

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities
02/05/94 00:00:00	0:00:00												SIP software being tested. STA in use, Sensor door is closed. Preparing for P1 Burn
02/05/94 03:06:00	3:06:00										MAD	LOS	
02/05/94 07:00:00	7:00:00										CAN	AOS	
02/05/94 07:21:00	7:21:00												Uplink and Schedule P1 burn scripts
02/05/94 07:44:00	7:44:00												Record TLM in SSDR Segment 0
02/05/94 09:03:00	9:03:00												Slew S/C to final P1 burn attitude
02/05/94 09:16:00	9:16:00										GDS	LOS	
02/05/94 09:25:00	9:25:00										MAD	AOS	
02/05/94 09:28:00	9:28:00										MAD	LOS	
02/05/94 10:00:52	10:00:52												P1 Burn
02/05/94 10:10:00	10:10:00										CAN	AOS	
02/05/94 10:24:00	10:24:00												All Cameras On
02/05/94 10:25:00	10:25:00												Initialize filters (DHUSEL26); (DHUSELNO);
02/05/94 10:26:00	10:26:00												DHUSEL22
02/05/94 10:27:00	10:27:00												Slew S/C sensors to final first Earth observation attitude
02/05/94 10:34:00	10:34:00												Record in SSDR Segment 1
02/05/94 10:35:00	10:35:00												DHUSEL3
02/05/94 10:35:13	10:35:13												Slew S/C sensors (QT000)
02/05/94 10:35:31	10:35:31												Slew S/C sensors (QT001)

02/05/94 15:04:00	15:04:00																					HiRes and NIR Cameras On	
02/05/94 15:05:00	15:05:00																					DHUSEL27	
02/05/94 15:06:00	15:06:00																					Stop Imageing (DHUSELNO)	
02/05/94 15:07:00	15:07:00																					HiRes and NIR Cameras Off	
02/05/94 15:08:00	15:08:00																					Activate ST-A (DHUSEL1)	
02/05/94 18:11:00	18:11:00																					HiRes and UV Cameras On	
02/05/94 18:12:00	18:12:00																					Slew s/c Sensors to Vega (GNC12VEGARW)	
02/05/94 18:19:00	18:19:00																					DHUSEL5	
02/05/94 18:19:30	18:19:30																					Stop Imageing (DHUSELNO)	
02/05/94 18:20:00	18:20:00																					Record in SSSR Segment 3	
02/05/94 18:21:00	18:21:00																					DHUSEL20	
02/05/94 18:22:00	18:22:00																					Stop Imageing (DHUSELNO)	
02/05/94 18:23:00	18:23:00																					Downlink SSSR Segment 3	
02/05/94 18:38:00	18:38:00																					Activate ST-A (DHUSEL1)	
02/05/94 18:39:00	18:39:00																					Record in SSSR Segment 3	
02/05/94 18:40:00	18:40:00																					DHUSEL20	
02/05/94 18:41:00	18:41:00																					Activate ST-A (DHUSEL1)	
02/05/94 18:42:00	18:42:00																					Downlink SSSR Segment 3	
02/05/94 18:51:00	18:51:00																					PMK	AOS
02/05/94 18:53:00	18:53:00																					Slew s/c Sensors to Vega (GNC12VEGARW)	
02/05/94 18:54:00	18:54:00																					Record in SSSR Segment 3	
02/05/94 18:56:00	18:56:00																					Activate ST-A (DHUSEL1)	
02/05/94 18:57:00	18:57:00																					Downlink SSSR Segment 3	
02/05/94 19:24:00	19:24:00																					GDS	AOS
02/05/94 19:36:00	19:36:00																					Range A Off	
02/05/94 22:27:00	22:27:00																					Range A On	

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					All ground commands except for scheduled SCL script for P1 burn
					P1 Burn
					End P1 Burn
					Earth Observation
					No data, SDR not in record
					Failed to point to Earth, quaternion tables uplinked at wrong times. Reaction wheel speeds very high. Test had to be aborted.

■	■	■	■	■	Data not saved					
■	■	■	■	■	Data not saved					
■	■				UV and HiRes, both filter 6 only					
■	■				UV and HiRes, both filter 6 only					

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02/07/94 00:00:00	0:00:00												ST-A in use
02/07/94 01:47:00	1:47:00										MAD	LOS	
02/07/94 05:00:00	5:00:00												Turn on UV Cameras
02/07/94 05:01:00	5:01:00												Turn on NIR, LWIR, and HiRes Cameras
02/07/94 05:08:11	5:08:11										CAN	AOS	
02/07/94 05:16:00	5:16:00												Uplink DHU Series B_Phase
02/07/94 05:21:00	5:21:00												Slew s/c sensors to Betelgeuse (GNC12BETELRW)
02/07/94 05:27:00	5:27:00												Record in SSSDR Segment 1
02/07/94 05:36:00	5:36:00												Open Sensor Door
02/07/94 05:38:00	5:38:00												Record in SSSDR Segment 4
02/07/94 05:46:00	5:46:00												Initialize filters (DHUSEL27); Stop Imageing (DHUSELNO);
02/07/94 05:47:00	5:47:00												DHUSEL24
02/07/94 05:47:30	5:47:30												Stop Imageing (DHUSELNO)
02/07/94 05:48:00	5:48:00												Initialize filters (DHUSEL27); Stop Imageing (DHUSELNO);
02/07/94 05:49:00	5:49:00												DHUSEL24
02/07/94 05:49:30	5:49:30												Stop Imageing (DHUSELNO)
02/07/94 05:51:00	5:51:00												Initialize filters (DHUSEL27); Stop Imageing (DHUSELNO);
02/07/94 05:52:00	5:52:00												DHUSEL24
02/07/94 05:52:00	5:52:00												Initialize filters (DHUSEL27); Stop Imageing (DHUSELNO);
02/07/94 05:52:30	5:52:30												Stop Imageing (DHUSELNO)

02/07/94 05:53:00	5:53:00																		DHUSEL24
02/07/94 05:53:30	5:53:30																		Stop Imageing (DHUSELNO)
02/07/94 05:54:00	5:54:00																		Initialize filters (DHUSEL27); Stop Imageing (DHUSELNO);
02/07/94 05:54:30	5:54:30																		Activate ST-A (DHUSEL1);
02/07/94 05:58:00	5:58:00																		Slew s/c sensors P1C Burn attitude (GNC12P1CRW)
02/07/94 05:59:00	5:59:00																		All Cameras Off
02/07/94 06:05:00	6:05:00																		Close Sensor Door
02/07/94 06:42:00	6:42:00																		Switch to DHU mode @ 128 kbps
02/07/94 06:45:00	6:45:00													PMK		LOS			
02/07/94 06:52:00	6:52:00																		Downlink SSSDR Segment 4
02/07/94 09:04:00	9:04:00																		Record TLM in SSSDR Segment 0
02/07/94 09:09:19	9:09:19													GDS		LOS			
02/07/94 13:18:56	13:18:56													MAD		AOS			
02/07/94 14:07:54	14:07:54													CAN		LOS			
02/07/94 14:41:00	14:41:00																		Downlink SSSDR Segment 0
02/07/94 14:44:00	14:44:00																		Set downlink rate to 8 kbs
02/07/94 18:10:42	18:10:42													PMK		AOS			
02/07/94 18:15:00	18:15:00																		Slew s/c sensors to Pleiades (GNC12PLEIADES)
02/07/94 18:31:00	18:31:00																		Open Sensor Door
02/07/94 18:36:00	18:36:00																		Uplink DHU Series A_Phase
02/07/94 18:42:00	18:42:00																		UV and HiRes Cameras ON
02/07/94 18:47:00	18:47:00																		Record in SSSDR Segment 1
02/07/94 19:01:00	19:01:00																		Image UV (DHUSEL23); Stop Imageing (DHUSELNO); Image HiRes (DHUSEL20) Stop Imageing (DHUSELNO);
02/07/94 19:02:00	19:02:00																		Image UV (DHUSEL23); Stop Imageing (DHUSELNO); Image HiRes (DHUSEL20) Stop Imageing (DHUSELNO);

02/07/94 19:04:00	19:04:00											Activate ST-A (DHUSEL1);
02/07/94 19:05:00	19:05:00											Downlink SSSDR Segment 1
02/07/94 19:12:00	19:12:00											Close Sensor Door
02/07/94 19:17:00	19:17:00											UV and HiRes Cameras OFF
02/07/94 19:38:00	19:38:00											Downlink SSSDR Segment 1
02/07/94 20:17:00	20:17:00											Range A Off
02/07/94 21:10:02	21:10:02								GDS	AOS		
02/07/94 21:11:00	21:11:00											UV and HiRes Cameras ON
02/07/94 21:20:00	21:20:00											Open Sensor Door
02/07/94 21:21:00	21:21:00											Record in SSSDR Segment 1
02/07/94 21:34:00	21:34:00											Image UV (DHUSEL23); Stop Imageing (DHUSELNO); Image HiRes (DHUSEL20) Stop Imageing (DHUSELNO);
02/07/94 21:35:00	21:35:00											Image UV (DHUSEL23); Stop Imageing (DHUSELNO); Image HiRes (DHUSEL20) Stop Imageing (DHUSELNO);
02/07/94 21:36:00	21:36:00											Activate ST-A (DHUSEL1);
02/07/94 21:37:00	21:37:00											Downlink SSSDR Segment 1
02/07/94 21:45:00	21:45:00											UV and HiRes Cameras OFF
02/07/94 21:48:00	21:48:00											Close Sensor Door
02/07/94 22:06:00	22:06:00											Read dosimeter latch values
02/07/94 22:11:00	22:11:00											Expose dosimeter
02/07/94 22:52:00	22:52:00											UV and HiRes Cameras ON
02/07/94 22:54:00	22:54:00											Open Sensor Door
02/07/94 22:58:00	22:58:00											Record in SSSDR Segment 1
02/07/94 23:10:00	23:10:00											Image UV (DHUSEL23); Stop Imageing (DHUSELNO); Image HiRes (DHUSEL20) Stop Imageing (DHUSELNO);
02/07/94 23:12:00	23:12:00											Image UV (DHUSEL23); Stop Imageing (DHUSELNO); Image HiRes (DHUSEL20) Stop Imageing (DHUSELNO);
02/07/94 23:12:30	23:12:30											Activate ST-A (DHUSEL1);

02/07/94 23:13:00	23:13:00											Downlink SDR Segment 1
02/07/94 23:32:00	23:32:00											UV and HiRes Cameras OFF
02/07/94 23:33:00	23:33:00											Close Sensor Door

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					No scheduled SCL scripts, all ground commands.
					Boresight Test using Betelgeuse
					All sensors except LWIR, including STA and STB
					All sensors except LWIR, including STA and STB
					All sensors except LWIR, including STA and STB

						All sensors except LWIR, including STA and STB
						End Boresight Test
						Boresight Test using Pleiades
						UV filter 1 only HiRes filter 2 only
						UV filter 1 only HiRes filter 2 only

						End Boresight Test

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02/08/94 00:00:00	0:00:00	0											
02/08/94 00:44:00	0:44:00												Set downlink rate to 2 kbps
02/08/94 00:45:00	0:45:00												Enable B AGC
02/08/94 00:50:00	0:50:00												Solar Arrays to Manual
02/08/94 00:54:00	0:54:00												Slew s/c HGA to Earth, in Inertial Point mode, first RF test Quaternion (RFFEB7R2)
02/08/94 01:05:00	1:05:00												Switch to HGA
02/08/94 01:20:00	1:20:00												RF test Quaternion RFFEB7RW3
02/08/94 01:39:00	1:39:00												Record quaternions in SDDR Segment 0
02/08/94 01:46:00	1:46:00												RF test Quaternion RFFEB7RW7
02/08/94 01:51:00	1:51:00												RF test Quaternion RFFEB7RW6
02/08/94 01:55:00	1:55:00												RF test Quaternion RFFEB7RW5
02/08/94 02:01:00	2:01:00												RF test Quaternion RFFEB7RW4
02/08/94 02:02:13	2:02:13										MAD	LOS	
02/08/94 02:06:00	2:06:00												RF test Quaternion RFFEB7RW9
02/08/94 02:09:00	2:09:00												RF test Quaternion RFFEB7RW8
02/08/94 02:13:00	2:13:00												RF test Quaternion RFFEB7RW3
02/08/94 02:16:00	2:16:00												RF test Quaternion RFFEB7RW2
02/08/94 02:27:00	2:27:00												RF test Quaternion RFFEB7RW1
02/08/94 02:31:00	2:31:00												Set downlink rate to 8 kbps
02/08/94 02:32:00	2:32:00												Switch to DHU mode
02/08/94 02:33:00	2:33:00												Switch to OMNI
02/08/94 02:34:00	2:34:00												Set downlink rate to 128 kbps
02/08/94 02:39:00	2:39:00												Set downlink rate to 8 kbps

02/08/94 02:42:00	2:42:00											Slew s/c Sensors to the Pleiades, Inertial Point mode (GNC12PLEAIDES)
02/08/94 02:44:00	2:44:00											Undervoltage
02/08/94 04:20:00	4:20:00											Slew s/c to Sun soaking attitude, Inertial Point mode (GNC12SSW)
02/08/94 05:23:34	5:23:34								CAN		AOS	
02/08/94 06:59:53	6:59:53								PMK		LOS	
02/08/94 08:06:00	8:06:00											Rotate S/C (GNC12M2ZMY)
02/08/94 09:11:59	9:11:59								GDS		LOS	
02/08/94 13:19:32	13:19:32								MAD		AOS	
02/08/94 14:00:01	14:00:01								CAN		LOS	
02/08/94 17:33:00	17:33:00											Range A Off
02/08/94 18:01:52	18:01:52								PMK		AOS	
02/08/94 19:49:00	19:49:00											Rotate S/C (GNC12SS)
02/08/94 20:30:00	20:30:00											HKP Reset
02/08/94 21:10:54	21:10:54								GDS		AOS	
02/08/94 22:01:00	22:01:00											Set Downlink Rate to 8 kbps
02/08/94 22:45:00	22:45:00											NIR and LWIR cameras and coolers On
02/08/94 22:56:00	22:56:00											UV and HiRes cameras On
02/08/94 23:17:00	23:17:00											Slew s/c Sensors to Earth, Inertial Point mode (EARTHOB5)
02/08/94 23:22:00	23:22:00											Open Sensor Door
02/08/94 23:29:00	23:29:00											Load Exposure Table; Uplink DHU Sequence SEQ_262

02/08/94 23:44:00	23:44:00										Record in SSDR Segment 1
02/08/94 23:46:38	23:46:38										Image (DHUSEL0)
02/08/94 23:47:13	23:47:13										Park filters (DHUSEL27); Activate ST-A (DHUSEL1)
02/08/94 23:54:00	23:54:00										Slew s/c Sensors to Moon, Inertial Point mode (MOONQUAT)
02/08/94 23:56:00	23:56:00										Record in SSDR Segment 1
02/08/94 23:58:15	23:58:15										Image (DHUSEL0)
02/08/94 23:58:49	23:58:49										Park filters (DHUSEL27); Activate ST-A (DHUSEL1)

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					No scheduled SCL scripts, all ground commands.
					RF Test

					Battery low, solar panels had to be disabled for RF test, slewing to better Sun angle
					End RF Test
					Undervoltage, HKP in lifeboat, 250 BPS
					Recovered from undervoltage, recharging battery
					Battery getting warm
					Battery getting warm
					Exposure Test using Earth and Moon

								All Sensors Compressed and Uncompressed
								All Sensors Compressed and Uncompressed
								End Exposure Test

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02/09/94 00:00:00	0:00:00	0											RF Test Nav software/Star tracker tests; Sensor/Autoexposure Tests
02/09/94 00:02:00	0:02:00												All Cameras OFF
02/09/94 00:03:00	0:03:00												Downlink SDR Segment 1
02/09/94 00:30:00	0:30:00												Close Sensor Door
02/09/94 00:34:00	0:34:00												Slew s/c HGA to Earth, in Inertial Point mode, first RF test Quaternion (RFTESTQ1)
02/09/94 00:47:00	0:47:00												Enable B AGC
02/09/94 00:49:00	0:49:00												Record Quaternions in SDR Segment 3
02/09/94 00:49:00	0:49:00												Disable ST (DHUSELNO);
02/09/94 00:50:00	0:50:00												Set downlink rate to 2 kbps
02/09/94 00:54:00	0:54:00												Solar Arrays to Manual
02/09/94 00:56:00	0:56:00												Switch to HGA
02/09/94 01:00:00	1:00:00												RF test Quaternion RFTESTQ2
02/09/94 01:05:00	1:05:00												RF test Quaternion RFTESTQ3
02/09/94 01:10:00	1:10:00												RF test Quaternion RFTESTQ4
02/09/94 01:15:00	1:15:00												RF test Quaternion RFTESTQ5
02/09/94 01:20:00	1:20:00												RF test Quaternion RFTESTQ6
02/09/94 01:25:00	1:25:00												RF test Quaternion RFTESTQ7
02/09/94 01:30:00	1:30:00												RF test Quaternion RFTESTQ8
02/09/94 01:35:00	1:35:00												RF test Quaternion RFTESTQ9
02/09/94 01:40:00	1:40:00												RF test Quaternion RFTESTQ10
02/09/94 01:46:00	1:46:00												Switch to OMNI
02/09/94 01:48:00	1:48:00												Disable B AGC
02/09/94 01:50:00	1:50:00												Set downlink rate to 8 kbps

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02/09/94 02:10:00	2:10:00									Slew s/c Sensors to the Pleiades, Inertial Point mode (GNC12PLD1RW)
02/09/94 02:11:58	2:11:58							MAD	LOS	
02/09/94 02:14:00	2:14:00									Solar Arrays to Auto
02/09/94 02:25:00	2:25:00									Switch to DHU mode @ 8 kbps
02/09/94 02:26:00	2:26:00									Switch to DHU mode @ 128 kbps
02/09/94 02:28:00	2:28:00									Switch to DHU mode @ 64 kbps
02/09/94 02:36:00	2:36:00									Downlink SSSDR Segment 1
02/09/94 02:59:00	2:59:00									Downlink SSSDR Segment 2
02/09/94 03:19:00	3:19:00									Downlink SSSDR Segment 3
02/09/94 04:53:00	4:53:00									Update state vector (GNC53_18FEB0400)
02/09/94 07:10:01	7:10:01							PMK	LOS	
02/09/94 08:45:00	8:45:00							CAN	AOS	
02/09/94 08:56:00	8:56:00									Downlink SSSDR Segment 0
02/09/94 08:59:00	8:59:00									Downlink SSSDR Segment 1
02/09/94 09:01:00	9:01:00									Ranging A ON
02/09/94 09:13:15	9:13:15							GDS	LOS	
02/09/94 09:18:00	9:18:00									Downlink SSSDR Segment 2
02/09/94 09:37:00	9:37:00									Downlink SSSDR Segment 3
02/09/94 10:18:00	10:18:00									Ranging A OFF
02/09/94 11:48:00	11:48:00									Switch to DHU mode @ 8 kbps
02/09/94 11:52:00	11:52:00									Ranging A ON
02/09/94 13:03:13	13:03:13							MAD	AOS	
02/09/94 13:43:08	13:43:08							CAN	LOS	
02/09/94 17:54:24	17:54:24							PMK	AOS	
02/09/94 17:55:00	17:55:00									Ranging A OFF

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02/09/94 17:55:00	17:55:00										Read dosimeter latch values
02/09/94 17:56:00	17:56:00										Expose dosimeter
02/09/94 18:09:00	18:09:00										Slew s/c HGA to Earth, in Inertial Point mode (GNC12SUN)
02/09/94 19:15:00	19:15:00										Disable ST (DHUSELNO);
02/09/94 19:18:00	19:18:00										Activate ST-A (DHUSEL1);
02/09/94 19:23:00	19:23:00										Slew s/c HGA to Earth, in Inertial Point mode (GNC12EARTH)
02/09/94 19:26:00	19:26:00										Disable ST (DHUSELNO);
02/09/94 19:28:00	19:28:00										Activate ST-A (DHUSEL1);
02/09/94 19:30:00	19:30:00										Disable ST (DHUSELNO); Activate ST-B (DHUSEL2);
02/09/94 19:31:00	19:31:00										Disable ST (DHUSELNO);
02/09/94 19:32:00	19:32:00										Activate ST-A (DHUSEL1);
02/09/94 19:45:00	19:45:00										Disable ST (DHUSELNO); Uplink Star Tracker cofig tables
02/09/94 19:51:00	19:51:00										Activate ST-A (DHUSEL1);
02/09/94 20:05:00	20:05:00										Update state vector (GNC53_18FEB0918)
02/09/94 21:11:34	21:11:34								GDS	AOS	
02/09/94 20:14:00	20:14:00										Slew s/c Sensors to Earth, Inertial Point mode (GNC12EARTHROW1)
02/09/94 20:19:00	20:19:00										IR cameras & cryocoolers ON
02/09/94 20:33:00	20:33:00										Load exposure table EXPDAY2; Load DHU Sequence Table SEQ_262
02/09/94 20:36:00	20:36:00										UV and HiRes camera ON
02/09/94 20:39:00	20:39:00										DHUSEL26
02/09/94 20:41:00	20:41:00										Activate ST-A (DHUSEL1);
02/09/94 20:43:43	20:43:43										Request realtime HiRes Image (DUMP_H4)
02/09/94 20:43:00	20:43:00										DHUSEL26

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02/09/94 20:43:43	20:43:43									Request realtime HiRes Image (DUMP_H4)
02/09/94 20:44:00	20:44:00									Activate ST-A (DHUSEL1);
02/09/94 20:46:00	20:46:00									Record in SDDR Segment 3; Activate ST-A (DHUSEL1);
02/09/94 20:47:39	20:47:39									DHUSEL00
02/09/94 20:47:56	20:47:56									Activate ST-A (DHUSEL1);
02/09/94 20:51:00	20:51:00									Uplink Autoexposure
02/09/94 20:52:47	20:52:47									DHUSEL00
02/09/94 20:53:09	20:53:09									Activate ST-A (DHUSEL1);
02/09/94 21:10:26	21:10:26									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:10:54	21:10:54									DHUSEL30
02/09/94 21:11:54	21:11:54									Activate ST-A (DHUSEL1);
02/09/94 21:12:00	21:12:00									Earth Pointing Quaternion (GNC12EARTHWR2)
02/09/94 21:14:38	21:14:38									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:14:58	21:14:58									DHUSEL30
02/09/94 21:15:49	21:15:49									Activate ST-A (DHUSEL1);
02/09/94 21:16:00	21:16:00									Earth Pointing Quaternion (GNC12EARTHWR3)
02/09/94 21:17:40	21:17:40									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:18:02	21:18:02									DHUSEL30
02/09/94 21:18:53	21:18:53									Activate ST-A (DHUSEL1);
02/09/94 21:19:00	21:19:00									Earth Pointing Quaternion (GNC12EARTHWR4)
02/09/94 21:21:24	21:21:24									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:21:46	21:21:46									DHUSEL30
02/09/94 21:21:49	21:21:49									Activate ST-A (DHUSEL1);
02/09/94 21:23:00	21:23:00									Earth Pointing Quaternion (GNC12EARTHWR5)

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02/09/94 21:25:02	21:25:02									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:25:22	21:25:22									DHUSEL30
02/09/94 21:26:13	21:26:13									Activate ST-A (DHUSEL1);
02/09/94 21:26:30	21:26:30									Earth Pointing Quaternion (GNC12EARTH6)
02/09/94 21:27:10	21:27:10									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:27:36	21:27:36									DHUSEL30
02/09/94 21:28:27	21:28:27									Activate ST-A (DHUSEL1);
02/09/94 21:29:00	21:29:00									Earth Pointing Quaternion (GNC12EARTH7)
02/09/94 21:31:03	21:31:03									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:31:20	21:31:20									DHUSEL30
02/09/94 21:32:17	21:32:17									Activate ST-A (DHUSEL1); Earth Pointing Quaternion (GNC12EARTH8)
02/09/94 21:33:42	21:33:42									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:34:10	21:34:10									DHUSEL30
02/09/94 21:35:02	21:35:02									Activate ST-A (DHUSEL1);
02/09/94 21:35:00	21:35:00									Earth Pointing Quaternion (GNC12EARTH9)
02/09/94 21:35:57	21:35:57									Request realtime HiRes Image (DUMP_H4)
02/09/94 21:36:14	21:36:14									DHUSEL30
02/09/94 21:37:35	21:37:35									Activate ST-A (DHUSEL1);
02/09/94 21:39:00	21:39:00									LWIR Cooler Off
02/09/94 21:54:00	21:54:00									Switch to lunar mapping mode; GNC14 (ACSMoDe=LunarMapping)
02/09/94 22:18:00	22:18:00									LWIR Cooler On
02/09/94 22:20:23	22:20:23									Initialize Filters (DHUSEL26)
02/09/94 22:20:40	22:20:40									Activate ST-A (DHUSEL1);

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02/09/94 22:21:00	22:21:00									Record in SSDR Segment 4
02/09/94 22:23:00	22:23:00									Request realtime UV Image (DUMP_UV14)
02/09/94 22:41:00	22:41:00									Uplink Autoexposure
02/09/94 22:41:07	22:41:07									DHUSEL00
02/09/94 22:41:23	22:41:23									Activate ST-A (DHUSEL1);
02/09/94 22:51:15	22:51:15									DHUSEL00
02/09/94 22:51:49	22:51:49									Initialize filters (DHUSEL27); Activate ST-A (DHUSEL1);
02/09/94 22:52:00	22:52:00									Uplink Autoexposure
02/09/94 22:54:00	22:54:00									IR Cameras and Coolers Off
02/09/94 22:58:00	22:58:00									Load exposure table for laser test; LASER_1
02/09/94 22:59:00	22:59:00									Initialize filters (DHUSEL27); Activate ST-A (DHUSEL1);
02/09/94 23:00:14	23:00:14									DHUSEL05
02/09/94 23:01:40	23:01:40									Request realtime HiRes Image (DUMP_H4)
02/09/94 23:03:29	23:03:29									Activate ST-A (DHUSEL1);
02/09/94 23:07:00	23:07:00									Turn on UV & HR cameras; Laser power ON
02/09/94 23:08:00	23:08:00									Activate ST-A (DHUSEL1);
02/09/94 23:14:00	23:14:00									Switch to DHU mode @ 64 kbps
02/09/94 23:16:00	23:16:00									Downlink SSSR Segment 3
02/09/94 23:37:00	23:37:00									Downlink SSSR Segment 4

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UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					No SCL scripts, all ground commands.
					RF Test

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				All Sensors and STA Compressed and Uncompressed
				All Sensors and STA Compressed and Uncompressed
				Laser test
				HiRes color @ 1 Hz
				Still in Lunar mapping ACS mode

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities
02/10/94 00:00:00	0:00:00	0											Boresight tests using Pleiades and the Southern Cross
02/10/94 00:09:00	0:09:00												UV and HiRes camera ON
02/10/94 00:12:00	0:12:00												Uplink DHU Sequence SEQ_263
02/10/94 00:16:00	0:16:00												Slew s/c sensors to the Southern Cross, in Inertial Point mode (GNCCRUX0RW)
02/10/94 00:22:00	0:22:00												Record in SDR Segment 5
02/10/94 00:23:00	0:23:00												Load exposure table PLEIADES1; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:23:53	0:23:53												Boresight Images (DHUSEL20)
02/10/94 00:25:24	0:25:24												Stop Imaging (DHUSELNO)
02/10/94 00:24:23	0:24:23												Load exposure table PLEIADES2; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:24:53	0:24:53												Boresight Images (DHUSEL20)
02/10/94 00:25:24	0:25:24												Park Filters (DHUSEL27); DHUSELNO
02/10/94 00:25:31	0:25:31												Activate ST-B (DHUSEL2);
02/10/94 00:26:35	0:26:35												Rotate s/c 30 degrees around Z axis (GNCCRUX30RW)
02/10/94 00:29:33	0:29:33												Load exposure table PLEIADES1; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:30:02	0:30:02												Boresight Images (DHUSEL20)
02/10/94 00:30:20	0:30:20												Stop Imaging (DHUSELNO)

02/10/94 00:30:26	0:30:26										Load exposure table PLEIADES2; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:30:56	0:30:56										Boresight Images (DHUSEL20)
02/10/94 00:31:27	0:31:27										Park Filters (DHUSEL27); DHUSELNO
02/10/94 00:31:25	0:31:25										Stop Imaging (DHUSELNO)
02/10/94 00:31:34	0:31:34										Activate ST-B (DHUSEL2);
02/10/94 00:31:35	0:31:35										Rotate s/c 30 degrees around Z axis (GNCCRUX60RW)
02/10/94 00:33:50	0:33:50										Load exposure table PLEIADES1; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:34:30	0:34:30										Boresight Images (DHUSEL20)
02/10/94 00:34:37	0:34:37										Stop Imaging (DHUSELNO)
02/10/94 00:34:43	0:34:43										Load exposure table PLEIADES2; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:35:13	0:35:13										Boresight Images (DHUSEL20)
02/10/94 00:35:38	0:35:38										Park Filters (DHUSEL27); DHUSELNO
02/10/94 00:35:51	0:35:51										Activate ST-B (DHUSEL2);
02/10/94 00:37:05	0:37:05										Rotate s/c 30 degrees around Z axis (GNCCRUX90RW)
02/10/94 00:39:26	0:39:26										Load exposure table PLEIADES1; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:40:06	0:40:06										Boresight Images (DHUSEL20)
02/10/94 00:40:13	0:40:13										Stop Imaging (DHUSELNO)
02/10/94 00:40:19	0:40:19										Load exposure table PLEIADES2; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:40:49	0:40:49										Boresight Images (DHUSEL20)
02/10/94 00:41:33	0:41:33										Park Filters (DHUSEL27); DHUSELNO

02/10/94 00:41:41	0:41:41										Activate ST-B (DHUSEL2);
02/10/94 00:41:49	0:41:49										Turn OFF STA
02/10/94 00:42:12	0:42:12										Rotate s/c 30 degrees around Z axis (GNCCRUX120RW)
02/10/94 00:44:07	0:44:07										Load exposure table PLEIADES1; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 00:44:47	0:44:47										Boresight Images (DHUSEL20)
02/10/94 01:07:41	1:07:41										Load exposure table PLEIADES2; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 01:08:11	1:08:11										Boresight Images (DHUSEL20)
02/10/94 01:08:42	1:08:42										Park Filters (DHUSEL27); DHUSELNO
02/10/94 01:08:49	1:08:49										Activate ST-B (DHUSEL2);
02/10/94 01:09:25	1:09:25										Rotate s/c 30 degrees around Z axis (GNCCRUX150RW)
02/10/94 01:11:58	1:11:58										Load exposure table PLEIADES1; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 01:12:21	1:12:21										Boresight Images (DHUSEL20)
02/10/94 01:12:51	1:12:51										Load exposure table PLEIADES2; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 01:13:21	1:13:21										Boresight Images (DHUSEL20)
02/10/94 01:14:02	1:14:02										Park Filters (DHUSEL27); DHUSELNO
02/10/94 01:14:08	1:14:08										Activate ST-B (DHUSEL2);
02/10/94 01:14:26	1:14:26										Rotate s/c 30 degrees around Z axis (GNCCRUX180RW)
02/10/94 01:16:51	1:16:51										Load exposure table PLEIADES1; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 01:17:30	1:17:30										Boresight Images (DHUSEL20)
02/10/94 01:17:37	1:17:37										Stop Imaging (DHUSELNO)

02/10/94 01:17:44	1:17:44											Load exposure table PLEIADES2; Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 01:18:14	1:18:14											Boresight Images (DHUSEL20)
02/10/94 01:18:54	1:18:54											Park Filters (DHUSEL27); DHUSELNO
02/10/94 01:19:02	1:19:02											Activate ST-B (DHUSEL2);
02/10/94 01:21:00	1:21:00											Downlink SSSDR Segment 5
02/10/94 01:26:00	1:26:00											Turn ON STA
02/10/94 01:40:00	1:40:00											Turn OFF STA
02/10/94 01:53:00	1:53:00											Slew s/c to favorable sun soaking attitude, (GNC12SUNRW)
02/10/94 01:59:00	1:59:00											Downlink SSSDR Segment 3
02/10/94 02:06:00	2:06:00											Replay SSSDR Segment 3
02/10/94 02:06:00	2:06:00											Turn OFF UV & HR cameras
02/10/94 02:17:04	2:17:04								MAD		LOS	
02/10/94 02:30:00	2:30:00											Read dosimeter latch values
02/10/94 02:43:00	2:43:00											Expose dosimeter
02/10/94 04:15:00	4:15:00											Downlink SSSDR Segment 4
02/10/94 05:39:32	5:39:32								CAN		AOS	
02/10/94 07:11:00	7:11:00											Downlink SSSDR Segment 3
02/10/94 07:18:44	7:18:44								PMK		LOS	
02/10/94 09:12:00	9:12:00											Downlink SSSDR Segment 0
02/10/94 09:14:00	9:14:00											Downlink SSSDR Segment 1
02/10/94 09:14:04	9:14:04								GDS		LOS	
02/10/94 10:28:00	10:28:00											Downlink SSSDR Segment 2
02/10/94 10:47:00	10:47:00											Downlink SSSDR Segment 4
02/10/94 11:18:00	11:18:00											Downlink SSSDR Segment 5
02/10/94 12:24:00	12:24:00											Close Sensor Door

02/10/94 13:02:52	13:02:52									MAD	AOS	
02/10/94 13:34:24	13:34:24									CAN	LOS	
02/10/94 17:47:29	17:47:29									PMK	AOS	
02/10/94 18:05:00	18:05:00											Ranging A OFF
02/10/94 21:06:00	21:06:00											UV and HiRes camera ON
02/10/94 21:08:00	21:08:00											STA power OFF
02/10/94 21:09:00	21:09:00											Uplink DHU Sequence SEQ_263
02/10/94 21:11:00	21:11:00											Load exposure table (PLEIADES)
02/10/94 21:12:25	21:12:25									GDS	AOS	
02/10/94 21:13:00	21:13:00											Slew s/c sensors to the Southern Cross, in Inertial Point mode (GNCCRUX0RW)
02/10/94 21:21:00	21:21:00											Slew s/c sensors to the Pleiades, in Inertial Point mode (GNCPLEI0RW)
02/10/94 21:26:00	21:26:00											Rotate s/c 60 degrees around Z axis (GNCPLEI300RW)
02/10/94 21:28:00	21:28:00											Record in SDR Segment 3
02/10/94 21:33:00	21:33:00											Open Sensor Door
02/10/94 21:37:56	21:37:56											Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 21:38:28	21:38:28											Boresight Images (DHUSEL20)
02/10/94 21:38:50	21:38:50											Stop Imaging (DHUSELNO)
02/10/94 21:38:51	21:38:51											Activate ST-B (DHUSEL2);
02/10/94 21:39:11	21:39:11											Rotate s/c 30 degrees around Z axis (GNCPLEI0RW)
02/10/94 21:41:52	21:41:52											Rotate s/c 30 degrees around Z axis (GNCPLEI330RW)
02/10/94 21:44:03	21:44:03											Stop Imaging (DHUSELNO)
02/10/94 21:44:09	21:44:09											Initialize Filters (DHUSEL26); DHUSELNO

02/10/94 21:44:41	21:44:41										Boresight Images (DHUSEL20)
02/10/94 21:45:04	21:45:04										Activate ST-B (DHUSEL2);
02/10/94 21:45:14	21:45:14										Rotate s/c 30 degrees around Z axis (GNCPLEI0RW)
02/10/94 21:47:19	21:47:19										Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 21:47:52	21:47:52										Boresight Images (DHUSEL20)
02/10/94 21:48:10	21:48:10										Stop Imaging (DHUSELNO)
02/10/94 21:48:13	21:48:13										Activate ST-B (DHUSEL2);
02/10/94 21:48:28	21:48:28										Rotate s/c 30 degrees around Z axis (GNCPLEI30RW)
02/10/94 21:50:28	21:50:28										Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 21:51:02	21:51:02										Boresight Images (DHUSEL20)
02/10/94 21:51:16	21:51:16										Stop Imaging (DHUSELNO)
02/10/94 21:51:23	21:51:23										Activate ST-B (DHUSEL2);
02/10/94 21:51:50	21:51:50										Rotate s/c 30 degrees around Z axis (GNCPLEI60RW)
02/10/94 21:53:56	21:53:56										Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 21:54:28	21:54:28										Boresight Images (DHUSEL20)
02/10/94 21:54:44	21:54:44										Stop Imaging (DHUSELNO)
02/10/94 21:54:51	21:54:51										Activate ST-B (DHUSEL2);
02/10/94 21:55:12	21:55:12										Rotate s/c 30 degrees around Z axis (GNCPLEI90RW)
02/10/94 21:57:40	21:57:40										Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 21:58:13	21:58:13										Boresight Images (DHUSEL20)
02/10/94 21:58:28	21:58:28										Stop Imaging (DHUSELNO)
02/10/94 21:58:34	21:58:34										Activate ST-B (DHUSEL2);
02/10/94 21:58:58	21:58:58										Rotate s/c 30 degrees around Z axis (GNCPLEI120RW)

02/10/94 22:01:09	22:01:09										Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 22:01:41	22:01:41										Boresight Images (DHUSEL20)
02/10/94 22:01:57	22:01:57										Stop Imaging (DHUSELNO)
02/10/94 22:02:03	22:02:03										Activate ST-B (DHUSEL2);
02/10/94 22:02:19	22:02:19										Rotate s/c 30 degrees around Z axis (GNCPLEI150RW)
02/10/94 22:02:19	22:02:19										Slew s/c to favorable sun soaking attitude, (GNC12SUNRW)
02/10/94 22:04:26	22:04:26										Initialize Filters (DHUSEL26); DHUSELNO
02/10/94 22:04:58	22:04:58										Boresight Images (DHUSEL20)
02/10/94 22:05:14	22:05:14										Stop Imaging (DHUSELNO)
02/10/94 22:05:23	22:05:23										Activate ST-B (DHUSEL2);
02/10/94 22:05:35	22:05:35										Close Sensor Door
02/10/94 22:22:00	22:22:00										Switch to DHU mode @ 64 kbps
02/10/94 22:24:00	22:24:00										Turn OFF UV & HR cameras
02/10/94 22:26:00	22:26:00										Downlink SDR Segment 3
02/10/94 23:13:00	23:13:00										Image HiRes (DHUSEL20)
02/10/94 23:51:00	23:51:00										Slew s/c Sensors to Earth, in Inertial Point mode (FEB10RW1)
02/10/94 23:52:00	23:52:00										HiRes camera ON
02/10/94 23:53:00	23:53:00										STA Power ON

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					No SCL scripts, all ground commands.
					Southern Cross Boresight
					UV filter 3; HiRes filter 2
					UV filter 3; HiRes filter 2

						Pleiades Boresight Test
						Incorrect starting rotation
						UV filter 3; HiRes filter 2
						Incorrect rotation

										UV filter 3; HiRes filter 2
										UV filter 3; HiRes filter 2
										UV filter 3; HiRes filter 2
										UV filter 3; HiRes filter 2

									UV filter 3; HiRes filter 2
									UV filter 3; HiRes filter 2
									End Boresight Test
									Earth Observation Test

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities
02/11/94 00:00:00	0:00:00	0											Earth Observation in progress
02/11/94 00:03:00	0:03:00												Turn ON STA
02/11/94 00:04:00	0:04:00												Turn ON UV, NIR, & LWIR cameras
02/11/94 00:06:00	0:06:00												Load exposure table (EXPDAY2)
02/11/94 00:07:00	0:07:00												Uplink DHU Sequence SEQ_262
02/11/94 00:10:00	0:10:00												Record in SSDR Segment 4
02/11/94 00:15:00	0:15:00												Downlink SSDR Segment 1
02/11/94 00:21:00	0:21:00												Record in SSDR Segment 4
02/11/94 00:22:00	0:22:00												Initialize filters (DHUSEL26); Activate ST-A (DHUSEL1);
02/11/94 00:24:00	0:24:00												Request realtime UV Image (DUMP_UV14)
02/11/94 00:25:09	0:25:09												DHUSEL00
02/11/94 00:25:33	0:25:33												Activate ST-A (DHUSEL1);
02/11/94 00:26:00	0:26:00												Activate Limb Detection software
02/11/94 00:32:00	0:32:00												Open Sensor Door
02/11/94 00:33:00	0:33:00												Request realtime UV Image (DUMP_UV14)
02/11/94 00:33:36	0:33:36												DHUSEL00
02/11/94 00:33:53	0:33:53												Activate ST-A (DHUSEL1);
02/11/94 00:34:00	0:34:00												Activate Limb Detection software
02/11/94 00:35:00	0:35:00												Request realtime NIR Image (DUMP_N4)

02/11/94 00:37:54	0:37:54																		DHUSEL00
02/11/94 00:38:29	0:38:29																		Park filters (DHUSEL27); Activate ST-A (DHUSEL1)
02/11/94 00:39:00	0:39:00																		Disable Limb Detection software
02/11/94 00:40:00	0:40:00																		Request realtime HIRES Image (DUMP_H4)
02/11/94 00:41:34	0:41:34																		DHUSEL00
02/11/94 00:42:09	0:42:09																		Park filters (DHUSEL27); Activate ST-A (DHUSEL1)
02/11/94 00:46:00	0:46:00																		LWIR Cooler and Camera OFF
02/11/94 00:47:00	0:47:00																		NIR Cooler and Camera OFF
02/11/94 00:49:00	0:49:00																		UV and HIRES cameras off
02/11/94 00:51:00	0:51:00																		Close Sensor Door
02/11/94 01:17:00	1:17:00																		Enable AGC
02/11/94 01:46:00	1:46:00																		Slew s/c HGA to Earth, first RF Test attitude (RF_TEST_01)
02/11/94 02:00:00	2:00:00																		Slew s/c HGA to RF Test attitude (RF_TEST_02)
02/11/94 02:02:00	2:02:00																		Switch to Omni Antenna
02/11/94 02:04:00	2:04:00																		Record Quaternions in SDR Segment 0
02/11/94 02:05:00	2:05:00																		Slew s/c HGA to RF Test attitude (RF_TEST_03)
02/11/94 02:09:00	2:09:00																		Slew s/c HGA to RF Test attitude (RF_TEST_04)
02/11/94 02:10:00	2:10:00																		Switch to HGA
02/11/94 02:14:00	2:14:00																		Slew s/c HGA to RF Test attitude (RF_TEST_05)
02/11/94 02:17:54																			MAD LOS

02/11/94 02:21:00	2:21:00										Slew s/c HGA to RF Test attitude (RF_TEST_06)
02/11/94 02:25:00	2:25:00										Slew s/c HGA to RF Test attitude (RF_TEST_07)
02/11/94 02:30:00	2:30:00										Slew s/c HGA to RF Test attitude (RF_TEST_08)
02/11/94 02:34:00	2:34:00										Slew s/c HGA to RF Test attitude (RF_TEST_09)
02/11/94 02:40:00	2:40:00										Slew s/c HGA to RF Test attitude (RF_TEST_10)
02/11/94 02:45:00	2:45:00										Slew s/c HGA to RF Test attitude (RF_TEST_11)
02/11/94 02:50:00	2:50:00										Slew s/c HGA to RF Test attitude (RF_TEST_12)
02/11/94 02:52:00	2:52:00										Slew s/c HGA to RF Test attitude (RF_TEST_13)
02/11/94 02:54:00	2:54:00										Slew s/c HGA to RF Test attitude (RF_TEST_14)
02/11/94 02:56:00	2:56:00										Slew s/c HGA to RF Test attitude (RF_TEST_15)
02/11/94 02:59:00	2:59:00										Slew s/c HGA to RF Test attitude (RF_TEST_16)
02/11/94 03:01:00	3:01:00										Slew s/c HGA to RF Test attitude (RF_TEST_17)
02/11/94 03:06:00	3:06:00										Slew s/c HGA to RF Test attitude (RF_TEST_20)
02/11/94 03:08:00	3:08:00										Slew s/c HGA to RF Test attitude (RF_TEST_21)
02/11/94 03:10:00	3:10:00										Slew s/c HGA to RF Test attitude (RF_TEST_22)
02/11/94 03:12:00	3:12:00										Slew s/c HGA to RF Test attitude (RF_TEST_23)
02/11/94 03:14:00	3:14:00										Slew s/c HGA to RF Test attitude (RF_TEST_24)
02/11/94 03:34:00	3:34:00										Slew s/c HGA to GS8 (GNC13)
02/11/94 03:38:00	3:38:00										Ranging B On
02/11/94 04:18:00	4:18:00										Downlink SDR Segment 0

02/11/94 04:22:00	4:22:00											Downlink SSSR Segment 0
02/11/94 04:24:00	4:24:00											Downlink SSSR Segment 4
02/11/94 05:27:00	5:27:00											Ranging B OFF
02/11/94 05:48:01									CAN	AOS		
02/11/94 07:17:00	7:17:00											Slew s/c HGA to CAN (GNC13CANRW)
02/11/94 07:27:32									PMK	LOS		
02/11/94 07:37:00	7:37:00											Ranging B On
02/11/94 09:15:01									GDS	LOS		
02/11/94 09:29:00	9:29:00											Ranging B OFF
02/11/94 12:02:00	12:02:00											Ranging A OFF
02/11/94 12:33:00	12:33:00											Ranging B On
02/11/94 13:04:00	13:04:00											Slew s/c HGA to MAD (GNC13MADRW)
02/11/94 13:04:09									MAD	AOS		
02/11/94 13:35:11									CAN	LOS		
02/11/94 14:19:00	14:19:00											Slew s/c HGA to PMK (GNC13PMKRW)
02/11/94 14:25:00	14:25:00											Ranging B OFF
02/11/94 17:40:52									PMK	AOS		
02/11/94 17:57:00	17:57:00											Turn ON NIR, & LWIR cameras and coolers
02/11/94 17:59:00	17:59:00											Ranging A OFF
02/11/94 18:02:00	18:02:00											Turn ON UV and HiRes camreas
02/11/94 18:02:00	18:02:00											Uplink DHU Sequence SEQ_262
02/11/94 18:06:00	18:06:00											Initialize filters (DHUSEL26); Activate ST-B (DHUSEL2);
02/11/94 18:07:00	18:07:00											Record in SSSR Segment 1
02/11/94 18:44:40	18:44:40											Perform LWIR dark field test

02/11/94 18:49:05	18:49:05																		Stop Imaging (DHUSELNO)
02/11/94 18:49:51	18:49:51																		Perform NIR dark field test
02/11/94 18:54:20	18:54:20																		Stop Imaging (DHUSELNO)
02/11/94 18:55:53	18:55:53																		Perform UV dark field test
02/11/94 19:00:15	19:00:15																		Stop Imaging (DHUSELNO)
02/11/94 19:00:52	19:00:52																		Perform HiRes dark field test
02/11/94 19:07:34	19:07:34																		Stop Imaging (DHUSELNO)
02/11/94 19:08:11	19:08:11																		Perform LWIR dark field test
02/11/94 19:12:40	19:12:40																		Stop Imaging (DHUSELNO)
02/11/94 19:13:48	19:13:48																		Perform NIR dark field test
02/11/94 19:18:43	19:18:43																		Stop Imaging (DHUSELNO)
02/11/94 19:19:00	19:19:00																		Activate ST-B (DHUSEL2);
02/11/94 19:35:00	19:35:00																		Ranging A OFF
02/11/94 19:36:08	19:36:08																		Perform NIR dark field test
02/11/94 19:38:10	19:38:10																		Stop Imaging (DHUSELNO)
02/11/94 20:12:18	20:12:18																		Perform NIR dark field test
02/11/94 20:17:05	20:17:05																		Stop Imaging (DHUSELNO)
02/11/94 20:19:00	20:19:00																		Activate ST-B (DHUSEL2);
02/11/94 20:29:00	20:29:00																		Turn OFF NIR and LWIR cameras
02/11/94 20:31:00	20:31:00																		Turn OFF UV & HR cameras
02/11/94 20:40:00	20:40:00																		Turn ON NIR and LWIR cameras and coolers
02/11/94 20:43:00	20:43:00																		Turn ON UV & HR cameras
02/11/94 20:44:00	20:44:00																		Record in SDR Segment 2
02/11/94 20:46:00	20:46:00																		Load exposure table EXPDAY
02/11/94 20:47:00	20:47:00																		Uplink DHU Sequence SEQ_262
02/11/94 20:50:00	20:50:00																		Slew s/c Sensors to Earth, in Inertial Point mode (FEB11ERW)
02/11/94 20:56:00	20:56:00																		Open Sensor Door
02/11/94 21:00:00	21:00:00																		Initialize (DHUSEL26); Activate ST-B (DHUSEL2);

02/11/94 21:03:00	21:03:00											Request realtime UV Image (DUMP_UV14)
02/11/94 21:05:50	21:05:50											DHUSEL22
02/11/94 21:06:38	21:06:38											Stop Imaging (DHUSELNO)
02/11/94 21:10:00	21:10:00											Request realtime UV Image (DUMP_UV14)
02/11/94 21:13:07	21:13:07											DHUSEL22
02/11/94 21:13:35	21:13:35											Stop Imaging (DHUSELNO)
02/11/94 21:14:01									GDS	AOS		
02/11/94 21:19:00	21:19:00											Request realtime NIR Image (DUMP_NIR4)
02/11/94 21:20:51	21:20:51											DHUSEL22
02/11/94 21:20:53	21:20:53											Stop Imaging (DHUSELNO)
02/11/94 21:26:00	21:26:00											Request realtime LWIR Image (DUMP_LWIR)
02/11/94 21:27:53	21:27:53											DHUSEL22
02/11/94 21:30:05	21:30:05											Stop Imaging (DHUSELNO)
02/11/94 21:46:00	21:46:00											Uplink DHU Sequence SEQ_263
02/11/94 21:47:00	21:47:00											Load exposure table VEGABORE
02/11/94 21:49:00	21:49:00											Initialize (DHUSEL26); Activate ST-B (DHUSEL2);
02/11/94 21:57:00	21:57:00											Slew s/c Sensors to Vega, in Inertial Point mode (FEB11VEGA1)
02/11/94 22:01:37	22:01:37											Image with all sensors (DHUSEL20)
02/11/94 22:01:46	22:01:46											Image with Hires (DHUSEL30)
02/11/94 22:02:07	22:02:07											Activate ST-B (DHUSEL2);
02/11/94 22:03:00	22:03:00											Inertial Point to Vega (FEB11VEGA2)

02/11/94 22:04:38	22:04:38										Image with all sensors (DHUSEL20)
02/11/94 22:04:53	22:04:53										Image with Hires (DHUSEL30)
02/11/94 22:05:13	22:05:13										Activate ST-B (DHUSEL2);
02/11/94 22:05:00	22:05:00										Inertial Point to Vega (FEB11VEGA3)
02/11/94 22:06:13	22:06:13										Image with all sensors (DHUSEL20)
02/11/94 22:06:28	22:06:28										Image with Hires (DHUSEL30)
02/11/94 22:06:48	22:06:48										Activate ST-B (DHUSEL2);
02/11/94 22:06:00	22:06:00										Inertial Point to Vega (FEB11VEGA4)
02/11/94 22:07:50	22:07:50										Image with all sensors (DHUSEL20)
02/11/94 22:08:05	22:08:05										Image with Hires (DHUSEL30)
02/11/94 22:08:25	22:08:25										Activate ST-B (DHUSEL2);
02/11/94 22:09:00	22:09:00										Inertial Point to Vega (FEB11VEGA5)
02/11/94 22:09:12	22:09:12										Image with all sensors (DHUSEL20)
02/11/94 22:09:27	22:09:27										Image with Hires (DHUSEL30)
02/11/94 22:09:47	22:09:47										Activate ST-B (DHUSEL2);
02/11/94 22:10:00	22:10:00										Inertial Point to Vega (FEB11VEGA6)
02/11/94 22:10:43	22:10:43										Image with all sensors (DHUSEL20)
02/11/94 22:10:58	22:10:58										Image with Hires (DHUSEL30)
02/11/94 22:11:18	22:11:18										Activate ST-B (DHUSEL2);
02/11/94 22:12:00	22:12:00										Inertial Point to Vega (FEB11VEGA7)
02/11/94 22:12:18	22:12:18										Image with all sensors (DHUSEL20)

02/11/94 22:12:08	22:12:08										Image with Hires (DHUSEL30)
02/11/94 22:12:28	22:12:28										Activate ST-B (DHUSEL2);
02/11/94 22:13:00	22:13:00										Inertial Point to Vega (FEB11VEGA8)
02/11/94 22:14:08	22:14:08										Image with all sensors (DHUSEL20)
02/11/94 22:14:25	22:14:25										Image with Hires (DHUSEL30)
02/11/94 22:14:44	22:14:44										Activate ST-B (DHUSEL2);
02/11/94 22:15:00	22:15:00										Inertial Point to Vega (FEB11VEGA9)
02/11/94 22:15:41	22:15:41										Image with all sensors (DHUSEL20)
02/11/94 22:15:55	22:15:55										Image with Hires (DHUSEL30)
02/11/94 22:16:16	22:16:16										Activate ST-B (DHUSEL2);
02/11/94 22:17:00	22:17:00										Inertial Point to Vega (FEB11VEGA10)
02/11/94 22:17:23	22:17:23										Image with all sensors (DHUSEL20)
02/11/94 22:17:37	22:17:37										Image with Hires (DHUSEL30)
02/11/94 22:17:58	22:17:58										Activate ST-B (DHUSEL2);
02/11/94 22:20:00	22:20:00										Inertial Point to Vega (FEB11VEGA11)
02/11/94 22:20:57	22:20:57										Image with all sensors (DHUSEL20)
02/11/94 22:21:12	22:21:12										Image with Hires (DHUSEL30)
02/11/94 22:21:32	22:21:32										Activate ST-B (DHUSEL2);
02/11/94 22:22:00	22:22:00										Inertial Point to Vega (FEB11VEGA12)
02/11/94 22:22:33	22:22:33										Image with all sensors (DHUSEL20)
02/11/94 22:22:48	22:22:48										Image with Hires (DHUSEL30)
02/11/94 22:23:08	22:23:08										Activate ST-B (DHUSEL2);

02/11/94 22:24:00	22:24:00										Inertial Point to Vega (FEB11VEGA13)
02/11/94 22:24:08	22:24:08										Image with all sensors (DHUSEL20)
02/11/94 22:24:23	22:24:23										Image with Hires (DHUSEL30)
02/11/94 22:24:43	22:24:43										Activate ST-B (DHUSEL2);
02/11/94 22:25:00	22:25:00										Inertial Point to Vega (FEB11VEGA14)
02/11/94 22:25:44	22:25:44										Image with all sensors (DHUSEL20)
02/11/94 22:25:59	22:25:59										Image with Hires (DHUSEL30)
02/11/94 22:26:19	22:26:19										Activate ST-B (DHUSEL2);
02/11/94 21:27:00	21:27:00										Inertial Point to Vega (FEB11VEGA15)
02/11/94 22:27:27	22:27:27										Image with all sensors (DHUSEL20)
02/11/94 22:27:42	22:27:42										Image with Hires (DHUSEL30)
02/11/94 22:28:02	22:28:02										Activate ST-B (DHUSEL2);
02/11/94 21:28:00	21:28:00										Inertial Point to Vega (FEB11VEGA16)
02/11/94 22:29:32	22:29:32										Image with all sensors (DHUSEL20)
02/11/94 22:29:38	22:29:38										Image with Hires (DHUSEL30)
02/11/94 22:31:31	22:31:31										Activate ST-B (DHUSEL2);
02/11/94 22:35:00	22:35:00										Turn OFF UV & HR cameras
02/11/94 22:44:00	22:44:00										Close sensor door
02/11/94 22:54:00	22:54:00										Ranging A OFF
02/11/94 22:55:00	22:55:00										Slew s/c HGA to MAD (GNC13MADRW)
02/11/94 23:11:00	23:11:00										Switch to DHU mode @ 128 kbps
02/11/94 23:16:00	23:16:00										Ranging B ON

02/11/94 23:17:00	23:17:00										Downlink SDR Segment 2
02/11/94 23:34:00	23:34:00										Downlink SDR Segment 3

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					No SCL scripts, all ground commands.
					All Sensors Compressed and Uncompressed, including star trackers
					All Sensors Compressed and Uncompressed, including star trackers

						All Sensors Compressed and Uncompressed, including star trackers
						All Sensors Compressed and Uncompressed, including star trackers
						End Earth Observation
						Start RF Test

									Filter 3
									Filter 2
									Filter 3
									Filter 3
									Filter 3
									Filter 3
									End Dark Field Test
									Start Earth observation

				Ground Command
				Ground Command

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UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities
02/12/94 00:00:00	0:00:00	0											
02/12/94 00:22:00	0:22:00												Record in SSDR Segment 3
02/12/94 00:25:00	0:25:00												Record in SSDR Segment 4
02/12/94 00:29:00	0:29:00												Record in SSDR Segment 3
02/12/94 00:36:00	0:36:00												Ranging B Off
02/12/94 00:56:00	0:56:00												Uplink and Schedule Lunar rehearsal scripts
02/12/94 01:00:00	1:00:00												Lunar rehearsal
02/12/94 02:18:00	2:18:00												Downlink SSDR Segment 4
02/12/94 02:19:15											MAD	LOS	
02/12/94 03:27:00	3:27:00												Downlink SSDR Segment 1
02/12/94 03:30:00	3:30:00												Downlink SSDR Segment 1
02/12/94 05:57:05											CAN	AOS	
02/12/94 07:04:00	7:04:00												Slew s/c HGA to CAN (GNC13CANRW)
02/12/94 07:37:54											PMK	LOS	
02/12/94 07:41:00	7:41:00												Ranging B On
02/12/94 09:16:39											GDS	LOS	
02/12/94 09:35:00	9:35:00												Ranging B Off
02/12/94 12:11:00	12:11:00												NIR Cooler and Camera On
02/12/94 12:12:00	12:12:00												UV and HIRES cameras On

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02/12/94 12:16:00	12:16:00										Slew s/c Sensors to 50 degree off axis from Sun (FEB12X50)
02/12/94 12:25:00	12:25:00										Request UV Image (DHU36)
02/12/94 12:34:00	12:34:00										Request UV Image (DHU36)
02/12/94 12:38:00	12:38:00										Request HIRES Image (DHU36)
02/12/94 12:45:00	12:45:00										Request HIRES Image (DHU36)
02/12/94 12:46:00	12:46:00										PARK filters (DHUSEL27); Activate ST-A (DHUSEL1);
02/12/94 12:47:00	12:47:00										UV and HIRES cameras off
02/12/94 12:49:00	12:49:00										HIRES camera On
02/12/94 12:50:00	12:50:00										Request HIRES Image (DHU36)
02/12/94 12:51:00	12:51:00										Slew s/c to Sun-soaking attitude (GNC12SUNRW)
02/12/94 12:52:00	12:52:00										PARK filters (DHUSEL27); Activate ST-A (DHUSEL1);
02/12/94 13:06:43									MAD	AOS	
02/12/94 13:27:47									CAN	LOS	
02/12/94 15:20:00	15:20:00										IMU B Off
02/12/94 15:21:00	15:21:00										Slew s/c Sensors to 10 degree off axis from Sun (FEB12X10)
02/12/94 15:25:00	15:25:00										Request HIRES Image (DHU36)
02/12/94 15:26:00	15:26:00										Request HIRES Image (DHU36)
02/12/94 15:29:00	15:29:00										NIR Cooler and Camera OFF
02/12/94 15:30:00	15:30:00										UV and HIRES cameras off
02/12/94 15:34:00	15:34:00										Request realtime HiRes Image
02/12/94 15:38:00	15:38:00										HIRES cameras On
02/12/94 15:44:00	15:44:00										UV camera On
02/12/94 16:01:00	16:01:00										Downlink SDR Segment 1
02/12/94 16:03:00	16:03:00										UV camera Off
02/12/94 16:04:00	16:04:00										Close Sensor Door
02/12/94 17:34:20									PMK	AOS	

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02/12/94 18:51:00	18:51:00										Uplink and Schedule Lunar rehearsal scripts
02/12/94 19:00:00	19:00:00										Lunar rehearsal
02/12/94 19:59:00	19:59:00										Switch to DHU mode @ 128 kbps
02/12/94 20:02:00	20:02:00										Downlink SSSDR Segment 4
02/12/94 21:17:19								GDS	AOS		
02/12/94 22:22:00	22:22:00										NIR andd LWIR Coolers and Cameras On
02/12/94 22:24:00	22:24:00										Switch to DHU mode @ 64 kbps
02/12/94 22:25:00	22:25:00										Switch to OMNI
02/12/94 22:28:00	22:28:00										UV and HIRES cameras On
02/12/94 22:29:00	22:29:00										Record in SSSDR Segment 1
02/12/94 22:42:00	22:42:00										Load exposure table (EXPDAY3)
02/12/94 22:43:00	22:43:00										Uplink DHU Sequence SEQ_22
02/12/94 22:44:00	22:44:00										Initialize filters (DHUSEL27); Activate ST-B (DHUSEL2);
02/12/94 22:45:00	22:45:00										Request realtime UV Image (DUMP_UV14)
02/12/94 22:46:00	22:46:00										DHUSEL22
02/12/94 22:47:00	22:47:00										Activate ST-B (DHUSEL2);
02/12/94 22:48:00	22:48:00										Open Sensor Door
02/12/94 22:49:00	22:49:00										Request realtime UV Image (DUMP_UV14)
02/12/94 22:51:00	22:51:00										DHUSEL22
02/12/94 20:52:00	20:52:00										Activate ST-B (DHUSEL2);
02/12/94 22:54:00	22:54:00										Request realtime UV Image (DUMP_UV14)
02/12/94 22:56:00	22:56:00										DHUSEL22
02/12/94 22:58:00	22:58:00										Activate ST-B (DHUSEL2);
02/12/94 23:00:00	23:00:00										All Sensors Off
02/12/94 23:06:00	23:06:00										HiRes camera On

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02/12/94 23:07:00	23:07:00									Initialize filters (DHUSEL27); Activate ST-B (DHUSEL2);
02/12/94 23:08:00	23:08:00									HiRes camera Off
02/12/94 23:12:00	23:12:00									UV Camera On
02/12/94 23:18:00	23:18:00									Slew s/c Sensors to Vega (VEGAFEB13)
02/12/94 23:19:00	23:19:00									Request realtime UV Image (DUMP_UV14)
02/12/94 23:19:30	23:19:30									DHUSEL29
02/12/94 23:20:00	23:20:00									Activate ST-B (DHUSEL2);
02/12/94 23:22:00	23:22:00									UV Camera Off
02/12/94 23:33:00	23:33:00									Close Sensor Door
02/12/94 23:34:00	23:34:00									Slew s/c HGA to PMK (GNC13PMKRW)
02/12/94 23:37:00	23:37:00									Switch to HGA
02/12/94 23:38:00	23:38:00									Switch to DHU mode @ 128 kbps
02/12/94 23:39:00	23:39:00									Downlink SSSDR Segment 1
02/12/94 23:52:00	23:52:00									Downlink SSSDR Segment 2
02/12/94 23:56:00	23:56:00									Switch to DHU mode @ 64 kbps

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UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					All ground commands except for the Lunar rehearsal scheduled SCL script
					TLM Test
					Lunar Rehearsal
					via SCL script
					End Lunar rehearsal
					Stray Light test

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UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities
02/13/94 00:00:00	0:00:00	0											UV filter test, veiling glare test, and auto-exposure test using the Earth as a target planned
02/13/94 00:08:00	0:08:00												IMU B On
02/13/94 01:49:00	1:49:00												Uplink DHU Sequence SEQ_29
02/13/94 01:50:00	1:50:00												Slew s/c Sensors to Vega (VEGAFEB13)
02/13/94 02:00:00	2:00:00												Open Sensor Door
02/13/94 02:01:00	2:01:00												UV Camera On
02/13/94 02:01:00	2:01:00												Initialize filters (DHUSEL26); Activate ST-B (DHUSEL2);
02/13/94 02:02:00	2:02:00												Record in SSSDR Segment 1
02/13/94 02:06:00	2:06:00												DHUSEL26
02/13/94 02:07:00	2:07:00												Activate ST-B (DHUSEL2);
02/13/94 02:08:00	2:08:00												UV Camera Off
02/13/94 02:10:00	2:10:00												Close Sensor Door
02/13/94 02:21:57											MAD	LOS	
02/13/94 02:22:00	2:22:00												Slew s/c HGA to PMK (GNC13PMKRW)
02/13/94 02:29:00	2:29:00												Switch to HGA
02/13/94 02:30:00	2:30:00												Switch to DHU mode @ 128 kbps
02/13/94 02:31:00	2:31:00												Downlink SSSDR Segment 1
02/13/94 05:09:00	5:09:00												Record in SSSDR Segment 2
02/13/94 05:09:00	5:09:00												Slew s/c Sensors to 10 degrees off axis from Sun (FEB12X10)

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02/13/94 05:13:00	5:13:00											UV and HIRES cameras On
02/13/94 05:16:00	5:16:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 05:22:00	5:22:00											Open Sensor Door
02/13/94 05:23:00	5:23:00											Request realtime UV Image (DHU36_UVVISVL)
02/13/94 05:25:00	5:25:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 05:28:00	5:28:00											Request realtime UV Image (DHU36_UVVISVL)
02/13/94 05:30:00	5:30:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 05:32:00	5:32:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 05:35:00	5:35:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 05:48:00	5:48:00											Slew s/c Sensors to 11 degrees off axis from Sun (FEB12X11)
02/13/94 05:49:00	5:49:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 05:51:00	5:51:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 05:57:00	5:57:00											Slew s/c Sensors to 12 degrees off axis from Sun (FEB12X12)
02/13/94 05:58:00	5:58:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 06:02:00	6:02:00											Request realtime UV Image (DHU36_UVVISVL)
02/13/94 06:04:00	6:04:00											Slew s/c Sensors to 13 degrees off axis from Sun (FEB12X13)
02/13/94 06:06:00	6:06:00											Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 06:06:08									CAN		AOS	
02/13/94 06:09:00	6:09:00											Slew s/c Sensors to 14 degrees off axis from Sun (FEB12X14)
02/13/94 06:15:00	6:15:00											Request realtime UV Image (DHU36_UVVISVL)

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02/13/94 06:18:00	6:18:00									Slew s/c Sensors to 15 degrees off axis from Sun (FEB12X15)
02/13/94 06:20:00	6:20:00									Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 06:24:00	6:24:00									Request realtime UV Image (DHU36_UVVISVL)
02/13/94 06:29:00	6:29:00									Slew s/c Sensors to 20 degrees off axis from Sun (FEB12X20)
02/13/94 06:34:00	6:34:00									Request realtime UV Image (DHU36_UVVISVL)
02/13/94 06:35:00	6:35:00									Request realtime UV Image (DHU36_UVVISVL)
02/13/94 06:40:00	6:40:00									Request realtime UV Image (DHU36_UVVISVL)
02/13/94 06:41:00	6:41:00									Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 06:42:00	6:42:00									Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 06:45:00	6:45:00									Slew s/c Sensors to 30 degrees off axis from Sun (FEB12X30)
02/13/94 06:48:00	6:48:00									Request realtime UV Image (DHU36_UVVISVL)
02/13/94 06:51:00	6:51:00									Request realtime UV Image (DHU36_UVVISVL)
02/13/94 06:56:00	6:56:00									Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 06:57:00	6:57:00									Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:00:00	7:00:00									Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:03:00	7:03:00									Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:08:00	7:08:00									Slew s/c Sensors to 25 degrees off axis from Sun (FEB12X25)
02/13/94 07:15:00	7:15:00									Request realtime UV Image (DHU36_UVVISVL)
02/13/94 07:18:00	7:18:00									Request realtime UV Image (DHU36_UVVISVL)

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02/13/94 07:20:00	7:20:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:21:00	7:21:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:22:00	7:22:00																			Request realtime UV Image (DHU36_UVVISVL)
02/13/94 07:23:00	7:23:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:24:00	7:24:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:26:00	7:26:00																			Slew s/c Sensors to 38 degrees off axis from Sun (FEB12X38)
02/13/94 07:29:00	7:29:00																			Request realtime UV Image (DHU36_UVVISVL)
02/13/94 07:32:00	7:32:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:34:00	7:34:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:36:00	7:36:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:38:00	7:38:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:38:00	7:38:00																			Slew s/c Sensors to 39 degrees off axis from Sun (FEB12X39)
02/13/94 07:42:00	7:42:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 07:52:26																				
02/13/94 07:53:00	7:53:00																			Ranging A On
02/13/94 07:54:00	7:54:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 08:03:00	8:03:00																			Slew s/c Sensors to 40 degrees off axis from Sun (FEB12X40)
02/13/94 08:04:00	8:04:00																			Request realtime HiRes Image (DHU36_LIDVL)
02/13/94 08:11:00	8:11:00																			UV and HIRES cameras off
02/13/94 08:12:00	8:12:00																			Close Sensor Door

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02/13/94 08:27:00	8:27:00										Slew s/c HGA to CAN (GNC13CANRW)
02/13/94 08:42:00	8:42:00										Ranging B On
02/13/94 08:45:00	8:45:00										Switch to HGA
02/13/94 08:48:00	8:48:00										Switch to DHU mode @ 128 kbps
02/13/94 08:51:00	8:51:00										Downlink SSSDR Segment 2
02/13/94 09:19:59								GDS	LOS		
02/13/94 09:35:00	9:35:00										UV Camera On
02/13/94 11:39:00	11:39:00										UV Camera Off
02/13/94 13:12:12								MAD	AOS		
02/13/94 13:15:48								CAN	LOS		
02/13/94 15:23:00	15:23:00										Switch to DHU mode @ 64 kbps
02/13/94 15:57:00	15:57:00										Slew s/c HGA to MAD (GNC13MADRW)
02/13/94 17:09:00	17:09:00										Open Sensor Door
02/13/94 17:19:00	17:19:00										Switch to OMNI
02/13/94 17:27:38								PMK	AOS		
02/13/94 17:31:00	17:31:00										All Cameras On
02/13/94 17:42:00	17:42:00										Close Sensor Door
02/13/94 18:04:00	18:04:00										Ranging A Off
02/13/94 18:10:00	18:10:00										Slew s/c Sensors to Earth (EARTHFE13)
02/13/94 18:14:00	18:14:00										Ranging B Off
02/13/94 18:29:00	18:29:00										LWIR Camera and Cooler Off
02/13/94 18:47:00	18:47:00										LWIR Camera and Cooler On
02/13/94 19:03:00	19:03:00										PARK filters (DHUSEL27); Activate ST-B (DHUSEL2);
02/13/94 19:04:00	19:04:00										Record in SSSDR Segment 1

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02/13/94 19:05:00	19:05:00									Request realtime HiRes Image (DUMP_H4)
02/13/94 19:05:30	19:05:30									DHUSEL22
02/13/94 19:05:45	19:05:45									Activate ST-B (DHUSEL2);
02/13/94 19:06:00	19:06:00									Request realtime HiRes Image (DUMP_H4)
02/13/94 19:07:15	19:07:15									DHUSEL22
02/13/94 19:08:00	19:08:00									Request realtime HiRes Image (DUMP_H4)
02/13/94 19:11:00	19:11:00									DHUSEL22
02/13/94 19:12:00	19:12:00									Activate ST-B (DHUSEL2);
02/13/94 19:13:00	19:13:00									Request realtime HiRes Image (DUMP_H4)
02/13/94 19:13:30	19:13:30									DHUSEL22
02/13/94 19:14:00	19:14:00									Activate ST-B (DHUSEL2);
02/13/94 19:16:00	19:16:00									Request realtime HiRes Image (DUMP_H4)
02/13/94 19:16:30	19:16:30									DHUSEL22
02/13/94 19:17:00	19:17:00									Activate ST-B (DHUSEL2);
02/13/94 19:17:30	19:17:30									LWIR Camera and Cooler Off
02/13/94 19:37:00	19:37:00									LWIR Camera and Cooler On
02/13/94 19:37:30	19:37:30									Request realtime HiRes Image (DUMP_H4)
02/13/94 19:51:00	19:51:00									DHUSEL22
02/13/94 19:51:30	19:51:30									Activate ST-B (DHUSEL2);
02/13/94 19:54:00	19:54:00									Request realtime HiRes Image (DUMP_H4)
02/13/94 19:54:30	19:54:30									DHUSEL22
02/13/94 19:55:00	19:55:00									Activate ST-B (DHUSEL2);
02/13/94 19:59:00	19:59:00									Request realtime HiRes Image (DUMP_H4)
02/13/94 19:59:30	19:59:30									DHUSEL22
02/13/94 20:00:00	20:00:00									Activate ST-B (DHUSEL2);
02/13/94 20:02:00	20:02:00									DHUSEL22

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02/13/94 20:02:15	20:02:15										Request realtime HiRes Image (DUMP_H4)
02/13/94 20:02:30	20:02:30										Activate ST-B (DHUSEL2);
02/13/94 20:06:00	20:06:00										All Cameras Off
02/13/94 20:08:00	20:08:00										Downlink SDR Segment 1
02/13/94 20:59:00	20:59:00										Slew s/c HGA to PMK (GNC13PMKRW)
02/13/94 21:24:45								GDS	AOS		
02/13/94 22:10:00	22:10:00										Update state vector (GNC53_13FEB2200)

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					No scheduled SCL scripts, all ground commands.
					UV Filter Test
					End UV Filter Test
					Veiling Glare Test

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									End Earth Observation

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UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities
02/14/94 00:00:00													Pointing accuracy test, auto-exposure test using the Earth, and a star occultation observation planned
02/14/94 02:28:10											MAD	LOS	
02/14/94 03:37:47													Read Dosimeter
02/14/94 03:45:25													Expose Dosimeter
02/14/94 04:36:47													Read Dosimeter
02/14/94 04:37:29													Read Dosimeter
02/14/94 04:38:10													Read Dosimeter
02/14/94 04:44:52													Expose Dosimeter
02/14/94 06:00:13													Read Dosimeter
02/14/94 06:08:18													Expose Dosimeter
02/14/94 06:42:23											CAN	AOS	
02/14/94 07:00:25													Read Dosimeter
02/14/94 07:06:28													Expose Dosimeter
02/14/94 08:19:20											PMK	LOS	
02/14/94 08:42:34													RANGE A ON
02/14/94 08:56:00													Slew S/C sensors to Vega (VEGAFEB13)
02/14/94 09:01:44													Read Dosimeter
02/14/94 09:07:33													Expose Dosimeter
02/14/94 09:14:00													Slew S/C sensors to Vega (VEGAFEB14)
02/14/94 09:18:00													Open Sensor Door
02/14/94 09:20:55													UVVIS Camera ON
02/14/94 09:22:23													HIRES Camera On

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02/14/94 09:25:00											Record in SSDR 1
02/14/94 09:26:20											Hires Realtime Image Capture, Very Low settings (DHU36_LIDVL)
02/14/94 09:28:14								GDS	LOS		
02/14/94 09:35:36											UVVIS Realtime Image Capture (DHU36_UVVUSM)
02/14/94 09:38:15											Uplink DHU Sequence SEQ_HR_266
02/14/94 09:38:33											Uplink DHU Sequence SEQ_10
02/14/94 09:39:49											Uplink Exposure Table POINTING_2MS_EXP; Initialize Filters (DHUSEL26); DHUSELNO
02/14/94 09:39:49											DHUSEL10
02/14/94 09:42:03											Activate ST-A (DHUSEL1);
02/14/94 09:43:00											Close Sensor Door
02/14/94 09:43:21											Turn OFF UV/VIS and Hires Cameras
02/14/94 09:59:53											Read Dosimeter
02/14/94 10:05:29											Expose Dosimeter
02/14/94 10:44:04											Read Dosimeter
02/14/94 10:49:24											Expose Dosimeter
02/14/94 10:55:28											Switch to DHU mode @ 64 kbps
02/14/94 10:59:52											Slew S/C to Earth (GNC13CANRW)
02/14/94 11:08:52											Range B ON
02/14/94 11:12:49											Switch to DHU Mode @128 kbps
02/14/94 11:17:22											Download SSDR Segment 1
02/14/94 11:50:13											Read Dosimeter
02/14/94 11:54:17											Expose Dosimeter
02/14/94 12:53:01								CAN	LOS		
02/14/94 13:27:18								MAD	AOS		
02/14/94 14:23:10											Slew S/C to Madrid Station (GNC13MADRW)
02/14/94 14:24:26											Read Dosimeter
02/14/94 14:29:43											Expose Dosimeter

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02/14/94 16:09:16												Read Dosimeter
02/14/94 16:16:38												Expose Dosimeter
02/14/94 16:21:54												Read Dosimeter
02/14/94 16:43:27												Switch to DHU Mode @128 kbps
[Blacked out row]												
02/14/94 17:06:25												Slew S/C to Center on Pleiades (CEXL GNC18,STARIDX=2)
02/14/94 17:08:32												NIR Camera ON
02/14/94 17:09:12												Hires Camera ON
02/14/94 17:09:53												UV/Vis Camera ON
02/14/94 17:10:20												LWIR Camera ON
02/14/94 17:13:25												Open Sensor Door
02/14/94 17:14:56												Uplink Exposure Table: EXPDAY3
02/14/94 17:15:45												Uplink Sequence Table; SEQ_22
02/14/94 17:20:01									PMK	AOS		[Blacked out cell]
02/14/94 17:28:03												DHUSELNO
02/14/94 17:28:36												Expose Dosimeter
02/14/94 17:28:17												Initialize Filter Positions; DHUSEL27
02/14/94 17:29:42												DHUSEL1
02/14/94 17:31:46												Request Real-time Image (DUMP_UV14)
02/14/94 17:32:05												DHUSEL22
02/14/94 17:33:39												Activate ST-A (DHUSEL1);
02/14/94 17:34:42												Request Real-time Image (DUMP_UV14)
02/14/94 17:35:34												DHUSEL22
02/14/94 17:36:24												Activate ST-A (DHUSEL1);
02/14/94 17:37:59												Request Real-time Image (DUMP_UV14)
02/14/94 17:38:13												DHUSEL22
02/14/94 17:38:59												Activate ST-A (DHUSEL1);
02/14/94 17:41:22												Activate Autoexposure (AE_UV14,AE_N1, AE_L)

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02/14/94 17:42:15										Request Real-time Image (DUMP_N1)
02/14/94 17:42:30										DHUSEL22
02/14/94 17:43:00										Request Real-time Image (DUMP_N1)
02/14/94 17:45:06										Activate Centroiding on All Cameras (CENTRD_UV14, CNTRD,H4_CNTRD_N1,CNTRD_L)
02/14/94 17:47:10										Slew S/C to center in UVV (GNC1E, Camera=UV-VIS1)
02/14/94 17:48:57										Request Real-time Image (DUMP_N1)
										DE-Activate Centroiding on IR Cameras, AE_N1,CTL=D,AE_L,CTL=D)
02/14/94 17:53:37										DHUSEL22
02/14/94 17:54:33										Activate ST-A (DHUSEL1);
02/14/94 17:57:38										Activate AutoExposure of UV
02/14/94 17:57:53										De-Activate AutoExposure for UV
02/14/84 17:58:10										De-Activate Centroiding for UV
02/14/94 17:58:53										DHUSELNO
02/14/94 17:58:47										Activate ST-A (DHUSEL1);
02/14/94 18:08:40										Turn OFF NIR and LWIR Cameras
02/14/94 18:13:29										Close Sensor Door
02/14/94 18:13:43										DHUSELNO
02/14/94 18:13:59										Re-Initialize Filters; DHUSEL27
02/14/94 18:14:23										Activate ST-A (DHUSEL1);
02/14/94 18:28:50										Read Dosimeter
02/14/94 18:34:06										Expose Dosimeter
02/14/94 18:39:26										Slew S/C to Center Cameras on Earth (GNC12)
02/14/94 19:01:44										DHUSELNO
02/14/94 19:02:16										Reset SIP
02/14/94 19:03:13										Turn OFF Hires & UV/VIS

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02/14/94 19:08:31										Activate ST-A (DHUSEL1);
02/14/94 19:13:53										Slew S/C (GNC11)
02/14/94 19:14:44										Slew S/C (GNC33)
02/14/94 19:16:14										Slew S/C to Center Cameras on Earth (GNC12)
02/14/94 19:34:19										Read Dosimeter
02/14/94 19:39:33										Expose Dosimeter
02/14/94 20:39:46										Read Dosimeter
02/14/94 20:44:59										Expose Dosimeter
02/14/94 20:43:54										Open Sensor Door
02/14/94 20:47:51										Turn ON HIRES & UV/VIS Cameras
02/14/94 20:49:07										Record in SSDR Segment 2
02/14/94 20:50:59										Upload Exposure Table; P2OCCULT2
02/14/94 20:51:21										Upload Sequence Table; AEQIL_263
02/14/94 20:51:33										Upload Sequence Table; DHUIL1
02/14/94 20:54:05										DHUSELNO
02/14/94 20:54:32										Initialize Filters; DHUSEL26
02/14/94 20:54:49										DHUSEL14
02/14/94 21:01:01										DHUSELNO
02/14/94 21:01:45										Activate ST-A (DHUSEL1);
02/14/94 21:02:21										Close Sensor Door
02/14/94 21:03:22										Turn OFF Hires & UVVIS Cameras
02/14/94 21:05:39										Slew S/C to Center on Earth (GNC12)
02/14/94 21:23:51										Downlink SSDR Segment 1
02/14/94 21:45:11										Read Dosimeter
02/14/94 21:50:27										Expose Dosimeter
02/14/94 21:39:12										Downlink SSDR Segment 2
02/14/94 21:50:19								GDS	AOS	
02/14/94 22:50:40										Read Dosimeter
02/14/94 23:56:35										Slew S/C (GNC12P2)

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					No scheduled SCL scripts, all ground commands.
					Begin Pointing Accuracy Test

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities
02/15/94 00:00:00													
02/15/94 00:01:00											MAD	LOS	
02/15/94 03:01:14													Read Dosimeter
02/15/94 03:06:38													Expose Dosimeter
02/15/94 03:38:47											CAN	AOS	
02/15/94 03:48:20													Read Dosimeter
02/15/94 03:53:44													Expose Doseimter
02/15/94 03:57:17													Expose Dosimeter
02/15/94 04:41:14													Read Dosimeter
02/15/94 04:46:27													Expose Dosimeter
02/15/94 05:18:46											PMK	LOS	
02/15/94 05:48:40													Slew S/C to P2 burn attitude (GNC12P2)
02/15/94 06:26:57													Read Dosimeter
02/15/94 06:32:12													Expose Dosimeter
02/15/94 06:59:56													Read Dosimeter
02/15/94 07:04:57													Expose Dosimeter
02/15/94 07:39:15													Read Dosimeter
02/15/94 07:44:27													Expose Dosimeter
02/15/94 07:59:43											GDS	LOS	
02/15/94 08:13:40													Slew S/C to updated P2 burn attitude (GNC12P2RW)
02/15/94 08:50:00													Uplink and Schedule P2 burn scripts
02/15/94 09:05:00													Expose Dosimeter

02/15/94 09:10:00												Read Dosimeter
02/15/94 09:22:00												Expose Dosimeter
02/15/94 09:23:00												Read Dosimeter
02/15/94 09:53:00												Expose Dosimeter
02/15/94 09:58:00												Read Dosimeter
02/15/94 10:18:00												Record TLM in SSSDR Segment 0
02/15/94 11:36:00												IMU B On
02/15/94 12:52:32												P2 BURN
02/15/94 12:55:31										MAD	AOS	
02/15/94 13:36:50										CAN	LOS	
02/15/94 15:46:00												IMU B Off
02/15/94 15:56:00												Slew S/C to sun soaking attitude (GNC12SUNRW)
02/15/94 15:59:00												IMU B On
02/15/94 15:59:00												Slew S/C HGA to MAD (GNC12MADRW)
02/15/94 16:41:00												Switch to DHU mode @ 8 kbps
02/15/94 16:45:00												Switch to DHU mode @ 128 kbps
02/15/94 16:56:00												Downlink SSSDR Segment 0
02/15/94 17:18:00												Downlink SSSDR Segment 2
02/15/94 17:31:00												Downlink SSSDR Segment 3
02/15/94 17:44:28										PMK	AOS	
02/15/94 17:59:00												Downlink SSSDR Segment 4
02/15/94 18:42:00												Downlink SSSDR Segment 5
02/15/94 20:06:00												Downlink SSSDR Segment 6
02/15/94 20:31:06										GDS	AOS	
02/15/94 20:54:00												Downlink SSSDR Segment 2
02/15/94 21:15:17												Turn ON NIR, LWIR, UV/VIS, Hires Cameras

02/15/94 21:43:17											Uplink Exposure Tables; (EXPDAY3)
02/15/94 21:43:52											Uplink Sequence Table; SEQ_262
02/15/94 21:44:49											Initialize Filters; DHUSEL26
02/15/94 21:45:13											Activate ST-A (DHUSEL1);
02/15/94 21:45:43											OPEN SENSOR DOOR
02/15/94 22:14:55											Record in SSSR Segment 1
02/15/94 22:21:33											Request Realtime Image (DUMP_UV14)
02/15/94 22:22:30											DHUSEL0
02/15/94 22:23:19											Activate ST-A (DHUSEL1);
02/15/94 22:24:20											Request Realtime Image (DUMP_UV14)
02/15/94 22:24:37											Activate AutoExposure for UV/VIS, NIR, LWIR (AE_UV14,AE_N1,AE_L)
02/15/94 22:25:21											DHUSEL0
02/15/94 22:26:50											Request Realtime Image (DUMP_UV14)
02/15/94 22:28:22											Activate ST-A (DHUSEL1);
02/15/94 22:29:19											Request Realtime Image (DUMP_UV14)
02/15/94 22:29:34											Activate Centroiding for UV/Vis, Hires (CNTRD_UV14,CNTRD,H4)
02/15/94 22:30:15											DHUSEL0
02/15/94 22:31:51											Activate Centroiding for NIR (CNTRD_N1)
02/15/94 22:32:46											Request Realtime Image; (DUMP_N1)
02/15/94 22:33:14											Activate Centroiding for LWIR (CNTRD_L)
02/15/94 22:34:04											Activate ST-A (DHUSEL1);
02/15/94 22:34:32											De-Activate Centroiding for UV/VIS, HIRES,NIR,LWIR
02/15/94 22:35:32											DHUSEL27
02/15/94 22:37:40											Activate ST-A (DHUSEL1);
											Turn off AutoExposure

02/15/94 22:48:00												Close Sensor Door
02/15/94 22:48:00												Turn off LWIR,NIR,UV/VIS,HIRES
02/15/94 22:56:00												Slew S/C to Sun-Soaked (GNC12SUNRW)

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					P2 burn by scheduled SCL script, all else ground commands.
					P2 Burn

						End Earth Observation #8

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event
02/16/94 00:14:00												
02/16/94 00:17:00												
02/16/94 00:23:00												
02/16/94 00:31:00												
02/16/94 00:36:00												
02/16/94 00:36:00												
02/16/94 00:36:00												
02/16/94 00:36:00												
02/16/94 00:41:00												

02/16/94 00:58:00									
02/16/94 00:58:22								MAD	LOS
02/16/94 01:05:00									
02/16/94 01:09:00									
02/15/94 02:15:00									
02/16/94 02:21:08									
02/16/94 02:32:00									
02/16/94 02:36:00									
02/16/94 02:37:00									
02/16/94 02:50:00									
02/16/94 02:50:00									
02/16/94 02:50:00									

02/16/94 02:51:00												
02/16/94 02:51:00												
02/16/94 02:51:00												
02/16/94 03:40:00												
02/16/94 03:40:00												
02/16/94 03:46:00												
02/16/94 03:47:00												
02/16/94 03:59:00												
02/16/94 04:10:00												
02/16/94 04:17:00												
02/16/94 04:17:48										CAN	AOS	

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 By:rjp

02/16/94 04:23:00											
02/16/94 04:25:00											
02/16/94 04:37:00											
02/16/94 04:37:00											
02/16/94 04:59:00											
02/16/94 05:01:00											
02/16/94 05:26:00											
02/16/94 05:28:00											
02/16/94 05:31:00											
02/16/94 05:39:00											
02/16/94 05:45:00											
02/16/94 05:49:00											
02/16/94 05:58:22										PMK	LOS
02/16/94 06:26:00											
02/16/94 07:17:00											

02/16/94 07:52:00										
02/16/94 07:58:00										
02/16/94 07:59:00										
02/16/94 08:09:00										
02/16/94 08:18:00										
02/16/94 08:21:00										
02/16/94 08:23:00										
02/16/94 08:25:10								GDS	LOS	
02/16/94 08:31:00										
02/16/94 08:35:00										
02/16/94 08:44:00										
02/16/94 09:21:00										
02/16/94 09:22:00										
02/16/94 09:25:00										
02/16/94 10:09:00										
02/16/94 10:12:00										
02/16/94 10:30:00										
02/16/94 10:39:00										
02/16/94 10:52:00										
02/16/94 10:58:00										
02/16/94 11:00:00										
02/16/94 11:07:00										
02/16/94 11:24:00										

02/16/94 12:41:22										MAD	AOS
02/16/94 12:50:00											
02/16/94 12:54:00											
02/16/94 13:04:00											
02/16/94 13:07:00											
02/16/94 13:30:02										CAN	LOS
02/16/94 13:24:00											
02/16/94 13:27:00											
02/16/94 13:28:00											
02/16/94 14:42:00											
02/16/94 14:43:00											
02/16/94 14:45:00											
02/16/94 15:41:00											
02/16/94 15:46:00											
02/16/95 15:56:00											
02/16/94 16:02:00											
02/16/94 16:56:00											
02/16/94 17:01:00											
02/16/94 17:08:00											
02/16/94 17:09:00											
02/16/94 17:13:00											
02/16/94 17:14:00											

02/16/94 17:15:00										
2/16/194 17:17										
02/16/94 17:17:00										
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02/16/94 17:21:00										
02/16/94 17:26:50										
02/16/94 17:27:20										
02/16/94 17:29:00										
02/16/94 17:32:35										
02/16/94 17:32:50										
02/16/94 17:32:56									PMK	AOS
02/16/94 17:33:15										
02/16/94 17:34:32										
02/16/94 17:35:04										
02/16/94 17:36:25										
02/16/94 17:38:37										
02/16/94 17:38:52										
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02/16/94 17:42:43										
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02/16/94 17:48:21										

02/16/94 17:45:27									
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02/16/94 17:49:22									
02/16/94 17:50:21									
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02/16/94 18:03:36									
02/16/94 18:04:03									
02/16/94 18:27:52									
02/16/94 18:28:00									
02/16/94 18:36:00									
02/16/94 20:21:00									
02/16/94 20:28:00									
02/16/94 20:28:20							GDS	AOS	
02/16/94 20:46:08									
02/16/94 20:46:30									
02/16/94 20:48:00									
02/16/94 20:56:00									
02/16/94 20:58:00									
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02/16/94 20:59:00									
02/16/94 20:59:00									
02/16/94 21:00:08									

02/16/94 21:00:34									
02/16/94 21:00:52									
02/16/94 21:01:37									
02/16/94 21:01:57									
02/16/94 21:04:33									
02/16/94 21:04:44									
02/16/94 21:05:04									
02/16/94 21:06:14									
02/16/94 21:07:12									
02/16/94 21:07:32									
02/16/94 21:07:57									
02/16/94 21:09:30									
02/16/94 21:09:46									
02/16/94 21:10:03									
02/16/94 21:10:33									
02/16/94 21:11:37									
02/16/94 21:13:45									
02/16/94 21:14:45									
02/16/94 21:15:20									
02/16/94 21:20:00									

02/16/94 21:22:27										
02/16/94 21:26:31										
02/16/94 21:36:00										
02/16/94 21:45:50										
02/16/04 21:56:00										
02/16/94 21:59:00										
02/16/94 21:59:00										
02/16/94 22:00:00										
02/16/94 22:05:56										
02/16/94 22:05:56										
02/16/94 22:15:20										
02/16/94 22:16:16										
02/16/94 22:32:00										
02/16/94 22:58:00										
02/16/94 23:03:00										
02/16/94 23:05:00										
02/16/94 23:08:20										
02/16/94 23:20:00										
02/16/94 23:21:00										
02/16/94 23:24:03										

S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
BEGIN DARKFIELD TEST						
TURN ON LWIR, NIR CAMERAS						NOTE: THIS TEST EXECUTED PROPERLY BUT THE IMAGES WERE NOT SAVED TO THE SSDR
CLOSE Startracker Doors						
Record in SSDR Segment 2						
Execute STDark (Perform Startracker Dark fields)						
Load up new STA Exposure Settings every 6 seconds (18 sets in all)						
Take Startracker A Dark fields (DHUSEL13)						Uncompressed STA Images No Data
Load up new STB Exposure Settings every 6 seconds (18 sets in all)						
Take Startracker B Darkfields (DHUSEL14)						Uncompressed STB Images No Data
Open STA Door						
Activate STA (DHUSEL1)						
Turn ON Hires, UV/VIS Cameras						
Initialize Filters; DHUSEL26						
DHUSELNO						
Start UV/Vis Darkfields						
Upload new UVV Exposure settings every 2 seconds (18 sets in all)						
Take Darkfield Images (DHUSEL15)						No Data
DHUSEL1						
Turn OFF UV/Vis Camera						
Start Hires Darkfields						
Upload new Hires Exposure settings every 2 seconds (27 sets in all)						

Take Darkfield Images (DHUSEL16)						No Data
DHUSEL1						
Turn OFF Hires Camera						
Slew S/C so Sensors Point to South Galactic Pole; (GNC12SPG01)						
Open Sensor Door						
Start NIR Darkfields						
Upload new NIR Exposure settings every second (20 sets in all)						
Take NIR Darkfield Images (DHUSEL18)						No Data
DHUSELNO						
Turn OFF NIR Camera						
Start LWIR Darkfields						
Upload new LWIR Exposure settings every second (20 sets in all)						
Take LWIR Darkfield images (DHUSEL17)						No Data
DHUSEL 1						
Turn OFF LWIR Camera						
Close Sensor Door						
Slew S/C to Sun-Soaked Attitude (GNC12SUNRW)						
						END DARKFIELD TEST
						Begin Cooldown Test
Slew S/C to point Sensors to South Galactic Pole (GNC12SGP01)						
OPEN SENSOR DOOR						
Open Startracker B Door						
DHUSEL21						
Activate Startracker B (DHUSEL2)						
Turn ON NIR, LWIR Cameras						
Record in SDR Segment 2						
Upload Exposure Tables; COOL_EXP						

Upload Sequence Table; DHUSEQ_21					
Upload Sequence Table; SEQ_IRS					
For 40 cycles: Every Minute: DHUSEL31; DHUSEL21					
DHUSELNO					
Upload Sequence table; SEQ_31					
					End Cooldown Test
					Begin Dark field Test
Record in SDDR Segment 3					THIS TEST IS BEING REPEATED SINCE THE IMAGES FROM THE EARLIER RUN WERE NOT SAVED
Start NIR Darkfields					
Upload new NIR Exposure settings every second (20 sets in all)					
Take NIR Darkfield Images (DHUSEL18)					
DHUSELNO					
Turn OFF NIR Camera					
Start LWIR Darkfields					
Upload new LWIR Exposure settings every second (20 sets in all)					
Take LWIR Darkfield images (DHUSEL17)					
DHUSEL 1					
Turn OFF LWIR Camera					
Turn ON Hires and UV/Vis Cameras					
DHUSEL1					
Slew S/C (GNC12MZMYRW)					
Close Both Startracker Doors					
Execute STDark (Perform Startracker Dark fields)					
Load up new STA Exposure Settings every 6 seconds (18 sets in all)					

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Take Startracker A Dark fields (DHUSEL13)						Uncompressed STA Images
Load up new STB Exposure Settings every 6 seconds (18 sets in all)						
Take Startracker B Darkfields (DHUSEL14)						Uncompressed STB Images
Activate Startracker A						
Start UV/Vis Darkfields						
Upload new UVV Exposure settings every 2 seconds (18 sets in all)						
Take Darkfield Images (DHUSEL15)						
DHUSEL1						
Turn OFF UV/Vis Camera						
Start Hires Darkfields						
Upload new Hires Exposure settings every 2 seconds (27 sets in all)						
Take Darkfield Images (DHUSEL16)						
Activate Startracker A (DHUSEL1)						
Turn OFF Hires Camera						
Slew S/C High Gain Antenna to Goldstone Station (GNC13GDSRW)						
Switch to High Gain Transmitter						
DHUSELNO						
Upload New Exposure Settings for Startrackers (STA_350_2_OFF7; STB_350_2_OFF7)						
DHUSEL1						
Slew S/C to point High Gain Antenna at Goldstone						
						End Dark Field Test
Download SDR Segment 2						
Download SDR Segment 2						
Download SDR Segment 3						
Download SDR Segment 3						

Slew S/C to point High Gain Antenna to Canberra (GNC13CANRW)							
Switch to Datarate of 8 kbps							
Switch to Omni Transmitter							
							Begin Full Earth Observation
Slew S/C to Center Sensors on Full Earth (GNC13JOSHRW)							
Turn on Hires, UV/VIS Cameras							
Record to SSSDR Segment 1							
Request UV/Vis Realtime Image, filter 1							
Request UV/Vis Realtime Image, filter 1							
Set Data link rate to 64 kbps							
Set Data link rate back to 8 kbps							
Upload Sequence Table (EARTHS_SEG_31)							
Upload Exposure Settings (EXPDAYVDB)							
DHUSEL31							
Set Data Rate to 8 kbps							
DHUSEL1							
Turn OFF UVVIS, Hires							
							End Full Earth Observation
							Prepare for P2 Correction Burn
Slew S/C to P2 Correction Burn Orientation (GNC12P2CRW)							
Record to SSSDR Segment 0							
Slew S/C High Gain Antenna to Canberra (GNC13CANRW)							
Switch to Omni Transmitter							
Close both Startracker Doors							
Switch to High-Gain Transmitter							

Slew S/C to P2 Correction Burn Orientation (GNC12P2CRW)									
P2 Correction Burn									
Slew S/C High Gain Antenna to Canberra (GNC13CANRW)									
Swith to Omni Transmitter									
Switch to High-Gain Transmitter									
Switch to Omni Transmitter									
Slew S/C High Gain Antenna to Goldstone Site (GNC13GDSRW)									
Slew S/C High Gain to Madrid Station (GNC12MADRW)									
Switch to High Gain Transmitter									
Open Startracker A Door									
Activate Startracker A (DHUSEL1)									
Read Dosimeter									
Expose Dosimeter									
Switch to Downlink Rate of 128 kpbs									
Download SDR Segment 0									
									Begin Earth Observation #9
Switch to Omni Transmitter									
Slew S/C to Earth Observation Attitude (GNC12EOF1612)									
Turn ON All Cameras									
Turn off Laser Transmitter									
Open Startracker B Door									
Upload Exposure Paramters (EXPDAY4)									

Upload Sequence Table (SEQ_262)						
Initialize Filters (DHUSEL26)						
Activate Startracker A (DHUSEL1)						
Record to SDR Segment 1						
DHUSEL10						Filter 3
Activate Startracker A (DHUSEL1)						
DHUSEL0						Compressed & Uncompressed, including Startrackers
DHUSEL1						
Open Sensor Door						
Request UV Image, filter 4						
DHUSEL0						Compressed & Uncompressed, including Startrackers
DHUSEL1						
Request UV Image, filter 4						
Activate Autoexposure for UV/VIS, NIR, LWIR Cameras						
DHUSEL0						Compressed & Uncompressed, including Startrackers
Request UV Image, filter 4						
DHUSEL1						
Activate Centroiding for UV/VIS, filter 4, Hires, filter 4, NIR, filter 1						
Request NIR Image, filter 1						
DHUSEL0						Compressed & Uncompressed, including Startrackers
Activate Centroiding for NIR, filter 1, LWIR						

DHUSEL1									
Deactivate Centroiding, all Cameras									
Reset Filter Settings (DHUSEL27									
Activate Startracker A (DHUSEL1)									
Upload Default Startracker Exposure Settings (STA_3502_OFF7, STB_350_2_OFF7)									
DHUSEL10								Filter 3	
Activate Startracker A (DHUSEL1)									
Turn OFF All Cameras									
Close Sensor Door									
Download SDR Segment 1									
								End Earth Observation #9	
								Begin Moon Observation	
Close Startracker B Door									
Slew S/C to Lunar Pointing (GNC14)									
Turn ON all Cameras									
Turn OFF Laser Transmitter									
Open Sensor Door									
Upload Exposure Paramters (EXPDAY4)									
Upload Sequence Table (SEQ_262)									
Initialize Filters (DHUSEL26)									
Activate Startracker A (DHUSEL1)									
Record to SDR Segment 1									
DHUSEL10								Filter 3	

Activate Startracker A (DHUSEL1)							
Request UV Image, Filter 1							
DHUSEL0						Compressed & Uncompressed, including Startrackers	
DHUSEL1							
Request UV Image, filter 4							
DHUSEL0						Compressed & Uncompressed, including Startrackers	
DHUSEL1							
Activate Autoexposure for UV/VIS, filter 4, NIR, filter 1, LWIR Cameras							
DHUSEL0						Compressed & Uncompressed, including Startrackers	
Request UV Image, filter 4							
DHUSEL1							
Activate Centroiding for UV/VIS, filter 4							
DHUSEL0						Compressed & Uncompressed, including Startrackers	
Request UV Image, filter 4							
DHUSEL1							
Deactivate Centroiding for UV/VIS							
DHUSEL10							
DHUSEL1							
Upload Default Startracker Exposure Settings (STA_350_2_OFF7, STB_350_2_OFF7)							
DHU Crash/ Reboot							

Turn OFF All Cameras									
Close Sensor Door									
									End Moon Observation
Reset DHU									
Upload DHU Code Ver 2.41									
Upload Startracker Sequence Tables (SEQ_01, SEQ_02)									
Run Startracker A (DHUSEL1)									
Run Startracker B (DHUSEL2)									
DHUSEL1									
DHUSELNO									
Upload B_PHASE Sequence Tables									
DHUSEL1									
Turn Ranging A OFF									
Upload A_PHASE Sequence Tables									
Upload DHU Compression Tables									
Turn Ranging B OFF									
Set Data Link Rate to 8 kbps									
Slew S/C High Gain Antenna to Pomonkey Station (GNC13PMKRW)									
Turn ON High Gain Transmitter									
Set Data Link Rate to 128 kbps									
Download SDR Segment 1									

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UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event
02/17/94 01:18:00											MAD	LOS
02/17/94 01:42:36												
02/17/94 01:47:45												
02/17/94 01:47:56												
02/17/94 01:53:01												
02/17/94 02:39:00												
02/17/94 02:39:00												
02/17/94 02:44:00												
02/17/94 02:58:00												
02/17/94 03:00:00												
02/17/94 03:01:00												
02/17/94 03:14:24												
02/17/94 03:17:48												
02/17/94 03:18:16												
02/17/94 03:27:28												
02/17/94 03:28:00												
02/17/94 03:30:58												
02/17/94 03:55:58												
02/17/94 03:58:37												
02/17/94 03:59:25												

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02/17/94 04:04:16										
02/17/94 04:05:19										
02/17/94 04:06:38										
02/17/94 04:06:51										
02/17/94 04:08:32										
02/17/94 04:08:51										
02/17/94 04:13:16										
02/17/94 04:14:23										
02/17/94 04:16:02										
02/17/94 04:37:26										
02/17/94 04:37:58								CAN		AOS
02/17/94 04:50:54										
02/17/94 04:52:29										
02/17/94 05:12:12										
02/17/94 05:20:20										
02/17/94 05:36:31										
02/17/94 05:36:42										
02/17/94 05:42:57										
02/17/94 06:14:24								PMK		LOS
02/17/94 08:22:36										
02/17/94 08:25:04										
02/17/94 08:29:30										
02/17/94 08:30:25								GDS		LOS
02/17/94 08:30:51										
02/17/94 11:00:11										
02/17/94 11:01:17										

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02/17/94 11:10:03										
02/17/94 12:37:46								MAD	AOS	
02/17/94 13:22:27								CAN	LOS	
02/17/94 15:12:59										
02/17/94 15:14:00										
02/17/94 15:42:07										
02/17/94 15:55:15										
02/17/94 15:57:55										
02/17/94 15:58:21										
02/17/94 15:59:20										
02/17/94 16:03:22										
02/17/94 16:18:47										
02/17/94 16:25:14										
02/17/94 16:28:37										
02/17/94 16:34:11										
02/17/94 16:36:23										
02/17/94 16:36:56										
02/17/94 16:41:26										
02/17/94 16:41:44										
02/17/94 16:42:10										
02/17/94 16:48:29										
02/17/94 16:48:49										
02/17/94 16:49:10										
02/17/94 16:51:23										
02/17/94 16:51:40										

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02/17/94 16:52:01																			
02/17/94 16:57:03																			
02/17/94 16:57:32																			
02/17/94 16:57:56																			
02/17/94 17:00:30																			
02/17/94 17:00:46																			
02/17/94 17:01:35																			
02/17/94 17:11:10																			
02/17/94 17:11:28																			
02/17/94 17:11:58																			
02/17/94 17:17:56																			
02/17/94 17:18:30																			
02/17/94 17:19:00																			
02/17/94 17:22:55																			
02/17/94 17:23:42																			
02/17/94 17:27:44																			
02/17/94 17:28:01																			
02/17/94 17:28:32																			
02/17/94 17:33:37																			
02/17/94 17:34:01																			
02/17/94 17:35:40																			
02/17/94 17:41:14																			
02/17/94 17:42:22																			
02/17/94 17:45:29																			
02/17/94 17:45:48																			
02/17/94 17:46:11																			

Last Update: 02/01/2021 21:21:58
By: rjp

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02/17/94 17:49:04										
02/17/94 17:55:26										
02/17/94 17:56:23										
02/17/94 17:56:40										
02/17/94 17:57:02										
02/17/94 17:59:01										
02/17/94 18:04:58										
02/17/94 18:05:41										
02/17/94 18:06:01										
02/17/94 18:08:48										
02/17/94 18:09:51										
02/17/94 18:12:13										
02/17/94 18:12:29										
02/17/94 18:15:08										
02/17/94 18:15:46										
02/17/94 18:16:33										
02/17/94 18:18:49										
02/17/94 18:19:05										
02/17/94 18:24:01										
02/17/94 18:24:22										
02/17/94 18:25:05										
02/17/94 18:27:10										
02/17/94 18:29:40										
02/17/94 18:31:20										

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02/17/94 19:41:05										
02/17/94 19:48:19										
02/17/94 21:49:43										
02/17/94 22:04:49										
02/17/94 22:05:43										
02/17/94 23:11:33										
02/17/94 23:16:56										
02/17/94 21:20:00										
02/17/94 22:00:00										
02/17/94 22:00:00										
02/17/94 22:10:00										

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02/17/94 22:15:00									
02/17/94 22:20:00									
02/17/94 22:20:00									
02/17/94 20:28:43								GDS	AOS
02/17/94 22:30:00									
02/17/94 22:30:00									
02/17/94 22:31:00									
02/17/94 22:31:00									
02/17/94 22:31:00									
02/17/94 22:31:00									
02/17/94 22:31:00									
02/17/94 22:36:00									
02/17/94 22:37:00									
02/17/94 22:40:00									
02/17/94 22:41:00									
02/17/94 22:45:00									
02/17/94 22:47:00									
02/17/94 22:47:00									
02/17/94 22:47:00									
02/17/94 22:58:00									
02/17/94 22:59:00									
02/17/94 23:01:00									
02/17/94 23:03:00									
02/17/94 23:03:00									
02/17/94 23:04:00									
02/17/94 23:08:00									
02/17/94 23:10:00									

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02/17/94 23:15:00											
02/17/94 23:19:00											
02/17/94 23:23:00											
02/17/94 23:29:00											
02/17/94 23:33:00											
02/17/94 23:40:00											
02/17/94 23:47:00											
02/17/94 23:56:00											
02/18/94 00:05:00											
02/18/94 00:05:00											
02/18/94 00:09:00											
02/18/94 00:09:00											
02/18/94 00:10:00											
02/18/94 00:10:00											
02/18/94 00:10:00											

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S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
Read Dosimeter						
Expose Dosimeter						
Resd Dosimeter						
Expose Dosimeter						
						BEGIN STARTRACKER POINTING TEST
Turn ON UV/VIS, Hires Cameras						TEST DID NOT RUN SUCCESSFULLY DUE TO DHU CRASH AND SENSOR DOOR BEING CLOSED
Record in SSDR Segment 2						
Upload Sequence Table (AEQ_24HU)						
Initialize Filters (DHUSEL26)						
Activate Startracker A (DHUSEL1)						
Upload Sensor Settings (HSP10)						
Slew S/C to point Cameras toward South Galactic Pole (GNC12SGP28)						Uncompressed STA Images
Set Date Rate to 8 kbps						
Switch to Omni Transmitter						Uncompressed STB Images
DHUSEL24						
DHU CRASHED						
Activate Startracker A (DHUSEL1)						
Turn OFF Hires, UV/VIS Cameras						
						END STARTRACKER POINTING TEST DUE TO DHU CRASH
RESET DHU						
Upload DHU Software Ver. 2.41						

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Upload Startracker Sequence Tables (SEQ_01, SEQ_02)									
Run Startracker A (DHUSEL1)									
Run Startracker B (DHUSEL2)									
DHUSEL1									
DHUSELNO									
Upload B_PHASE Sequence Tables									
Upload A_PHASE Sequence Tables									
Upload DHU Compression Tables									
Activate Startracker A (DHUSEL1)									
Slew S/C High Gain Antenna to point to Pommonkey Station (GNC13PMKRW)									
Set Data Link Rate to 8 kbps									
Turn OFF All C ameras									
Switch to High Gain Transmitter									
Download SDR Segment 2									
Upload Sensor Exposure Settings (LUNAREH)									
Upload Sequence Tables (AEQ-15, AEQ_21)									
Turn OFF Transmitter									
Slew S/C High Gain to Canberra Station (GNC13CANRW)									
Switch to High Gain Transmitter									
Turn High Gain Ranging ON, Omni Ranging OFF									
Download SDR Segment 1									
Turn High Gain Ranging Off									
Switch to Data Link Rate of 8 kbps									

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Turn OFF Transmitter								
Turn ON Omni Transmitter								
Turn ON Omni Ranging								
								BEGIN STARTRACKER POINTING TEST
Turn ON UV/VIS, Hires Cameras								
Upload Sequences Table (AEQIL_263_HSP, SEQ_24_HSP, AEQ_24HSP)								
Initialize Filters (DHUSEL26)								
Activate Startracker A (DHUSEL1)								
Record in SDR Segment 1								
Upload Sensor Settings (HSP10)								
Slew S/C to point Cameras to Betelgeuse (GNC12SGP28)								
OPEN Startracker B Door								
Open Sensor Door								
Request UV/Vis Image								
DHUSEL24								Also Uncompressed Startracker A and B Images
DHUSEL1								
Request Hires Image								
DHUSEL24								Also Uncompressed Startracker A and B Images
DHUSEL1								
Request UV Image								
DHUSEL24								Also Uncompressed Startracker A and B Images
DHUSEL1								
Request UV/VIS Image								
DHUSEL24								Also Uncompressed Startracker A and B Images

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DHUSEL1									
Request UV Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Slew S/C to Point Cameras toward Betelgeuse with a roll of 60° (GNC12SGP29)									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Upload Exposure Settings (HSP1)									
Slew S/C to point Cameras toward Rigel (GNC12SGP31)									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									

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Upload Exposure Settings (HSP2)									
Slew S/C to Point Cameras toward Belletrix (GNC12SGP04)									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Turn Omni Ranging OFF									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Slew S/C to Point Cameras toward Pleiades w/Roll of 60° (GNC12SGP08)									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Upload Exposure Settings (HSP5)									
Slew S/C to Point Cameras toward Alnitak (GNC12SGP13)									
Request Hires Image									
DHUSEL24								Also Uncompressed Startracker A and B Images	
DHUSEL1									
Set Data Link Rate to 2 kbps									
Close Startracker B Door									
Turn OFF Hires, UV/VIS Cameras									
								END STARTRACKER POINTING TEST	
Record to SDR Segment 2									
Close Sensor Door									
								BEGIN HIGH GAIN ANTENNA TEST	
Load up RF Test Command List									
Run RF_TEST_02									

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Run RF_TEST_01								
Turn IMU B OFF								
Run RF_TEST_02								
Switch to High Gain Antenna Transmitter								
Run RF_TEST_03								
RUN RF_TEST_04								
RUN RF_TEST_05								
RUN RF_TEST_06								
RUN RF_TEST_07								
RUN RF_TEST_08								
								END HIGH GAIN ANTENNA TEST
Slew S/C High Gain Antenna to Pomonkey Ground Station (GNC13PMKRW)								
Set Data Link Rate to 128 kbps								
Download SDR Segment 2								
Download SDR Segment 1								
Turn IMU B ON								
Set Data Link Rate to 8 kbps								
Swtich to Omni Transmitter								
Read Dosimeter								
Expose Dosimeter								
								BEGIN LUNAR MAPPING REHEARSAL
Upload Script for Lunar Mapping Rehearsal (LM_SETUP)								
EXECUTE Lunar Mapping Script								
Turn ON NIR and LWIR Cameras								
Turn ON Laser Heater								

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Slew to South Galactic Pole (GNC18IDXIRW)						
Open Sensor Door						
Turn on UV/VIS, Hires Cameras						
InitIALIZED Filter Wheels (DHUSEL26)						
Record to SSDR Segment 5						
Execute LWIR, NIR Dark field Imaging (DHUSEL25)						
DHUSEL31						
Turn ON Laser Transmitter						
DHUSEL1						
Slew to Nadir Pointing (GNC14POSRW)						
Re-initialize filters (DHUSEL26)						
DHUSEL8						
LOAD EXPOSURE TABLES (LUNREH_LAS)						
DHUSEL5						
DHUSEL1						
Load Exposure Table (LUNAREH)						
Turn OFF Laser						
Close Sensor Door						
Goto to Inertial Pointing (GNC12LM1)						
Activate Lunar Exposure for UV/VIS, NIR, LWIR)						
Slew to Nadir Pointing (GNC14POSRW)						
Record to SSDR Segment 6						
Re-initialize filters (DHUSEL26)						
DHUSEL11						
DHUSEL1						
DHUSEL12						

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DHUSEL1							
DHUSEL11							
DHUSEL1							
DHUSEL12							
DHUSEL1							
DHUSEL11							
DHUSEL1							
DHUSEL12							
DHUSEL1							
Turn OFF UV/VIS, Hires Cameras							
Slew S/C to Point Cameras to Pleiades (GNC18IDX2RW)							
LWIR, NIR Dark fields (DHUSEL25)							
DHUSEL31							
DHUSEL1							
Turn OFF LWIR, NIR Cameras							
Slew High Gain Antenna to Pomonkey Station (GNC13PMKRW)							
							END LUNAR MAPPING REHEARSAL

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event
02/18/94 00:05:00												
02/18/94 00:05:00												
02/18/94 00:09:00												
02/18/94 00:09:00												
02/18/94 00:10:00												
02/18/94 00:10:00												
02/18/94 00:10:00												
02/18/94 00:41:44												
02/18/94 00:48:44												
02/18/94 01:08:28												
02/18/94 01:24:05											MAD	LOS
02/18/94 02:02:18												
02/18/94 02:12:57												
02/18/94 04:45:13											CAN	AOS
02/18/94 05:09:49												
02/18/94 06:00:26												
02/18/94 06:22:51											PMK	LOS
02/18/94 08:20:00												
02/18/94 08:29:06											GDS	LOS
02/18/94 08:30:05												
02/18/94 08:30:52												
02/18/94 08:51:20												

02/18/94 08:55:19																	
02/18/94 09:11:48																	
02/18/94 09:13:44																	
02/18/94 09:16:21																	
02/18/94 09:18:00																	
02/18/94 09:20:00																	
02/18/94 09:23:00																	
02/18/94 10:22:00																	
02/18/94 10:23:47																	
02/18/94 10:30:30																	
02/18/94 10:32:33																	
02/18/94 10:33:10																	
02/18/94 10:33:54																	
02/18/94 10:40:41																	
02/18/94 11:50:00																	
02/18/94 10:52:00																	
02/18/94 11:18:00																	
02/18/94 11:19:00																	
02/18/94 11:30:00																	
02/18/94 12:18:34														MAD		AOS	
02/18/94 12:55:20														CAN		LOS	
02/18/94 13:25:00																	
02/18/94 14:20:00																	

02/18/94 14:26:00											
02/18/94 14:34:00											
02/18/94 17:06:04									PMK	AOS	
02/18/94 21:18:00											
02/18/94 23:12:00											

S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
Turn OFF UV/VIS, Hires Cameras						
Slew S/C to Point Cameras to Pleiades (GNC18IDX2RW)						
LWIR, NIR Dark fields (DHUSEL25)						
DHUSEL31						
DHUSEL1						
Turn OFF LWIR, NIR Cameras						
Slew High Gain Antenna to Pomonkey Station (GNC13PMKRW)						
						END LUNAR MAPPING REHEARSAL
Download SDR Segment 5						
Download SDR Segment 6						
Slew High Gain Antenna to Pomonkey Station (GNC13PMKRW)						
Download SDR Segment 6						
Download SDR Segment 5						
Set Data Link Rate to 8 kbps						
Turn OFF Transmitters						
Turn ON Transmitter						
Turn ON High Gain Transmitter						
Turn ON Ranging (both transmitter)						
Switch to Omni Transmitter						

Set Data Link Rate to 2 kbps						
						Begin NIR, LWIR Cameras Cooldown Test
Open Sensor Door						
Turn ON NIR, LWIR Cameras						
Record to SSSDR Segment 1						
Upload Exposure Settings (COOL_EXP)						
Upload Sequence Tables (DHUSEC_21, SEQ-IRS)						
FOR 45 MINUTES: DHUSEL 31 FOR EVERY TWO MINUTES FOR ONE MINUTE						
DHUSEL1						
Slew S/C to Point Cameras toward Betelgeuse (GNC12BETELRW)						
Perform NIR Snapshot images (NIR2_41,NIR2_49, NIR4_33)						
DHUSELNO						
Perform NIR Snapshot Images (NIR4_33)						
Turn OFF LWIR Camera						
Turn OFF NIR Camera						
						END NIR, LWIR COOLDOWN TEST
Set Data Rate to 2 kbps						
Close Sensor Door						
Switch to High Gain Antenna						
Set Data Rate to 8 kbps						
DHUSEL1						
						No DSN coverage

Set Data Rate to 128 kpbs							
Download SDR Segment 1							
Upload of Lunar Mapping Script Failed							
Lunar Mapping Test Aborted due to problems with Command VAX							
Ranging with High Gain ON							

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event
02/19/94 00:00:00												
02/19/94 00:16:00												
02/19/94 00:48:44												
02/19/94 00:50:00											GDS	AOS
02/19/94 01:00:00												
02/19/94 01:02:00												
02/19/94 01:10:00												
02/19/94 01:14:00												
02/19/94 01:15:00												
02/19/94 01:16:00												
02/19/94 05:35:30											CAN	AOS
02/19/94 06:29:00												
02/19/94 08:30:05												
02/19/94 08:30:52												
02/19/94 08:51:20												
02/19/94 08:57:00												
02/19/94 10:08:00												
02/19/94 10:19:00												
02/19/94 10:20:00												
02/19/94 10:22:00												
02/19/94 10:28:00												
02/19/94 11:14:00												
02/19/94 12:20:00											MAD	AOS
02/19/94 12:53:00												

Last Update: 02/01/2021 21:21:58
 By:rjp

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S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
Preparing for Lunar Orbit Insertion (LOI1) Burn						
Set Data Link Rate to 8 kbps						
Build Command Set for LOI						
[REDACTED]						
Slew S/C to LOI Burn Orientation						
Switch to Omni Transmitters						
Turn High Gain Ranging OFF						
Open Startracker B Cover						
Turn Omni Ranging ON						
Activate Startracker B (DHUSEL2)						
Close Startracker A Cover						
[REDACTED]						
Open Startracker A Cover						
Activate Startracker A (DHUSEL1)						
Close Startracker B Cover						
Turn OFF Laser Transmitter Heater						
Upload and Schedule LOI Burn Script						
Slew S/C to Updated LOI Attitude (GNC12LOIRW)						
Close Startracker A Door						
DHUSELNO						
Open Startracker B Door						
Activate Startracker B (DHUSEL2)						
Record TLM in SDR Segment 0						
[REDACTED]						
[REDACTED]						
LUNAR INSERTION BURN						LUNAR INSERTION BURN

END Loop Timelines

Orbit 01 Timeline - Data Compression Test

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
02/19/94 12:51:32	0:00:00	0											BEGIN LOI1 BURN @ 12:51:32						S/C in burn maneuver state: • all sensor doors closed • cameras off • omni antenna active • in burn attitude
02/19/94 12:57:42	0:00:00	370			395								END LOI1 BURN						Duration = 370.12 sec deltaV=460.3 m/s (+0.2% error) BEGIN ORBIT OPERATIONS
02/19/94 13:04:36	0:06:54											Equator - A							START REV #1
02/19/94 13:08:24	0:10:42		10.0	107.9	539.8							N10A							
02/19/94 13:12:19	0:14:37		20.0	107.9	637.7							N20A							
02/19/94 13:14:15	0:16:33										CAN	LOS							
02/19/94 13:16:37	0:18:55		30.0	108.0	766.5							N30A							
02/19/94 13:21:27	0:23:45		40.0	108.1	930.7							N40A							
02/19/94 13:27:00	0:29:18		50.0	108.2	1135.6							N50A							
02/19/94 13:32:00	0:34:18												ST-A door OPEN						Ground Command
02/19/94 13:33:30	0:35:48		60.0	108.4	1387.9							N60A							
02/19/94 13:34:00	0:36:18												Select ST-A						Ground Command
02/19/94 13:41:16	0:43:34		70.0	108.9	1694.5							N70A							
02/19/94 14:02:22	1:04:40		89.5	197.1	2496.2							North Pole							
02/19/94 14:04:23	1:06:41		88.4	268.4	2568.2							LDUSK							
02/19/94 14:16:53	1:19:11		80.0	284.2	2995.2							N80D							
02/19/94 14:17:00	1:19:18												Read dosimeter latch values						Ground Command
02/19/94 14:22:00	1:24:18												Expose dosimeter						Ground Command
02/19/94 14:35:03	1:37:21		70.0	285.6	3549.3							N70D							
02/19/94 14:57:35	1:59:53		60.0	285.9	4127.7							N60D							
02/19/94 15:24:57	2:27:15		50.0	285.9	4677.1							N50D							
02/19/94 15:56:58	2:59:16		40.0	285.8	5122.1							N40D							
02/19/94 16:12:00	3:14:18												Switch to lunar mapping mode (ACSMMode=LunarMapping)						Ground Command
02/19/94 16:32:32	3:34:49		30.0	285.6	5381.6							N30D							
02/19/94 16:53:39	0:00:00		24.3	285.5	5423.2							Aposelene							START OF ORBIT 1/2
02/19/94 16:57:00	0:03:21												Start and initialize SIP						Ground Command
02/19/94 17:09:32	0:15:53		20.0	285.4	5399.7							N20D							
02/19/94 17:15:59	0:22:20		18.2	285.3	5376.1						PMK	AOS							
02/19/94 17:45:26	0:51:47		10.0	285.2	5172.3							N10D							
02/19/94 17:50:00	0:56:21												SA-B mode to MANUAL; Rotate SA-B away from sun						Ground Command Battery at full pressure
02/19/94 18:05:00	1:11:21												Deselect ST; Uplink A- and S-series DHU sequence tables						Ground Command SEQ and AEQ sequence tables uploaded
02/19/94 18:18:03	1:24:24		0.0	285.0	4749.2							Equator - D							

Orbit 01 Timeline - Data Compression Test

02/19/94 18:27:00	1:33:21										Select ST-A; SA-A mode to AUTO					Ground Command
02/19/94 18:46:06	1:52:27		-10.0	284.8	4209.9						S10D					
02/19/94 19:07:00	2:13:21											Switch to DHU mode @ 8 kbps; Switch to DHU mode @ 64 kbps				Ground Command
02/19/94 19:09:18	2:15:39		-20.0	284.7	3632.1						S20D					
02/19/94 19:18:00	2:24:21											Uplink and schedule L001 scripts				Ground Command
02/19/94 19:24:00	2:30:21											Upload SEQ_262.UMI in SEQT 26				Ground Command
02/19/94 19:28:03	2:34:24		-30.0	284.6	3072.6						S30D					
																Err:508
02/19/94 19:38:07	2:44:28	0										IR cameras & cryocoolers ON; Set SA mode to AUTO				
																Err:508
02/19/94 19:43:04	2:49:25		-40.0	284.7	2564.3						S40D					
02/19/94 19:55:05	3:01:26		-50.0	284.8	2120.6						S50D					
02/19/94 20:00:00	3:06:21											Ranging A OFF				Ground Command
02/19/94 20:04:49	3:11:10		-60.0	285.0	1743.5						S60D					
																Err:508
02/19/94 20:08:42	3:15:03	0										Deactivate ST; Slew s/c sensors to SGP (ACSMMode=StarPointing, Index=1)				Slew to South Galactic Pole
02/19/94 20:12:48	3:19:09		-70.0	285.5	1428.5						S70D					
02/19/94 20:13:42	3:20:03	300										Select ST-A; Sensor door OPEN; UV & HR cameras ON				
02/19/94 20:15:00	3:21:21											Downlink UV1 R/T (Filter=1) image				Ground Command - data missing
02/19/94 20:17:00	3:23:21											Switch downlink rate to 8 kbps				Ground Command
02/19/94 20:19:28	3:25:49		-80.0	287.1	1168.8						S80D					
02/19/94 20:23:07	3:29:28	565										Initialize filters (DHU SEQT 26); Record in SDR Segment 1				Start recorder in Segment 1
02/19/94 20:23:42	3:30:03	35										Perform LWIR imaging (DHU SEQT 25)				Dark field imaging
02/19/94 20:24:12	3:30:33	30										Perform NIR imaging (DHU SEQT 31)				
02/19/94 20:24:42	3:31:03	30										Stop imaging - select ST-A				
02/19/94 20:24:52	3:31:13	10										Deselect ST; Switch to lunar mapping mode (ACSMMode=LunarMapping)				Slew sensors to nadir
02/19/94 20:25:08	3:31:29		-89.4	15.4	957.6						South Pole					
02/19/94 20:25:54	3:32:15		-88.4	82.6	930.2						LDAWN					
02/19/94 20:30:03	3:36:24		-80.0	100.5	788.5						S80A					
02/19/94 20:30:42	3:37:03	350										Select ST-A				
02/19/94 20:30:52	3:37:13	10										Initialize filters (DHU SEQT 26); Load exposure tables (IdExpTable); Perform lunar imaging (Execute subscript LunarImaging)				All cameras & filters Data Compression Target 1: South Pole region
02/19/94 20:31:14	3:37:35	32										Stop imaging - select ST-A				Occurs inside LunarImaging
02/19/94 20:31:37	3:37:58											Downlink UV1 R/T (Filter=1) image				Ground Command - data missing
02/19/94 20:34:25	3:40:46		-70.0	102.1	654.8						S70A					

Orbit 01 Timeline - Data Compression Test

02/19/94 20:35:27	3:41:48		-67.4	102.3	626.1				GDS	AOS								
02/19/94 20:35:37	3:41:58	263								S80A	Load exposure tables (IdExpTable); Perform lunar uncompressed imaging (LunarImaging)							WAIT includes previous 32 sec. Data missing
02/19/94 20:36:09	3:42:30	32									Stop imaging - select ST-A							Occurs inside LunarImaging
02/19/94 20:38:23	3:44:44		-60.0	102.7	552.7					S60A								
02/19/94 20:38:25	3:44:46										Switch data rate to 2 kbps							Ground Command
02/19/94 20:39:59	3:46:20	230								S70A	Record in SSSDR Segment 2							WAIT includes previous 32 sec. SSDR Segment 2
02/19/94 20:40:46	3:47:07	47									Load exposure tables (IdExpTable); Perform lunar imaging (Execute subscript LunarImaging)							Data missing
02/19/94 20:41:00	3:47:07										DHU CRASH							
02/19/94 20:42:03	3:48:24		-50.0	103.0	478.6					S50A								
02/19/94 20:43:00											Abort L001 script; Cancel L001 Post script							Ground Command SCRIPT ABORTED
																		Err:508
02/19/94 20:45:31	3:51:52		-40.0	103.1	430.1					S40A								
02/19/94 20:46:00											SSDR to IDLE							Ground Command
02/19/94 20:48:53	3:55:14		-30.0	103.2	405.5					S30A								
02/19/94 20:49:00											Switch to DHU bypass mode							Ground Command
02/19/94 20:50:46	3:57:07		-24.3	103.3	401.8					Periselene								
02/19/94 20:52:00											Reset DHU; Uplink DHU version 241; Reinitialize DHU							Ground Command
02/19/94 20:52:12	3:58:33		-20.0	103.3	403.9					S20A								
02/19/94 20:55:33	4:01:54		-10.0	103.4	425.4					S10A								
02/19/94 20:56:00											NIR camera & cryocooler OFF							Ground Command
02/19/94 20:59:00	4:05:21		0.0	103.5	470.5					Equator - A								
02/19/94 21:00:00											Uplink ST sequence tables; Cycle ST; Deselect ST; Uplink A- and S-series DHU sequence tables							Ground Command
02/19/94 21:02:38	4:08:59		10.0	103.5	540.9					N10A								
02/19/94 21:06:33	4:12:54		20.0	103.6	638.9					N20A								
02/19/94 21:07:00	4:13:21										NIR camera & cryocooler ON							Ground Command
02/19/94 21:10:51	4:17:12		30.0	103.7	768.0					N30A								
02/19/94 21:11:00	4:17:21										Uplink DHU compression tables							Ground Command
02/19/94 21:12:30	4:18:51										Upload SEQ_262.UMI in SEQT 26							Ground Command
02/19/94 21:15:41	4:22:02		40.0	103.8	932.4					N40A								
02/19/94 21:21:00	4:27:21										Uplink exposure tables							Ground Command
02/19/94 21:21:15	4:27:36		50.0	104.0	1137.6					N50A								
02/19/94 21:23:41	4:30:02										Select ST-A							Ground Command
02/19/94 21:24:23	4:30:44										Select DHU SEQT 0							Ground Command Un/compressed images incl. ST
02/19/94 21:25:00	4:31:21										Stop imaging - select ST-A							Ground Command

Orbit 01 Timeline - Data Compression Test

02/19/94 21:25:42	4:32:03								Select DHU SEQT 0			Ground Command Un/compressed images incl. ST
02/19/94 21:26:00	4:32:21								Stop imaging - select ST-A			Ground Command
02/19/94 21:26:10	4:32:31								Initialize filters (DHU SEQT 26)			Ground Command
02/19/94 21:26:24	4:32:45								Select ST-A			Ground Command
02/19/94 21:26:41	4:33:02								Select DHU SEQT 0			Ground Command Un/compressed images incl. ST
02/19/94 21:26:59	4:33:20								Stop imaging - select ST-A			Ground Command
02/19/94 21:27:17	4:33:38								Record in SDDR Segment 3			Ground Command SSDR Segment 3
02/19/94 21:27:45	4:34:06	60.0	104.2	1390.1				N60A				
02/19/94 21:28:22	4:34:43								Select DHU SEQT 0			Ground Command Data Compression Target 19: Compton crater (Lat. 53° to 60°)
02/19/94 21:28:59	4:35:20								Stop imaging - select ST-A			Ground Command
02/19/94 21:29:00	4:35:21								Switch data rate to 8 kbps; Switch to DHU mode			Ground Command
02/19/94 21:31:02	4:37:23								Dump UV1 R/T image (filter=4)			Ground Command - data missing
02/19/94 21:31:17	4:37:38								Select DHU SEQT 0			Ground Command Un/compressed images incl. ST
02/19/94 21:32:18	4:38:39								Stop imaging - select ST-A			Ground Command
02/19/94 21:33:36	4:39:57								Select DHU SEQT 0			Ground Command Un/compressed images incl. ST
02/19/94 21:33:53	4:40:14								Stop imaging - select ST-A			Ground Command
02/19/94 21:35:32	4:41:53	70.0	104.7	1697.1				N70A				
02/19/94 21:35:39	4:42:00								Select DHU SEQT 0			Ground Command Un/compressed images incl. ST
02/19/94 21:36:00	4:42:21								Dump UV1 R/T image (filter=1)			Ground Command - data missing
02/19/94 21:36:52	4:43:13								Stop imaging - select ST-A			Ground Command
02/19/94 21:39:32	4:45:53								Select DHU SEQT 0			Ground Command Un/compressed images incl. ST
02/19/94 21:39:49	4:46:10								Dump NIR R/T image (filter=6)			Ground Command - data missing
02/19/94 21:40:40									DHU CRASH			
02/19/94 21:40:42	4:47:03								Stop imaging - select ST-A			Ground Command - failed
02/19/94 21:43:00									Switch to DHU bypass mode			Ground Command
02/19/94 21:44:00	4:50:21								Switch data rate to 2 kbps			Ground Command
02/19/94 21:45:00	4:51:21	80.0	106.3	2065.8				N80A				
02/19/94 21:47:00									NIR cryocooler OFF			Ground Command
02/19/94 21:48:00									All cameras (except ST) OFF			Ground Command
02/19/94 21:51:00									Reset DHU; Uplink DHU version 241; Reinitialize DHU			Ground Command
02/19/94 21:56:40	5:03:01	89.4	192.7	2499.4				North Pole				
02/19/94 21:58:37	5:04:58	88.4	261.6	2569.6				LDUSK				
02/19/94 21:59:00									Uplink ST sequence tables; Select ST-A			Ground Command

Orbit 01 Timeline - Data Compression Test

02/19/94 22:02:00	5:08:21										Deselect ST; Slew HGA to Goldstone (ACSMODE=EarthPointing, GDS)							Ground Command
02/19/94 22:08:00	5:14:21										Select ST-A							Ground Command
02/19/94 22:10:00	5:16:21										ST-B door OPEN							Ground Command Not getting matches with ST-A
02/19/94 22:11:11	5:17:32		80.0	279.5	2998.6					N80D								
02/19/94 22:12:00	5:18:21										Select ST-B							Ground Command
02/19/94 22:13:00	5:19:21										Switch to HGA							Ground Command
02/19/94 22:17:00	5:23:21										Switch to DHU mode @ 128 kbps							Ground Command
02/19/94 22:19:00	5:25:21										Downlink SSSR Segment 3							Ground Command
02/19/94 22:29:24	5:35:45		70.0	281.1	3552.8					N70D								
02/19/94 22:29:30	5:35:51										Downlink SSSR Segment 1							Ground Command
02/19/94 22:51:57	5:58:18		60.0	281.4	4131.1					N60D								
02/19/94 23:19:20	6:25:41		50.0	281.5	4680.0					N50D								
02/19/94 23:38:00	6:44:21										Downlink SSSR Segment 2							Ground Command
02/19/94 23:51:23	6:57:44		40.0	281.4	5123.9					N40D								
02/19/94 23:57:00	7:03:21										SSDR to IDLE - downlink complete							Ground Command
02/20/94 00:26:57	7:33:18		30.0	281.2	5382.0					N30D								
02/20/94 00:47:51	7:54:12		24.3	281.1	5422.6					Aposelene								
																		LunarImaging Subscript
		0									Disable IPE processing (autoexp off); Load compression parameters; Start imaging (DHU SEQT 0)							AEQ_33.UMI loaded in SEQT 0 Both compressed & uncompress. images for all cameras incl. ST
		14									Enable Autoexposure							For UV1,HR,NIR & LWIR
		14									Stop imaging - select ST-A							
		4									Disable IPE processing (autoexp off)							End Subscript

Orbit 2 Timeline - Data Compression Test

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/20/94 00:47:51	0:00:00		24.3	281.1	5422.6							Aposelene							SSDR downlink complete; ACSMode is EarthPointing
02/20/94 01:03:56	0:16:05		20.0	281.0	5398.5							N20D							
02/20/94 01:13:00	0:25:09												Update state vector (GNC53_20FEB000)						Ground Command
02/20/94 01:32:00	0:44:09												Deselect ST						Ground Command
02/20/94 01:33:00	0:45:09												Uplink ST sequence tables; Cycle ST; Deselect ST; Uplink A- and S-series DHU sequence tables						Ground Command
02/20/94 01:39:00	0:51:09												Uplink DHU compression tables						Ground Command
02/20/94 01:39:49	0:51:58		10.0	280.8	5169.8							N10D							
02/20/94 01:41:00	0:53:09												Upload SEQ_262.UMI in SEQT 26						Ground Command
02/20/94 01:49:00	1:01:09												Upload AEQ_33U.UMI in SEQT 0						Ground Command
02/20/94 01:50:00	1:02:09												Select ST-B						Ground Command
02/20/94 01:55:30	1:07:39		5.3	280.7	4991.5						MAD	LOS							
02/20/94 02:12:25	1:24:34		0.0	280.6	4745.8							Equator - D							
02/20/94 02:25:00	1:37:09												Slew about X-axis (inertial pointing)						Ground Command - to cool batt.
02/20/94 02:40:26	1:52:35		-10.0	280.5	4206.2							S10D							
02/20/94 02:57:00	2:09:09												Slew about X-axis (inertial pointing)						Ground Command - try diff. att
02/20/94 03:03:36	2:15:45		-20.0	280.4	3628.4							S20D							
02/20/94 03:05:00	2:17:09												Downlink SSDR Segment 1						Ground Command
02/20/94 03:09:00	2:21:09												Uplink and schedule L002 scripts						Ground Command
02/20/94 03:16:00	2:28:09												Downlink SSDR Segment 2						Ground Command
02/20/94 03:22:19	2:34:28		-30.0	280.4	3069.3							S30D							
																			Err:508
02/20/94 03:23:26	2:35:35	0											IR cameras & cryocoolers ON; SA mode to AUTO						
																			Err:508
02/20/94 03:34:00	2:46:09												SSDR to IDLE - downlink complete						Ground Command
02/20/94 03:37:00	2:49:09												Set downlink rate to 2 kbps						Ground Command
02/20/94 03:37:19	2:49:28		-40.0	280.4	2561.4							S40D							
02/20/94 03:40:00	2:52:09												Select ST-A						Ground Command
02/20/94 03:41:00	2:53:09												ST-B door CLOSE						Ground Command
02/20/94 03:49:19	3:01:28		-50.0	280.5	2118.2							S50D							
02/20/94 03:51:00	3:03:09												Switch to bypass mode @ 8 kbps						Ground Command
02/20/94 03:55:00	3:07:09												Set downlink rate to 2 kbps						Ground Command
02/20/94 03:59:03	3:11:12		-60.0	280.7	1741.5							S60D							
02/20/94 04:01:00	3:13:09												Switch to omni antennas						Ground Command
02/20/94 04:07:01	3:19:10		-70.0	281.3	1426.9							S70D							

Orbit 2 Timeline - Data Compression Test

Time	Altitude	Latitude	Longitude	Roll	YPR	Mode	Event	Notes
02/20/94 04:13:40	3:25:49	-80.0	283.1	1167.6		S80D		
								Err:508
02/20/94 04:17:51	3:30:00	0					Deactivate ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)	NOTE: Planning ephemeris was late by several minutes Slew to South Galactic Pole
02/20/94 04:19:20	3:31:29	-89.4	10.6	956.8		South Pole		
02/20/94 04:20:05	3:32:14	-88.4	76.1	930.0		LDAWN		
02/20/94 04:20:26	3:32:35	155					UV & HR cameras ON	
02/20/94 04:22:51	3:35:00	145					Select ST-A	
02/20/94 04:23:00	3:35:10	10					Initialize filters (DHU SEQT 26); Record in SSSR Segment 1	Start recorder in Segment 1
02/20/94 04:23:26	3:35:35	25					Perform LWIR imaging (DHU SEQT 25)	Dark field imaging
02/20/94 04:23:56	3:36:05	30					Perform NIR imaging (DHU SEQT 31)	
02/20/94 04:24:14	3:36:23	-80.0	95.9	787.9		S80A		
02/20/94 04:24:26	3:36:35	30					Stop imaging - select ST-A	
02/20/94 04:24:36	3:36:45	10					Deselect ST; Switch to lunar mapping mode (ACSMODE=LunarMapping)	Slew sensors to nadir
02/20/94 04:28:37	3:40:46	-70.0	97.7	654.4		S70A		
02/20/94 04:30:26	3:42:35	350				MAXS	Select ST-A	Planning ephemeris off 11 min
02/20/94 04:30:36	3:42:45	10					Initialize filters (DHU SEQT 26)	
02/20/94 04:31:06	3:43:15	30					Start imaging (DHU SEQT 0)	Un/compressed images incl. ST
02/20/94 04:32:10	3:44:19	64					Stop imaging - select ST-A	
02/20/94 04:32:34	3:44:43	-60.0	98.3	552.4		S60A		
02/20/94 04:36:14	3:48:23	-50.0	98.6	478.6		S50A		
02/20/94 04:39:43	3:51:52	-40.0	98.8	430.2		S40A		
02/20/94 04:43:04	3:55:13	-30.0	98.9	405.8		S30A		
02/20/94 04:43:39	3:55:49	690					Start imaging (DHU SEQT 0)	T/L ERROR: WAIT should've been 650 sec Un/compressed images incl. ST
02/20/94 04:44:43	3:56:52	64					Stop imaging - select ST-A	
02/20/94 04:44:56	3:57:05	-24.4	98.9	402.2		Periselene		
02/20/94 04:46:23	3:58:32	-20.0	99.0	404.4		S20A		
02/20/94 04:47:19	3:59:28	156					Record in SSSR Segment 2	SSSR Segment 2
02/20/94 04:47:20	3:59:30	1					Start imaging (DHU SEQT 0)	Slodowska crater (Lat -18°) SCRIPT ERROR: WAIT should have been 125 seconds, not 125 tics
02/20/94 04:48:24	4:00:34	64					Stop imaging - select ST-A	
02/20/94 04:48:44	4:00:53	19					Record in SSSR Segment 3	SSSR Segment 3
02/20/94 04:49:44	4:01:53	-10.0	99.1	425.9		S10A		
02/20/94 04:51:04	4:03:13	140					Start imaging (DHU SEQT 0)	Un/compressed images incl. ST
02/20/94 04:51:36	4:03:45	32					Stop imaging - select ST-A	
02/20/94 04:53:12	4:05:21	0.0	99.2	471.2		Equator - A		
02/20/94 04:56:50	4:08:59	10.0	99.2	541.8		N10A		
02/20/94 04:57:03	4:09:12	327					Start imaging (DHU SEQT 0)	Un/compressed images incl. ST

Orbit 2 Timeline - Data Compression Test

02/20/94 04:57:35	4:09:44	32											Stop imaging - select ST-A				
02/20/94 05:00:45	4:12:54		20.0	99.3	640.1								N20A				
02/20/94 05:03:11	4:15:20	336											MEQA	Record in SSSDR Segment 4			SSDR Segment 4
02/20/94 05:05:04	4:17:13		30.0	99.4	769.3								N30A				
02/20/94 05:09:54	4:22:03		40.0	99.5	934.0								N40A				
02/20/94 05:11:20	4:23:29	489												Start imaging (DHU SEQT 0)			Fabry crater (Lat. 40° to 48°)
02/20/94 05:12:56	4:25:05	96												Stop imaging - select ST-A			Un/compressed images incl. ST
02/20/94 05:15:28	4:27:37		50.0	99.7	1139.5								N50A				
02/20/94 05:16:31	4:28:40		51.7	99.7	1180.2							CAN	AOS				
02/20/94 05:16:38	4:28:47	222												Record in SSSDR Segment 5			SSDR Segment 5
02/20/94 05:21:29	4:33:38	291												Start imaging (DHU SEQT 0)			Un/compressed images incl. ST
02/20/94 05:21:59	4:34:08		60.0	100.0	1392.4								N60A				
02/20/94 05:23:05	4:35:14	96												Stop imaging - select ST-A			
																	Err:508
																	Err:508
02/20/94 05:23:05	4:35:14	0												Park filters (DHU SEQT 27)			Scheduled start time was 05:23:00, but started late because of previous errors
02/20/94 05:23:10	4:35:19	5												UV & HR cameras OFF; IR cameras & cryocoolers OFF			
02/20/94 05:23:20	4:35:29	10												Sensor door CLOSE; Deselect ST; Slew s/c HGA to Earth (ACSM mode=EarthPointing, Center)			Slew HGA to Earth
02/20/94 05:26:41	4:38:50	201												Select ST-A			
02/20/94 05:26:51	4:39:00	10												Select ST-B; ST-B door OPEN; Switch to HGA at 128kbps			
																	Err:508
02/20/94 05:29:46	4:41:55		70.0	100.6	1699.8								N70A				
02/20/94 05:38:00	4:50:09													Downlink SSSDR Segment 1			Ground Command
02/20/94 05:39:16	4:51:25		80.0	102.3	2068.9								N80A				
02/20/94 05:50:57	5:03:06		89.4	189.2	2503.3								North Pole				
02/20/94 05:52:51	5:05:00		88.4	255.1	2571.5								LDUSK				
02/20/94 06:05:29	5:17:38		80.0	274.9	3002.2								N80D				
02/20/94 06:07:00	5:19:09													Downlink SSSDR Segment 2			Ground Command
02/20/94 06:20:00	5:32:09													Downlink SSSDR Segment 3			Ground Command
02/20/94 06:23:43	5:35:52		70.0	276.6	3556.8								N70D				
02/20/94 06:33:00	5:45:09													Downlink SSSDR Segment 4			Ground Command
02/20/94 06:46:18	5:58:27		60.0	277.0	4135.0								N60D				
02/20/94 07:03:14	6:15:23		53.6	277.1	4492.4								PMK				
02/20/94 07:13:43	6:25:52		50.0	277.1	4683.3								N50D				
02/20/94 07:23:00	6:35:09													Ranging B ON			Ground Command
02/20/94 07:43:00	6:55:09													Slew about X-axis (inertial pointing)			Ground Command - to cool batt.
02/20/94 07:45:48	6:57:57		40.0	277.0	5126.1								N40D				
02/20/94 08:21:22	7:33:31		30.0	276.9	5382.6								N30D				

Orbit 2 Timeline - Data Compression Test

02/20/94 08:32:00	7:44:09										Downlink SDR Segment 5						Ground Command
02/20/94 08:42:01	7:54:10		24.4	276.8	5422.3						Aposelene						

Orbit 3 Timeline - Aborted LOI2 Burn/Sensor Door Test (Dark Field)

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/20/94 08:42:01	0:00:00		24.4	276.8	5422.3							Aposelene							Downlinking SDDR Segment 5 Preparing for LOI2 Burn
02/20/94 08:49:00	0:06:59												SDDR to IDLE - downlink complete						Ground Command
02/20/94 08:58:22	0:16:21		20.0	276.7	5397.4							N20D							
02/20/94 09:07:48	0:25:47		17.4	276.6	5359.6						GDS	LOS							
02/20/94 09:25:00	0:42:59												Set downlink rate to 8 kbps						Ground Command
02/20/94 09:30:00	0:47:59												Switch to omni antennas						Ground Command
02/20/94 09:34:14	0:52:13		10.0	276.5	5167.1							N10D							
02/20/94 09:41:00	0:58:59												Select ST-A						Ground Command
02/20/94 09:43:00	1:00:59												ST-B door CLOSE						Ground Command
02/20/94 09:56:00	1:13:59												Slew to LOI2 burn attitude (GNC12LOI2RW)						Ground Command
02/20/94 10:05:00	1:22:59												ST-B door OPEN						Ground Command
02/20/94 10:06:47	1:24:46		0.0	276.3	4742.1							Equator - D							
02/20/94 10:08:00	1:25:59												Select ST-B						Ground Command
02/20/94 10:34:46	1:52:45		-10.0	276.2	4202.0							S10D							
02/20/94 10:48:00	2:05:59												Uplink & schedule LOI2 burn scripts; Configure s/c for burn (DELTAV_LOI2BURN)						Ground Command
02/20/94 10:57:54	2:15:53		-20.0	276.1	3624.2							S20D							
02/20/94 11:11:00	2:28:59												Ranging A ON Ranging B OFF						Ground Command
02/20/94 11:16:35	2:34:34		-30.0	276.0	3065.4							S30D							
02/20/94 11:31:33	2:49:32		-40.0	276.1	2558.0							S40D							
02/20/94 11:43:33	3:01:32		-50.0	276.2	2115.3							S50D							
02/20/94 11:51:00	3:08:59												ST-A door CLOSE						Ground Command
02/20/94 11:52:00	3:09:59												ST-A camera OFF						Ground Command
02/20/94 11:53:15	3:11:14		-60.0	276.5	1739.1							S60D							
02/20/94 12:01:13	3:19:12		-70.0	277.1	1425.0							S70D							
02/20/94 12:07:52	3:25:51		-80.0	279.0	1166.0							S80D							
02/20/94 12:13:30	3:31:29		-89.3	3.8	956.1							South Pole							
02/20/94 12:14:15	3:32:14		-88.4	70.0	929.3							LDAWN							
02/20/94 12:16:00	3:33:59												ST-A door OPEN						Ground Command
02/20/94 12:18:00	3:35:59												ST-A camera ON						Ground Command
02/20/94 12:18:25	3:36:24		-80.0	91.3	787.0							S80A							
02/20/94 12:20:00	3:37:59												Select ST-A						Ground Command
02/20/94 12:22:48	3:40:47		-70.0	93.2	653.7							S70A							
02/20/94 12:26:45	3:44:44		-60.0	93.9	551.9							S60A							
02/20/94 12:30:25	3:48:24		-50.0	94.2	478.3							S50A							
02/20/94 12:32:23	3:50:22												Close ST doors						Scheduled Command
02/20/94 12:33:54	3:51:53		-40.0	94.4	430.1							S40A							

Orbit 3 Timeline - Aborted LOI2 Burn/Sensor Door Test (Dark Field)

02/20/94 12:37:15	3:55:14		-30.0	94.5	405.8					S30A								
02/20/94 12:39:05	3:57:04		-24.5	94.6	402.3					Periselene								
02/20/94 12:40:34	3:58:33		-20.0	94.6	404.6					S20A								
02/20/94 12:41:42	3:59:41										Start LOI2 Burn Script							Scheduled Command Ignition scheduled for 12:42:23
02/20/94 12:42:12	4:00:11										Abort LOI2 Burn							Ground Command Sensor door TLM incorrectly indicated OPEN
02/20/94 12:43:43	4:01:42										Start LOI2 Post Burn Script							Scheduled Command
02/20/94 12:43:56	4:01:55		-10.0	94.7	425.7					S10A								
02/20/94 12:45:00	4:02:59										Perform DELTAV_SHUTDOWN							Ground Command
02/20/94 12:47:24	4:05:23		0.0	94.8	471.2					Equator - A								
02/20/94 12:50:00	4:07:59										Switch to SUPER format							Ground Command
02/20/94 12:51:02	4:09:01		10.0	94.9	541.9					N10A								
02/20/94 12:54:57	4:12:56		20.0	95.0	640.3					N20A								
02/20/94 12:59:00	4:16:59										Slew to thermal conditioning attitude							Ground Command
02/20/94 12:59:16	4:17:15		30.0	95.1	769.6					N30A								
02/20/94 12:59:37	4:17:36		32.9	95.1	814.5				MAD	AOS								
02/20/94 13:04:07	4:22:06		40.0	95.2	934.2					N40A								
02/20/94 13:09:00	4:26:59										Slew to new thermal conditioning attitude (inertial pointing)							Ground Command
02/20/94 13:09:41	4:27:40		50.0	95.4	1139.5					N50A								
02/20/94 13:16:12	4:34:11		60.0	95.7	1392.0					N60A								
02/20/94 13:17:00	4:34:59										Slew to thermal conditioning attitude							Ground Command - inertial ptg
02/20/94 13:23:00	4:40:59										ST-B door OPEN							Ground Command
02/20/94 13:24:00	4:41:59		70.0	96.3	1698.7					N70A								
02/20/94 13:25:00	4:42:59										Select ST-B							Ground Command
02/20/94 13:27:00	4:44:59										Switch to HGA							Ground Command
02/20/94 13:28:00	4:45:59										Ranging A OFF Ranging B ON							Ground Command
02/20/94 13:33:29	4:51:28		80.0	98.2	2066.7					N80A								
02/20/94 13:42:43	5:00:42		88.7	124.9	2447.5				CAN	LOS								
02/20/94 13:45:09	5:03:08		89.3	184.5	2499.0					North Pole								
02/20/94 13:47:02	5:05:01		88.4	249.2	2565.9					LDUSK								
02/20/94 13:59:40	5:17:39		80.0	270.4	2995.2					N80D								
02/20/94 14:17:51	5:35:50		70.0	272.2	3545.8					N70D								
02/20/94 14:40:21	5:58:20		60.0	272.6	4118.7					N60D								
02/20/94 14:57:00	6:14:59										Update state vector (GNC53_20FEB1450)							Ground Command
02/20/94 15:00:00	6:17:59										Slew s/c HGA to Madrid (ACSMODE=EarthPointing, MAD)							Ground Command Slew HGA to Madrid
02/20/94 15:07:37	6:25:36		50.0	272.7	4660.5					N50D								
02/20/94 15:39:27	6:57:26		40.0	272.7	5096.4					N40D								
02/20/94 15:46:00	7:03:59										UV camera ON							Ground Command
02/20/94 15:48:00	7:05:59										Upload SEQ_29.UMI in SEQT 29							Ground Command
02/20/94 16:14:43	7:32:42		30.0	272.5	5346.9					N30D								
02/20/94 16:20:00	7:37:59										Load door-closed exposure table							Ground Command

Orbit 3 Timeline - Aborted LOI2 Burn/Sensor Door Test (Dark Field)

02/20/94 16:21:00	7:38:59											Initialize filters (DHU SEQT 27); Select ST-B; Record in SDR Segment 1							SENSOR DOOR ENGINEERING TEST Ground Command
02/20/94 16:23:00	7:40:59											Perform UV imaging (DHU SEQT 29)							Ground Command Door closed, dark field images.
02/20/94 16:23:22	7:41:21											Stop imaging - select ST-B							Ground Command
02/20/94 16:26:00	7:43:59											Switch to omni antennas							Ground Command
02/20/94 16:28:00	7:45:59											Slew sensors to Earth using inertial pointing (EARTHFE20)							Ground Command Slew sensors to Earth
02/20/94 16:31:00	7:48:59											Deselect ST							Ground Command
02/20/94 16:32:00	7:49:59											Ranging B OFF Ranging A ON							Ground Command
02/20/94 16:34:00	7:51:59											Select ST-B							Ground Command
02/20/94 16:34:41	7:52:40		24.5	272.4	5384.3							Aposelene							

Orbit 4 Timeline - Sensor Door and Engineering Tests

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/20/94 16:34:41	0:00:00		24.5	272.4	5384.3							Aposelene							SENSOR DOOR ENGINEERING TEST (continued)
02/20/94 16:34:50	0:00:09												Perform UV imaging (DHU SEQT 29)						Ground Command Door closed, dark field images.
02/20/94 16:35:11	0:00:29												Stop imaging, select ST-B						Ground Command
02/20/94 16:42:00	0:07:19												Sensor door OPEN						Ground Command
02/20/94 16:46:00	0:11:19												Record in SSSR Segment 2						Ground Command
02/20/94 16:47:00	0:12:19												Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 16:47:30	0:12:49												Stop imaging, select ST-B						Ground Command
02/20/94 16:48:00	0:13:18												Sensor door CLOSE						Ground Command
02/20/94 16:51:21	0:16:40		20.0	272.4	5358.2							N20D							
02/20/94 16:58:00	0:23:19												Perform UV imaging (DHU SEQT 29)						Ground Command Door closed, dark field images.
02/20/94 16:58:30	0:23:49												Stop imaging, select ST-B						Ground Command
02/20/94 17:01:00	0:26:18												Disable ST; Slew s/c HGA to Madrid (ACSMODE=EarthPointing, MAD)						Ground Command Slew HGA to Madrid
02/20/94 17:03:00	0:28:19												Switch downlink rate to 8 kbps; Select ST-B						Ground Command
02/20/94 17:04:00	0:29:18												Switch to HGA						Ground Command
02/20/94 17:05:00	0:30:19												Ranging A OFF Ranging B ON						Ground Command
02/20/94 17:06:00	0:31:19												Switch to DHU mode @ 128 kbps						Ground Command
02/20/94 17:12:00	0:37:19												Downlink SSSR Segment 1						Ground Command
02/20/94 17:20:00	0:45:18												Downlink SSSR Segment 2						Ground Command
02/20/94 17:26:00	0:51:19												SSDR to IDLE - downlink complete						Ground Command
02/20/94 17:26:50	0:52:09		10.0	272.2	5127.7							N10D							
02/20/94 17:30:00	0:55:18												Switch to bypass mode @ 8 kbps						Ground Command
02/20/94 17:42:00	1:07:19												Switch to omni antennas; Ranging B OFF; Ranging A ON						Ground Command
02/20/94 17:43:00	1:08:19												Slew to LOI2 burn attitude (GNC12LOI2RW)						Ground Command Slew to burn attitude
02/20/94 17:58:00	1:23:19												Upload SEQ_29C.UMI in SEQT 29						Ground Command
02/20/94 17:59:03	1:24:22		0.0	272.0	4705.5							Equator - D							
02/20/94 18:00:00	1:25:19												Record in SSSR Segment 1						Ground Command
02/20/94 18:01:38	1:26:57												Perform UV imaging (DHU SEQT 29)						Ground Command Compressed images
02/20/94 18:02:00	1:27:18												Stop imaging, select ST-B						Ground Command
02/20/94 18:08:51	1:34:10		-3.7	271.9	4515.4						PMK	AOS							
02/20/94 18:10:00	1:35:19												Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 18:10:30	1:35:49												Stop imaging, select ST-B						Ground Command

Orbit 4 Timeline - Sensor Door and Engineering Tests

02/20/94 18:21:30	1:46:48									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 18:22:00	1:47:19									Stop imaging, select ST-B						Ground Command
02/20/94 18:26:45	1:52:04		-10.0	271.9	4170.1					S10D						
02/20/94 18:30:00	1:55:19									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 18:30:30	1:55:49									Stop imaging, select ST-B						Ground Command
02/20/94 18:35:00	2:00:19									Read dosimeter latch values						Ground Command
02/20/94 18:40:00	2:05:19									Expose dosimeter						Ground Command
02/20/94 18:40:30	2:05:48									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 18:41:00	2:06:19									Stop imaging, select ST-B						Ground Command
02/20/94 18:48:00	2:13:19									SA-A mode to MANUAL						Ground Command
02/20/94 18:49:00	2:14:19									Rotate SA-A CCW						Ground Command
02/20/94 18:49:39	2:14:58		-20.0	271.8	3597.7					S20D						
02/20/94 18:51:00	2:16:19									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 18:51:30	2:16:49									Stop imaging, select ST-B						Ground Command
02/20/94 18:57:00	2:22:19									SA-A mode to AUTO						Ground Command
02/20/94 18:59:00	2:24:19									SA-A mode to MANUAL; Rotate SA-A CW						Ground Command
02/20/94 19:04:30	2:29:49									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 19:05:00	2:30:19									Stop imaging, select ST-B						Ground Command
02/20/94 19:08:11	2:33:30		-30.0	271.8	3044.0					S30D						
02/20/94 19:14:30	2:39:49									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 19:15:00	2:40:19									Stop imaging, select ST-B						Ground Command
02/20/94 19:20:00	2:45:19									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 19:20:30	2:45:49									Stop imaging, select ST-B						Ground Command
02/20/94 19:23:02	2:48:20		-40.0	271.8	2541.0					S40D						
02/20/94 19:29:30	2:54:49									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 19:30:00	2:55:19									Stop imaging, select ST-B						Ground Command
02/20/94 19:34:57	3:00:16		-50.0	271.9	2102.0					S50D						
02/20/94 19:40:00	3:05:19									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 19:40:30	3:05:49									Stop imaging, select ST-B						Ground Command
02/20/94 19:44:30	3:09:48									Switch to DHU mode						Ground Command
02/20/94 19:44:36	3:09:55		-60.0	272.2	1728.7					S60D						
02/20/94 19:51:00	3:16:18									Perform UV imaging (DHU SEQT 29)						Ground Command
02/20/94 19:51:30	3:16:48									Stop imaging, select ST-B						Ground Command
02/20/94 19:52:32	3:17:51		-70.0	272.8	1416.8					S70D						
02/20/94 19:55:00	3:20:19									ST-A camera OFF						Ground Command
02/20/94 19:59:09	3:24:28		-80.0	274.8	1159.6					S80D						
02/20/94 19:59:30	3:24:49									Perform UV imaging (DHU SEQT 29)						Ground Command

Orbit 4 Timeline - Sensor Door and Engineering Tests

02/20/94 20:00:00	3:25:19											Stop imaging, select ST-B					Ground Command
02/20/94 20:04:47	3:30:06	-89.3	1.8	950.6								South Pole					
02/20/94 20:05:30	3:30:49	-88.4	64.6	924.8								LDAWN					
02/20/94 20:06:00	3:31:19												SA-A mode to AUTO				Ground Command
02/20/94 20:09:40	3:34:59	-80.0	86.9	783.2								S80A					
02/20/94 20:10:30	3:35:48												Perform UV imaging (DHU SEQT 29)				Ground Command
02/20/94 20:11:00	3:36:19												Stop imaging, select ST-B				Ground Command
02/20/94 20:14:02	3:39:21	-70.0	88.8	650.7								S70A					
02/20/94 20:17:59	3:43:17	-60.0	89.5	549.7								S60A					
02/20/94 20:20:00	3:45:18												Perform UV imaging (DHU SEQT 29)				Ground Command
02/20/94 20:20:30	3:45:49												Stop imaging, select ST-B				Ground Command
02/20/94 20:21:39	3:46:58	-50.0	89.9	476.5								S50A					
02/20/94 20:25:07	3:50:26	-40.0	90.1	428.8								S40A					
02/20/94 20:25:00	3:50:19												Perform UV imaging (DHU SEQT 29)				Ground Command
02/20/94 20:25:30	3:50:49												Stop imaging, select ST-B				Ground Command
02/20/94 20:26:00	3:51:19												Perform UV imaging (DHU SEQT 29)				Ground Command
02/20/94 20:26:30	3:51:48												Stop imaging, select ST-B				Ground Command
02/20/94 20:27:00	3:52:19												Load door-open exposure table				Ground Command
02/20/94 20:27:30	3:52:49												Perform UV imaging (DHU SEQT 29)				Ground Command
02/20/94 20:28:29	3:53:48	-30.0	90.2	404.9								S30A					
02/20/94 20:30:16	3:55:34	-24.6	90.3	401.6								Periselene					
02/20/94 20:31:48	3:57:07	-20.0	90.3	404.0								S20A					
02/20/94 20:35:09	4:00:27	-10.0	90.4	426.0								S10A					
02/20/94 20:38:36	4:03:54	0.0	90.5	471.7								Equator - A					
02/20/94 20:42:00	4:07:19												Load door-closed exposure table				Ground Command
02/20/94 20:42:15	4:07:34	10.0	90.6	542.6								N10A					
02/20/94 20:43:30	4:08:49												Stop imaging, select ST-B				Ground Command
02/20/94 20:46:10	4:11:29	20.0	90.7	641.2								N20A					
02/20/94 20:46:00	4:11:18												Perform UV imaging (DHU SEQT 29)				Ground Command
02/20/94 20:46:30	4:11:49												Stop imaging, select ST-B				Ground Command
02/20/94 20:47:00	4:12:19												Slew s/c HGA to Pomonkey (ACSMODE=EarthPointing, PMK)				Ground Command Slew HGA to Pomonkey
02/20/94 20:50:29	4:15:47	30.0	90.8	770.8								N30A					
02/20/94 20:52:00	4:17:18												Switch to HGA				Ground Command
02/20/94 20:53:00	4:18:19												Ranging A OFF Ranging B ON				Ground Command
02/20/94 20:55:21	4:20:40	40.0	91.0	935.7								N40A					
02/20/94 21:00:00	4:25:19												Switch to DHU mode @ 128 kbps				Ground Command
02/20/94 21:00:55	4:26:14	50.0	91.1	1141.4								N50A					
02/20/94 21:03:00	4:28:19												Downlink SDDR Segment 1				Ground Command
02/20/94 21:07:27	4:32:46	60.0	91.5	1394.3								N60A					
02/20/94 21:09:00	4:34:19												SDDR to IDLE - downlink complete				Ground Command

Last Update: 02/01/2021 21:21:59
By:tcs

Orbit 4
Actual Timeline

Orbit 4 Timeline - Sensor Door and Engineering Tests

02/20/94 21:13:00	4:38:19												SA-A mode to MANUAL; Rotate SA-A CW				Ground Command
02/20/94 21:15:15	4:40:34	70.0	92.1	1701.5									N70A				
02/20/94 21:17:00	4:42:19												UV camera OFF				Ground Command
02/20/94 21:18:00	4:43:18												ST-A camera ON				Ground Command
02/20/94 21:24:45	4:50:04	80.0	94.0	2070.1									N80A				
02/20/94 21:26:46	4:52:05	82.8	95.6	2184.5									GDS AOS				
02/20/94 21:29:00	4:54:19												Ranging B OFF				Ground Command
02/20/94 21:36:26	5:01:45	89.3	179.9	2502.6									North Pole				
02/20/94 21:38:18	5:03:36	88.4	243.7	2568.9									LDUSK				
02/20/94 21:31:00	4:56:18												Load door-open exposure table				Ground Command
02/20/94 21:50:59	5:16:18	80.0	265.9	2999.4									N80D				
02/20/94 21:51:00	5:16:19												Slew s/c about X-axis using inertial pointing (EARTHFE20A)				Ground Command To cool battery
02/20/94 21:53:00	5:18:19												SA-A mode to AUTO				Ground Command
02/20/94 22:09:12	5:34:31	70.0	267.8	3550.4									N70D				
02/20/94 22:31:44	5:57:02	60.0	268.3	4123.2									N60D				
02/20/94 22:40:00	6:05:19												SA-A mode to MANUAL; Rotate SA-A CW				Ground Command
02/20/94 22:52:00	6:17:19												Set downlink rate to 8 kbps				Ground Command
02/20/94 22:57:00	6:22:19												Uplink new IP EXEC code to SIP				Ground Command
02/20/94 22:59:02	6:24:21	50.0	268.4	4664.5									N50D				
02/20/94 23:01:00	6:26:18												SA-A mode to AUTO; Stop and start IPE				Ground Command
02/20/94 23:08:00	6:33:19												Uplink FEB18 IPE tables for SIP				Ground Command
02/20/94 23:12:00	6:37:19												Slew s/c about X-axis using inertial pointing (EARTHFE20B)				Ground Command - to cool battery, last att. didn't help
02/20/94 23:16:00	6:41:19												Switch to omni antennas				Ground Command
02/20/94 23:17:00	6:42:18												Deselect ST				Ground Command
02/20/94 23:21:00	6:46:19												SA-A mode to MANUAL				Ground Command
02/20/94 23:25:00	6:50:19												SA-A mode to AUTO				Ground Command
02/20/94 23:30:54	6:56:13	40.0	268.4	5099.2									N40D				
02/20/94 23:46:00	7:11:18												Select ST-B				Ground Command
02/21/94 00:06:12	7:31:31	30.0	268.2	5348.0									N30D				
02/21/94 00:25:52	7:51:11	24.6	268.1	5384.2									Aposelene				

Orbit 5 Timeline - Lunar Auto Exposure Test (Door Closed)

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/21/94 00:25:52	0:00:00		24.6	268.1	5384.2							Aposelene							Sensor door closed
02/21/94 00:42:00	0:16:08												Ranging A ON						Ground Command
02/21/94 00:42:50	0:16:58		20.0	268.0	5357.2							N20D							
02/21/94 00:53:00	0:27:08												Read dosimeter latch values						Ground Command
02/21/94 00:58:00	0:32:08												Expose dosimeter						Ground Command
02/21/94 01:18:18	0:52:26		10.0	267.8	5124.9							N10D							
02/21/94 01:31:00	1:05:08												ST-A door OPEN						Ground Command
02/21/94 01:33:00	1:07:08												Switch to DHU bypass mode						Ground Command
02/21/94 01:35:00	1:09:08												Select ST-A						Ground Command
02/21/94 01:36:00	1:10:08												ST-B door CLOSE						Ground Command
02/21/94 01:50:28	1:24:36		0.0	267.7	4701.4							Equator - D							
02/21/94 02:14:00	1:48:08												Update state vector (GNC53_21FEB0000)						Ground Command
02/21/94 02:18:08	1:52:16		-10.0	267.5	4165.3							S10D							
02/21/94 02:41:00	2:15:08		-20.0	267.5	3592.9							S20D							
02/21/94 02:44:28	2:18:36		-22.2	267.5	3466.0						MAD	LOS							
02/21/94 02:59:30	2:33:38		-30.0	267.5	3039.5							S30D							
02/21/94 03:14:19	2:48:27		-40.0	267.5	2537.0							S40D							
02/21/94 03:20:00	2:54:08												Uplink S-series DHU sequence tables						Ground Command SEQ tables uploaded
02/21/94 03:26:13	3:00:21		-50.0	267.6	2098.5							S50D							
02/21/94 03:31:00	3:05:08												Uplink and schedule L003 scripts						Ground Command NOTE: L003 scripts used for L005
																			L003 Prep Script
02/21/94 03:32:00	3:06:08	0											IR cameras & cryocoolers ON; SA mode to AUTO						Prep started late due to late uplink-scheduled for 03:16:52
																			End L003 Prep Script
02/21/94 03:35:51	3:09:59		-60.0	267.9	1725.8							S60D							
02/21/94 03:43:45	3:17:53		-70.0	268.6	1414.4							S70D							
02/21/94 03:50:22	3:24:30		-80.0	270.6	1157.6							S80D							
																			L003 Script
02/21/94 03:51:52	3:26:00	0											UV & HR cameras ON						NOTE: Script events are late due to a ~5 min error in planning ephemeris
02/21/94 03:55:52	3:30:00	240											Deselect ST; Switch to lunar mapping mode (ACSMODE=LunarMapping)						Slew sensors to nadir
02/21/94 03:56:00	3:30:08		-89.3	357.7	948.9							South Pole							
02/21/94 03:56:43	3:30:51		-88.4	59.6	923.5							LDAWN							
02/21/94 04:00:50	3:34:58	298											Select ST-A						SCRIPT ERROR: WAIT should've been 300 sec
02/21/94 04:00:53	3:35:01		-80.0	82.5	781.9							S80A							

Orbit 5 Timeline - Lunar Auto Exposure Test (Door Closed)

02/21/94 04:01:00	3:35:08	10								Initialize filters (DHU SEQT 26); Record in SDR Segment 1; Activate Lunar Auto Exposure					Start recorder in Segment 1
02/21/94 04:01:50	3:35:58	50							MAXS	Execute L003_image					LUNAR AUTO EXPOSURE TEST
02/21/94 04:05:14	3:39:22		-70.0	84.5	649.7				S70A						Sensor door closed - all dark field images
02/21/94 04:06:43	3:40:51	293							S80A	Execute L003_image					Image set #2
02/21/94 04:09:11	3:43:19		-60.0	85.2	548.9				S60A						Note: Time between events includes script duration (30 sec) and WAIT between script calls
02/21/94 04:11:05	3:45:13	262							S70A	Execute L003_image					Image set #3
02/21/94 04:12:51	3:46:59		-50.0	85.5	476.0				S50A						
02/21/94 04:15:02	3:49:10	237							S60A	Execute L003_image					Image set #4
02/21/94 04:16:19	3:50:27		-40.0	85.7	428.5				S40A						
02/21/94 04:18:42	3:52:50	220							S50A	Execute L003_image					Image set #5
02/21/94 04:19:40	3:53:48		-30.0	85.9	404.8				S30A						
02/21/94 04:21:26	3:55:34		-24.7	86.0	401.5				Periselene						
02/21/94 04:22:10	3:56:18	208							S40A	Execute L003_image					Image set #6
02/21/94 04:23:00	3:57:08		-20.0	86.0	404.0				S20A						
02/21/94 04:25:32	3:59:40	202							S30A	Execute L003_image					Image set #7
02/21/94 04:26:21	4:00:29		-10.0	86.1	426.2				S10A						
02/21/94 04:28:51	4:02:59	199							S20A	Execute L003_image					Image set #8
02/21/94 04:29:48	4:03:56		0.0	86.2	472.2				Equator - A						
02/21/94 04:32:12	4:06:20	201							S10A	Execute L003_image					Image set #9
02/21/94 04:33:27	4:07:35		10.0	86.3	543.3				N10A						
02/21/94 04:35:39	4:09:47	207							MEQA	Execute L003_image					Image set #10
02/21/94 04:37:23	4:11:31		20.0	86.4	642.1				N20A						
02/21/94 04:39:18	4:13:26	219							N10A	Execute L003_image					Image set #11
02/21/94 04:41:42	4:15:50		30.0	86.5	772.0				N30A						
02/21/94 04:43:14	4:17:22	236							N20A	Execute L003_image					Image set #12
02/21/94 04:46:33	4:20:41		40.0	86.7	937.2				N40A						
02/21/94 04:47:33	4:21:41	259							N30A	Execute L003_image					Image set #13
02/21/94 04:52:08	4:26:16		50.0	86.9	1143.3				N50A						
02/21/94 04:52:25	4:26:33	292							N40A	Execute L003_image					Image set #14
02/21/94 04:58:00	4:32:08	335							N50A	Execute L003_image					Image set #15
02/21/94 04:58:41	4:32:49		60.0	87.2	1396.6				N60A						
02/21/94 05:04:32	4:38:40	392							N60A	Execute L003_image					Image set #16
02/21/94 05:05:02	4:39:10	30								Deactivate Lunar Auto Exposure					END AUTOEXPOSURE TEST
															End L003 Script
															L003 Post Script
02/21/94 05:05:34	4:39:42	0								Park filters (DHU SEQT 27)					

Orbit 5 Timeline - Lunar Auto Exposure Test (Door Closed)

02/21/94 05:05:39	4:39:47	5								UV & HR cameras OFF; IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
02/21/94 05:06:30	4:40:38		70.0	87.8	1704.4				N70A								
02/21/94 05:11:34	4:45:42	201								Select ST-A							SCRIPT ERROR: WAIT should've been 355 sec
02/21/94 05:11:44	4:45:52	10								Select ST-B; ST-B door OPEN; Switch to HGA at 128kbps							
End L003 Post Script																	
02/21/94 05:13:00	4:47:08									Ranging B ON							Ground Command
02/21/94 05:16:01	4:50:09		80.0	89.8	2073.5				N80A								
02/21/94 05:27:00	5:01:08									Downlink SDR Segment 1							Ground Command
02/21/94 05:27:43	5:01:51		89.3	175.6	2506.5				North Pole								
02/21/94 05:29:34	5:03:42		88.4	238.7	2572.4				LDUSK								
02/21/94 05:40:00	5:14:08									SSDR to IDLE - downlink complete							Ground Command
02/21/94 05:42:17	5:16:25		80.0	261.5	3003.8				N80D								
02/21/94 05:55:00	5:29:08									Update state vector (GNC53_21FEB0400)							Ground Command
02/21/94 06:00:32	5:34:40		70.0	263.4	3555.2				N70D								
02/21/94 06:11:08	5:45:16		64.6	263.8	3864.1			CAN	AOS								
02/21/94 06:23:07	5:57:15		60.0	263.9	4128.1				N60D								
02/21/94 06:50:27	6:24:35		50.0	264.1	4668.8				N50D								
02/21/94 07:22:22	6:56:30		40.0	264.0	5102.2				N40D								
02/21/94 07:54:11	7:28:19		30.7	263.9	5338.7			PMK	LOS								
02/21/94 07:57:41	7:31:49		30.0	263.9	5349.1				N30D								
02/21/94 08:17:01	7:51:09		24.7	263.8	5384.2				Aposelene								
L003_image Subscript																	
		0								Start imaging (DHU SEQT 9)							
		30								Stop imaging - select ST-A							
End Subscript																	

Orbit 7 Timeline - Type A Orbit Manning Rehearsal

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/21/94 14:40:31	0:00:00		28.5	260.2	2964.1							Aposelene							S/C in inertial pointing attitude for thermal conditioning
02/21/94 14:54:48	0:14:17		20.0	260.2	2933.5							N20D							
02/21/94 15:11:00	0:30:29												Read dosimeter latch values						Ground Command
02/21/94 15:11:11	0:30:40		10.0	260.2	2822.9							N10D							
02/21/94 15:16:00	0:35:29												Expose dosimeter						Ground Command
02/21/94 15:26:33	0:46:02		0.0	260.2	2645.4							Equator - D							
02/21/94 15:30:00	0:49:29												IR cameras & cryocoolers ON; Set SA to AUTO						Ground Command Script not ready
02/21/94 15:40:33	1:00:02		-10.0	260.2	2421.2							S10D							
02/21/94 15:53:03	1:12:32		-20.0	260.2	2171.7							S20D							
02/21/94 16:04:01	1:23:30		-30.0	260.3	1915.7							S30D							
02/21/94 16:13:34	1:33:03		-40.0	260.4	1667.5							S40D							
02/21/94 16:20:00	1:39:29												LASER Heater ON						Ground Command
02/21/94 16:21:52	1:41:21		-50.0	260.6	1436.3							S50D							
02/21/94 16:29:05	1:48:34		-60.0	260.9	1227.7							S60D							
02/21/94 16:33:00	1:52:29												Sensor door OPEN; UV & HR cameras ON						Ground Command Script not ready
02/21/94 16:35:25	1:54:54		-70.0	261.6	1044.0							S70D							
02/21/94 16:37:00	1:56:29												ST-A door OPEN						Ground Command
02/21/94 16:38:00	1:57:29												Laser power ON						Ground Command
02/21/94 16:41:01	2:00:30		-80.0	263.7	885.5							S80D							
02/21/94 16:44:00	2:03:29												Slew s/c sensors to nadir (ACSMODE=LunarMapping)						Ground Command
02/21/94 16:45:00	2:04:29												Initialize filters (DHU SEQT 28)						Ground Command
02/21/94 16:46:00	2:05:29		-89.3	348.1	752.5							South Pole							
02/21/94 16:46:05	2:05:34												Select ST-A						Ground Command
02/21/94 16:46:40	2:06:09		-88.4	51.7	735.7							LDAWN							
02/21/94 16:47:00	2:06:29												Record in SDR Segment 1						Ground Command
02/21/94 16:50:32	2:10:01		-80.0	75.3	642.3							S80A							
02/21/94 16:49:00	2:08:29												Upload exposure table LUNARZ75S						Ground Command
02/21/94 16:51:00	2:10:29												Start imaging (DHU SEQT 3)						Ground Command START MAPPING
02/21/94 16:53:00	2:12:29												Upload exposure table LUNARZ65S						Ground Command
02/21/94 16:54:00	2:13:29												Select DHU SEQT 4						Ground Command
02/21/94 16:54:43	2:14:12		-70.0	77.4	553.9							S70A							
02/21/94 16:58:00	2:17:29												Upload exposure table LUNARZ55S; Select DHU SEQT 6						Ground Command
02/21/94 16:58:38	2:18:07		-60.0	78.1	486.2							S60A							
02/21/94 17:01:00	2:20:29												Upload exposure table LUNARZ45S; Select DHU SEQT 5						Ground Command
02/21/94 17:02:20	2:21:49		-50.0	78.5	438.0							S50A							

Orbit 7 Timeline - Tyne A Orbit Mapping Rehearsal

02/21/94 18:48:57	4:08:26		60.0	257.1	2581.4					N60D								
02/21/94 18:49:00	4:08:29										Downlink SDR Segment 1							Ground Command
02/21/94 19:01:21	4:20:50		51.0	257.3	2757.5				PMK	AOS								
02/21/94 19:03:57	4:23:26		50.0	257.4	2775.4					N50D								
02/21/94 19:20:04	4:39:33		40.0	257.5	2908.2					N40D								
02/21/94 19:36:52	4:56:21		30.0	257.5	2963.2					N30D								
02/21/94 19:39:23	4:58:52		28.5	257.5	2964.1					Aposelene								

Orbit 8 Timeline - Type A Orbit Mapping Rehearsal

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/21/94 19:39:23	0:00:00		28.5	257.5	2964.1							Aposelene							Downlinking SSDR Segment 1 (orbit 7)
02/21/94 19:53:46	0:14:23		20.0	257.5	2933.1							N20D							
02/21/94 20:10:09	0:30:46		10.0	257.5	2822.1							N10D							
02/21/94 20:25:30	0:46:07		0.0	257.5	2644.2							Equator - D							
02/21/94 20:34:00	0:54:37												IR cameras & cryocoolers ON						Ground Command
02/21/94 20:39:30	1:00:07		-10.0	257.5	2419.8							S10D							
02/21/94 20:43:00	1:03:37												SSDR to IDLE						Ground Command - lost lock
02/21/94 20:45:00	1:05:37												Resume downlinking SSDR Segment 1						Ground Command - locked on
02/21/94 20:51:59	1:12:36		-20.0	257.5	2170.2							S20D							
02/21/94 21:02:57	1:23:34		-30.0	257.6	1914.2							S30D							
02/21/94 21:05:00	1:25:36												Uplink and schedule L008 scripts						Ground Command Errors, attempt to schedule scripts without uplinking baseline
02/21/94 21:12:30	1:33:07		-40.0	257.7	1666.0							S40D							
02/21/94 21:17:00	1:37:37												Laser heater ON						Ground Command
02/21/94 21:20:00	1:40:37												Uplink baseline scripts						Ground Command
02/21/94 21:20:47	1:41:24		-50.0	257.8	1435.0							S50D							
02/21/94 21:26:45	1:47:22											S60D							
02/21/94 21:27:00	1:47:37												Uplink and schedule L008 scripts						Ground Command Errors, too many scripts Mapping not scheduled
02/21/94 21:34:00	1:54:37												Delete non-required scripts (12)						Ground Command
02/21/94 21:40:00	2:00:37												Uplink and schedule L008 scripts						Ground Command Errors in uplink Mapping not scheduled
02/21/94 21:34:19	1:54:56		-70.0	258.8	1042.9							S70D							
02/21/94 21:39:55	2:00:32		-80.0	260.9	884.6							S80D							
02/21/94 21:44:54	2:05:31		-89.3	345.4	751.7							South Pole							
02/21/94 21:45:00	2:05:37												Laser power ON						Ground Command
02/21/94 21:45:34	2:06:11		-88.4	49.2	734.9							LDAWN							
02/21/94 21:49:26	2:10:03		-80.0	72.6	641.7							S80A							
02/21/94 21:51:00	2:11:37												UV & HR cameras ON; Laser power ON						Ground Command
02/21/94 21:53:37	2:14:14		-70.0	74.7	553.4							S70A							
02/21/94 21:54:00	2:14:37												SSDR to IDLE - downlink stopped						Ground Command
02/21/94 21:55:00	2:15:37												Switch to DHU bypass mode						Ground Command
02/21/94 21:57:00	2:17:37												Switch to omni antennas						Ground Command
02/21/94 21:57:31	2:18:08		-60.0	75.4	485.8							S60A							
02/21/94 22:01:00	2:21:37												Slew s/c sensors to nadir (ACSMMode=LunarMapping)						Ground Command
02/21/94 22:01:14	2:21:51		-50.0	75.7	437.8							S50A							

Orbit 8 Timeline - Type A Orbit Manning Rehearsal

02/21/94 22:02:00	2:22:37										Record in SDR Segment 2; Initialize filters (DHU SEQT 28); Select ST-A								Ground Command
02/21/94 22:04:48	2:25:25		-40.0	76.0	408.3					S40A									
02/21/94 22:05:00	2:25:37										Upload exposure table LUNARZ35S								Ground Command
02/21/94 22:05:30	2:26:07										Upload exposure table LUNARZ25S								Ground Command
02/21/94 22:06:00	2:26:36										Start imaging (DHU SEQT 5)								Ground Command START MAPPING
02/21/94 22:08:19	2:28:56		-30.0	76.1	396.8					S30A									
02/21/94 22:08:49	2:29:26		-28.6	76.1	396.6					Periselene									
02/21/94 22:10:00	2:30:37										Upload exposure table LUNARZ15S								Ground Command
02/21/94 22:11:49	2:32:26		-20.0	76.2	403.1					S20A									
02/21/94 22:14:00	2:34:37										Upload exposure table LUNARZ05S; Select DHU SEQT 6								Ground Command
02/21/94 22:15:22	2:35:58		-10.0	76.3	427.3					S10A									
02/21/94 22:17:30	2:38:07										Upload exposure table LUNARZ05N; Select DHU SEQT 7								Ground Command
02/21/94 22:18:24	2:39:01		1.0	76.5	476.0				GDS	AOS									
02/21/94 22:19:01	2:39:38		0.0	76.4	469.9					Equator - A									
02/21/94 22:21:30	2:42:07										Upload exposure table LUNARZ15N; Select DHU SEQT 8								Ground Command
02/21/94 22:22:52	2:43:29		10.0	76.5	531.7					N10A									
02/21/94 22:25:00	2:45:37										Upload exposure table LUNARZ25N; Select DHU SEQT 9								Ground Command Stop laser ranging
02/21/94 22:26:00	2:46:37										Laser power OFF								Ground Command
02/21/94 22:26:57	2:47:34		20.0	76.6	613.7					N20A									
02/21/94 22:28:00	2:48:37										Laser heater OFF								Ground Command
02/21/94 22:30:00	2:50:37										Upload exposure table LUNARZ35N; Select DHU SEQT 10								Ground Command
02/21/94 22:31:22	2:51:59		30.0	76.7	717.3					N30A									
02/21/94 22:35:00	2:55:36										Upload exposure table LUNARZ45N; Select DHU SEQT 11								Ground Command
02/21/94 22:36:14	2:56:51		40.0	76.9	843.9					N40A									
02/21/94 22:40:00	3:00:37										Upload exposure table LUNARZ55N								Ground Command
02/21/94 22:41:38	3:02:14		50.0	77.1	994.8					N50A									
02/21/94 22:45:00	3:05:37										Select DHU SEQT 12								Ground Command
02/21/94 22:46:00	3:06:37										Upload exposure table LUNARZ65N; Select DHU SEQT 13								Ground Command Data lost due to communication problems during downlink
02/21/94 22:47:44	3:08:21		60.0	77.4	1170.9					N60A									
02/21/94 22:48:00	3:08:37										Update state vector (GNC53_21FEB2000)								Ground Command
02/21/94 22:54:00	3:14:37										Upload exposure table LUNARZ75N; Select DHU SEQT 14								Ground Command
02/21/94 22:54:40	3:15:17		70.0	78.1	1372.4					N70A									
02/21/94 23:01:00	3:21:37										Upload exposure table LUNARZ85N; Select DHU SEQT 15								Ground Command
02/21/94 23:02:39	3:23:16		80.0	80.1	1597.6					N80A									
02/21/94 23:10:00	3:30:37										Stop all imaging (including ST)								Ground Command

Last Update: 02/01/2021 21:21:59
By:tcs

Orbit 8
Actual Timeline

Orbit 8 Timeline - Tyne A Orbit Manning Rehearsal

02/21/94 23:11:00	3:31:37									UV & HR cameras OFF					Ground Command
02/21/94 23:11:47	3:32:24	89.3	166.1	1841.0						North Pole					
02/21/94 23:13:00	3:33:37									UV & HR cameras ON; Park filters (DHU SEQT 27)					Ground Command Have to be on to park filters
02/21/94 23:13:09	3:33:46	88.4	228.4	1875.8						LDUSK					
02/21/94 23:15:00	3:35:37									Deselect ST; UV & HR cameras OFF; Laser power OFF (redundant)					Ground Command
02/21/94 23:17:00	3:37:37									Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0)					Ground Command
02/21/94 23:22:17	3:42:54	80.0	251.8	2095.2						N80D					
02/21/94 23:23:00	3:43:37									Select ST-A					Ground Command
02/21/94 23:24:30	3:45:07									Perform LWIR imaging (DHU SEQT 25)					Ground Command No data
02/21/94 23:25:00	3:45:37									Perform NIR imaging (DHU SEQT 31)					Ground Command No data
02/21/94 23:25:30	3:46:07									Stop imaging - select ST-A					Ground Command
02/21/94 23:26:00	3:46:37									All cameras (except ST) OFF					Ground Command
02/21/94 23:18:37	3:39:14									Slew s/c HGA to Pomonkey (ACSMMode=EarthPointing, PMK)					Ground Command
02/21/94 23:34:20	3:54:57	70.0	253.8	2348.7						N70D					
02/21/94 23:41:00	4:01:37									Switch to DHU mode @ 128 kbps					Ground Command
02/21/94 23:47:55	4:08:32	60.0	254.4	2582.7						N60D					
02/22/94 00:02:55	4:23:32	50.0	254.6	2776.4						N50D					
02/22/94 00:03:00	4:23:37									Downlink SDR Segment 2					Ground Command
02/22/94 00:19:02	4:39:39	40.0	254.7	2908.7						N40D					
02/22/94 00:35:51	4:56:28	30.0	254.8	2963.3						N30D					
02/22/94 00:38:15	4:58:52	28.6	254.8	2964.2						Aposelene					

Orbit 10 Timeline - Type A Orbit Mapping Rehearsal

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/22/94 05:37:08	0:00:00	0	28.6	252.0	2964.2							Aposelene							NOTE: L009 scripts were used for this orbit, since they did not execute on orbit 9
02/22/94 05:51:42	0:14:34		20.0	252.0	2932.3							N20D							
02/22/94 06:08:04	0:30:56		10.0	252.0	2820.4							N10D							
02/22/94 06:14:00	0:36:52												Laser heater ON						Ground Command
02/22/94 06:18:00	0:40:52												IR cameras & cryocoolers OFF						Ground Command
02/22/94 06:23:00	0:45:52												Uplink and schedule L009 scripts						Ground Command - note above
02/22/94 06:23:25	0:46:17		0.0	252.0	2641.8							Equator - D							
02/22/94 06:29:00	0:51:52												Cancel L009 Mapping Script						Ground Command - because wrong SEQT in run_dhu5?
02/22/94 06:30:00	0:52:52												Reuplink and schedule L009 scripts						Ground Command
02/22/94 06:34:00	0:56:52												Slew s/c HGA to Goldstone (ACSMODE=EarthPointing, GDS); Deselect ST						Ground Command
																			L009 Prepa Script
02/22/94 06:34:29	0:57:21	0											IR cameras & cryocoolers ON; SA mode to AUTO						
																			End L009 Prepa Script
02/22/94 06:37:24	1:00:16		-10.0	252.0	2417.0							S10D							
02/22/94 06:43:00	1:05:52												Select ST-A						Ground Command
02/22/94 06:49:52	1:12:44		-20.0	252.0	2167.2							S20D							
02/22/94 06:55:54	1:18:46		-26.3	252.1	2005.9						CAN	AOS							
02/22/94 07:00:49	1:23:41		-30.0	252.1	1911.3							S30D							
02/22/94 07:10:20	1:33:12		-40.0	252.2	1663.2							S40D							
02/22/94 07:12:00	1:34:52												Switch to HGA						Ground Command
02/22/94 07:14:00	1:36:52												Switch to DHU mode @ 8 kbps						Ground Command
02/22/94 07:18:37	1:41:29		-50.0	252.3	1432.4							S50D							
02/22/94 07:21:00	1:43:52												Switch to DHU bypass mode						Ground Command
02/22/94 07:22:00	1:44:52												Switch to omni antennas						Ground Command
02/22/94 07:25:49	1:48:41		-60.0	252.7	1224.2							S60D							
																			L009 Prepb Script
02/22/94 07:28:54	1:51:46	0											Deselect ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/22/94 07:31:28	1:54:21	155											UV & HR cameras ON						
02/22/94 07:32:08	1:55:00		-70.0	253.3	1040.9							S70D							
02/22/94 07:33:53	1:56:45	145											Select ST-A						
02/22/94 07:34:04	1:56:56	10											Initialize filters (DHU SEQT 28); Record in SDR Segment 3						Start recording in Segment 3
02/22/94 07:34:28	1:57:21	25											Perform LWIR imaging (DHU SEQT 25)						No data - overwritten

Orbit 10 Timeline - Type A Orbit Manning Rehearsal

02/22/94 07:34:58	1:57:51	30								Perform NIR imaging (DHU SEQT 31)				No data
02/22/94 07:35:29	1:58:21	30								Stop imaging - select ST-A				
02/22/94 07:35:39	1:58:31	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)				Slew to nadir
02/22/94 07:37:10	2:00:02	91								Laser power ON				
End L009 Prepb Script														
02/22/94 07:37:43	2:00:35		-80.0	255.3	882.9				S80D					
L009 Mapping Script														
02/22/94 07:40:28	2:03:20	0								Select ST-A				
02/22/94 07:40:38	2:03:30	10								Load exposure table LUNARZ85S				
02/22/94 07:41:28	2:04:20	50								Start imaging (DHU SEQT 9)				START MAPPING TEST Data in this segment overwritten
02/22/94 07:42:42	2:05:34		-89.3	340.3	750.2				South Pole					
02/22/94 07:43:22	2:06:14		-88.4	44.4	733.4				LDAWN					
02/22/94 07:47:00	2:09:52	331							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3				
02/22/94 07:47:14	2:10:06		-80.0	67.2	640.5				S80A					
02/22/94 07:48:00	2:10:52									Record in SDDR Segment 2				Ground Command OPS ERROR: Segment 2 data overwrote earlier Segment 3 data
02/22/94 07:51:11	2:14:03	251							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4				
02/22/94 07:51:24	2:14:16		-70.0	69.3	552.5				S70A					
02/22/94 07:55:05	2:17:57	234							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
02/22/94 07:55:18	2:18:10		-60.0	69.9	485.1				S60A					
02/22/94 07:58:46	2:21:39	222							S50A	Load exposure table LUNARZ45S; Select DHU SEQT 5				
02/22/94 07:59:01	2:21:53		-50.0	70.3	437.3				S50A					
02/22/94 08:02:21	2:25:14	215							S40A	Load exposure table LUNARZ35S				
02/22/94 08:02:35	2:25:27		-40.0	70.5	408.0				S40A					
02/22/94 08:05:52	2:28:44	210							S30A	Load exposure table LUNARZ25S				
02/22/94 08:06:06	2:28:58		-30.0	70.7	396.7				S30A					
02/22/94 08:06:34	2:29:26		-28.7	70.7	396.6				Periselene					
02/22/94 08:09:22	2:32:14	210							S20A	Load exposure table LUNARZ15S				
02/22/94 08:09:36	2:32:28		-20.0	70.8	403.3				S20A					
02/22/94 08:12:55	2:35:47	213							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
02/22/94 08:13:09	2:36:01		-10.0	70.9	427.7				S10A					
02/22/94 08:16:34	2:39:26	219							MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 7				
02/22/94 08:16:49	2:39:41		0.0	71.0	470.5				Equator - A					
02/22/94 08:20:25	2:43:17	231							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8				
02/22/94 08:20:39	2:43:31		10.0	71.1	532.5				N10A					

Orbit 10 Timeline - Type A Orbit Manning Rehearsal

02/22/94 08:24:29	2:47:21	245							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						Stop laser ranging
02/22/94 08:24:44	2:47:36		20.0	71.1	614.8				N20A							
02/22/94 08:25:30	2:48:22	60								Laser power OFF; Laser heater OFF						
02/22/94 08:28:55	2:51:47	205							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
02/22/94 08:29:10	2:52:02		30.0	71.3	718.6				N30A							
02/22/94 08:33:46	2:56:39	292							N40A	Load exposure table LUNARZ45N; Select DHU SEQT 11						
02/22/94 08:34:02	2:56:54		40.0	71.4	845.5				N40A							
02/22/94 08:34:52	2:57:44		43.5	71.5	896.1			PMK	LOS							
02/22/94 08:39:11	3:02:03	325							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12						
02/22/94 08:39:27	3:02:19		50.0	71.6	996.7				N50A							
02/22/94 08:45:16	3:08:08	365							N60A	Activate Lunar Autoexposure; Stop imaging - select ST-A; Execute run_dhu5						LUNAR AUTOEXPOSURE TEST
02/22/94 08:45:33	3:08:25		60.0	71.9	1173.1				N60A							
02/22/94 08:47:36	3:10:28	140								Execute run_dhu5						Image Set #2 NOTE:: Time between events includes imaging duration (20 sec) and imbedded WAIT (120 sec)
02/22/94 08:49:56	3:12:48	140								Execute run_dhu5						Image Set #3
02/22/94 08:52:16	3:15:08	140								Execute run_dhu5						Image Set #4
02/22/94 08:52:30	3:15:22		70.0	72.6	1374.9				N70A							
02/22/94 08:54:36	3:17:28	140								Execute run_dhu5						Image Set #5
02/22/94 08:56:56	3:19:48	140								Execute run_dhu5						Image Set #6
02/22/94 08:59:16	3:22:08	140								Execute run_dhu5						Image Set #7
02/22/94 09:00:29	3:23:21		80.0	74.5	1600.3				N80A							
02/22/94 09:01:36	3:24:29	140								Execute run_dhu5						Image Set #8
02/22/94 09:03:56	3:26:49	140								Execute run_dhu5						Image Set #9
02/22/94 09:06:16	3:29:09	140								Execute run_dhu5						Image Set #10
02/22/94 09:07:16	3:30:08															Images stop (actual time)
02/22/94 09:08:37	3:31:29	140								Deactivate Lunar Autoexposure						END AUTOEXPOSURE TEST
End L009 Script																
02/22/94 09:09:38	3:32:30		89.3	160.0	1843.7				North Pole							
02/22/94 09:11:01	3:33:53		88.4	223.8	1879.0				LDUSK							
L009 Post Script																
02/22/94 09:11:23	3:34:15	0								Select ST-A; Park filters (DHU SEQT 27)						T/L ERROR: WAIT needed between these commands
02/22/94 09:11:28	3:34:20	5								UV & HR cameras OFF						
02/22/94 09:11:38	3:34:30	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)						Slew to Vega
02/22/94 09:16:23	3:39:15	285								Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging

Orbit 10 Timeline - Type A Orbit Manning Rehearsal

02/22/94 09:16:53	3:39:45	30									Perform NIR imaging (DHU SEQT 31)						
02/22/94 09:17:23	3:40:15	30									Stop imaging - select ST-A						
02/22/94 09:17:33	3:40:25	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
02/22/94 09:20:10	3:43:02		80.0	246.4	2098.2					N80D							
02/22/94 09:22:23	3:45:15	290									Select ST-A						READY FOR DATA DUMP
End L009 Post Script																	
02/22/94 09:27:00	3:49:52										Switch to DHU mode @ 8 kbps						Ground Command
02/22/94 09:28:00	3:50:52										Switch to HGA						Ground Command
02/22/94 09:31:00	3:53:52										Switch to downlink rate to 128 kbps						Ground Command
02/22/94 09:32:14	3:55:06		70.0	248.3	2351.6					N70D							
02/22/94 09:37:00	3:59:52										Downlink SSSR Segment 2						Ground Command
02/22/94 09:44:00	4:06:52										Sensor door CLOSE						Ground Command - for burn
02/22/94 09:45:49	4:08:41		60.0	248.9	2585.3					N60D							
02/22/94 09:50:00	4:12:52										Update state vector (GNC53_22FEB0800)						Ground Command
02/22/94 10:00:50	4:23:42		50.0	249.2	2778.3					N50D							
02/22/94 10:16:59	4:39:51		40.0	249.3	2909.8					N40D							
02/22/94 10:29:00	4:51:52										SSDR to IDLE - Segment 2 complete						Ground Command
02/22/94 10:33:47	4:56:39		30.0	249.3	2963.4					N30D							
02/22/94 10:36:00	4:58:52		28.7	249.3	2964.1					Aposelene							NOTE: LOI2C burn done during Orbit 11 - no imaging
run_dhu5 Subscript																	
		0									Start imaging (DHU SEQT 5)						NOTE: Script shows SEQT 29 here, but that takes UV only, so script was probably corrected before execution
		20									Stop imaging - select ST-A						
		120									Msg "Complete run_DHU5"						
End Subscript																	

Orbit 12 Timeline - Type B Orbit Manning Rehearsal

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/22/94 15:34:34	0:00:00		28.2	246.6	2970.5							Aposelene	Downlinking SSSR Segment 2 (orbit 10)						NOTE: LOI2C burn done during Orbit 11 - no imaging
02/22/94 15:43:00	0:08:26												SSDR to IDLE - downlink complete						Ground Command
02/22/94 15:48:31	0:13:57		20.0	246.6	2941.2							N20D							
02/22/94 15:52:03	0:17:29		17.3	246.6	2918.2						CAN	LOS							
02/22/94 16:00:00	0:25:26												Set downlink rate to 8 kbps						Ground Command
02/22/94 16:01:00	0:26:26												Switch to DHU bypass mode						Ground Command
02/22/94 16:03:00	0:28:26												Switch to omni antennas						Ground Command
02/22/94 16:04:59	0:30:25		10.0	246.6	2830.7							N10D							
02/22/94 16:20:26	0:45:52		0.0	246.5	2652.0							Equator - D							
02/22/94 16:22:00	0:47:26												Uplink baseline scripts (incl. PrepA)						Ground Command
02/22/94 16:28:00	0:53:26												Schedule L012 PrepA Script						Ground Command
																			Err:508
02/22/94 16:32:03	0:57:29	0											NIR camera & cryocooler ON; SA mode to AUTO						
02/22/94 16:34:31	0:59:57		-10.0	246.5	2425.7							S10D							
02/22/94 16:47:03	1:12:29		-20.0	246.5	2173.6							S20D							
02/22/94 16:58:03	1:23:29		-30.0	246.6	1915.0							S30D							
02/22/94 17:00:00	1:25:26												Uplink and schedule L012 scripts						Ground Command
02/22/94 17:07:03	1:32:29	2100											LWIR camera & cryocooler ON						
02/22/94 17:07:36	1:33:02		-40.0	246.7	1664.2							S40D							
02/22/94 17:14:33	1:39:59	450											Laser heater ON; Sensor door OPEN						
																			Err:508
02/22/94 17:15:54	1:41:20		-50.0	246.8	1430.9							S50D							
02/22/94 17:17:00	1:42:26												Update state vector (GNC53_22FEB1600); ST-B door CLOSE						Ground Command
02/22/94 17:18:00	1:43:26												Select ST-A						Ground Command
02/22/94 17:23:06	1:48:32		-60.0	247.1	1220.5							S60D							
																			Err:508
02/22/94 17:23:28	1:48:54	0											Msg "WRNG: Omni/8k in 1 min."; SSDR to IDLE						
02/22/94 17:24:28	1:49:54	60											Switch to omni antennas; Switch to bypass mode @ 8 kbps						
02/22/94 17:26:28	1:51:54	120											Deselect ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/22/94 17:29:03	1:54:29	155											UV & HR cameras ON						
02/22/94 17:29:25	1:54:51		-70.0	247.7	1035.4							S70D							
02/22/94 17:31:28	1:56:53	145											Select ST-A						
02/22/94 17:31:38	1:57:04	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1						Start recording in Segment 1

Orbit 12 Timeline - Type B Orbit Manning Rehearsal

02/22/94 17:32:03	1:57:28	25								Perform LWIR imaging (DHU SEQT 25)						Start dark fields imaging
02/22/94 17:32:33	1:57:59	30								Perform NIR imaging (DHU SEQT 31)						
02/22/94 17:33:03	1:58:29	30								Stop imaging - select ST-A						
02/22/94 17:33:13	1:58:39	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)						Slew to nadir
02/22/94 17:34:44	2:00:10	91								Laser power ON						
																Err:508
02/22/94 17:34:59	2:00:25		-80.0	249.6	875.8					S80D						Err:508
																Err:508
02/22/94 17:38:03	2:03:28	0								Select ST-A						
02/22/94 17:38:13	2:03:39	10								Load exposure table LUNARZ85S						
02/22/94 17:39:03	2:04:29	50								Start imaging (DHU SEQT 16)						START MAPPING
02/22/94 17:39:57	2:05:23		-89.3	336.1	741.5					South Pole						
02/22/94 17:40:37	2:06:03		-88.4	40.7	724.5					LDAWN						
02/22/94 17:44:27	2:09:53		-80.0	62.0	630.8					S80A						
02/22/94 17:44:33	2:09:59	330								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					Start laser ranging
02/22/94 17:48:36	2:14:02		-70.0	63.9	541.8					S70A						
02/22/94 17:48:41	2:14:07	248								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18					
02/22/94 17:52:28	2:17:54		-60.0	64.5	473.6					S60A						
02/22/94 17:52:34	2:18:00	233								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
02/22/94 17:56:08	2:21:34		-50.0	64.9	424.9					S50A						
02/22/94 17:56:14	2:21:40	220								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 5					
02/22/94 17:59:41	2:25:07		-40.0	65.1	394.9					S40A						
02/22/94 17:59:46	2:25:12	212								S40A	Load exposure table LUNARZ35S					
02/22/94 18:03:09	2:28:35		-30.0	65.2	382.9					S30A						
02/22/94 18:03:15	2:28:41	209								S30A	Load exposure table LUNARZ25S					
02/22/94 18:03:45	2:29:11		-28.3	65.2	382.6					Periselene						
02/22/94 18:06:37	2:32:03		-20.0	65.3	388.7					S20A						
02/22/94 18:06:42	2:32:08	207								S20A	Load exposure table LUNARZ15S					
02/22/94 18:10:07	2:35:33		-10.0	65.4	412.3					S10A						
02/22/94 18:10:13	2:35:39	211								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
02/22/94 18:13:44	2:39:10		0.0	65.5	454.4					Equator - A						
02/22/94 18:13:50	2:39:16	217								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 7					
02/22/94 18:17:32	2:42:58		10.0	65.6	515.6					N10A						
02/22/94 18:17:38	2:43:04	228								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
02/22/94 18:21:34	2:47:00		20.0	65.7	597.1					N20A						
02/22/94 18:21:40	2:47:06	242								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					Stop laser ranging
02/22/94 18:22:40	2:48:06	60									Laser power OFF					

Orbit 12 Timeline - Type B Orbit Mapping Rehearsal

02/22/94 18:25:56	2:51:22		30.0	65.8	700.2					N30A									
02/22/94 18:26:02	2:51:28	202								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
02/22/94 18:30:44	2:56:10		40.0	65.9	826.3					N40A									
02/22/94 18:30:50	2:56:16	288								N40A	Switch to inertial pointing (GNC1240N01); Load exposure table LUNARZ45N; Select DHU SEQT 11								Initiate oblique viewing
02/22/94 18:36:05	3:01:31		50.0	66.1	976.9					N50A									
02/22/94 18:36:11	3:01:37	321								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
02/22/94 18:42:07	3:07:33		60.0	66.4	1153.1					N60A									
02/22/94 18:42:14	3:07:40	363								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 9								SCRIPT ERROR: Should've been SEQT 19, not SEQT 9
02/22/94 18:45:40	3:11:06	206									Slew s/c sensors to nadir (ACSMMode=LunarMapping)								End oblique viewing - resume nadir pointing
02/22/94 18:48:59	3:14:25		70.0	67.0	1354.8					N70A									
02/22/94 18:49:06	3:14:32	206								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								
02/22/94 18:56:53	3:22:19		80.0	68.8	1580.8					N80A									
02/22/94 18:57:01	3:22:27	475								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
Err:508																			
02/22/94 19:05:58	3:31:24		89.3	155.3	1825.8					North Pole									
02/22/94 19:07:21	3:32:47		88.4	220.1	1861.6					LDUSK									
Err:508																			
02/22/94 19:08:05	3:33:31	0									Select ST-A								
02/22/94 19:08:15	3:33:41	10									Park filters (DHU SEQT 27); UV & HR cameras OFF								
02/22/94 19:08:25	3:33:51	10									Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0)								Slew to Vega
02/22/94 19:13:05	3:38:31	280									Perform LWIR imaging (DHU SEQT 25)								Start dark field imaging
02/22/94 19:13:35	3:39:01	30									Perform NIR imaging (DHU SEQT 31)								
02/22/94 19:14:05	3:39:31	30									Stop imaging - select ST-A								
02/22/94 19:14:15	3:39:41	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)								Slew HGA to Earth
02/22/94 19:16:25	3:41:51		80.0	241.2	2082.4					N80D									
02/22/94 19:19:05	3:44:31	290									Select ST-A								READY FOR DATA DUMP
Err:508																			
02/22/94 19:23:00	3:48:26										Switch to HGA								Ground Command
02/22/94 19:28:25	3:53:51		70.0	243.0	2339.0					N70D									
02/22/94 19:29:00	3:54:26										Switch to DHU mode @ 128 kbps								Ground Command
02/22/94 19:39:00	4:04:26										Downlink SSSR Segment 1								Ground Command
02/22/94 19:41:58	4:07:24		60.0	243.6	2576.8					N60D									
02/22/94 19:42:00	4:07:26										IMU A OFF								Ground Command

Orbit 13 Timeline - Star Tracker B Images - No Lunar Images

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/22/94 20:32:56	0:00:00		28.3	243.9	2970.4							Aposelene							Downlinking SDR Segment 1 (orbit 12)
02/22/94 20:46:59	0:14:03		20.0	243.9	2940.7							N20D							
02/22/94 21:00:00	0:27:04												SSDR to IDLE - downlink paused						Ground Command For changing ground stations
02/22/94 21:03:27	0:30:31		10.0	243.8	2829.8							N10D							
02/22/94 21:08:00	0:35:04												Resume downlink SDR Segment 1						Ground Command
02/22/94 21:09:00	0:36:04												IMU A On						Ground Command
02/22/94 21:15:30	0:42:34												Ranging A OFF Ranging B OFF						Ground Command
02/22/94 21:18:53	0:45:57		0.0	243.8	2650.8							Equator - D							
02/22/94 21:32:58	1:00:02		-10.0	243.8	2424.3							S10D							
02/22/94 21:45:29	1:12:33		-20.0	243.8	2172.2							S20D							
02/22/94 21:56:28	1:23:32		-30.0	243.8	1913.6							S30D							
02/22/94 22:06:02	1:33:06		-40.0	243.9	1663.0							S40D							
02/22/94 22:14:19	1:41:23		-50.0	244.1	1429.8							S50D							
02/22/94 22:21:31	1:48:35		-60.0	244.3	1219.6							S60D							
02/22/94 22:27:49	1:54:53		-70.0	244.9	1034.6							S70D							
02/22/94 22:33:23	2:00:27		-80.0	246.8	875.1							S80D							
02/22/94 22:38:21	2:05:25		-89.4	333.7	740.9							South Pole							
02/22/94 22:39:01	2:06:05		-88.4	38.7	723.9							LDAWN							
02/22/94 22:42:51	2:09:55		-80.0	59.4	630.4							S80A							
02/22/94 22:47:00	2:14:04		-70.0	61.2	541.5							S70A							
02/22/94 22:50:52	2:17:56		-60.0	61.8	473.4							S60A							
02/22/94 22:54:32	2:21:36		-50.0	62.2	424.9							S50A							
02/22/94 22:58:04	2:25:08		-40.0	62.4	394.9							S40A							
02/22/94 23:01:33	2:28:37		-30.0	62.5	383.0							S30A							
02/22/94 23:02:08	2:29:12		-28.3	62.5	382.7							Periselene							
02/22/94 23:05:00	2:32:04		-20.0	62.6	388.9							S20A							
02/22/94 23:08:31	2:35:35		-10.0	62.7	412.7							S10A							
02/22/94 23:11:44	2:38:48		1.6	62.8	464.2						GDS	AOS							
02/22/94 23:12:08	2:39:12		0.0	62.8	454.8							Equator - A							
02/22/94 23:15:56	2:43:00		10.0	62.8	516.1							N10A							
02/22/94 23:19:58	2:47:02		20.0	62.9	597.7							N20A							
02/22/94 23:24:20	2:51:24		30.0	63.0	700.9							N30A							
02/22/94 23:29:09	2:56:13		40.0	63.1	827.2							N40A							
02/22/94 23:34:30	3:01:34		50.0	63.3	977.9							N50A							
02/22/94 23:37:00	3:04:04												SSDR to IDLE - downlink complete						Ground Command
02/22/94 23:40:32	3:07:36		60.0	63.6	1154.2							N60A							
02/22/94 23:47:24	3:14:28		70.0	64.2	1356.1							N70A							
02/22/94 23:55:19	3:22:23		80.0	66.0	1582.1							N80A							
02/23/94 00:04:24	3:31:28		89.4	152.7	1827.2							North Pole							

Orbit 13 Timeline - Star Tracker B Images - No Lunar Images

02/23/94 00:05:48	3:32:52		88.4	218.2	1863.3					LDUSK							
02/23/94 00:14:51	3:41:55		80.0	238.6	2083.8					N80D							
02/23/94 00:22:00	3:49:04										Record in SSSR Segment 2						Ground Command
02/23/94 00:23:00	3:50:04										Store nine ST-A images						Ground Command ST-A images
02/23/94 00:26:52	3:53:56		70.0	240.3	2340.3					N70D							
02/23/94 00:27:00	3:54:04										Select ST-A						Ground Command
02/23/94 00:31:00	3:58:04										Downlink SSSR Segment 2						Ground Command
02/23/94 00:32:00	3:59:04										SSDR to IDLE - downlink complete						Ground Command
02/23/94 00:40:25	4:07:29		60.0	240.9	2577.9					N60D							
02/23/94 00:55:26	4:22:30		50.0	241.1	2775.5					N50D							
02/23/94 00:59:00	4:26:04										SA-A mode to MANUAL; Rotate SA-A CW						Ground Command To reduce current to battery
02/23/94 01:11:36	4:38:40		40.0	241.1	2911.6					N40D							
02/23/94 01:28:28	4:55:32		30.0	241.2	2969.0					N30D							
02/23/94 01:31:19	4:58:23		28.3	241.1	2970.3					Aposelene							

Orbit 14 Timeline - Point Stare Test (Petavius Peak)/IR Temp Response Test

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/23/94 01:31:19	0:00:00		28.3	241.1	2970.3							Aposelene							No activities - standing by for orbit 14. S/C on HGA in EarthPointing ACS attitude.
02/23/94 01:45:27	0:14:08		20.0	241.1	2940.1							N20D							
02/23/94 01:54:00	0:22:41												Switch to DHU bypass mode						Ground Command
02/23/94 01:54:00	0:22:41												Switch to omni antennas						Ground Command
02/23/94 02:00:00	0:28:41												Slew s/c sensors to nadir (ACSMMode=LunarMapping)						Ground Command For thermal conditioning
02/23/94 02:01:54	0:30:35		10.0	241.1	2828.9							N10D							
02/23/94 02:16:00	0:44:41												Update state vector (GNC53_23FEB0000)						Ground Command
02/23/94 02:17:20	0:46:01		0.0	241.1	2649.6							Equator -D							
02/23/94 02:18:00	0:46:41												Uplink and schedule L014 scripts						Ground Command
02/23/94 02:23:00	0:51:41												SA-A mode to AUTO						Ground Command
																			Err:508
02/23/94 02:28:51	0:57:32	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			Err:508
02/23/94 02:29:00	0:57:41												SA-B mode to MANUAL; Rotate SA-B CCW						Ground Command
02/23/94 02:30:00	0:58:41												Read dosimeter latch values						Ground Command
02/23/94 02:31:24	1:00:05		-10.0	241.0	2423.0							S10D							
02/23/94 02:35:00	1:03:41												Expose dosimeter						Ground Command
02/23/94 02:43:55	1:12:36		-20.0	241.1	2170.9							S20D							
02/23/94 02:54:54	1:23:35		-30.0	241.1	1912.3							S30D							
																			Err:508
02/23/94 03:03:51	1:32:32	0											LWIR camera & cryocooler ON						
02/23/94 03:04:27	1:33:08		-40.0	241.2	1661.8							S40D							
02/23/94 03:11:20	1:40:01	449											Laser heater ON; Sensor door OPEN						
																			Err:508
02/23/94 03:12:43	1:41:24		-50.0	241.3	1428.8							S50D							
02/23/94 03:19:55	1:48:36		-60.0	241.6	1218.7							S60D							
																			Err:508
02/23/94 03:20:16	1:48:57	0											Msg "WRNG: Omni/8k in 1 min.."; SSDR to IDLE						
02/23/94 03:21:16	1:49:57	60											Switch to omni antennas; Switch to bypass mode @ 8 kbps						
02/23/94 03:23:16	1:51:57	120											Deselect ST; Slew s/c sensors to SGP (ACSMMode=StarPointing, Index=1)						Slew to South Galactic Pole
02/23/94 03:25:51	1:54:32	155											UV & HR cameras ON						
02/23/94 03:26:13	1:54:54		-70.0	242.1	1033.9							S70D							
02/23/94 03:28:16	1:56:57	145											Select ST-A						

Orbit 14 Timeline - Point Stare Test (Petavius Peak)/IR Temp Response Test

02/23/94 03:28:26	1:57:07	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 1									Start recording in Segment 1
02/23/94 03:28:51	1:57:32	25								Perform LWIR imaging (DHU SEQT 25)									Start dark fields imaging
02/23/94 03:29:21	1:58:02	30								Perform NIR imaging (DHU SEQT 31)									
02/23/94 03:29:51	1:58:32	30								Stop imaging - select ST-A									
02/23/94 03:30:01	1:58:42	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)									Slew to nadir
02/23/94 03:31:20	2:00:01	79								Msg "Complete: L014_prepB"									NOTE: Turning on laser power was commented out of the script
Err:508																			
02/23/94 03:31:47	2:00:28		-80.0	243.9	874.6					S80D									
Err:508																			
02/23/94 03:34:51	2:03:31	0																	
02/23/94 03:35:01	2:03:42	10																	
02/23/94 03:35:51	2:04:32	50																	
02/23/94 03:36:45	2:05:26		-89.4	331.4	740.4					South Pole									
02/23/94 03:37:25	2:06:06		-88.4	36.9	723.3					LDAWN									
02/23/94 03:41:14	2:09:55		-80.0	56.8	630.0					S80A									
02/23/94 03:41:20	2:10:01	329								S80A									
02/23/94 03:45:23	2:14:03		-70.0	58.6	541.3					S70A									Laser off
02/23/94 03:45:29	2:14:10	249								S70A									
02/23/94 03:49:15	2:17:56		-60.0	59.2	473.3					S60A									
02/23/94 03:49:21	2:18:02	232								S60A									
02/23/94 03:52:00	2:20:41	159																	
02/23/94 03:52:56	2:21:37		-50.0	59.5	424.9					S50A									
02/23/94 03:53:01	2:21:42	61								S50A									
02/23/94 03:56:28	2:25:09		-40.0	59.6	395.0					S40A									
02/23/94 03:56:33	2:25:14	212								S40A									
02/23/94 03:57:00	2:25:41	27																	
02/23/94 03:59:56	2:28:37		-30.0	59.8	383.2					S30A									
02/23/94 04:00:02	2:28:42	182								S30A									
02/23/94 04:00:30	2:29:11		-28.4	59.8	382.9					Periselene									
02/23/94 04:02:00	2:30:40	118																	
02/23/94 04:03:24	2:32:04		-20.0	59.9	389.1					S20A									
02/23/94 04:03:29	2:32:09	89								S20A									
02/23/94 04:06:00	2:34:40	151																	
02/23/94 04:06:55	2:35:36		-10.0	60.0	413.0					S10A									
02/23/94 04:07:00	2:35:41	60								S10A									

Orbit 14 Timeline - Point Stare Test (Petavius Peak)/IR Temp. Response Test

02/23/94 04:10:00	2:38:41	180							S10A	Slew s/c sensors to nadir (ACSMODE=LunarMapping)					END POINT & STARE TEST Slew to nadir
02/23/94 04:10:32	2:39:13		0.0	60.0	455.3				Equator -A						
02/23/94 04:10:37	2:39:17	37							MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 7					
02/23/94 04:14:20	2:43:01		10.0	60.1	516.7				N10A						
02/23/94 04:14:20	2:43:01		12.5	60.1	536.4			MAD	LOS						
02/23/94 04:14:25	2:43:06	228							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
02/23/94 04:18:22	2:47:03		20.0	60.2	598.4				N20A						
02/23/94 04:18:28	2:47:09	243								Stop imaging - select ST-A					
02/23/94 04:18:38	2:47:19	10								Park filters (DHU SEQT 27); UV & HR cameras OFF					START IR TEMPERATURE RESPONSE TEST (Deep Space Stare)
02/23/94 04:18:48	2:47:29	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Laser power OFF (already off)					Slew to Vega using RW
02/23/94 04:22:45	2:51:26		30.0	60.3	701.7				N30A						
02/23/94 04:25:10	2:53:51	392								LWIR imaging - select DHU SEQT 25					
02/23/94 04:25:25	2:54:06	15								NIR imaging - select DHU SEQT 31					
02/23/94 04:25:40	2:54:21	15								Stop imaging - select ST-A					
02/23/94 04:26:10	2:54:51	30								LWIR imaging - select DHU SEQT 25					
02/23/94 04:26:25	2:55:06	15								NIR imaging - select DHU SEQT 31					
02/23/94 04:26:40	2:55:21	15								Stop imaging - select ST-A					
02/23/94 04:27:10	2:55:51	30								LWIR imaging - select DHU SEQT 25					
02/23/94 04:27:25	2:56:06	15								NIR imaging - select DHU SEQT 31					
02/23/94 04:27:33	2:56:14		40.0	60.4	828.1				N40A						
02/23/94 04:27:40	2:56:21	15								Stop imaging - select ST-A					
02/23/94 04:28:10	2:56:51	30								LWIR imaging - select DHU SEQT 25					
02/23/94 04:28:25	2:57:06	15								NIR imaging - select DHU SEQT 31					
02/23/94 04:28:40	2:57:21	15								Stop imaging - select ST-A					
02/23/94 04:29:10	2:57:51	30								LWIR imaging - select DHU SEQT 25					
02/23/94 04:29:25	2:58:06	15								NIR imaging - select DHU SEQT 31					
02/23/94 04:29:40	2:58:20	15								Stop imaging - select ST-A					
02/23/94 04:30:10	2:58:51	30								LWIR imaging - select DHU SEQT 25					
02/23/94 04:30:25	2:59:06	15								NIR imaging - select DHU SEQT 31					
02/23/94 04:30:40	2:59:21	15								Stop imaging - select ST-A					
02/23/94 04:31:10	2:59:51	30								LWIR imaging - select DHU SEQT 25					
02/23/94 04:31:25	3:00:06	15								NIR imaging - select DHU SEQT 31					
02/23/94 04:31:40	3:00:21	15								Stop imaging - select ST-A					
02/23/94 04:32:10	3:00:51	30								LWIR imaging - select DHU SEQT 25					
02/23/94 04:32:25	3:01:06	15								NIR imaging - select DHU SEQT 31					
02/23/94 04:32:40	3:01:21	15								Stop imaging - select ST-A					
02/23/94 04:32:54	3:01:35		50.0	60.6	978.9				N50A						
02/23/94 04:33:10	3:01:51	30								LWIR imaging - select DHU SEQT 25					
02/23/94 04:33:25	3:02:06	15								NIR imaging - select DHU SEQT 31					

Orbit 14 Timeline - Point Stare Test (Petavius Peak)/IR Temp Response Test

02/23/94 04:33:40	3:02:21	15									Stop imaging - select ST-A			
02/23/94 04:34:10	3:02:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:34:25	3:03:05	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:34:40	3:03:21	15									Stop imaging - select ST-A			
02/23/94 04:35:10	3:03:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:35:25	3:04:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:35:40	3:04:21	15									Stop imaging - select ST-A			
02/23/94 04:36:10	3:04:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:36:25	3:05:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:36:40	3:05:21	15									Stop imaging - select ST-A			
02/23/94 04:37:10	3:05:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:37:25	3:06:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:37:40	3:06:21	15									Stop imaging - select ST-A			
02/23/94 04:38:10	3:06:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:38:25	3:07:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:38:40	3:07:21	15									Stop imaging - select ST-A			
02/23/94 04:38:57	3:07:38		60.0	60.8	1155.3				N60A					
02/23/94 04:39:10	3:07:50	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:39:25	3:08:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:39:40	3:08:21	15									Stop imaging - select ST-A			
02/23/94 04:40:10	3:08:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:40:25	3:09:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:40:40	3:09:21	15									Stop imaging - select ST-A			
02/23/94 04:41:10	3:09:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:41:25	3:10:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:41:40	3:10:21	15									Stop imaging - select ST-A			
02/23/94 04:42:10	3:10:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:42:25	3:11:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:42:40	3:11:21	15									Stop imaging - select ST-A			
02/23/94 04:43:10	3:11:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:43:25	3:12:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:43:40	3:12:21	15									Stop imaging - select ST-A			
02/23/94 04:44:10	3:12:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:44:25	3:13:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:44:40	3:13:21	15									Stop imaging - select ST-A			
02/23/94 04:45:10	3:13:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:45:25	3:14:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:45:40	3:14:20	15									Stop imaging - select ST-A			
02/23/94 04:45:50	3:14:31		70.0	61.4	1357.3				N70A					
02/23/94 04:46:10	3:14:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:46:25	3:15:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:46:40	3:15:21	15									Stop imaging - select ST-A			
02/23/94 04:47:10	3:15:51	30									LWIR imaging - select DHU SEQT 25			
02/23/94 04:47:25	3:16:06	15									NIR imaging - select DHU SEQT 31			
02/23/94 04:47:40	3:16:21	15									Stop imaging - select ST-A			
02/23/94 04:48:10	3:16:51	30									LWIR imaging - select DHU SEQT 25			

Orbit 14 Timeline - Point Stare Test (Petavius Peak)/IR Temp Response Test

02/23/94	04:48:25	3:17:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:48:40	3:17:21	15												Stop imaging - select ST-A			
02/23/94	04:49:10	3:17:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:49:25	3:18:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:49:40	3:18:21	15												Stop imaging - select ST-A			
02/23/94	04:50:10	3:18:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:50:25	3:19:05	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:50:40	3:19:21	15												Stop imaging - select ST-A			
02/23/94	04:51:10	3:19:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:51:25	3:20:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:51:40	3:20:21	15												Stop imaging - select ST-A			
02/23/94	04:52:10	3:20:50	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:52:25	3:21:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:52:40	3:21:21	15												Stop imaging - select ST-A			
02/23/94	04:53:10	3:21:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:53:25	3:22:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:53:40	3:22:21	15												Stop imaging - select ST-A			
02/23/94	04:53:44	3:22:24		80.0	63.1	1583.3							N80A					
02/23/94	04:54:10	3:22:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:54:25	3:23:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:54:40	3:23:21	15												Stop imaging - select ST-A			
02/23/94	04:55:10	3:23:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:55:25	3:24:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:55:40	3:24:21	15												Stop imaging - select ST-A			
02/23/94	04:56:10	3:24:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:56:25	3:25:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:56:40	3:25:21	15												Stop imaging - select ST-A			
02/23/94	04:57:10	3:25:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:57:25	3:26:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:57:40	3:26:21	15												Stop imaging - select ST-A			
02/23/94	04:58:10	3:26:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:58:25	3:27:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:58:40	3:27:21	15												Stop imaging - select ST-A			
02/23/94	04:59:10	3:27:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	04:59:25	3:28:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	04:59:40	3:28:21	15												Stop imaging - select ST-A			
02/23/94	05:00:10	3:28:51	30												LWIR imaging - select DHU SEQT 25			
02/23/94	05:00:25	3:29:06	15												NIR imaging - select DHU SEQT 31			
02/23/94	05:00:40	3:29:21	15												Stop imaging - select ST-A			END IR TEMP. RESPONSE TEST
02/23/94	05:01:10	3:29:51	30												Msg "Complete L014"			
Err:508																		
02/23/94	05:02:50	3:31:30		89.4	150.0	1828.6							North Pole					
02/23/94	05:04:15	3:32:56		88.4	216.4	1864.9							LDUSK					
Err:508																		
02/23/94	05:10:57	3:39:38	0												Select ST-A			

Orbit 14 Timeline - Point Stare Test (Petavius Peak)/IR Temp Response Test

02/23/94 05:11:07	3:39:47	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)					Slew HGA to Earth
02/23/94 05:13:18	3:41:59		80.0	236.0	2085.2				N80D						
02/23/94 05:14:00	3:42:41									Switch to HGA					Ground Command
02/23/94 05:15:56	3:44:37	290								Select ST-A					
Err:508															
02/23/94 05:20:00	3:48:40									Switch to DHU mode @ 8 kbps					Ground Command
02/23/94 05:21:00	3:49:41									Set downlink rate to 128 kbps					Ground Command
02/23/94 05:25:19	3:54:00		70.0	237.7	2341.5				N70D						
02/23/94 05:30:00	3:58:41									Downlink SDR Segment 1					Ground Command
02/23/94 05:38:53	4:07:34		60.0	238.2	2578.9				N60D						
02/23/94 05:53:54	4:22:35		50.0	238.4	2776.2				N50D						
02/23/94 05:57:00	4:25:41									Slew s/c HGA to Pomonkey (ACSMMode=EarthPointing, PMK)					Ground Command
02/23/94 06:10:04	4:38:45		40.0	238.4	2911.9				N40D						
02/23/94 06:20:00	4:48:41									HR camera ON; Laser power ON					Ground Command
02/23/94 06:23:00	4:51:41									Test laser firing					Ground Command
02/23/94 06:26:56	4:55:37		30.0	238.4	2968.9				N30D						
02/23/94 06:27:00	4:55:41									Laser power OFF; HR camera OFF					Ground Command
02/23/94 06:29:42	4:58:23		28.4	238.4	2970.0				Aposelene						

Orbit 15 Timeline - Points Of Interest Observations

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
02/23/94 06:29:42	0:00:00		28.4	238.4	2970.0							Aposelene							Downlinking SSSR Segment 1 (orbit 14)
02/23/94 06:43:54	0:14:12		20.0	238.4	2939.5							N20D							
02/23/94 07:00:21	0:30:39		10.0	238.4	2827.9							N10D							
02/23/94 07:15:47	0:46:05		0.0	238.3	2648.4							Equator -D							
02/23/94 07:23:00	0:53:18												Uplink and schedule L015 scripts						Ground Command
																			Err:508
02/23/94 07:27:15	0:57:33	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			Err:508
02/23/94 07:29:50	1:00:08		-10.0	238.3	2421.7							S10D							
02/23/94 07:30:00	1:00:18												DHU Reset						DHU crashed - auto reset
02/23/94 07:39:17	1:09:35		-18.2	238.3	2213.4						CAN	AOS							
02/23/94 07:41:00	1:11:18												Uplink DHU version 241						Ground Command
02/23/94 07:42:21	1:12:39		-20.0	238.3	2169.6							S20D							
02/23/94 07:47:00	1:17:18												Upload ST sequence tables; Select ST-B						Ground Command
02/23/94 07:50:00	1:20:18												LWIR camera ON						Ground Command
02/23/94 07:52:00	1:22:18												Uplink DHU sequence tables						Ground Command OPS ERROR: Phasing loop sequence tables uploaded (B_PHASE & A_PHASE) instead of lunar sequence tables (SEQ_LUNAR)
02/23/94 07:53:19	1:23:37		-30.0	238.3	1911.1							S30D							
02/23/94 07:56:00	1:26:18												Uplink compression tables						Ground Command
02/23/94 07:57:00	1:27:18												Upload SEQ_262.umi into SEQT 26; Uplink sensor tables						Ground Command
02/23/94 08:01:00	1:31:18												Select ST-A						Ground Command
																			Err:508
02/23/94 08:02:15	1:32:33	0											LWIR camera & cryocooler ON; Laser heater ON						
																			Err:508
02/23/94 08:02:51	1:33:09		-40.0	238.4	1660.7							S40D							
02/23/94 08:05:00	1:35:18												Cancel L015 Prep3 script; Uplink & schedule new Prep3 script						Ground Command - changed SSSR segment to 2 instead of 1
02/23/94 08:06:00	1:36:18												Deselect ST						Ground Command
02/23/94 08:07:00	1:37:18												Uplink ST exposure table; Select ST-A						Ground Command
02/23/94 08:08:00	1:38:18												HR camera ON						Ground Command
02/23/94 08:09:00	1:39:18												Laser power ON						Ground Command
02/23/94 08:10:00	1:40:18												Fire laser (failed); Laser power OFF; HR camera OFF						Ground Command

Orbit 15 Timeline - Points Of Interest Observations

02/23/94 08:11:08	1:41:26		-50.0	238.5	1427.9				S50D											
02/23/94 08:13:00	1:43:18									Set downlink rate to 8 kbps										Ground Command
02/23/94 08:16:00	1:46:18									Select ST-B; Select ST-A										Ground Command
02/23/94 08:18:19	1:48:37		-60.0	238.8	1218.0				S60D											
Err:508																				
02/23/94 08:18:40	1:48:58	0								Msg "WARNING: Omni/8k in 1 min.."; SSDR to IDLE										
02/23/94 08:19:40	1:49:58	60								Switch to omni antennas; Switch to bypass mode @ 8 kbps										
02/23/94 08:21:40	1:51:58	120								Deselect ST; Slew s/c sensors to SGP (ACSMMode=StarPointing, Index=1)										Slew to South Galactic Pole
02/23/94 08:24:15	1:54:33	155								UV & HR cameras ON										
02/23/94 08:24:37	1:54:55		-70.0	239.3	1033.3				S70D											
02/23/94 08:26:40	1:56:58	145								Select ST-A										
02/23/94 08:26:49	1:57:08	10								Initialize filters (DHU SEQT 28); Record in SSDR Segment 2										Start recording in Segment 2
02/23/94 08:27:15	1:57:33	25								Perform LWIR imaging (DHU SEQT 25)										Start dark fields imaging
02/23/94 08:27:45	1:58:03	30								Perform NIR imaging (DHU SEQT 31)										
02/23/94 08:28:15	1:58:33	30								Stop imaging, select ST-A										
02/23/94 08:28:25	1:58:43	10								Deselect ST; Slew s/c sensors to nadir (ACSMMode=LunarMapping)										Slew to nadir
Err:508																				
02/23/94 08:30:11	2:00:29		-80.0	241.0	874.1				S80D											
Err:508																				
02/23/94 08:33:14	2:03:33	0								Select ST-A										
02/23/94 08:35:09	2:05:27		-89.4	329.2	740.0				South Pole											
02/23/94 08:35:49	2:06:07		-88.4	35.1	722.9				LDAWN											
02/23/94 08:39:38	2:09:56		-80.0	54.2	629.8				S80A											
02/23/94 08:39:43	2:10:01	389								Load exposure table LUNARZ75S; Select DHU SEQT 3										UV and NIR VDBDSU.UMI loaded in SEQT 3
02/23/94 08:40:28	2:10:46	45								Slew to Mises A using quaternion table ORB1516000										START POI OBSERVATIONS Target 1: Mises A impact crater (34°S, 55.3°E)
02/23/94 08:43:47	2:14:05		-70.0	55.9	541.2				S70A											
02/23/94 08:43:51	2:14:10	203								Load exposure table LUNARZ65S; Select DHU SEQT 4										UV and color HiRes VDBAUR.UMI loaded in SEQT 4
02/23/94 08:47:39	2:17:57		-60.0	56.5	473.3				S60A											
02/23/94 08:47:44	2:18:02	232								Load exposure table LUNARZ55S; Select DHU SEQT 6										Color HiRes and LWIR SEQ_16.UMI loaded in SEQT 6
02/23/94 08:50:29	2:20:47	165								Load QTable ORB1516001										
02/23/94 08:51:19	2:21:37		-50.0	56.7	424.9				S50A											
02/23/94 08:51:25	2:21:43	56								Load exposure table LUNARZ45S; Select DHU SEQT 5										Color HiRes SEQ_LASE.UMI loaded in SEQT 5
02/23/94 08:54:52	2:25:10		-40.0	56.9	395.2				S40A											
02/23/94 08:54:57	2:25:15	212								Load exposure table LUNARZ35S										

Orbit 15 Timeline - Points Of Interest Observations

02/23/94 08:57:58	2:28:17	182													Load exposure table LUNARZ25S	
02/23/94 08:58:20	2:28:38		-30.0	57.0	383.4					S30A						
02/23/94 08:58:53	2:29:11		-28.4	57.1	383.2					Periselene						
02/23/94 09:00:02	2:30:21	124													Load QTable ORB1516002	
02/23/94 09:01:27	2:31:45	84													Load exposure table LUNARZ15S	
02/23/94 09:01:48	2:32:06		-20.0	57.1	389.5					S20A						
02/23/94 09:04:58	2:35:16	211													Load exposure table LUNARZ05S; Select DHU SEQT 6	Color HiRes and LWIR Target 2: Luna 16 (0.4°S, 56.2°E)
02/23/94 09:05:19	2:35:37		-10.0	57.2	413.5					S10A						
02/23/94 09:08:56	2:39:14		0.0	57.3	455.8					Equator - A						
02/23/94 09:10:03	2:40:21	305													Load QTable ORB1516003	Target 3: Luna 20 (3.3°S, 56.3°E)
02/23/94 09:12:23	2:42:41	140													Load exposure table LUNARZ15N; Select DHU SEQT 8	AEQ_08.UMI loaded in SEQT 8
02/23/94 09:12:44	2:43:02		10.0	57.4	517.3					N10A						
02/23/94 09:15:00	2:45:18														Ranging A ON Ranging B ON	Ground Command
02/23/94 09:16:46	2:47:04		20.0	57.4	599.1					N20A						
02/23/94 09:17:39	2:47:57		24.4	57.5	642.8				PMK	LOS						
02/23/94 09:20:14	2:50:32	471													Load exposure table LUNARZ25N; Select DHU SEQT 9	STB Compressed and UV filter 2 OFF_AXIS_B_SEQ_09.UMI loaded in SEQT 9
02/23/94 09:21:09	2:51:27		30.0	57.5	702.5					N30A						
02/23/94 09:25:58	2:56:16		40.0	57.6	828.9					N40A						
02/23/94 09:29:08	2:59:26	534													Load QTable ORB1516004	
02/23/94 09:29:54	3:00:12	46													Load exposure table LUNARZ35N; Select DHU SEQT 10	HiRes @ app. 7 hz, filter 3 (blocked) JITTER_SEQ_10.UMI loaded in SEQT 10
02/23/94 09:31:19	3:01:37		50.0	57.8	979.9					N50A						
02/23/94 09:34:42	3:05:00	288													Load exposure table LUNARZ45N; Select DHU SEQT 11	JITTER_SEQ_11.UMI loaded in SEQT 11
02/23/94 09:37:22	3:07:40		60.0	58.1	1156.4					N60A						
02/23/94 09:39:08	3:09:26	266													Load QTable ORB1516005	No Data
02/23/94 09:40:04	3:10:22	56													Load exposure table LUNARZ55N; Select DHU SEQT 12	
02/23/94 09:44:15	3:14:33		70.0	58.6	1358.4					N70A						
02/23/94 09:46:07	3:16:25	363													Load exposure table LUNARZ65N; Select DHU SEQT 13	
02/23/94 09:48:08	3:18:26	121													Deselect ST; Switch to lunar mapping mode (ACSMoDe=LunarMapping)	END POI OBSERVATIONS Slew sensors to nadir
02/23/94 09:52:10	3:22:28		80.0	60.2	1584.6					N80A						
02/23/94 09:52:50	3:23:08	282													Stop imaging, select ST-A	
																Err:508
02/23/94 10:01:16	3:31:34		89.4	147.2	1829.8					North Pole						
02/23/94 10:02:41	3:32:59		88.4	214.7	1866.4					LDUSK						
																Err:508
02/23/94 10:03:24	3:33:42	0													Select ST-A	

Last Update: 02/01/2021 21:22:00
By:tcs

Orbit 15 Timeline - Points Of Interest Observations

02/23/94 10:03:34	3:33:52	10								Park filters (DHU SEQT 27); UV & HR cameras OFF									
02/23/94 10:03:43	3:34:02	10								Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0)									Slew to Vega
02/23/94 10:08:23	3:38:42	280								Perform LWIR imaging (DHU SEQT 25)									No Data
02/23/94 10:08:54	3:39:12	30								Perform NIR imaging (DHU SEQT 31)									
02/23/94 10:09:24	3:39:42	30								Stop imaging, select ST-A									
02/23/94 10:09:33	3:39:52	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)									Slew HGA to Earth
02/23/94 10:11:45	3:42:03		80.0	233.4	2086.5														N80D
02/23/94 10:14:23	3:44:42	290								Select ST-A									READY FOR DATA DUMP
																			Err:508
02/23/94 10:23:46	3:54:04		70.0	235.0	2342.7														N70D
02/23/94 10:32:00	4:02:18									Switch to DHU mode @ 8 kbps									Ground Command
02/23/94 10:33:00	4:03:18									Switch to HGA									Ground Command
02/23/94 10:36:00	4:06:18									Set downlink rate to 128 kbps									Ground Command
02/23/94 10:37:20	4:07:38		60.0	235.5	2579.8														N60D
02/23/94 10:44:00	4:14:18									Set SA step rate to LO; SA-A mode to MANUAL; Rotate SA-A CCW									Ground Command
02/23/94 10:52:21	4:22:39		50.0	235.6	2776.8														N50D
02/23/94 10:54:00	4:24:18									SA-A mode to AUTO; Set SA step rate to HI									Ground Command
02/23/94 11:08:32	4:38:50		40.0	235.7	2912.1														N40D
02/23/94 11:10:00	4:40:18									Update state vector (GNC53_23FEB1000)									Ground Command
02/23/94 11:11:00	4:41:18									Uplink & schedule script to playback SSDR Segment 1 (orbit 14)									Ground Command Scheduled for 14:00:00
02/23/94 11:12:00	4:42:18									Downlink SSDR Segment 2 (orbit 15)									Ground Command
02/23/94 11:15:00	4:45:18									Sensor door CLOSE									Ground Command - closed as precaution for upcoming commanding gap
02/23/94 11:25:24	4:55:42		30.0	235.7	2968.6														N30D
02/23/94 11:28:04	4:58:22		28.4	235.7	2969.7														Aposelene
																			NOTE: There was a commanding gap during Orbit 16, so the only activity was dumping the SSDR

Orbit 17 Timeline - Dark Field Images

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/23/94 16:26:27	0:00:00		28.5	233.0	2969.3							Aposelene							NOTE: There was a commanding gap during Orbit 16, so the only activity was dumping the SDR
02/23/94 16:26:30	0:00:03												Read dosimeter latch values						Ground Command
02/23/94 16:31:30	0:05:03												Expose dosimeter						Ground Command
02/23/94 16:36:00	0:09:33												Ranging A OFF Ranging B OFF						Ground Command
02/23/94 16:40:49	0:14:22		20.0	233.0	2938.2							N20D							
02/23/94 16:57:10	0:30:43		9.5	232.9	2816.4						CAN	LOS							
02/23/94 16:57:15	0:30:48		10.0	232.9	2826.1							N10D							
02/23/94 17:04:00	0:37:33												Downlink SDR Segment 1 patches						Ground Command
02/23/94 17:10:00	0:43:33												SSDR to IDLE - downlink complete						Ground Command
02/23/94 17:12:40	0:46:13		0.0	232.9	2646.2							Equator - D							
02/23/94 17:21:00	0:54:33												Uplink and schedule L017 scripts						Ground Command; Errors in uplink, not all scripts scheduled
02/23/94 17:26:42	1:00:15		-10.0	232.8	2419.4							S10D							
02/23/94 17:28:00	1:01:33												Uplink and schedule L017 scripts						Ground Command; Errors in uplink, not all scripts scheduled.
02/23/94 17:39:12	1:12:45		-20.0	232.8	2167.4							S20D							
																			LM Prep1 Script
02/23/94 17:47:05	1:20:38	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
																			LM Prep2 Script
02/23/94 17:47:10	1:20:43	0											LWIR camera & cryocooler ON; Laser heater ON						OPS ERROR: Sensor door left closed, and open door command had been removed from this script assuming door was open
																			End Prep2 Script
02/23/94 17:50:09	1:23:42		-30.0	232.8	1909.1							S30D							
02/23/94 17:59:41	1:33:14		-40.0	232.9	1659.0							S40D							
02/23/94 18:00:00	1:33:33												LWIR camera & cryocooler OFF						Ground Command
02/23/94 18:04:45	1:38:18												Execute Prep2 script						Ground Command
																			LM Prep2 Script
02/23/94 18:05:00	1:38:33	0											LWIR camera & cryocooler ON; Laser heater ON						
																			End Prep2 Script
																			LM Prep3 Script
02/23/94 18:07:05	1:40:38	0											Msg "WRNG: Omni/8k in 1 min.."; SSDR to IDLE						
02/23/94 18:07:57	1:41:30		-50.0	233.0	1426.5							S50D							

Orbit 17 Timeline - Dark Field Images

02/23/94 18:08:05	1:41:38	60													Switch to omni antennas; Switch to bypass mode @ 8 kbps						
02/23/94 18:10:05	1:43:38	120													Deselect ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/23/94 18:12:40	1:46:13	155													UV & HR cameras ON						
02/23/94 18:15:05	1:48:38	145													Select ST-A						
02/23/94 18:15:08	1:48:41		-60.0	233.2	1216.9										S60D						
02/23/94 18:15:15	1:48:48	10													Initialize filters (DHU SEQT 28); Record in SSSR Segment 1						Start recording in Segment 1
02/23/94 18:15:40	1:49:13	25													Perform LWIR imaging (DHU SEQT 25)						Start dark fields imaging
02/23/94 18:16:10	1:49:43	30													Perform NIR imaging (DHU SEQT 31)						
02/23/94 18:16:40	1:50:13	30													Stop imaging - select ST-A						
02/23/94 18:16:50	1:50:23	10													Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)						Slew to nadir
02/23/94 18:18:09	1:51:42	79													Msg "Complete: L017_prep3"						
																					End Prep3 Script
02/23/94 18:21:25	1:54:58		-70.0	233.7	1032.5										S70D						
02/23/94 18:26:59	2:00:32		-80.0	235.2	873.6										S80D						
02/23/94 18:29:00	2:02:33														Uplink and schedule L017 Mapping & Post scripts (L017SETUP2)						Ground Command
02/23/94 18:31:56	2:05:29		-89.5	320.8	740.0										South Pole						
02/23/94 18:32:38	2:06:11		-88.4	31.9	722.3										LDAWN						
02/23/94 18:36:26	2:09:59		-80.0	49.0	629.7										S80A						
02/23/94 18:40:35	2:14:08		-70.0	50.6	541.2										S70A						
02/23/94 18:44:27	2:18:00		-60.0	51.1	473.6										S60A						
																					Err:508
02/23/94 18:45:16	2:18:49	0													Laser power ON; Select ST-A						NOTE: Phasing loop SEQTs were uploaded instead of lunar SEQTs NOTE: Sensor door was closed, so all images are dark images
02/23/94 18:48:07	2:21:40		-50.0	51.3	425.4										S50A						
02/23/94 18:51:40	2:25:13		-40.0	51.5	395.8										S40A						
02/23/94 18:55:08	2:28:41		-30.0	51.6	384.2										S30A						
02/23/94 18:55:16	2:28:49	600													S30A						Load exposure table LUNARZ25S
02/23/94 18:55:21	2:28:54	5													S30A						LASER RANGING TEST Color HiRes SEQ_LASE.UMI loaded in SEQT 5
02/23/94 18:55:39	2:29:12		-28.5	51.6	384.0										Periselene						
02/23/94 18:58:36	2:32:09		-20.0	51.7	390.4										S20A						
02/23/94 18:58:44	2:32:17	203													S20A						
02/23/94 19:02:07	2:35:40		-10.0	51.8	414.5										S10A						
02/23/94 19:04:04	2:37:37	320													S5A						START FLAT FIELD TEST Target: Messier-Geikie
																					Flatfields Subscript

Orbit 17 Timeline - Dark Field Images

02/23/94 19:04:04	2:37:37	0								Load SEQ_JB_22.UMI into SEQT 22; Load SEQ_JB_23.UMI into SEQT 23; Load SEQ_26x6.UMI into SEQT 26								
02/23/94 19:04:06	2:37:39	2								Initialize filters (DHU SEQT 26); Select ST-A								
02/23/94 19:04:11	2:37:44	5								Start imaging (DHU SEQT 23)								UV: filter 2, NIR: filter 6
02/23/94 19:04:46	2:38:19	35								Load SEQ_26x5.UMI into SEQT 26								
02/23/94 19:04:48	2:38:21	2								Initialize filters (DHU SEQT 26); Select ST-A								T/L ERROR: Failed because of insufficient time allowed - filters unchanged
02/23/94 19:04:53	2:38:26	5								Select DHU SEQT 23								
02/23/94 19:05:28	2:39:01	35								Load SEQ_26x4.UMI into SEQT 26								
02/23/94 19:05:30	2:39:03	2								Initialize filters (DHU SEQT 26); Select ST-A								Failed - see above
02/23/94 19:05:35	2:39:08	5								Select DHU SEQT 23								
02/23/94 19:05:44	2:39:17		0.0	51.8	457.0					Equator - A								
02/23/94 19:06:10	2:39:43	35								Stop imaging - select ST-A								
02/23/94 19:06:19	2:39:52	10								Load SEQ_262.UMI into SEQT 26; Initialize filters (DHU SEQT 28)								Restore original SEQT 26
02/23/94 19:06:21	2:39:54	2								Select DHU SEQT 22								No data
02/23/94 19:06:21	2:39:54	0								Stop imaging - select ST-A								SCRIPT ERROR: WAIT should've been 32 seconds, not 32 tics
End Flatfields Subscript																		
02/23/94 19:09:18	2:42:51	177								N10A	Set SA mode to MANUAL							
02/23/94 19:09:32	2:43:05		10.0	51.9	518.6					N10A								
02/23/94 19:13:35	2:47:08		20.0	51.9	600.6					N20A								
02/23/94 19:17:58	2:51:31		30.0	52.0	704.1					N30A								
02/23/94 19:22:47	2:56:20		40.0	52.1	830.8					N40A								
02/23/94 19:22:33	2:56:07	795								N40A	Load exposure table LUNARZ45N; Execute JT subscript							START JITTER TEST
JT Subscript																		
02/23/94 19:22:33	2:56:07	0									Msg "Execute: Jitter Test"							
02/23/94 19:22:38	2:56:12	5									Start imaging (DHU SEQT 9)							OFF_AXIS_B_SEQ_09.UMI loaded in SEQT 9 UV filter 2 & ST-B images
02/23/94 19:23:08	2:56:42	30									Set SA step rate to LO; Set SA-A mode to AUTO; Set SA-B mode to AUTO							
02/23/94 19:24:09	2:57:42	60									Set SA step rate to HI;							
02/23/94 19:25:09	2:58:42	60									Stop imaging - select ST-A							
End JT Subscript																		
Err:508																		
02/23/94 19:27:00	3:00:33										SA-A mode to MANUAL; SA-B mode to MANUAL							Ground Command
02/23/94 19:28:09	3:01:42		50.0	52.3	981.9					N50A								
02/23/94 19:34:12	3:07:45		60.0	52.5	1158.5					N60A								
02/23/94 19:39:00	3:12:33										Load exposure table LUNARZ285N							Ground Command
02/23/94 19:40:00	3:13:33										Set SA step rate to LO							Ground Command
02/23/94 19:41:06	3:14:39		70.0	53.0	1360.7					N70A								

Orbit 17 Timeline - Dark Field Images

02/23/94 19:49:01	3:22:34		80.0	54.4	1586.8					N80A									
02/23/94 19:50:00	3:23:33										Select DHU SEQT 5								Ground Command
02/23/94 19:51:00	3:24:33										Set SA step rate to HI								Ground Command
02/23/94 19:57:00	3:30:33										Stop imaging - select ST-A; Laser Power OFF								Ground Command
02/23/94 19:58:08	3:31:41		89.5	140.8	1831.9					North Pole									
02/23/94 19:59:36	3:33:09		88.4	211.4	1869.4					LDUSK									
Err:508																			
02/23/94 20:02:18	3:35:52	0									Select ST-A								
02/23/94 20:02:28	3:36:01	10									Park filters (DHU SEQT 27); UV & HR cameras OFF								
02/23/94 20:02:38	3:36:11	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)								Slew to Vega
02/23/94 20:07:18	3:40:51	280									Perform LWIR imaging (DHU SEQT 25)								
02/23/94 20:07:48	3:41:21	30									Perform NIR imaging (DHU SEQT 31)								
02/23/94 20:08:18	3:41:51	30									Stop imaging - select ST-A								
02/23/94 20:08:28	3:42:01	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
02/23/94 20:08:38	3:42:11		80.0	228.2	2088.7					N80D									
02/23/94 20:13:18	3:46:51	290									Select ST-A								READY FOR DATA DUMP
Err:508																			
02/23/94 20:15:00	3:48:33										Switch to DHU mode @ 128 kbps								Ground Command
02/23/94 20:16:00	3:49:33										Switch to HGA								Ground Command
02/23/94 20:20:40	3:54:13		70.0	229.7	2344.6					N70D									
02/23/94 20:21:00	3:54:33										Downlink SSSR Segment 1								Ground Command
02/23/94 20:34:15	4:07:48		60.0	230.1	2581.3					N60D									
02/23/94 20:42:00	4:15:33										SSSR to IDLE - downlink complete								Ground Command
02/23/94 20:49:16	4:22:49		50.0	230.2	2777.6					N50D									
02/23/94 21:05:27	4:39:00		40.0	230.3	2912.1					N40D									
02/23/94 21:08:59	4:42:32		37.3	230.3	2935.0					PMK	AOS								
02/23/94 21:22:18	4:55:51		30.0	230.3	2967.9						N30D								
02/23/94 21:24:51	4:58:24		28.5	230.3	2968.9						Aposelene								

Orbit 18 Timeline - Laser Ranging Test (Dark Field Images)

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/23/94 21:24:51	0:00:00		28.5	230.3	2968.9							Aposelene	No activities						NOTE: Sensor door was closed, so all images are dark images NOTE: Phasing loop SEQTs were uploaded instead of lunar SEQTs
02/23/94 21:39:16	0:14:25		20.0	230.2	2937.5							N20D							
02/23/94 21:55:42	0:30:51		10.0	230.2	2825.1							N10D							
02/23/94 22:11:06	0:46:15		0.0	230.1	2645.2							Equator -D							
02/23/94 22:25:07	1:00:16		-10.0	230.1	2418.4							S10D							
02/23/94 22:37:37	1:12:46		-20.0	230.1	2166.4							S20D							
02/23/94 22:48:34	1:23:43		-30.0	230.1	1908.3							S30D							
02/23/94 22:58:05	1:33:13		-40.0	230.1	1658.4							S40D							
02/23/94 23:06:21	1:41:30		-50.0	230.2	1426.0							S50D							
02/23/94 23:13:32	1:48:41		-60.0	230.4	1216.5							S60D							
02/23/94 23:19:49	1:54:58		-70.0	230.9	1032.3							S70D							
02/23/94 23:25:23	2:00:32		-80.0	232.3	873.5							S80D							
02/23/94 23:30:20	2:05:29		-89.5	318.2	740.1							South Pole							
02/23/94 23:31:02	2:06:11		-88.4	30.4	722.2							LDAWN							
02/23/94 23:33:00	2:08:08												Switch to bypass mode @ 8 kbps						Ground Command
02/23/94 23:34:00	2:09:09												Switch to omni antennas						Ground Command
02/23/94 23:34:50	2:09:58		-80.0	46.5	629.8							S80A							
02/23/94 23:35:00	2:10:09												LWIR camera & cryocooler ON						Ground Command
02/23/94 23:36:00	2:11:08												Slew s/c sensors to nadir (ACSMODE=LunarMapping)						Ground Command
02/23/94 23:38:59	2:14:08		-70.0	47.9	541.4							S70A							
02/23/94 23:42:51	2:18:00		-60.0	48.4	473.8							S60A							
02/23/94 23:46:31	2:21:40		-50.0	48.6	425.7							S50A							
02/23/94 23:50:00	2:25:09												Laser power ON						Ground Command
02/23/94 23:50:04	2:25:13		-40.0	48.8	396.2							S40A							
02/23/94 23:51:00	2:26:09												HiRes Camera On						Ground Command
02/23/94 23:53:32	2:28:41		-30.0	48.9	384.7							S30A							
02/23/94 23:54:00	2:29:09												Load exposure table LUNARZ25S						Ground Command
02/23/94 23:54:03	2:29:12		-28.5	48.9	384.5							Periselene							
02/23/94 23:57:00	2:32:09		-20.0	49.0	390.9							S20A							
02/23/94 23:58:00	2:33:09												Record in SSSR Segment 1						Ground Command
02/23/94 23:59:00	2:34:09												Initialize filters (DHU SEQT 28)						Ground Command SEQ_28X.umi loaded in SEQT 28
02/23/94 23:59:30	2:34:39												Start imaging (DHU SEQT 17)						Ground Command Compressed LWIR @ app 6 hz LWIRDKSEQ_17.umi loaded in SEQT 17
02/24/94 00:00:31	2:35:39		-10.0	49.0	415.1							S10A							

Orbit 18 Timeline - Laser Ranging Test (Dark Field Images)

02/24/94 00:01:30	2:36:39									Select DHU SEQT 05				Ground Command Color HiRes SEQ_LASE.UMI loaded in SEQT 5
02/24/94 00:02:30	2:37:39									Load exposure table LUNARZ25S				Ground Command
02/24/94 00:04:00	2:39:09									Load exposure table LUNARX25S				Ground Command
02/24/94 00:04:09	2:39:17	0.0	49.1	457.7					Equator - A					
02/24/94 00:06:00	2:41:09									Activate ST-A (Select DHU SEQT 1)				Ground Command
02/24/94 00:07:00	2:42:09									All cameras (except ST) OFF Laser power OFF				Ground Command
02/24/94 00:07:26	2:42:35	11.3	49.2	529.7				GDS	AOS					
02/24/94 00:07:57	2:43:06	10.0	49.1	519.4					N10A					
02/24/94 00:12:00	2:47:09	20.0	49.2	601.4					N20A					
02/24/94 00:16:23	2:51:31	30.0	49.3	705.0					N30A					
02/24/94 00:21:12	2:56:21	40.0	49.4	831.7					N40A					
02/24/94 00:22:00	2:57:09									Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)				Ground Command
02/24/94 00:26:35	3:01:44	50.0	49.5	982.9					N50A					
02/24/94 00:32:00	3:07:09									Select ST-A				Ground Command
02/24/94 00:32:38	3:07:47	60.0	49.7	1159.6					N60A					
02/24/94 00:33:00	3:08:09									Switch to HGA				Ground Command
02/24/94 00:35:00	3:10:09									Switch to DHU mode @ 128 kbps				Ground Command
02/24/94 00:39:32	3:14:41	70.0	50.1	1361.7					N70A					
02/24/94 00:41:00	3:16:09									Update state vector (GNC53_24FEB0000)				Ground Command
02/24/94 00:45:00	3:20:09									Downlink SDR Segment 1				Ground Command
02/24/94 00:47:28	3:22:37	80.0	51.5	1587.9					N80A					
02/24/94 00:56:00	3:31:09									SSDR to IDLE - downlink complete				Ground Command
02/24/94 00:56:35	3:31:44	89.5	138.0	1833.0					North Pole					
02/24/94 00:58:03	3:33:12	88.4	209.9	1870.7					LDUSK					
02/24/94 01:07:05	3:42:14	80.0	225.7	2089.7					N80D					
02/24/94 01:19:07	3:54:16	70.0	227.0	2345.4					N70D					
02/24/94 01:20:00	3:55:09									Sensor door OPEN				Ground Command
02/24/94 01:25:00	4:00:09									Read dosimeter latch values				Ground Command
02/24/94 01:30:00	4:05:09									Expose dosimeter				Ground Command
02/24/94 01:32:42	4:07:51	60.0	227.4	2581.8					N60D					
02/24/94 01:47:43	4:22:52	50.0	227.5	2777.8					N50D					
02/24/94 02:03:54	4:39:03	40.0	227.6	2911.9					N40D					
02/24/94 02:20:45	4:55:54	30.0	227.5	2967.4					N30D					
02/24/94 02:23:14	4:58:23	28.5	227.5	2968.3					Aposelene					

Orbit 19 Timeline - LWIR FPF Test (Messier Proclus)

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (secs)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
02/24/94 02:23:14	0:00:00		28.5	227.5	2968.3							Aposelene	No activities						NOTE: Phasing loop SEQTs were uploaded instead of lunar SEQTs
02/24/94 02:37:42	0:14:28		20.0	227.5	2936.7							N20D							
02/24/94 02:54:08	0:30:54		10.0	227.4	2824.2							N10D							
02/24/94 03:09:32	0:46:18		0.0	227.4	2644.2							Equator -D							
02/24/94 03:23:33	1:00:19		-10.0	227.3	2417.4							S10D							
02/24/94 03:24:00	1:00:46												Uplink and schedule L019 scripts (except L019 main script)						Ground Command
																			LM Prep1 Script
02/24/94 03:26:00	1:02:46	0											NIR camera & cryocooler ON; SA mode to AUTO						Started late because of upload - scheduled at 03:20:44
																			End Prep1 Script
02/24/94 03:36:02	1:12:48		-20.0	227.3	2165.6							S20D							
02/24/94 03:46:59	1:23:45		-30.0	227.3	1907.6							S30D							
																			LM Prep2 Script
02/24/94 03:55:44	1:32:30	0											LWIR camera & cryocooler ON; Laser heater ON						
																			End Prep2 Script
02/24/94 03:56:30	1:33:16		-40.0	227.4	1657.8							S40D							
02/24/94 04:04:45	1:41:31		-50.0	227.5	1425.6							S50D							
02/24/94 04:06:00	1:42:46												Uplink and schedule L019 main script (L019PLUS.PER)						Ground Command
02/24/94 04:11:56	1:48:42		-60.0	227.6	1216.3							S60D							
																			LM Prep3 Script
02/24/94 04:12:09	1:48:55	0											Msg "WRNG: Omni/8k in 1 min.."; SDR to IDLE						
02/24/94 04:13:09	1:49:55	60											Switch to bypass mode @ 8 kbps						
02/24/94 04:14:09	1:50:55	60											Switch to omni antennas						
02/24/94 04:15:09	1:51:55	60											Deselect ST; Slew s/c sensors to SGP (ACSMMode=StarPointing, Index=1)						Slew to South Galactic Pole
02/24/94 04:17:44	1:54:30	155											UV & HR cameras ON						
02/24/94 04:18:13	1:54:59		-70.0	228.1	1032.2							S70D							
02/24/94 04:20:09	1:56:55	145											Select ST-A						
02/24/94 04:20:19	1:57:05	10											Initialize filters (DHU SEQT 28); Record in SDR Segment 1						Start recording in Segment 1
02/24/94 04:20:44	1:57:30	25											Perform LWIR imaging (DHU SEQT 25)						Start dark fields imaging
02/24/94 04:21:14	1:58:00	30											Perform NIR imaging (DHU SEQT 31)						
02/24/94 04:21:44	1:58:30	30											Stop imaging - select ST-A						
02/24/94 04:21:54	1:58:40	10											Deselect ST; Slew s/c sensors to nadir (ACSMMode=LunarMapping)						Slew to nadir

Orbit 19 Timeline - LWIR EPF Test (Messier Proclus)

02/24/94 04:23:25	2:00:11	91																Laser power ON												
																												End Prep3 Script		
02/24/94 04:23:47	2:00:33			-80.0	229.4	873.6				S80D																				
																												Err:508		
02/24/94 04:26:43	2:03:30	0																												
02/24/94 04:26:53	2:03:39	10																												
02/24/94 04:28:44	2:05:30			-89.5	315.2	740.2				South Pole																				
02/24/94 04:29:26	2:06:12			-88.4	28.9	722.2				LDAWN																				
02/24/94 04:32:24	2:09:10	330								S80A																				
02/24/94 04:33:04	2:09:50	40																												
02/24/94 04:33:14	2:10:00			-80.0	43.9	630.0				S80A																				
02/24/94 04:37:23	2:14:09			-70.0	45.3	541.8				S70A																				
02/24/94 04:38:10	2:14:56	306								S70A																				
02/24/94 04:40:28	2:17:14	138								S60A																				
02/24/94 04:41:15	2:18:01			-60.0	45.7	474.2				S60A																				
02/24/94 04:44:08	2:20:54	220								S50A																				
02/24/94 04:44:55	2:21:41			-50.0	45.9	426.2				S50A																				
02/24/94 04:47:41	2:24:27	213								S40A																				
02/24/94 04:48:00	2:24:46																													
02/24/94 04:48:28	2:25:14	47																												
02/24/94 04:48:28	2:25:14			-40.0	46.1	396.7				S40A																				
02/24/94 04:48:30	2:25:16																													
02/24/94 04:51:10	2:27:56	162								S30A																				
02/24/94 04:51:57	2:28:43			-30.0	46.2	385.3				S30A																				
02/24/94 04:52:27	2:29:13			-28.5	46.2	385.1				Periselene																				
02/24/94 04:53:28	2:30:14	138																												
02/24/94 04:54:00	2:30:46																													
02/24/94 04:54:26	2:31:12			-19.9	46.3	392.5			MAD	LOS																				
02/24/94 04:54:38	2:31:24	70								S20A																				
02/24/94 04:55:25	2:32:11			-20.0	46.2	391.6				S20A																				
02/24/94 04:58:09	2:34:55	211																												
02/24/94 04:58:28	2:35:14	19																												
02/24/94 04:58:56	2:35:42			-10.0	46.3	415.8				S10A																				
02/24/94 05:01:47	2:38:33	199								S10A																				
02/24/94 05:02:34	2:39:20			0.0	46.3	458.4				Equator -A																				
02/24/94 05:03:28	2:40:14	101																												

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Orbit 19
Actual Timeline

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Orbit 19 Timeline - LWIR EPF Test (Messier Proclus)

02/24/94 05:05:35	2:42:21	127														Load exposure table LUNARZ15N									
02/24/94 05:06:22	2:43:08		10.0	46.4	520.2											N10A									
02/24/94 05:08:28	2:45:14	173															Load QTable ORB19QTb4							Target 2: Proclus (16°N,47°E)	
02/24/94 05:09:38	2:46:24	70															Load exposure table LUNARZ25N								
02/24/94 05:10:25	2:47:11		20.0	46.4	602.2												N20A								
02/24/94 05:13:28	2:50:14	230															Load QTable ORB19QTb5								
02/24/94 05:14:01	2:50:47	33															Load exposure table LUNARZ35N								
02/24/94 05:14:48	2:51:34		30.0	46.5	705.9												N30A								
02/24/94 05:16:13	2:52:59	132															Switch to nadir mapping (ACSMMode=LunarMapping)							Slew to nadir	
02/24/94 05:18:51	2:55:37	158															Load exposure table LUNARZ45N								
02/24/94 05:19:38	2:56:24		40.0	46.6	832.7												N40A								
02/24/94 05:20:13	2:56:59	82															Stop all imaging (including ST); Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0)							Slew to Vega	
02/24/94 05:25:00	3:01:46		50.0	46.7	983.9												N50A								
02/24/94 05:25:13	3:01:59	300															Load exposure table LUNARZ55N ; Select DHU SEQT 25								
02/24/94 05:25:53	3:02:39	40															Stop all imaging (including ST); Slew s/c sensors to nadir (ACSMMode=LunarMapping)							END LWIR EPF TEST Slew to nadir	
02/24/94 05:30:53	3:07:39	300															Load exposure table LUNARZ65N								
02/24/94 05:31:04	3:07:50		60.0	46.9	1160.6												N60A								
02/24/94 05:37:11	3:13:57	378															Load exposure table LUNARZ75N								
02/24/94 05:37:58	3:14:44		70.0	47.3	1362.8												N70A								
02/24/94 05:45:07	3:21:53	476															Load exposure table LUNARZ85N; Select ST-A								
																								Err:508	
02/24/94 05:45:54	3:22:40		80.0	48.6	1588.9												N80A								
02/24/94 05:55:01	3:31:47		89.5	134.9	1833.8												North Pole								
02/24/94 05:56:30	3:33:16		88.4	208.5	1872.0												LDUSK								
																								LM Post Script	
02/24/94 05:57:01	3:33:47	0															Select ST-A								
02/24/94 05:57:11	3:33:57	10															Park filters (DHU SEQT 27); UV & HR cameras OFF								
02/24/94 05:57:21	3:34:07	10															Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0)							Slew to Vega	
02/24/94 06:02:00	3:38:47	280															Perform LWIR imaging (DHU SEQT 25)							Start dark field imaging	
02/24/94 06:02:30	3:39:17	30															Perform NIR imaging (DHU SEQT 31)								
02/24/94 06:03:31	3:40:17	60															Stop imaging - select ST-A								
02/24/94 06:03:41	3:40:27	10															IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)							Slew HGA to Earth	
02/24/94 06:05:32	3:42:18		80.0	223.1	2090.6												N80D								
02/24/94 06:07:00	3:43:46																Laser Power OFF								Ground Command

Orbit 19 Timeline - LWIR FPE Test (Messier Proclus)

02/24/94 06:08:31	3:45:17	290													Select ST-A				READY FOR DATA DUMP
																	End Post Script		
02/24/94 06:09:00	3:45:46														Switch to HGA				Ground Command
02/24/94 06:10:00	3:46:46														Set downlink rate to 8 kbps				Ground Command
02/24/94 06:11:00	3:47:46														Switch to DHU mode @ 128 kbps				Ground Command
02/24/94 06:16:00	3:52:46														Downlink SDR Segment 1				Ground Command
02/24/94 06:17:34	3:54:20		70.0	224.4	2346.0									N70D					
02/24/94 06:21:00	3:57:46														Deselect ST; Uplink S-series DHU sequence tables (SEQ_LUNAR)				Ground Command SEQ sequence tables uploaded
02/24/94 06:27:00	4:03:46														Select ST-A				Ground Command
02/24/94 06:31:09	4:07:55		60.0	224.7	2582.2									N60D					
02/24/94 06:46:11	4:22:57		50.0	224.8	2777.9									N50D					
02/24/94 07:02:21	4:39:07		40.0	224.9	2911.6									N40D					
02/24/94 07:16:00	4:52:46														SSDR to IDLE - downlink complete				Ground Command
02/24/94 07:19:12	4:55:58		30.0	224.8	2966.8									N30D					
02/24/94 07:21:38	4:58:24		28.6	224.8	2967.7									Aposelene					

Orbit 20 Timeline - Type A

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/24/94 07:21:38	0:00:00		28.6	224.8	2967.7							Aposelene							No activities - HGA to Earth
02/24/94 07:36:09	0:14:31		20.0	224.8	2935.9							N20D							
02/24/94 07:52:34	0:30:56		10.0	224.7	2823.2							N10D							
02/24/94 08:07:57	0:46:19		0.0	224.6	2643.2							Equator -D							
02/24/94 08:12:49	0:51:11		-4.0	224.6	2554.4						CAN	AOS							
02/24/94 08:19:00	0:57:22												Uplink & schedule L020 prep scripts						Ground Command
																			LM Prep1 Script
02/24/94 08:19:07	0:57:29	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/24/94 08:21:58	1:00:20		-10.0	224.6	2416.6							S10D							
02/24/94 08:28:00	1:06:22												Switch to omni antennas						Ground Command
02/24/94 08:29:00	1:07:22												Set downlink rate to 8 kbps						Ground Command
02/24/94 08:30:00	1:08:22												Update state vector (GNC53_24FEB0800)						Ground Command
02/24/94 08:32:00	1:10:22												Slew s/c HGA to Canberra (ACSMODE=EarthPointing, CAN)						Ground Command
02/24/94 08:34:26	1:12:48		-20.0	224.6	2164.9							S20D							
02/24/94 08:37:00	1:15:22												Slew s/c HGA to Madrid (ACSMODE=EarthPointing, MAD)						Ground Command
02/24/94 08:40:00	1:18:22												Switch to inertial pointing						Ground Command
02/24/94 08:45:23	1:23:45		-30.0	224.6	1907.1							S30D							
02/24/94 08:48:00	1:26:22												Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Ground Command
02/24/94 08:50:00	1:28:22												Switch to HGA						Ground Command
																			LM Prep2 Script
02/24/94 08:54:07	1:32:29	0											LWIR camera & cryocooler ON; Laser heater ON						
																			End Prep2 Script
02/24/94 08:54:54	1:33:16		-40.0	224.6	1657.5							S40D							
02/24/94 09:03:09	1:41:31		-50.0	224.7	1425.5							S50D							
02/24/94 09:10:20	1:48:42		-60.0	224.9	1216.3							S60D							
																			LM Prep3 Script
02/24/94 09:13:32	1:51:54	0											Msg "WRNG: Omni/8k in 1 min.."; SSDR to IDLE						
02/24/94 09:14:32	1:52:54	60											Switch to bypass mode @ 8 kbps						
02/24/94 09:15:32	1:53:54	60											Switch to omni antennas						
02/24/94 09:16:32	1:54:54	60											Deselect ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/24/94 09:16:37	1:54:59		-70.0	225.2	1032.3							S70D							
02/24/94 09:17:00	1:55:22												Uplink and schedule L020 mapping scripts						Ground Command
02/24/94 09:19:07	1:57:29	155											UV & HR cameras ON						

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Orbit 20
Actual Timeline

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Orbit 20 Timeline - Type A

02/24/94 09:21:32	1:59:54	145									Select ST-A							
02/24/94 09:21:42	2:00:04	10									Initialize filters (DHU SEQT 28); Record in SDR Segment 1							Start recording in Segment 1
02/24/94 09:22:07	2:00:29	25									Perform LWIR imaging (DHU SEQT 25)							Start dark fields imaging
02/24/94 09:22:11	2:00:33		-80.0	226.5	873.8					S80D								
02/24/94 09:22:37	2:00:59	30									Perform NIR imaging (DHU SEQT 31)							
02/24/94 09:23:07	2:01:29	30									Stop imaging - select ST-A							
02/24/94 09:23:17	2:01:39	10									Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)							Slew to nadir
02/24/94 09:24:48	2:03:10	91									Laser power ON							
End Prep3 Script																		
Err:508																		
02/24/94 09:25:07	2:03:28	0									Select ST-A							
02/24/94 09:25:16	2:03:38	10									Set SA step rate to LO; Load exposure table LUNARZ85S							
02/24/94 09:26:06	2:04:28	50									Start imaging (DHU SEQT 9)							START MAPPING TEST
02/24/94 09:27:08	2:05:30		-89.6	312.0	740.6					South Pole								
02/24/94 09:27:51	2:06:13		-88.4	27.5	722.3					LDAWN								
02/24/94 09:31:37	2:09:59	331	-80.0	41.4	630.4					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3							
02/24/94 09:35:48	2:14:10	251	-70.0	42.6	542.2					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4							
02/24/94 09:39:42	2:18:04	234	-60.0	43.0	474.8					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
02/24/94 09:43:25	2:21:47	222	-50.0	43.2	426.8					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 5							
02/24/94 09:46:53	2:25:15		-40.0	43.4	397.4					S40A								
02/24/94 09:47:00	2:25:22	215								S40A	Load exposure table LUNARZ35S							
02/24/94 09:50:21	2:28:43		-30.0	43.5	385.9					S30A								
02/24/94 09:50:30	2:28:52	210								S30A	Load exposure table LUNARZ25S							
02/24/94 09:50:51	2:29:12		-28.6	43.5	385.8					Periselene								
02/24/94 09:53:50	2:32:12		-20.0	43.5	392.3					S20A								
02/24/94 09:54:00	2:32:22	210								S20A	Load exposure table LUNARZ15S							
02/24/94 09:57:00	2:35:22										Ranging A ON; Ranging B ON							Ground Command
02/24/94 09:57:00	2:35:22		-8.1	43.6	424.0				PMK	LOS								
02/24/94 09:57:21	2:35:43		-10.0	43.6	416.6					S10A								
02/24/94 09:57:32	2:35:54	213								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
02/24/94 10:00:59	2:39:21		0.0	43.6	459.2					Equator - A								
02/24/94 10:01:12	2:39:33	219								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 7							
02/24/94 10:04:42	2:43:03																	No Data, SDR overwritten before data could be downlinked
02/24/94 10:04:47	2:43:09		10.0	43.7	521.0					N10A								
02/24/94 10:05:03	2:43:24	231								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							

Orbit 20 Timeline - Type A

02/24/94 10:08:00	2:46:22										Read dosimeter latch values				Ground Command
02/24/94 10:08:50	2:47:12		20.0	43.7	603.1					N20A					
02/24/94 10:09:08	2:47:29	245								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				
02/24/94 10:10:08	2:48:30	60									Laser power OFF				
02/24/94 10:13:00	2:51:22										Expose dosimeter				Ground Command
02/24/94 10:13:14	2:51:36		30.0	43.8	706.9					N30A					
02/24/94 10:13:33	2:51:55	205								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				
02/24/94 10:18:03	2:56:25		40.0	43.8	833.7					N40A					
02/24/94 10:18:25	2:56:47	292								N40A	Load exposure table LUNARZ45N; Select DHU SEQT 11				
02/24/94 10:23:26	3:01:48		50.0	43.9	984.9					N50A					
02/24/94 10:23:50	3:02:12	325								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12				
02/24/94 10:29:30	3:07:52		60.0	44.1	1161.6					N60A					
02/24/94 10:29:55	3:08:17	365								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13				
02/24/94 10:36:24	3:14:46		70.0	44.5	1363.8					N70A					
02/24/94 10:36:50	3:15:12	415								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14				
02/24/94 10:44:20	3:22:42		80.0	45.7	1589.8					N80A					
02/24/94 10:44:45	3:23:07	475								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15				
															Err:508
02/24/94 10:53:28	3:31:50		89.6	132.4	1834.8					North Pole					
															LM Post Script
02/24/94 10:54:28	3:32:50	0									Select ST-A				
02/24/94 10:54:38	3:33:00	10									Park filters (DHU SEQT 27); UV & HR cameras OFF				
02/24/94 10:54:48	3:33:10	10									Set SA step rate to HI; Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0)				Slew to Vega
02/24/94 10:54:58	3:33:20		88.4	207.1	1873.2					LDUSK					
02/24/94 10:59:28	3:37:49	280									Perform LWIR imaging (DHU SEQT 25)				
02/24/94 10:59:58	3:38:20	30									Perform NIR imaging (DHU SEQT 31)				
02/24/94 11:00:28	3:38:50	30									Stop imaging - select ST-A				
02/24/94 11:00:38	3:39:00	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)				Slew HGA to Earth
02/24/94 11:03:59	3:42:21		80.0	220.6	2091.3					N80D					
02/24/94 11:05:28	3:43:49	290									Select ST-A				READY FOR DATA DUMP
															End Post Script
02/24/94 11:08:00	3:46:22										Switch to HGA				Ground Command - failed?
02/24/94 11:12:00	3:50:22										Switch to omni antennas				Ground Command

Orbit 20 Timeline - Type A

02/24/94 11:13:00	3:51:22										Switch to HGA									Ground Command
02/24/94 11:16:01	3:54:23		70.0	221.7	2346.5						N70D									
02/24/94 11:21:00	3:59:22											Set downlink rate to 8 kbps								Ground Command
02/24/94 11:22:00	4:00:22											Switch to DHU mode								Ground Command
02/24/94 11:23:00	4:01:22											Set downlink rate to 128 kbps								Ground Command
02/24/94 11:25:00	4:03:22											Downlink SDR Segment 1								Ground Command
02/24/94 11:29:37	4:07:59		60.0	222.1	2582.4						N60D									
02/24/94 11:44:38	4:23:00		50.0	222.1	2777.8						N50D									
02/24/94 12:00:48	4:39:10		40.0	222.2	2911.2						N40D									
02/24/94 12:09:00	4:47:22											SSDR to IDLE - downlink paused								Ground Command
02/24/94 12:17:39	4:56:01		30.0	222.1	2966.1						N30D									
02/24/94 12:19:00	4:57:22											Resume downlink SDR Segment 1								Ground Command
02/24/94 12:20:02	4:58:24		28.6	222.1	2967.0						Aposelene									

Orbit 21 Timeline - Exposure Tables Test

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/24/94 12:20:02	0:00:00		28.6	222.1	2967.0							Aposelene							Downlinking SDDR Segment 1 (orbit 20)
02/24/94 12:30:02	0:10:00		22.1	222.1	2947.9						GDS	LOS							
02/24/94 12:34:35	0:14:33		20.0	222.0	2935.1							N20D							
02/24/94 12:51:00	0:30:58		10.0	222.0	2822.3							N10D							
02/24/94 13:06:23	0:46:21		0.0	221.9	2642.3							Equator -D							
02/24/94 13:20:00	0:59:58												Ranging A OFF Ranging B OFF						Ground Command
02/24/94 13:20:23	1:00:21		-10.0	221.9	2415.8							S10D							
02/24/94 13:28:00	1:07:58												NIR camera & cryocooler ON						Ground Command
02/24/94 13:32:51	1:12:49		-20.0	221.8	2164.3							S20D							
02/24/94 13:43:47	1:23:45		-30.0	221.8	1906.7							S30D							
02/24/94 13:53:18	1:33:16		-40.0	221.8	1657.3							S40D							
02/24/94 13:56:00	1:35:58												LWIR camera & cryocooler ON						Ground Command
02/24/94 14:01:33	1:41:31		-50.0	221.9	1425.4							S50D							
02/24/94 14:08:00	1:47:58												SSDR to IDLE - downlink complete						Ground Command
02/24/94 14:08:44	1:48:42		-60.0	222.1	1216.4							S60D							
02/24/94 14:12:00	1:51:58												Set downlink rate to 8 kbps						Ground Command
02/24/94 14:13:00	1:52:58												Switch to DHU bypass mode						Ground Command
02/24/94 14:14:00	1:53:58												Switch to omni antennas						Ground Command
02/24/94 14:15:01	1:54:59		-70.0	222.4	1032.6							S70D							
02/24/94 14:16:00	1:55:58												Slew s/c sensors to nadir (ACSMMode=LunarMapping)						Ground Command
02/24/94 14:17:30	1:57:28												UV & HR cameras ON						Ground Command
02/24/94 14:19:00	1:58:58												Upload SEQ_22.UMI into SEQT 22						Ground Command
02/24/94 14:20:00	1:59:58												Load exposure table LUNARZ85S						Ground Command Failed due to incorrect command
02/24/94 14:20:35	2:00:33		-80.0	223.6	874.2							S80D							
02/24/94 14:21:00	2:00:58												Record in SDDR Segment 2						Ground Command
02/24/94 14:24:00	2:03:58												Deselect ST						Ground Command
02/24/94 14:25:00	2:04:58												Load exposure table LUNARZ85S						Ground Command
02/24/94 14:25:32	2:05:30		-89.6	309.5	741.0							South Pole							
02/24/94 14:26:15	2:06:13		-88.4	26.1	722.6							LDAWN							
02/24/94 14:28:00	2:07:58												Start imaging (DHU SEQT 22)						START EXPOSURE TABLES TEST Ground Command HiRes color
02/24/94 14:29:00	2:08:58												Stop imaging - select ST-A						Ground Command
02/24/94 14:30:03	2:10:01		-80.0	38.8	630.9							S80A							
02/24/94 14:30:30	2:10:28												Load exposure table LUNARZ75S						Ground Command
02/24/94 14:32:00	2:11:58												Start imaging (DHU SEQT 22)						Ground Command
02/24/94 14:32:30	2:12:28												Stop imaging - select ST-A						Ground Command
02/24/94 14:34:00	2:13:58												Load exposure table LUNARZ65S						Ground Command
02/24/94 14:34:12	2:14:10		-70.0	40.0	542.8							S70A							

Orbit 21 Timeline - Exposure Tables Test

02/24/94 14:36:00	2:15:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 14:36:30	2:16:28															Stop imaging - select ST-A				Ground Command
02/24/94 14:37:00	2:16:58															Load exposure table LUNARZ55S				Ground Command
02/24/94 14:38:04	2:18:02		-60.0	40.4	475.4										S60A					
02/24/94 14:39:00	2:18:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 14:39:30	2:19:28															Stop imaging - select ST-A				Ground Command
02/24/94 14:40:00	2:19:58															Load exposure table LUNARZ45S				Ground Command
02/24/94 14:41:44	2:21:42		-50.0	40.6	427.5										S50A					
02/24/94 14:43:00	2:22:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 14:43:30	2:23:28															Stop imaging - select ST-A				Ground Command
02/24/94 14:44:00	2:23:58															Load exposure table LUNARZ35S				Ground Command
02/24/94 14:45:17	2:25:15		-40.0	40.7	398.1										S40A					
02/24/94 14:47:00	2:26:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 14:47:30	2:27:28															Stop imaging - select ST-A				Ground Command
02/24/94 14:48:00	2:27:58															Load exposure table LUNARZ25S				Ground Command
02/24/94 14:48:46	2:28:44		-30.0	40.7	386.7										S30A					
02/24/94 14:49:15	2:29:13		-28.6	40.7	386.5										Periselene					
02/24/94 14:50:00	2:29:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 14:50:30	2:30:28															Stop imaging - select ST-A				Ground Command
02/24/94 14:52:00	2:31:58															Load exposure table LUNARZ15S				Ground Command
02/24/94 14:52:14	2:32:12		-20.0	40.8	393.1										S20A					
02/24/94 14:54:00	2:33:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 14:54:30	2:34:28															Stop imaging - select ST-A				Ground Command
02/24/94 14:55:00	2:34:58															Load exposure table LUNARZ05S				Ground Command
02/24/94 14:55:46	2:35:44		-10.0	40.8	417.4										S10A					
02/24/94 14:57:30	2:37:28															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 14:58:00	2:37:58															Stop imaging - select ST-A				Ground Command
02/24/94 14:59:24	2:39:22		0.0	40.9	460.1										Equator - A					
02/24/94 15:00:00	2:39:58															Load exposure table LUNARZ25N				Ground Command
02/24/94 15:03:12	2:43:10		10.0	40.9	522.0										N10A					
02/24/94 15:07:16	2:47:14		20.0	41.0	604.1										N20A					
02/24/94 15:09:00	2:48:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 15:09:30	2:49:28															Stop imaging - select ST-A				Ground Command
02/24/94 15:11:00	2:50:58															Load exposure table LUNARZ35N				Ground Command
02/24/94 15:11:40	2:51:38		30.0	41.0	707.8										N30A					
02/24/94 15:14:00	2:53:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 15:14:30	2:54:28															Stop imaging - select ST-A				Ground Command
02/24/94 15:16:00	2:55:58															Load exposure table LUNARZ75N				Ground Command
02/24/94 15:16:29	2:56:27		40.0	41.1	834.6										N40A					
02/24/94 15:21:52	3:01:50		50.0	41.2	985.9										N50A					
02/24/94 15:27:56	3:07:54		60.0	41.3	1162.6										N60A					
02/24/94 15:34:51	3:14:49		70.0	41.7	1364.7										N70A					
02/24/94 15:38:00	3:17:58															Start imaging (DHU SEQT 22)				Ground Command
02/24/94 15:38:30	3:18:28															Park filters (DHU SEQT 27)				END EXPOSURE TABLES TEST Ground Command - stop imaging
02/24/94 15:39:00	3:18:58															Select ST-A				Ground Command

Orbit 21 Timeline - Exposure Tables Test

02/24/94 15:41:00	3:20:58										Deselect ST; Slew s/c HGA to Earth (ACSMoDe=EarthPointing, Center)							Ground Command
02/24/94 15:42:47	3:22:45	80.0	42.8	1590.6							N80A							
02/24/94 15:48:00	3:27:58										Select ST-A							Ground Command
02/24/94 15:51:55	3:31:53	89.6	129.4	1835.5							North Pole							
02/24/94 15:53:26	3:33:24	88.4	205.7	1874.3							LDUSK							
02/24/94 15:54:00	3:33:58										Switch to DHU mode @ 8 kbps							Ground Command
02/24/94 15:55:00	3:34:58										Switch to HGA							Ground Command
02/24/94 16:02:00	3:41:58										Set downlink rate to 128 kbps							Ground Command
02/24/94 16:02:26	3:42:24	80.0	218.0	2091.9							N80D							
02/24/94 16:08:00	3:47:58										Downlink SSSDR Segment 2							Ground Command
02/24/94 16:14:29	3:54:27	70.0	219.1	2346.9							N70D							
02/24/94 16:28:04	4:08:02	60.0	219.4	2582.4							N60D							
02/24/94 16:43:05	4:23:03	50.0	219.5	2777.5							N50D							
02/24/94 16:50:00	4:29:58										Read dosimeter latch values							Ground Command
02/24/94 16:55:00	4:34:58										Expose dosimeter							Ground Command
02/24/94 16:59:00	4:38:58										SSDR to IDLE - downlink complete							Ground Command
02/24/94 16:59:15	4:39:13	40.0	219.4	2910.7							N40D							
02/24/94 17:10:10	4:50:08	32.9	219.4	2957.6						MAD	AOS							
02/24/94 17:16:05	4:56:03	30.0	219.4	2965.3							N30D							
02/24/94 17:18:26	4:58:24	28.6	219.4	2966.1							Aposelene							

Orbit 22 Timeline - litter Test/Flat Field Test (Cauchy-Amoris)

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/24/94 17:18:26	0:00:00		28.6	219.4	2966.1							Aposelene							No activities - HGA to Earth
02/24/94 17:33:01	0:14:35		20.0	219.3	2934.1							N20D							
02/24/94 17:49:25	0:30:59		10.0	219.2	2821.4							N10D							
02/24/94 18:04:27	0:46:01		-0.4	219.2	2631.1						CAN	LOS							
02/24/94 18:04:47	0:46:21		0.0	219.2	2641.5							Equator -D							
02/24/94 18:18:47	1:00:21		-10.0	219.1	2415.1							S10D							
02/24/94 18:31:15	1:12:49		-20.0	219.1	2163.9							S20D							
																			LM Prep1 Script
02/24/94 18:31:30	1:13:04	0											NIR camera & cryocooler ON; SA mode to AUTO						Script started by Ground Command
																			End Prep1 Script
02/24/94 18:42:11	1:23:45		-30.0	219.1	1906.5							S30D							
02/24/94 18:50:30	1:32:04												Uplink and schedule L022 scripts						Ground Command
02/24/94 18:51:42	1:33:16		-40.0	219.1	1657.3							S40D							
																			LM Prep2 Script
02/24/94 18:52:00	1:33:34	0											LWIR camera & cryocooler ON; Laser heater ON						
																			End Prep2 Script
02/24/94 18:59:57	1:41:31		-50.0	219.1	1425.6							S50D							
02/24/94 19:07:08	1:48:42		-60.0	219.3	1216.8							S60D							
																			LM Prep3 Script
02/24/94 19:10:36	1:52:10	0											Msg "WARNING: Omni/8k in 1 min.."; SSDR to IDLE						
02/24/94 19:11:36	1:53:10	60											Switch to omni antennas; Switch to bypass mode @ 8 kbps						
02/24/94 19:13:25	1:54:59		-70.0	219.6	1033.1							S70D							
02/24/94 19:13:36	1:55:10	120											Deselect ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/24/94 19:16:11	1:57:45	155											UV & HR cameras ON						
02/24/94 19:18:36	2:00:10	145											Select ST-A						
02/24/94 19:18:46	2:00:20	10											Initialize filters (DHU SEQT 28); Record in SSDR Segment 1						Start recording in Segment 1
02/24/94 19:18:59	2:00:33		-80.0	220.6	874.8							S80D							
02/24/94 19:19:11	2:00:45	25											Perform LWIR imaging (DHU SEQT 25)						Start dark fields imaging
02/24/94 19:19:41	2:01:15	30											Perform NIR imaging (DHU SEQT 31)						
02/24/94 19:20:11	2:01:45	30											Stop imaging - select ST-A						
02/24/94 19:20:21	2:01:55	10											Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)						Slew to nadir
Err:508	Err:508	91											Laser power ON						
																			End Prep3 Script

Orbit 22 Timeline - litter Test/Flat Field Test (Cauchy-Amoris)

02/24/94 19:23:57	2:05:31		-89.6	309.4	741.4					South Pole				
02/24/94 19:24:40	2:06:14		-88.4	24.7	723.1					LDAWN				
02/24/94 19:28:27	2:10:01		-80.0	36.3	631.6					S80A				
02/24/94 19:32:36	2:14:10		-70.0	37.3	543.5					S70A				
02/24/94 19:36:28	2:18:02		-60.0	37.7	476.2					S60A				
02/24/94 19:40:09	2:21:43		-50.0	37.9	428.3					S50A				
														Err:508
02/24/94 19:43:39	2:25:13	0									Load exposure table LUNARZ35S; Start imaging (DHU SEQT 5)			START JITTER TEST UV filter 2 & NIR filter 4 uncompressed
02/24/94 19:43:42	2:25:16		-40.0	38.0	398.9					S40A				
02/24/94 19:44:00	2:25:34										Set SA step rate to LO			Ground Command T/L ERROR: Jitter test subscript not called in script
02/24/94 19:47:11	2:28:45		-30.0	38.0	387.6					S30A				
02/24/94 19:47:40	2:29:14		-28.6	38.0	387.4					Periselene				
02/24/94 19:50:40	2:32:14		-20.0	38.1	394.0					S20A				
02/24/94 19:54:08	2:35:42	629									Load exposure table LUNARZ05S; Select DHU SEQT 7; Select DHU SEQT 0			SEQ 33.UMI loaded in SEQT 0 All Cameras, all filters, compressed and uncompressed (including ST-A and ST-B) T/L ERRORS: • SEQT 7 unneeded & not used • SA step rate to HI missing
02/24/94 19:54:11	2:35:45		-10.0	38.1	418.3					S10A				
02/24/94 19:56:01	2:37:35													Data stops - DHU crash?
02/24/94 19:56:57	2:38:31	169									Load exposure table LUNARZ05N; Select DHU SEQT 8; Switch to offset mapping using GNC14POSRWP1 (ACSMODE=LunarMapping, Center=?)			Slew to nadir plus 1 degree No data
02/24/94 19:57:49	2:39:23		0.0	38.1	461.0					Equator - A				
02/24/94 19:57:57	2:39:31	60									Load exposure table LUNARZ15N; Execute flatfields subscript			START FLAT FIELDS TEST No data
														Flatfields Subscript
02/24/94 19:57:57	2:39:31	0									Load SEQ_JB_22.UMI into SEQT 22; Load SEQ_JB_23.UMI into SEQT 23; Load SEQ_26x6.UMI into SEQT 26			
02/24/94 19:57:59	2:39:33	2									Initialize filters (DHU SEQT 26); Select ST-A			
02/24/94 19:58:03	2:39:38	5									Start imaging (DHU SEQT 23)			No data
02/24/94 19:58:39	2:40:13	35									Load SEQ_26x5.UMI into SEQT 26			
02/24/94 19:58:40	2:40:15	2									Initialize filters (DHU SEQT 26); Select ST-A			
02/24/94 19:58:45	2:40:20	5									Select DHU SEQT 23			No data
02/24/94 19:59:20	2:40:55	35									Load SEQ_26x4.UMI into SEQT 26			
02/24/94 19:59:22	2:40:56	2									Initialize filters (DHU SEQT 26); Select ST-A			
02/24/94 19:59:27	2:41:01	5									Select DHU SEQT 23			No data
02/24/94 20:00:02	2:41:36	35									Stop imaging - select ST-A			

Orbit 22 Timeline - litter Test/Flat Field Test (Cauchy-Amoris)

02/24/94 20:00:12	2:41:46	10									Load SEQ_262.UMI into SEQT 26; Initialize filters (DHU SEQT 28)						
02/24/94 20:00:14	2:41:48	2									Select DHU SEQT 22						No data
02/24/94 20:00:15	2:41:49	1									Stop imaging - select ST-A						SCRIPT ERROR: WAIT should've been 32 seconds, not 32 tics
End Flatfields Subscript																	
02/24/94 20:01:38	2:43:12		10.0	38.2	522.9						N10A						
02/24/94 20:05:12	2:46:46	297										Load exposure table LUNARZ25N; Select DHU SEQT 0					Time Since Previous Event is from end of Flatfields subscript
02/24/94 20:05:42	2:47:16		20.0	38.2	605.1						N20A						
02/24/94 20:10:00	2:51:34											Reset DHU					Ground Command DHU Crashed
02/24/94 20:10:02	2:51:36	290										Load exposure table LUNARZ35N; Select DHU SEQT 11					
02/24/94 20:10:06	2:51:40		30.0	38.2	708.8						N30A						
02/24/94 20:11:00	2:52:34											Uplink DHU version 241					Ground Command
02/24/94 20:14:00	2:55:34											Enable SASI Driver & SDDR					Ground Command
02/24/94 20:14:56	2:56:30		40.0	38.3	835.6						N40A						
02/24/94 20:17:00	2:58:34											Uplink ST sequence tables					Ground Command
02/24/94 20:18:45	3:00:20	523										Load exposure table LUNARZ45N; Select DHU SEQT 12					
02/24/94 20:20:19	3:01:53		50.0	38.4	986.8						N50A						
02/24/94 20:21:00	3:02:34											Select ST-A					Ground Command
02/24/94 20:22:00	3:03:34											Deselect ST; Uplink S-series DHU sequence tables					Ground Command SEQ tables uploaded
02/24/94 20:22:05	3:03:39																One LWIR image
02/24/94 20:24:50	3:06:24	364										Load exposure table LUNARZ55N; Select DHU SEQT 13					
02/24/94 20:26:23	3:07:57		60.0	38.5	1163.5						N60A						
02/24/94 20:26:31	3:08:05																Data resumes
02/24/94 20:31:45	3:13:20	416										Load exposure table LUNARZ65N; Select DHU SEQT 14					HiRes filter 2 instead of 6
02/24/94 20:33:18	3:14:52		70.0	38.8	1365.5						N70A						
02/24/94 20:33:45	3:15:19											Abort Script					Ground Command
02/24/94 20:37:00	3:18:34											Record in SDDR Segment 2					Ground Command
02/24/94 20:37:30	3:19:04											Select DHU SEQT 11					Ground Command
02/24/94 20:39:41	3:21:16	476										Script aborted					Happened after WAIT statement
Err:508																	
02/24/94 20:41:00	3:22:34											Stop imaging - select ST-A					Ground Command
02/24/94 20:41:14	3:22:48		80.0	39.8	1591.3						N80A						
02/24/94 20:47:00	3:28:34											Save ST-A images (16 total)					Ground Command - test to see why ST-A not getting matches
02/24/94 20:47:23	3:28:57																ST-A compressed images
02/24/94 20:50:22	3:31:56		89.6	126.4	1836.0						North Pole						ST-A compressed images
02/24/94 20:51:54	3:33:28		88.4	204.3	1875.2						LDUSK						ST-A compressed images
Err:508																	
02/24/94 20:54:21	3:35:55	0										Select ST-A					Stop ST-A compressed images

Orbit 22 Timeline - litter Test/Flat Field Test (Cauchy-Amoris)

02/24/94 20:54:31	3:36:05	10									Park filters (DHU SEQT 27); UV & HR cameras OFF							
02/24/94 20:54:41	3:36:15	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)							Slew to Vega
02/24/94 20:59:21	3:40:55	280									Perform LWIR imaging (DHU SEQT 25)							Start dark field imaging
02/24/94 20:59:51	3:41:25	30									Perform NIR imaging (DHU SEQT 31)							
02/24/94 21:00:21	3:41:55	30									Stop imaging - select ST-A							
02/24/94 21:00:31	3:42:05	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
02/24/94 21:00:54	3:42:28		80.0	215.5	2092.3					N80D								
02/24/94 21:05:21	3:46:55	290									Select ST-A							READY FOR DATA DUMP
Err:508																		
02/24/94 21:11:00	3:52:34	0									Uplink DHU compression tables							Ground Command
02/24/94 21:12:56	3:54:30		70.0	216.5	2347.0					N70D								
02/24/94 21:15:00	3:56:34										Laser Power OFF							Ground Command
02/24/94 21:16:00	3:57:34										Upload SEQ_262.UMI into SEQT 26							Ground Command
02/24/94 21:18:00	3:59:34										Uplink sensor table							Ground Command
02/24/94 21:24:00	4:05:34										Uplink ST exposure table							Ground Command
02/24/94 21:26:31	4:08:05		60.0	216.7	2582.3					N60D								
02/24/94 21:28:00	4:09:34										Switch to DHU mode @ 128 kbps							Ground Command
02/24/94 21:29:00	4:10:34										Switch to HGA							Ground Command
02/24/94 21:37:00	4:18:34										Downlink SDR Segment 1							Ground Command
02/24/94 21:41:32	4:23:06		50.0	216.8	2777.0					N50D								
02/24/94 21:57:42	4:39:16		40.0	216.7	2909.9					N40D								
02/24/94 22:14:32	4:56:06		30.0	216.7	2964.4					N30D								
02/24/94 22:16:51	4:58:25		28.6	216.7	2965.2					Aposelene								

Orbit 23 Timeline - Data Compression Test/Flat Field Tests

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/24/94 22:16:51	0:00:00		28.6	216.7	2965.2							Aposelene							Downlinking SDR Segment 1 (orbit 22)
02/24/94 22:17:08	0:00:17		27.9	216.7	2964.3						PMK	AOS							
02/24/94 22:20:00	0:03:09												SSDR to IDLE - downlink paused						Ground Command
02/24/94 22:31:26	0:14:35		20.0	216.6	2933.2							N20D							
02/24/94 22:47:50	0:30:59		10.0	216.5	2820.5							N10D							
02/24/94 23:03:12	0:46:21		0.0	216.4	2640.8							Equator -D							
02/24/94 23:11:00	0:54:09												Resume downlink SDR Segment 1; Uplink and schedule L023 scripts						Ground Command
																			LM Prep1 Script
02/24/94 23:14:00	0:57:09	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/24/94 23:17:12	1:00:21		-10.0	216.4	2414.6							S10D							
02/24/94 23:29:39	1:12:48		-20.0	216.3	2163.6							S20D							
02/24/94 23:40:35	1:23:44		-30.0	216.3	1906.5							S30D							
02/24/94 23:46:00	1:29:09												Downlink SDR Segment 2						Ground Command
																			LM Prep2 Script
02/24/94 23:49:00	1:32:09	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/24/94 23:50:06	1:33:15		-40.0	216.3	1657.5							S40D							
02/24/94 23:54:00	1:37:09												SSDR to IDLE - downlink complete						Ground Command
02/24/94 23:57:00	1:40:09												Switch to DHU bypass mode						Ground Command
02/24/94 23:58:00	1:41:09												Switch to omni antennas						Ground Command
02/24/94 23:58:21	1:41:30		-50.0	216.3	1426.0							S50D							
02/25/94 00:00:00	1:43:09												Slew s/c -Z omni towards Earth (GNC12OMN01)						Ground Command To dump data through omni
02/25/94 00:03:30	1:46:39												Update state vector (GNC53_25FEB0000)						Ground Command
02/25/94 00:05:32	1:48:41		-60.0	216.5	1217.3							S60D							
																			LM Prep3 Script
02/25/94 00:08:25	1:51:34	0											Msg "WARNING: Omni/8k in 1 min.."; SSDR to IDLE						
02/25/94 00:09:25	1:52:34	60											Switch to omni antennas; Switch to bypass mode @ 8 kbps						
02/25/94 00:11:25	1:54:34	120											Deselect ST; Slew s/c sensors to SGP (ACSM=StarPointing, Index=1)						Slew to South Galactic Pole
02/25/94 00:11:49	1:54:58		-70.0	216.8	1033.7							S70D							
02/25/94 00:14:00	1:57:09	155											UV & HR cameras ON						
02/25/94 00:16:25	1:59:34	145											Select ST-A						

Orbit 23 Timeline - Data Compression Test/Flat Field Tests

02/25/94 00:16:34	1:59:44	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 1									Start recording in Segment 1
02/25/94 00:17:00	2:00:09	25								Perform LWIR imaging (DHU SEQT 25)									Start dark fields imaging
02/25/94 00:17:23	2:00:32		-80.0	217.7	875.6				S80D										
02/25/94 00:17:30	2:00:39	30								Perform NIR imaging (DHU SEQT 31)									
02/25/94 00:18:00	2:01:09	30								Stop imaging - select ST-A									
02/25/94 00:18:10	2:01:19	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)									Slew to nadir
02/25/94 00:19:40	2:02:50	91								Laser power ON									
End Prep3 Script																			
02/25/94 00:22:21	2:05:30		-89.7	305.1	742.3				South Pole										
02/25/94 00:23:05	2:06:14		-88.4	23.3	723.7				LDAWN										
02/25/94 00:26:52	2:10:01		-80.0	33.7	632.4				S80A										
Err:508																			
02/25/94 00:30:00	2:13:09	0								Load exposure table LUNARZ75S									
02/25/94 00:30:05	2:13:14	5								Initialize filters (DHU SEQT 26); Start Compression Test imaging (DHU SEQT 0)									DATA COMPRESSION TEST Target #1: High latitude with young craters (72°S) All cameras & filters
02/25/94 00:30:25	2:13:34	20								Stop imaging - select ST-A									
02/25/94 00:31:01	2:14:10		-70.0	34.7	544.4				S70A										
02/25/94 00:34:53	2:18:02		-60.0	35.0	477.1				S60A										
02/25/94 00:38:34	2:21:43		-50.0	35.2	429.2				S50A										
02/25/94 00:42:07	2:25:16		-40.0	35.2	399.9				S40A										
02/25/94 00:45:33	2:28:42	908							S30A	Load exposure table LUNARZ25S									
02/25/94 00:45:36	2:28:45		-30.0	35.3	388.6				S30A										
02/25/94 00:45:37	2:28:47	5							S30A	Start Compression Test imaging (DHU SEQT 0)									Target #2: Piccolomini crater vicinity (31°-28°S)
02/25/94 00:46:00	2:29:09	23							PERIS	Stop imaging - select ST-A									
02/25/94 00:46:05	2:29:14		-28.6	35.3	388.4				Periselene										
02/25/94 00:47:59	2:31:09	119								Start Compression Test imaging (DHU SEQT 0)									Target #3: Fracastorius crater rim (23°-19°S)
02/25/94 00:48:20	2:31:29	20								Stop imaging - select ST-A									
02/25/94 00:49:01	2:32:11	42							S20A	Select SDR Segment 2									SSDR Segment 2
02/25/94 00:49:05	2:32:14		-20.0	35.3	395.0				S20A										
02/25/94 00:49:30	2:32:39	28								Load exposure table LUNARZ15S									
02/25/94 00:49:35	2:32:44	5								Start Compression Test imaging (DHU SEQT 0)									Target #3a: Rosse crater (18°S)
02/25/94 00:49:49	2:32:59	15								Stop imaging - select ST-A									
02/25/94 00:52:37	2:35:46		-10.0	35.4	419.4				S10A										
02/25/94 00:53:19	2:36:29	210								Load exposure table LUNARZ05S									
02/25/94 00:53:24	2:36:33	5								Start Compression Test imaging (DHU SEQT 0)									Targets #4,5: Capella crater (7.5°S) and Cratus 2 crater (6°S)
02/25/94 00:54:14	2:37:23	50								Stop imaging - select ST-A									
02/25/94 00:56:15	2:39:24		0.0	35.4	462.1				Equator - A										

Orbit 23 Timeline - Data Compression Test/Flat Field Tests

02/25/94 00:56:32	2:39:41	138									Select SSDR Segment 3				SSDR Segment 3
02/25/94 01:00:04	2:43:13		10.0	35.4	523.9					N10A					
02/25/94 01:00:04	2:43:13	212									Execute flatfields1 subscript				START FLAT FIELDS TEST
															Flatfields1 Subscript
02/25/94 01:00:04	2:43:13	0									Load SEQ_RVB_24.UMI into SEQT 24; Select ST-A				Cauchy-Barlow flat field (11°N)
02/25/94 01:00:14	2:43:23	10									Load SEQ_26xx1.UMI into SEQT 26; Initialize filters (DHU SEQT 26)				
02/25/94 01:00:16	2:43:25	2									Start imaging (DHU SEQT 24)				HiRes filter 2 uncompressed
02/25/94 01:00:26	2:43:35	10									Load SEQ_26xx2.UMI into SEQT 26; Initialize filters (DHU SEQT 26)				Imaging stopped during filter initialization
02/25/94 01:00:28	2:43:37	2									Start imaging (DHU SEQT 24)				
02/25/94 01:00:38	2:43:47	10									Load SEQ_26xx2.UMI into SEQT 26; Initialize filters (DHU SEQT 26)				Imaging stopped during filter initialization
02/25/94 01:00:40	2:43:49	2									Start imaging (DHU SEQT 24)				
02/25/94 01:00:50	2:43:59	10									Stop imaging - select ST-A				END FLATFIELDS TEST
															End Flatfields1 Subscript
02/25/94 01:00:55	2:44:04	5									Load exposure table LUNARZ15N				RESUME DATA COMPRESSION TEST
02/25/94 01:01:00	2:44:09	5									Start Compression Test imaging (DHU SEQT 0)				Target #6: Rima Cauchy unit boundary (11°-15°N)
02/25/94 01:01:19	2:44:28	19									Stop imaging - select ST-A				
02/25/94 01:02:59	2:46:08	100									Start Compression Test imaging (DHU SEQT 0)				Targets #7,8: Rima Cauchy unit boundary and Maraldi crater (16°-20°N)
02/25/94 01:03:54	2:47:03	55									Stop imaging - select ST-A				
02/25/94 01:04:08	2:47:17		20.0	35.5	606.1					N20A					
02/25/94 01:05:34	2:48:43	100									Load exposure table LUNARZ25N				
02/25/94 01:05:39	2:48:48	5									Start Compression Test imaging (DHU SEQT 0)				Target #9: Romer crater (25°-26°N)
02/25/94 01:05:54	2:49:03	15									Stop imaging - select ST-A				
02/25/94 01:08:08	2:51:17	134									Select SSDR Segment 4				SSDR Segment 4
02/25/94 01:08:32	2:51:41		30.0	35.5	709.8					N30A					
02/25/94 01:08:54	2:52:03	46									Load exposure table LUNARZ35N				
02/25/94 01:08:59	2:52:08	5									Start Compression Test imaging (DHU SEQT 0)				Target #10: G. Bond Rima (31°-33°N)
02/25/94 01:09:14	2:52:23	15									Stop imaging - select ST-A				
02/25/94 01:10:09	2:53:18		35.6	35.5	778.3					GDS	AOS				
02/25/94 01:13:22	2:56:31		40.0	35.5	836.6						N40A				
02/25/94 01:14:14	2:57:23	300									Execute flatfields1 subscript				START FLAT FIELDS TEST
															Flatfields2 Subscript
02/25/94 01:14:14	2:57:23	0									Load SEQ_JB_22.UMI into SEQT 22; Load SEQ_JB_23.UMI into SEQT 23; Load SEQ_26x6.UMI into SEQT 26				Hercules-Mortis flat field (45°-48°N)
02/25/94 01:14:16	2:57:25	2									Initialize filters (DHU SEQT 26); Select ST-A				
02/25/94 01:14:21	2:57:30	5									Start imaging (DHU SEQT 23)				UV and NIR filter 2 only Images started at 01:14:40
02/25/94 01:14:56	2:58:05	35									Load SEQ_26x5.UMI into SEQT 26				

Orbit 23 Timeline - Data Compression Test/Flat Field Tests

02/25/94 01:14:58	2:58:07	2							Initialize filters (DHU SEQT 26); Select ST-A					T/L ERROR: Not enough time to execute filter initialization
02/25/94 01:15:03	2:58:12	5							Start imaging (DHU SEQT 23)					Images started at 01:15:23
02/25/94 01:15:38	2:58:47	35							Load SEQ_26x4.UMI into SEQT 26					
02/25/94 01:15:40	2:58:49	2							Initialize filters (DHU SEQT 26); Select ST-A					T/L ERROR: Not enough time to execute filter initialization
02/25/94 01:15:45	2:58:54	5							Start imaging (DHU SEQT 23)					Images started at 01:16:06
02/25/94 01:16:20	2:59:29	35							Stop imaging - select ST-A					
02/25/94 01:16:30	2:59:39	10							Load SEQ_262.UMI into SEQT 26; Initialize filters (DHU SEQT 28)					Restore original SEQT 22
02/25/94 01:16:32	2:59:41	2							Select DHU SEQT 22					No data
02/25/94 01:16:32	2:59:41	0							Stop imaging - select ST-A					SCRIPT ERROR: WAIT should've been 32 seconds, not 32 tics
End Flatfields2 Subscript														
02/25/94 01:18:45	3:01:54		50.0	35.6	987.8				N50A					
02/25/94 01:24:50	3:07:59		60.0	35.7	1164.3				N60A					
02/25/94 01:25:07	3:08:16	515												RESUME DATA COMPRESSION TEST Events occurred 32 sec. early because of above error
02/25/94 01:25:12	3:08:21	5							Start Compression Test imaging (DHU SEQT 0)					Target #11: Democritus crater (62°-63°N)
02/25/94 01:25:27	3:08:36	15							Stop imaging - select ST-A					
02/25/94 01:30:39	3:13:48	312							Select SSSR Segment 5					SSDR Segment 5
02/25/94 01:31:45	3:14:54		70.0	36.0	1366.3				N70A					
02/25/94 01:38:27	3:21:36	468							Load exposure table LUNARZ75N					
02/25/94 01:38:32	3:21:41	5							Start Compression Test imaging (DHU SEQT 0)					Target #12: de Sitter crater (79°-81°N)
02/25/94 01:38:46	3:21:55	14							Stop imaging - select ST-A					
Err:508														
02/25/94 01:39:41	3:22:50		80.0	36.9	1591.9				N80A					
02/25/94 01:40:00	3:23:09								Read dosimeter latch values					Ground Command
02/25/94 01:45:00	3:28:09								Expose dosimeter					Ground Command
LM Post Script														
02/25/94 01:48:48	3:31:57	0							Select ST-A					
02/25/94 01:48:50	3:31:59		89.7	125.6	1836.8				North Pole					
02/25/94 01:48:58	3:32:07	10							Park filters (DHU SEQT 27); UV & HR cameras OFF					
02/25/94 01:49:08	3:32:17	10							Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)					Slew to Vega
02/25/94 01:50:22	3:33:31		88.4	202.9	1876.0				LDUSK					
02/25/94 01:53:48	3:36:57	280							Perform LWIR imaging (DHU SEQT 25)					Start dark field imaging
02/25/94 01:54:18	3:37:27	30							Perform NIR imaging (DHU SEQT 31)					
02/25/94 01:54:48	3:37:57	30							Stop imaging - select ST-A					

Orbit 23 Timeline - Data Compression Test/Flat Field Tests

02/25/94 01:54:58	3:38:07	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
02/25/94 01:59:21	3:42:30		80.0	213.0	2092.6					N80D						
02/25/94 01:59:48	3:42:57	290									Select ST-A					READY FOR DATA DUMP
End Post Script																
02/25/94 02:05:00	3:48:09										Laser power OFF					Ground Command
02/25/94 02:07:00	3:50:09										Switch to DHU mode @ 128 kbps; Switch to HGA					Ground Command
02/25/94 02:09:00	3:52:09										Switch to inertial pointing (GNC12DMP01)					Ground Command Preparing for SIP reset
02/25/94 02:11:23	3:54:32		70.0	213.8	2347.0					N70D						
02/25/94 02:13:00	3:56:09										Deselect ST					Ground Command
02/25/94 02:15:00	3:58:09										Reset SIP					Ground Command Planned reset to test new code
02/25/94 02:17:00	4:00:09										Select ST-A					Ground Command
02/25/94 02:19:00	4:02:09										Downlink SSSR Segment 1					Ground Command
02/25/94 02:21:00	4:04:09										Uplink new SIP code (version 2.0)					Ground Command - uplink continues until 4:03
02/25/94 02:24:58	4:08:07		60.0	214.0	2581.9					N60D						
02/25/94 02:39:59	4:23:08		50.0	214.1	2776.4					N50D						
02/25/94 02:45:00	4:28:09										Downlink SSSR Segment 2					Ground Command
02/25/94 02:56:08	4:39:17		40.0	214.0	2909.0					N40D						
02/25/94 03:10:00	4:53:09										Downlink SSSR Segment 3					Ground Command
02/25/94 03:12:57	4:56:06		30.0	214.0	2963.4					N30D						
02/25/94 03:15:16	4:58:25		28.6	214.0	2964.2					Aposelene						

Orbit 24 Timeline - Luminescence Experiment

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/25/94 03:15:16	0:00:00		28.6	214.0	2964.2							Aposelene							Downlinking SDDR Segment 3 (orbit 23)
02/25/94 03:29:52	0:14:36		20.0	213.9	2932.1							N20D							
02/25/94 03:46:00	0:30:44												Downlink SDDR Segment 4						Ground Command
02/25/94 03:46:15	0:30:59		10.0	213.8	2819.6							N10D							
02/25/94 04:01:36	0:46:20		0.0	213.7	2640.1							Equator -D							
02/25/94 04:08:00	0:52:44												Downlink SDDR Segment 5						Ground Command
02/25/94 04:15:35	1:00:19		-10.0	213.6	2414.3							S10D							
02/25/94 04:16:00	1:00:44												SSDR to IDLE - downlink complete						Ground Command
02/25/94 04:19:00	1:03:44												Uplink and schedule L024 scripts						Ground Command
																			LM Prep1 Script
02/25/94 04:21:07	1:05:51	0											NIR camera & cryocooler ON; SA mode to AUTO						Started late because of late upload. Scheduled start time was 04:12:42
																			End Prep1 Script
02/25/94 04:28:00	1:12:44												Uplink C-series DHU sequence tables						Ground Command CEQ tables uploaded
02/25/94 04:28:03	1:12:47		-20.0	213.6	2163.5							S20D							
02/25/94 04:38:59	1:23:43		-30.0	213.5	1906.7							S30D							
																			LM Prep2 Script
02/25/94 04:47:42	1:32:26	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/25/94 04:48:29	1:33:13		-40.0	213.5	1658.0							S40D							
02/25/94 04:56:45	1:41:29		-50.0	213.6	1426.7							S50D							
02/25/94 05:03:56	1:48:40		-60.0	213.7	1218.1							S60D							
																			LM Prep3 Script
02/25/94 05:04:07	1:48:51	0											Msg "WARNING: Omni/8k in 1 min.."; SSDR to IDLE						
02/25/94 05:05:07	1:49:51	60											Switch to omni antennas; Switch to bypass mode @ 8 kbps						
02/25/94 05:07:07	1:51:51	120											Deselect ST; Slew s/c sensors to SGP (ACSMMode=StarPointing, Index=1)						Slew to South Galactic Pole
02/25/94 05:09:42	1:54:26	155											UV & HR cameras ON						
02/25/94 05:10:13	1:54:57		-70.0	213.9	1034.6							S70D							
02/25/94 05:12:07	1:56:51	145											Select ST-A						
02/25/94 05:12:17	1:57:01	10											Initialize filters (DHU SEQT 28); Record in SDDR Segment 1						Start recording in Segment 1
02/25/94 05:12:42	1:57:26	25											Perform LWIR imaging (DHU SEQT 25)						Start dark fields imaging
02/25/94 05:13:12	1:57:56	30											Perform NIR imaging (DHU SEQT 31)						
02/25/94 05:13:42	1:58:26	30											Stop imaging - select ST-A						

Orbit 24 Timeline - Luminescence Experiment

02/25/94 05:13:52	1:58:36	10								Deselect ST; Slew s/c sensors to nadir (ACSMMode=LunarMapping)									Slew to nadir Momentum dump occurred during slew
02/25/94 05:15:23	2:00:07	91								Laser power ON									
End Prep3 Script																			
02/25/94 05:15:47	2:00:31		-80.0	214.8	876.5					S80D									
Err:508																			
02/25/94 05:18:42	2:03:26	0								Select ST-A									
02/25/94 05:18:52	2:03:36	10								Load exposure table LUNARZ855									
02/25/94 05:19:41	2:04:26	50								Start imaging (DHU SEQT 16)									START MAPPING TEST
02/25/94 05:20:00	2:04:44									Set SA step rate to LO									Ground Command
02/25/94 05:20:41	2:05:26	60								MAXS									
02/25/94 05:20:45	2:05:29		-89.7	300.0	743.5					South Pole									
02/25/94 05:21:29	2:06:13		-88.4	21.9	724.6					LDAWN									
02/25/94 05:25:16	2:10:00		-80.0	31.2	633.4					S80A									
02/25/94 05:26:03	2:10:47	321																	START LUMINESCENCE EXPERIMENT CEQ_33.UMI loaded in SEQT 0 All cameras compressed and uncompressed including ST
02/25/94 05:27:55	2:12:39																		Imaging stopped - DHU crash probably occurred at this time
02/25/94 05:28:37	2:13:21		-69.4	32.1	541.4					MAD	LOS								
02/25/94 05:28:43	2:13:27	160																	
02/25/94 05:29:00	2:13:44																		Ground Command
02/25/94 05:29:22	2:14:06	39																	Abort not received in time to stop this
02/25/94 05:29:25	2:14:09		-70.0	32.1	545.5					S70A									
02/25/94 05:31:23	2:16:07	121																	Script aborted
Err:508																			
02/25/94 05:31:30	2:16:14																		Switch to nadir mapping mode (ACSMMode=LunarMapping)
Err:508																			
02/25/94 05:31:31	2:16:15	0																	Started at end of L024 First, which occurred 15 min. early
02/25/94 05:32:47	2:17:32	77																	Load exposure table LUNARZ15S
02/25/94 05:33:18	2:18:02		-60.0	32.3	478.2					S60A									
02/25/94 05:33:21	2:18:05	33																	Failed because of DHU crash
02/25/94 05:34:00	2:18:44																		Reset DHU; Uplink DHU version 241
02/25/94 05:36:19	2:21:04	179																	Ground Command
02/25/94 05:36:21	2:21:05	1																	Load exposure table LUNARZ05S
02/25/94 05:36:59	2:21:43		-50.0	32.5	430.3					S50A									Start imaging (DHU SEQT 0)
02/25/94 05:38:00	2:22:44																		Failed because of DHU crash
02/25/94 05:38:00	2:22:44																		Enable SASI and SSSDR
02/25/94 05:39:59	2:24:43	218																	Ground Command
02/25/94 05:40:00	2:24:44																		Load exposure table LUNARZ05N
02/25/94 05:40:00	2:24:44																		Ground Command CEQ tables uploaded

Orbit 24 Timeline - Luminescence Experiment

02/25/94 05:40:33	2:25:17		-40.0	32.5	401.0				S40A				
02/25/94 05:43:48	2:28:32	229								Load exposure table LUNARZ15N			
02/25/94 05:43:50	2:28:34	3								Select DHU SEQT 29			DHU working again
02/25/94 05:44:02	2:28:46		-30.0	32.6	389.7				S30A				
02/25/94 05:44:21	2:29:06	31								Slew to Apollo 17 attitude using QTable Apollo17_mosaic000; Select DHI SEQT 30			ATTEMPTED APOLLO 17 MOSAIC Failed because Quaternion Tables executed 15 min. early due to aborted first script
02/25/94 05:44:30	2:29:14		-28.6	32.6	389.5				Periselene				
02/25/94 05:46:00	2:30:44									Abort Script			Ground Command
02/25/94 05:46:51	2:31:36	150								Script aborted			Occurred at end of WAIT
													Err:508
02/25/94 05:47:31	2:32:15		-20.0	32.6	396.1				S20A				
02/25/94 05:48:00	2:32:44									Stop imaging - select ST-A			Ground Command
02/25/94 05:49:00	2:33:44									Switch to nadir mapping mode (ACSMMode=LunarMapping)			Ground Command
02/25/94 05:51:03	2:35:47		-10.0	32.6	420.4				S10A				
02/25/94 05:52:00	2:36:44									Uplink DHU compression tables			Ground Command
02/25/94 05:54:41	2:39:25		0.0	32.7	463.1				Equator - A				
02/25/94 05:57:00	2:41:44									Uplink DHU sensor tables			Ground Command
02/25/94 05:58:30	2:43:14		10.0	32.7	525.0				N10A				
02/25/94 06:02:34	2:47:18		20.0	32.7	607.1				N20A				
02/25/94 06:03:30	2:48:14									Deselect ST			Ground Command
02/25/94 06:04:30	2:49:14									Uplink ST exposure table			Ground Command
02/25/94 06:06:59	2:51:43		30.0	32.7	710.8				N30A				
02/25/94 06:11:00	2:55:44									Switch to inertial pointing mode (same attitude)			Ground Command
02/25/94 06:11:49	2:56:33		40.0	32.8	837.6				N40A				
02/25/94 06:16:00	3:00:44									Select ST-A			Ground Command
02/25/94 06:17:12	3:01:56		50.0	32.8	988.7				N50A				
02/25/94 06:23:17	3:08:01		60.0	32.9	1165.1				N60A				
02/25/94 06:30:12	3:14:56		70.0	33.2	1366.9				N70A				
02/25/94 06:38:09	3:22:53		80.0	34.0	1592.4				N80A				
02/25/94 06:47:17	3:32:01		89.7	121.4	1836.9				North Pole				
02/25/94 06:48:50	3:33:34		88.4	201.5	1876.6				LDUSK				
													LM Post Script
02/25/94 06:49:15	3:33:59	0								Select ST-A			
02/25/94 06:49:25	3:34:09	10								Park filters (DHU SEQT 27); UV & HR cameras OFF			
02/25/94 06:49:35	3:34:19	10								Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0)			Slew to Vega
02/25/94 06:54:15	3:38:59	280								Perform LWIR imaging (DHU SEQT 25)			Start dark field imaging
02/25/94 06:54:45	3:39:29	30								Perform NIR imaging (DHU SEQT 31)			
02/25/94 06:55:15	3:39:59	30								Stop imaging - select ST-A			

Orbit 24 Timeline - Luminescence Experiment

02/25/94 06:55:25	3:40:09	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
02/25/94 06:57:49	3:42:33		80.0	210.4	2092.6					N80D						
02/25/94 07:00:15	3:44:59	290									Select ST-A; Laser power OFF					READY FOR DATA DUMP
																End Post Script
02/25/94 07:06:00	3:50:44										Switch to DHU mode @ 8 kbps					Ground Command
02/25/94 07:06:30	3:51:14										Switch to HGA					Ground Command
02/25/94 07:08:00	3:52:44										Set downlink rate to 128 kbps					Ground Command
02/25/94 07:09:51	3:54:35		70.0	211.2	2346.7					N70D						
02/25/94 07:22:00	4:06:44										Downlink SSSDR Segment 1					Ground Command
02/25/94 07:23:25	4:08:09		60.0	211.3	2581.3					N60D						
02/25/94 07:38:25	4:23:09		50.0	211.4	2775.5					N50D						
02/25/94 07:54:34	4:39:18		40.0	211.3	2908.0					N40D						
02/25/94 08:11:23	4:56:07		30.0	211.2	2962.2					N30D						
02/25/94 08:13:42	4:58:26		28.6	211.2	2963.0					Aposelene						

Orbit 25 Timeline - LWIR FPF Test (Pre-Imbrian)/Apollo 17/Lunakhod 2

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
02/25/94 08:13:42	0:00:00		28.6	211.2	2963.0							Aposelene							Downlinking SDR Segment 1 (orbit 24)
02/25/94 08:25:00	0:11:18												SSDR to IDLE - downlink complete						Ground Command
02/25/94 08:28:16	0:14:34		20.0	211.2	2931.1							N20D							
02/25/94 08:44:39	0:30:57		10.0	211.1	2818.7							N10D							
02/25/94 08:50:23	0:36:41		5.7	211.0	2747.9						CAN	AOS							
02/25/94 09:00:00	0:46:18		0.0	211.0	2639.6							Equator -D							
02/25/94 09:04:00	0:50:18												Switch to inertial pointing (same attitude)						Ground Command
02/25/94 09:09:00	0:55:18												Update state vector (GNC53_25FEB0900)						Ground Command
02/25/94 09:13:59	1:00:17		-10.0	210.9	2414.1							S10D							
02/25/94 09:17:00	1:03:18												NIR camera & cryocooler ON						Ground Command
02/25/94 09:25:00	1:11:18												Switch to DHU bypass mode						Ground Command
02/25/94 09:26:26	1:12:44		-20.0	210.8	2163.7							S20D							
02/25/94 09:31:00	1:17:18												Switch to omni antennas						Ground Command
02/25/94 09:37:22	1:23:40		-30.0	210.8	1907.1							S30D							
02/25/94 09:44:00	1:30:18												Adjust inertial pointing attitude						Ground Command - reason unk.
02/25/94 09:46:53	1:33:11		-40.0	210.8	1658.6							S40D							
02/25/94 09:52:00	1:38:18												Uplink and schedule L025 scripts						Ground Command
																			LM Prep2 Script
02/25/94 09:54:15	1:40:33	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						Scheduled for 09:51:06, but started late because of late upload
																			End Prep2 Script
02/25/94 09:55:08	1:41:26		-50.0	210.8	1427.5							S50D							
02/25/94 10:02:19	1:48:37		-60.0	210.9	1219.1							S60D							
																			LM Prep3 Script
02/25/94 10:02:31	1:48:49	0											Msg "WARNING: Omni/8k in 1 min.."; SSDR to IDLE						
02/25/94 10:03:31	1:49:49	60											Switch to bypass mode @ 8 kbps						
02/25/94 10:04:31	1:50:49	60											Switch to omni antennas						
02/25/94 10:05:31	1:51:49	60											Deselect ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/25/94 10:08:06	1:54:24	155											UV & HR cameras ON						
02/25/94 10:08:37	1:54:55		-70.0	211.1	1035.7							S70D							

Orbit 25 Timeline - LWIR EPF Test (Pre-Imbrian)/Apollo 17/Lunakhod 2

02/25/94 10:10:31	1:56:49	145								Select ST-A									
02/25/94 10:10:41	1:56:59	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 1									Start recording in Segment 1
02/25/94 10:11:06	1:57:24	25								Perform LWIR imaging (DHU SEQT 25)									Start dark fields imaging
02/25/94 10:11:36	1:57:54	30								Perform NIR imaging (DHU SEQT 31)									
02/25/94 10:12:06	1:58:24	30								Stop imaging - select ST-A									
02/25/94 10:12:16	1:58:34	10								Deselect ST; Switch to nadir mapping (ACSMODE=LunarMapping)									Slew to nadir
02/25/94 10:13:47	2:00:05	91								Laser power ON									
End Prep3 Script																			
02/25/94 10:14:11	2:00:29		-80.0	211.8	877.7					S80D									
Err:508																			
02/25/94 10:17:05	2:03:23	0								Set SA step rate to LO									
02/25/94 10:17:05	2:03:23	0								Load exposure table LUNARZ85S									SCRIPT ERROR: WAIT should've been 5 seconds, not 5 tics
02/25/94 10:17:07	2:03:25	1								Initialize filters (DHU SEQT 28); Start imaging (DHU SEQT 16)									START MAPPING TEST; SCRIPT ERROR: WAIT should've been 55 seconds, not 55 tics
02/25/94 10:17:07	2:03:25	0								Select DHU SEQT 21									SCRIPT ERROR: WAIT should've been 5 seconds, not 5 tics
02/25/94 10:18:07	2:04:25	60								MAXS	Load exposure table LUNARZ75S								
02/25/94 10:19:10	2:05:28		-89.7	301.3	744.4					South Pole									
02/25/94 10:19:54	2:06:12		-88.4	20.5	725.6					LDAWN									
02/25/94 10:23:41	2:09:59		-80.0	28.7	634.6					S80A									
02/25/94 10:23:58	2:10:16	351									Slew to target using quaternion table PreIMB_STARE000								START LWIR EMISSION PHASE FUNCTION (EPF) TEST Target: Pre-Imbrian Plains (45°S,30°E)
02/25/94 10:26:42	2:13:00	165								S70A	Load exposure table LUNARZ65S								
02/25/94 10:27:30	2:13:48										Uplink GNC tables to SIP (UPLOADS_FEB25)								Ground Command
02/25/94 10:27:50	2:14:08		-70.0	29.4	546.7					S70A									
02/25/94 10:28:57	2:15:15	135									Load QTable PreIMB_STARE001								Pointing off because of above timing errors
02/25/94 10:30:34	2:16:52	97								S60A	Load exposure table LUNARZ55S								
02/25/94 10:31:43	2:18:01		-60.0	29.7	479.4					S60A									
02/25/94 10:33:48	2:20:06		-51.6	29.8	438.3					PMK	LOS								
02/25/94 10:33:58	2:20:16	203									Load QTable PreIMB_STARE002								Pointing off because of above timing errors
02/25/94 10:34:17	2:20:35	19								S50A	Load exposure table LUNARZ45S								

Orbit 25 Timeline - LWIR FPF Test (Pre-Imbrian)/Apollo 17/Lunakhod 2

02/25/94 10:35:24	2:21:42		-50.0	29.8	431.5				S50A			
02/25/94 10:38:58	2:25:16	281								End Script		Not a command
02/25/94 10:38:58	2:25:16		-40.0	29.8	402.2				S40A			
												Err:508
												Err:508
02/25/94 10:39:14	2:25:32	0								Load QTable PreIMB_STARE003		NOTE: Because of above errors, this script started 65 sec. early, thus pointing was off
02/25/94 10:42:00	2:28:18									Set SA step rate to HI		Ground Command
02/25/94 10:42:28	2:28:46		-30.0	29.9	390.9				S30A			
02/25/94 10:42:56	2:29:14		-28.6	29.9	390.7				Periselene			
02/25/94 10:43:00	2:29:18									Set SA step rate to LO		Ground Command
02/25/94 10:44:14	2:30:32	300								Load QTable PreIMB_STARE004		
02/25/94 10:45:05	2:31:23	51							S20A	Load exposure table LUNARZ15S		
02/25/94 10:45:57	2:32:15		-20.0	29.9	397.3				S20A			
02/25/94 10:48:37	2:34:55	212							S10A	Load exposure table LUNARZ05S		
02/25/94 10:49:13	2:35:31	37								Load QTable PreIMB_STARE005		
02/25/94 10:49:29	2:35:47		-10.0	29.9	421.6				S10A			
02/25/94 10:52:15	2:38:33	181							MEQA	Load exposure table LUNARZ05N		
02/25/94 10:53:07	2:39:25		0.0	29.9	464.3				Equator - A			
02/25/94 10:54:11	2:40:29	117								Record in SDR Segment 2; Select DHU SEQT 30; Slew to Apollo 17 using quaternion table Apo_LNKOD000		START HIRES MOSAIC Calibration Target: Apollo 17 (20.19°N,30.76°E) SSDR Segment 2
02/25/94 10:56:52	2:43:10	160								Load QTable Apo_LNKOD001		
02/25/94 10:56:57	2:43:15		10.0	29.9	526.1				N10A			
02/25/94 10:59:31	2:45:49	160								Load QTable Apo_LNKOD002		
02/25/94 11:01:01	2:47:19		20.0	30.0	608.2				N20A			
02/25/94 11:02:12	2:48:30	160								Load QTable Apo_LNKOD003		ULCN Target: Lunakhod 2 (25.83°N,30.92°E)
02/25/94 11:04:34	2:50:52	142							N30A	Load exposure table LUNARZ35N		
02/25/94 11:04:51	2:51:09	18								Load QTable Apo_LNKOD004		
02/25/94 11:05:25	2:51:43		30.0	30.0	711.9				N30A			
02/25/94 11:07:32	2:53:50	160								Load QTable Apo_LNKOD005		
02/25/94 11:09:23	2:55:41	112							N40A	Load exposure table LUNARZ45N		
02/25/94 11:10:11	2:56:29	48								Load QTable Apo_LNKOD006		

Orbit 25 Timeline - LWIR FPF Test (Pre-Imbrian)/Apollo 17/Lunakhod 2

02/25/94 11:10:16	2:56:34		40.0	30.0	838.5				N40A					
02/25/94 11:14:11	3:00:29	240								Select DHU SEQT 21				No data
02/25/94 11:14:42	3:01:00	30								Switch to nadir mapping mode (ACSMODE=LunarMapping); Record in SSSR Segment 3				Slew sensors to nadir SSSR Segment 3
02/25/94 11:14:48	3:01:06	6							N50A	Load exposure table LUNARZ55N				
02/25/94 11:15:39	3:01:57		50.0	30.0	989.6				N50A					
02/25/94 11:21:29	3:07:47	401							N60A	Load exposure table LUNARZ65N				
02/25/94 11:21:44	3:08:02		60.0	30.1	1165.9				N60A					
02/25/94 11:28:24	3:14:42	415							N70A	Load exposure table LUNARZ75N				
02/25/94 11:28:39	3:14:57		70.0	30.3	1367.5				N70A					
02/25/94 11:29:24	3:15:42	60								Record in SSSR Segment 4; Execute AE_test subscript				SSSR Segment 4 LUNAR AUTO EXPOSURE TEST NOTE: This subscript is missing
02/25/94 11:29:30	3:15:48									Dump UV0 filter 4 image				Ground Command
02/25/94 11:32:00	3:18:18									Dump UV0 filter 4 image				Ground Command
02/25/94 11:33:00	3:19:18									Dump UV0 filter 4 image				Ground Command
02/25/94 11:36:36	3:22:54		80.0	31.0	1592.8				N80A					
02/25/94 11:37:00	3:23:18									Dump UV0 filter 4 image				Ground Command
02/25/94 11:45:00	3:31:18									Switch to DHU mode @ 8 kbps				Ground Command
02/25/94 11:45:45	3:32:03		89.7	119.7	1837.1				North Pole					
02/25/94 11:46:13	3:32:31													Data stops
02/25/94 11:47:19	3:33:37		88.4	200.0	1877.0				LDUSK					
02/25/94 11:49:00	3:35:18									Cancel switch to DHU mode				Ground Command
02/25/94 11:51:00	3:37:18									Set data rate to 128 kbps				Ground Command
02/25/94 11:53:08	3:39:26	?								Disable Lunar Auto Exposure				Time based on telemetry
														Err:508
														LM Post Script
02/25/94 11:53:08	3:39:26	0								Select ST-A; Set SA step rate to HI				Post map script started late due to errors in AE_Test. Scheduled start was 11:47:42
02/25/94 11:53:18	3:39:36	10								Park filters (DHU SEQT 27); UV & HR cameras OFF				
02/25/94 11:53:28	3:39:46	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)				Slew to Vega
02/25/94 11:56:16	3:42:34		80.0	207.9	2092.5				N80D					
02/25/94 11:58:08	3:44:26	280								Perform LWIR imaging (DHU SEQT 25)				Start dark field imaging
02/25/94 11:58:38	3:44:56	30								Perform NIR imaging (DHU SEQT 31)				
02/25/94 11:59:08	3:45:26	30								Stop imaging - select ST-A				
02/25/94 11:59:18	3:45:36	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)				Slew HGA to Earth

Orbit 25 Timeline - LWIR FPF Test (Pre-Imbrian)/Apollo 17/Lunakhod 2

02/25/94 12:04:08	3:50:26	290									Select ST-A; Laser power OFF							READY FOR DATA DUMP
End Post Script																		
02/25/94 12:07:00	3:53:18										Switch to HGA							Ground Command
02/25/94 12:08:00	3:54:18										Switch to DHU mode @ 128 kbps							Ground Command
02/25/94 12:08:18	3:54:36		70.0	208.5	2346.2						N70D							
02/25/94 12:21:00	4:07:18										Downlink SDR Segment 1							Ground Command
02/25/94 12:21:52	4:08:10		60.0	208.7	2580.5						N60D							
02/25/94 12:36:52	4:23:10		50.0	208.7	2774.4						N50D							
02/25/94 12:37:00	4:23:18										SSDR to IDLE - downlink paused							Ground Command
02/25/94 12:53:00	4:39:18		40.0	208.6	2906.7						N40D							To change ground station
02/25/94 13:09:49	4:56:07		30.0	208.5	2961.2						N30D							
02/25/94 13:12:05	4:58:23		28.7	208.5	2961.9						Aposelene							

Orbit 26 Timeline - Type B Orbit Mapping Rehearsal

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
02/25/94 13:12:05	0:00:00		28.7	208.5	2961.9							Aposelene							Downlink paused while changing ground stations
02/25/94 13:14:17	0:02:12		26.8	208.5	2959.7						GDS	LOS							
02/25/94 13:15:00	0:02:55												Downlink SSSR Segment 2						Ground Command
02/25/94 13:18:00	0:05:55												Ranging B ON						Ground Command
02/25/94 13:26:42	0:14:37		20.0	208.4	2929.7							N20D							
02/25/94 13:43:04	0:30:59		10.0	208.3	2817.3							N10D							
02/25/94 13:58:24	0:46:19		0.0	208.2	2638.2							Equator -D							
02/25/94 14:12:23	1:00:18		-10.0	208.1	2412.9							S10D							
02/25/94 14:24:50	1:12:45		-20.0	208.1	2162.8							S20D							
02/25/94 14:35:45	1:23:40		-30.0	208.0	1906.6							S30D							
02/25/94 14:36:00	1:23:55												Downlink SSSR Segment 3						Ground Command
02/25/94 14:39:00	1:26:55												Uplink & schedule L026 prep scripts						Ground Command
																			LM Prep1 Script
02/25/94 14:39:48	1:27:43	0											NIR camera & cryocooler ON; SA mode to AUTO						Scheduled for 14:49:30, but started late due to late upload
																			End Prep1 Script
02/25/94 14:42:00	1:29:55												Downlink SSSR Segment 4						Ground Command
02/25/94 14:45:16	1:33:11		-40.0	208.0	1658.3							S40D							
																			LM Prep2 Script
02/25/94 14:49:30	1:37:25	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/25/94 14:53:31	1:41:26		-50.0	208.0	1427.5							S50D							
02/25/94 15:00:42	1:48:37		-60.0	208.1	1219.3							S60D							
																			LM Prep3 Script
02/25/94 15:00:55	1:48:50	0											Msg "WARNING: Omni/8k in 1 min.."; SSDR to IDLE						
02/25/94 15:01:55	1:49:50	60											Switch to bypass mode @ 8 kbps						
02/25/94 15:02:55	1:50:50	60											Switch to omni antennas						
02/25/94 15:03:55	1:51:50	60											Deselect ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/25/94 15:06:30	1:54:25	155											UV & HR cameras ON						
02/25/94 15:07:00	1:54:55		-70.0	208.3	1036.1							S70D							
02/25/94 15:08:55	1:56:50	145											Select ST-A						
02/25/94 15:09:05	1:57:00	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1						Failed due to DHU crash

Orbit 26 Timeline - Type B Orbit Manning Rehearsal

02/25/94 15:09:30	1:57:25	25								Perform LWIR imaging (DHU SEQT 25)					No data - DHU crashed
02/25/94 15:10:00	1:57:55	30								Perform NIR imaging (DHU SEQT 31)					
02/25/94 15:10:30	1:58:25	30								Stop imaging - select ST-A					
02/25/94 15:10:40	1:58:35	10								Deselect ST; Slew s/c sensors to nadir (ACSMMode=LunarMapping)					Unknown if this occurred
02/25/94 15:11:00	1:58:55									Reset DHU					Ground Command DHU Crashed
02/25/94 15:12:11	2:00:06	91								Laser power ON					
															End Prep3 Script
02/25/94 15:12:34	2:00:29		-80.0	209.0	878.2					S80D					
02/25/94 15:17:33	2:05:28		-89.7	297.4	745.1					South Pole					
02/25/94 15:18:17	2:06:12		-88.4	18.4	726.3					LDAWN					
02/25/94 15:22:04	2:09:59		-80.0	26.0	635.4					S80A					
02/25/94 15:23:00	2:10:55										Switch to inertial pointing				Ground Command
02/25/94 15:26:13	2:14:08		-70.0	26.7	547.6					S70A					
02/25/94 15:30:07	2:18:02		-60.0	27.0	480.3					S60A					
02/25/94 15:33:48	2:21:43		-50.0	27.1	432.5					S50A					
02/25/94 15:37:00	2:24:55										Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)				Ground Command
02/25/94 15:37:22	2:25:17		-40.0	27.1	403.3					S40A					
02/25/94 15:38:00	2:25:55										Switch to HGA				Ground Command
02/25/94 15:40:51	2:28:46		-30.0	27.1	392.0					S30A					
02/25/94 15:41:00	2:28:55										All cameras (except ST) OFF				Ground Command
02/25/94 15:41:19	2:29:14		-28.7	27.2	391.9					Periselene					
02/25/94 15:42:00	2:29:55										Laser power OFF				Ground Command
02/25/94 15:44:21	2:32:16		-20.0	27.2	398.5					S20A					
02/25/94 15:45:00	2:32:55										Ranging B OFF				Ground Command
02/25/94 15:46:00	2:33:55										Uplink DHU version 249				Ground Command First use of DHU version 249
02/25/94 15:47:53	2:35:48		-10.0	27.2	422.9					S10A					
02/25/94 15:50:00	2:37:55										Enable SASI driver; Enable SSDR; Uplink C-series DHU sequence tables				Ground Command CEQ tables uploaded
02/25/94 15:51:00	2:38:55										Select ST-A (Select DHU SEQT 1)				Ground Command
02/25/94 15:51:32	2:39:27		0.0	27.2	465.6					Equator - A					
02/25/94 15:55:21	2:43:16		10.0	27.2	527.5					N10A					
02/25/94 15:59:26	2:47:21		20.0	27.2	609.7					N20A					
02/25/94 16:03:30	2:51:25										All cameras ON				Ground Command
02/25/94 16:03:51	2:51:46		30.0	27.2	713.3					N30A					
02/25/94 16:05:00	2:52:55										Uplink ST exposure table				Ground Command
02/25/94 16:07:00	2:54:55										Slew s/c sensors to nadir (ACSMMode=LunarMapping); Switch to omni antennas				Slew to nadir
02/25/94 16:08:42	2:56:37		40.0	27.2	840.0					N40A					

Orbit 26 Timeline - Type B Orbit Mapping Rehearsal

02/25/94 16:14:05	3:02:00		50.0	27.3	991.1				N50A									
02/25/94 16:15:00	3:02:55									Initialize filters (DHU SEQT 28); Uplink & schedule revised L026 scripts								Ground Command
Err:508																		
02/25/94 16:16:00	3:03:55	0								Set SA step rate to LO; Load exposure table LUNARZ35N; Start imaging (DHU SEQT 10)								Scheduled for 16:08:29 - started immediately after uplinking
Err:508	Err:508	10								Switch to inertial pointing (GNC12feb25); Load exposure table LUNARZ45N; Select DHU SEQT 11								Initiate oblique viewing
02/25/94 16:20:10	3:08:05		60.0	27.4	1167.4				N60A									
Err:508	Err:508	324								Load exposure table LUNARZ55N; Select DHU SEQT 12								
02/25/94 16:27:06	3:15:01		70.0	27.5	1369.0				N70A									
Err:508	Err:508	365								Load exposure table LUNARZ65N; Select DHU SEQT 9								
Err:508	Err:508	208								Switch to nadir mapping (ACSMODE=LunarMapping)								Slew to nadir
Err:508	Err:508	208								Load exposure table LUNARZ75N; Select DHU SEQT 20								
02/25/94 16:35:03	3:22:58		80.0	28.2	1594.1				N80A									
Err:508	Err:508	477								Load exposure table LUNARZ85N; Select DHU SEQT 21								
Err:508																		
02/25/94 16:44:12	3:32:07		89.8	116.4	1838.2				North Pole									
02/25/94 16:45:46	3:33:41		88.4	198.0	1878.2				LDUSK									
Err:508																		
02/25/94 16:46:10	3:34:05	0								Select ST-A; Set SA step rate to HI								
02/25/94 16:46:20	3:34:14	10								Park filters (DHU SEQT 27); UV & HR cameras OFF								
02/25/94 16:46:29	3:34:24	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)								Slew to Vega
02/25/94 16:51:10	3:39:04	280								Perform LWIR imaging (DHU SEQT 25)								Start dark field imaging
02/25/94 16:51:40	3:39:34	30								Perform NIR imaging (DHU SEQT 31)								
02/25/94 16:52:10	3:40:05	30								Stop imaging - select ST-A								
02/25/94 16:52:20	3:40:14	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
02/25/94 16:54:44	3:42:39		80.0	205.2	2093.4				N80D									
02/25/94 16:57:09	3:45:04	290								Select ST-A; Laser power OFF								READY FOR DATA DUMP
Err:508																		
02/25/94 17:03:00	3:50:55									Switch to HGA								Ground Command
02/25/94 17:05:00	3:52:55									Switch to DHU mode @ 128 kbps								Ground Command
02/25/94 17:06:46	3:54:41		70.0	205.8	2346.8				N70D									

Orbit 26 Timeline - Type B Orbit Manning Rehearsal

02/25/94 17:08:00	3:55:55											Downlink SSDR Segment 1							Ground Command
02/25/94 17:20:20	4:08:15		60.0	206.0	2580.6							N60D							
02/25/94 17:24:00	4:11:55												Downlink SSDR Segment 4						Ground Command
02/25/94 17:35:19	4:23:14		50.0	206.0	2774.0							N50D							
02/25/94 17:46:00	4:33:55												SSDR to IDLE - downlink complete						Ground Command
02/25/94 17:51:27	4:39:22		40.0	205.9	2905.9							N40D							
02/25/94 18:08:14	4:56:09		30.0	205.8	2959.8							N30D							
02/25/94 18:10:31	4:58:26		28.7	205.8	2960.6							Aposelene							

Orbit 27 Timeline - Luminescence Experiment/Apollo 11 Observation

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/25/94 18:10:31	0:00:00		28.7	205.8	2960.6							Aposelene							No activities - HGA to Earth
02/25/94 18:20:54	0:10:23		21.9	205.7	2940.5						MAD	AOS							
02/25/94 18:25:06	0:14:35		20.0	205.7	2928.6							N20D							
02/25/94 18:29:00	0:18:29												Schedule L027 prep scripts						Ground Command
02/25/94 18:30:00	0:19:29												Switch to DHU bypass mode						Ground Command
02/25/94 18:36:00	0:25:29												Switch to inertial pointing mode (GNC12FEB25OMNI)						Ground Command
02/25/94 18:37:00	0:26:29												Switch to omni antennas						Ground Command
02/25/94 18:41:28	0:30:57		10.0	205.6	2816.4							N10D							
02/25/94 18:56:47	0:46:16		0.0	205.5	2637.8							Equator -D							
02/25/94 19:05:00	0:54:29												Update state vector (GNC53_25FEB1830)						Ground Command
02/25/94 19:10:45	1:00:14		-10.0	205.4	2413.0							S10D							
02/25/94 19:12:47	1:02:16		-12.3	205.4	2356.2						CAN	LOS							
02/25/94 19:23:12	1:12:41		-20.0	205.3	2163.2							S20D							
02/25/94 19:27:30	1:16:59												Uplink and schedule L027 scripts						Ground Command
																			LM Prep1 Script
02/25/94 19:27:55	1:17:24	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/25/94 19:33:00	1:22:29												Upload CEQ_33NB.UMI into SEQT 24						Ground Command
02/25/94 19:34:08	1:23:37		-30.0	205.3	1907.4							S30D							
02/25/94 19:43:39	1:33:08		-40.0	205.3	1659.4							S40D							
																			LM Prep2 Script
02/25/94 19:47:55	1:37:24	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/25/94 19:51:54	1:41:23		-50.0	205.3	1428.8							S50D							
02/25/94 19:59:06	1:48:35		-60.0	205.3	1220.7							S60D							
																			LM Prep3 Script
02/25/94 19:59:20	1:48:49	0											Msg "WARNING: Omni/8k in 1 min."; SSDR to IDLE						
02/25/94 20:00:20	1:49:49	60											Switch to bypass mode @ 8 kbps						
02/25/94 20:01:20	1:50:49	60											Select omni antennas						
02/25/94 20:02:20	1:51:49	60											Deselect ST; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/25/94 20:04:55	1:54:24	155											UV & HR cameras ON						
02/25/94 20:05:24	1:54:53		-70.0	205.5	1037.6							S70D							

Orbit 27 Timeline - Luminescence Experiment/Apollo 11 Observation

02/25/94 20:07:20	1:56:49	145									Select ST-A								
02/25/94 20:07:30	1:56:59	10									Initialize filters (DHU SEQT 28); Record in SSDR Segment 1								
02/25/94 20:07:55	1:57:24	25									Perform LWIR imaging (DHU SEQT 25)								Start dark field imaging
02/25/94 20:08:25	1:57:54	30									Perform NIR imaging (DHU SEQT 31)								
02/25/94 20:08:55	1:58:24	30									Stop imaging - select ST-A								
02/25/94 20:09:05	1:58:34	10									Deselect ST; Slew s/c sensors to nadir (ACSMMode=LunarMapping)								Slew to nadir
02/25/94 20:10:36	2:00:05	91									Laser power ON								
End Prep3 Script																			
02/25/94 20:10:58	2:00:27		-80.0	206.1	879.8						S80D								
Err:508																			
02/25/94 20:13:55	2:03:24	0									Select ST-A; Initialize filters (DHU SEQT 28); Load exposure table LUNARZ855								
02/25/94 20:14:55	2:04:24	60									Start imaging (DHU SEQT 16)								
02/25/94 20:15:57	2:05:26		-89.8	292.3	746.8						South Pole								
02/25/94 20:16:02	2:05:31	67									Slew to luminescence attitude using quaternion table THERM_SOUTH000 Select DHU SEQT 9								LUMINESCENCE EXPERIMENT
02/25/94 20:16:42	2:06:11		-88.4	16.9	727.7						LDAWN								
02/25/94 20:18:00	2:07:29										Set SA step rate to LO								Ground Command
02/25/94 20:18:42	2:08:11	160									Load QTable THERM_SOUTH001								SCRIPT ERROR: Missing Select DHU SEQT 24
02/25/94 20:20:26	2:09:55	104									S80A	Load exposure table LUNARZ755							
02/25/94 20:20:29	2:09:58		-80.0	23.5	636.9						S80A								
02/25/94 20:21:22	2:10:51	56										Load QTable THERM_SOUTH002							
02/25/94 20:24:02	2:13:31	160										Load QTable THERM_SOUTH003							SCRIPT ERROR: Missing Select DHU SEQT 9
02/25/94 20:24:36	2:14:05	34									S70A	Load exposure table LUNARZ655							
02/25/94 20:24:38	2:14:07		-70.0	24.1	549.1						S70A								
02/25/94 20:28:06	2:17:35	210										Switch to nadir mapping mode (ACSMMode=LunarMapping)							SCRIPT ERROR: WAIT should be 150 seconds
02/25/94 20:28:32	2:18:01		-60.0	24.3	481.8						S60A								
02/25/94 20:29:29	2:18:58	83									S60A	Load exposure table LUNARZ555							
02/25/94 20:32:14	2:21:43		-50.0	24.4	434.0						S50A								
02/25/94 20:33:11	2:22:40	222									S50A	Load exposure table LUNARZ45S; Stop imaging - select ST-A							
02/25/94 20:35:30	2:24:59											Start imaging (DHU SEQT 9)							Ground Command
02/25/94 20:35:48	2:25:17		-40.0	24.4	404.7						S40A								
02/25/94 20:39:18	2:28:47		-30.0	24.4	393.4						S30A								
02/25/94 20:39:46	2:29:15		-28.6	24.4	393.3						Periselene								
02/25/94 20:40:15	2:29:44	424									S30A	Load exposure table LUNARZ35S; Select DHU SEQT 5							
Err:508																			
Err:508																			

Orbit 27 Timeline - Luminescence Experiment/Apollo 11 Observation

02/25/94 21:34:00	3:23:29	87								N70A	Load exposure table LUNARZ75N										
02/25/94 21:35:13	3:24:42	73									Load QTable THERM_NORTH001 Select DHU SEQT 24									Compressed and uncompressed	
																				Err:508	
																				Err:508	
02/25/94 21:35:29	3:24:58	0									Msg "Execute: L027_fourth"										
02/25/94 21:36:29	3:25:58	60									Select DHU SEQT 9										
02/25/94 21:38:09	3:27:38	100									Load QTable THERM_NORTH002										
02/25/94 21:40:49	3:30:18	160									Load QTable THERM_NORTH003										
02/25/94 21:42:13	3:31:42	84									Load exposure table LUNARZ85N										
02/25/94 21:42:40	3:32:09		89.8	114.8	1838.2					North Pole											
02/25/94 21:43:29	3:32:58	76									Load QTable THERM_NORTH004										
02/25/94 21:44:15	3:33:44		88.4	196.3	1878.3					LDUSK											
02/25/94 21:46:09	3:35:38	160									Load QTable THERM_NORTH005										
02/25/94 21:48:49	3:38:18	160									Load QTable THERM_NORTH006										
02/25/94 21:49:49	3:39:18	60									Switch to nadir mapping mode (ACSMODE=LunarMapping)									Slew to nadir	
																				Err:508	
																				LM Post Script	
02/25/94 21:49:55	3:39:24	0									Select ST-A; Set SA step rate to HI									Post map script starting late, mapping script had time errors	
02/25/94 21:50:05	3:39:34	10									Park filters (DHU SEQT 27); UV & HR cameras OFF										
02/25/94 21:50:14	3:39:44	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)									Slew to Vega	
02/25/94 21:53:11	3:42:40		80.0	202.7	2092.9					N80D											
02/25/94 21:54:55	3:44:24	280									Perform LWIR imaging (DHU SEQT 25)										Start dark field imaging
02/25/94 21:55:25	3:44:54	30									Perform NIR imaging (DHU SEQT 31)										
02/25/94 21:55:55	3:45:24	30									Stop imaging - select ST-A										
02/25/94 21:56:05	3:45:34	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)									Slew HGA to Earth	
02/25/94 22:00:54	3:50:24	290									Select ST-A; Laser power OFF										READY FOR DATA DUMP
																					End Post Script
02/25/94 22:05:00	3:54:29										Switch to DHU mode @ 128 kbps										Ground Command
02/25/94 22:05:13	3:54:42		70.0	203.2	2345.9					N70D											
02/25/94 22:06:00	3:55:29										Switch to HGA										Ground Command
02/25/94 22:13:00	4:02:29										Downlink SSSR Segment 1										Ground Command
02/25/94 22:18:47	4:08:16		60.0	203.3	2579.5					N60D											
02/25/94 22:33:46	4:23:15		50.0	203.3	2772.6					N50D											
02/25/94 22:49:52	4:39:21		40.0	203.2	2904.4					N40D											
02/25/94 23:06:39	4:56:08		30.0	203.1	2958.3					N30D											
02/25/94 23:08:57	4:58:26		28.6	203.1	2959.1					Aposelene											

Orbit 28 Timeline - Type A Orbit Mapping Rehearsal/Calibration Target (MS2)

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/25/94 23:08:57	0:00:00		28.6	203.1	2959.1							Aposelene							Downlinking SSSR Segment 1 (orbit 27)
02/25/94 23:20:00	0:11:03												SSDR to IDLE - downlink complete						Ground Command
02/25/94 23:23:30	0:14:33		20.0	203.0	2927.3							N20D							
02/25/94 23:26:51	0:17:54		17.4	203.0	2904.9						PMK	AOS							
02/25/94 23:39:51	0:30:54		10.0	202.9	2815.6							N10D							
02/25/94 23:55:10	0:46:13		0.0	202.8	2637.5							Equator - D							
02/26/94 00:09:08	1:00:11		-10.0	202.7	2413.1							S10D							
02/26/94 00:14:00	1:05:03												Uplink and schedule L028 scripts						Ground Command
02/26/94 00:21:35	1:12:38		-20.0	202.6	2163.9							S20D							
																			LM Prep1 Script
02/26/94 00:26:19	1:17:22	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/26/94 00:32:31	1:23:34		-30.0	202.5	1908.3							S30D							
02/26/94 00:42:02	1:33:05		-40.0	202.5	1660.7							S40D							
																			LM Prep2 Script
02/26/94 00:46:19	1:37:22	0											LWIR camera & cryocooler ON; Laser heater ON; Open Sensor door if closed						
																			End Prep2 Script
02/26/94 00:50:17	1:41:20		-50.0	202.5	1430.2							S50D							
02/26/94 00:57:29	1:48:32		-60.0	202.5	1222.3							S60D							
																			Err:508
02/26/94 01:00:44	1:51:47	0											Msg "WARNING: Omni/8k in 1 min.."; SSDR to IDLE						
02/26/94 01:01:44	1:52:47	60											Switch to bypass mode @ 8 kbps						
02/26/94 01:02:44	1:53:47	60											Switch to omni antennas						
02/26/94 01:03:44	1:54:47	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1)						Slew to South Galactic Pole
02/26/94 01:03:48	1:54:51		-70.0	202.7	1039.2							S70D							
02/26/94 01:06:19	1:57:22	155											Set SA step rate to LO; UV & HR cameras ON						
02/26/94 01:08:44	1:59:47	145											Select ST-A						
02/26/94 01:08:54	1:59:57	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 2						Start in SSSR Segment 2
02/26/94 01:09:19	2:00:22	25											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
02/26/94 01:09:22	2:00:25		-80.0	203.2	881.5							S80D							
02/26/94 01:09:49	2:00:52	30											Perform NIR imaging (DHU SEQT 31)						
02/26/94 01:10:19	2:01:22	30											Stop imaging - select ST-A						

Orbit 28 Timeline - Type A Orbit Mapping Rehearsal/Calibration Target (MS2)

02/26/94 01:10:29	2:01:32	10								Deselect ST; Set SA step rate to HI; Slew s/c sensors to nadir (ACSMODE=LunarMapping)							Slew to nadir
02/26/94 01:12:00	2:03:03	91								Set SA step rate to LO; Laser power ON							
End Prep3 Script																	
Err:508																	
02/26/94 01:12:19	2:03:22	0								Select ST-A							
02/26/94 01:12:28	2:03:31	10								Load exposure table LUNARZ85S							
02/26/94 01:13:18	2:04:21	50								Start imaging (DHU SEQT 9)							
02/26/94 01:14:22	2:05:25		-89.8	292.9	748.3					South Pole							
02/26/94 01:15:07	2:06:10		-88.4	15.2	729.3					LDAWN							
02/26/94 01:18:51	2:09:54	332								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3						Start laser ranging
02/26/94 01:18:54	2:09:57		-80.0	20.9	638.6					S80A							
02/26/94 01:23:00	2:14:03	250								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4						
02/26/94 01:23:04	2:14:07		-70.0	21.4	550.8					S70A							
02/26/94 01:26:55	2:17:57	234								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
02/26/94 01:26:58	2:18:01		-60.0	21.6	483.5					S60A							
02/26/94 01:30:36	2:21:39	222								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 5						
02/26/94 01:30:39	2:21:42		-50.0	21.7	435.6					S50A							
02/26/94 01:34:11	2:25:14	214								S40A	Load exposure table LUNARZ35S						
02/26/94 01:34:14	2:25:17		-40.0	21.7	406.3					S40A							
02/26/94 01:37:41	2:28:44	210								S30A	Load exposure table LUNARZ25S						
02/26/94 01:37:44	2:28:47		-30.0	21.7	394.9					S30A							
02/26/94 01:38:13	2:29:16		-28.6	21.7	394.8					Periselene							
02/26/94 01:41:10	2:32:13	210								S20A	Load exposure table LUNARZ15S						
02/26/94 01:41:14	2:32:17		-20.0	21.7	401.3					S20A							
02/26/94 01:44:43	2:35:46	212								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						
02/26/94 01:44:46	2:35:49		-10.0	21.7	425.6					S10A							
02/26/94 01:48:22	2:39:25	220								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 7						
02/26/94 01:48:26	2:39:29		0.0	21.7	468.3					Equator - A							
02/26/94 01:52:12	2:43:15	230								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
02/26/94 01:52:16	2:43:19		10.0	21.7	530.0					N10A							
02/26/94 01:56:21	2:47:24		20.0	21.7	612.0					N20A							

Orbit 28 Timeline - Type A Orbit Mapping Rehearsal/Calibration Target (MS2)

02/26/94 01:58:05	2:49:08	353									Record in SSSR Segment 3; Select DHU SEQT 24	MS2 CALIBRATION RUN Target: 15°-21°N CEQ_33NB.UMI in SEQT 24 All cameras, compressed and uncompressed T/L ERROR: Overshot target because WAIT should be 123 seconds
02/26/94 02:00:46	2:51:49		30.0	21.7	715.6					N30A		
02/26/94 02:02:34	2:53:37	269								N20A	Record in SSSR Segment 4; Load exposure table LUNARZ25N; Select DHU SEQT 9; Laser power OFF	END MS2 OBSERVATION Resume Mapping
02/26/94 02:05:37	2:56:40		40.0	21.7	842.0					N40A		SSDR Segment 4
02/26/94 02:06:35	2:57:38	241								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
02/26/94 02:10:00	3:01:03										Read dosimeter latch values	Ground Command
02/26/94 02:11:01	3:02:04		50.0	21.7	992.8					N50A		
02/26/94 02:11:26	3:02:29	291								N40A	Load exposure table LUNARZ45N; Select DHU SEQT 11	
02/26/94 02:15:00	3:06:03										Expose dosimeter	Ground Command
02/26/94 02:16:51	3:07:54	324								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	
02/26/94 02:17:07	3:08:10		60.0	21.8	1168.7					N60A		
02/26/94 02:18:58	3:10:01		64.3	21.9	1251.6				GDS	AOS		
02/26/94 02:22:57	3:14:00	366								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13	
02/26/94 02:24:02	3:15:05		70.0	21.9	1369.9					N70A		
02/26/94 02:29:52	3:20:55	415								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
02/26/94 02:31:59	3:23:02		80.0	22.4	1594.4					N80A		
02/26/94 02:37:48	3:28:51	477								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
												Err:508
02/26/94 02:41:08	3:32:11		89.8	109.9	1837.9					North Pole		
02/26/94 02:42:44	3:33:47		88.4	194.6	1878.3					LDUSK		
												LM Post Script
02/26/94 02:44:05	3:35:08	0									Select ST-A; Set SA step rate to HI	
02/26/94 02:44:15	3:35:18	10									Park filters (DHU SEQT 27); UV & HR cameras OFF	SEQT 27 did not execute
02/26/94 02:44:25	3:35:28	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)	Slew to Vega
02/26/94 02:49:05	3:40:08	280									Perform LWIR imaging (DHU SEQT 25)	Start dark field imaging
02/26/94 02:49:35	3:40:38	30									Perform NIR imaging (DHU SEQT 31)	
02/26/94 02:50:05	3:41:08	30									Stop imaging - select ST-A	

Orbit 28 Timeline - Type A Orbit Mapping Rehearsal/Calibration Target (MS2)

02/26/94 02:50:15	3:41:18	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
02/26/94 02:51:39	3:42:42		80.0	200.1	2092.4					N80D							
02/26/94 02:55:05	3:46:08	290									Select ST-A; Laser power OFF						READY FOR DATA DUMP
																	End Post Script
02/26/94 02:57:00	3:48:03										Set SA step rate to HI						Ground Command
02/26/94 02:59:00	3:50:03										Switch to HGA						Ground Command
02/26/94 03:00:00	3:51:03										Switch to DHU mode @ 128 kbps						Ground Command
02/26/94 03:03:00	3:54:03										Downlink SSSDR Segment 2						Ground Command
02/26/94 03:03:41	3:54:44		70.0	200.5	2345.0					N70D							
02/26/94 03:12:00	4:03:03										Uplink DHU compression tables						Ground Command
02/26/94 03:15:00	4:06:03										Upload CEQ_33NB.UMI into SEQT 24						Ground Command
02/26/94 03:17:14	4:08:17		60.0	200.6	2578.2					N60D							
02/26/94 03:32:12	4:23:15		50.0	200.6	2771.1					N50D							
02/26/94 03:48:17	4:39:20		40.0	200.5	2902.7					N40D							
02/26/94 04:05:03	4:56:06		30.0	200.4	2956.8					N30D							
02/26/94 04:07:25	4:58:28		28.6	200.4	2957.6					Aposelene							

Orbit 29 Timeline - Type B Orbit Mapping Rehearsal (Rules Based Test)

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
02/26/94 04:07:25	0:00:00		28.6	200.4	2957.6							Aposelene	Downlinking SS DR Segment 2 (orbit 28)						NOTE: S/C time was 5 sec early during the execution of L029 script. This error is not accounted for in times here, which are nominal times.
02/26/94 04:07:30	0:00:05												Downlink SS DR Segment 3						Ground Command
02/26/94 04:21:54	0:14:29		20.0	200.3	2926.1							N20D							
02/26/94 04:25:00	0:17:35												Delete unneeded SCL scripts						Ground Command
02/26/94 04:38:14	0:30:49		10.0	200.1	2814.8							N10D							
02/26/94 04:40:00	0:32:35												Uplink SCL baseline with rule based scripts						Ground Command
02/26/94 04:51:53	0:44:28		0.4	200.0	2645.9						GDS	MLOSM							
02/26/94 04:53:00	0:45:35												SSDR to IDLE - paused for occultation						Ground Command
02/26/94 04:53:33	0:46:08		0.0	200.0	2637.2							Equator -D							
02/26/94 04:53:39	0:46:14		-0.8	200.0	2621.3						PMK	MLOSM							
02/26/94 04:56:44	0:49:19		-2.9	200.0	2575.9						MAD	MLOSM							Enter occultation
02/26/94 05:07:30	1:00:05		-10.0	199.9	2413.4							S10D							
02/26/94 05:19:57	1:12:32		-20.0	199.9	2164.6							S20D							
02/26/94 05:21:20	1:13:55		-22.1	199.8	2111.8						MAD	MAOSM							Exit occultation
02/26/94 05:22:31	1:15:06		-23.1	199.8	2085.1						PMK	MAOSM							
02/26/94 05:23:11	1:15:46		-23.7	199.8	2069.6						GDS	MAOSM							
02/26/94 05:24:30	1:17:05												Resume downlink SS DR Segment 3						Ground Command
02/26/94 05:25:00	1:17:35												Uplink new autoscheduler code						Ground Command
02/26/94 05:30:53	1:23:28		-30.0	199.8	1909.5							S30D							
02/26/94 05:31:30	1:24:05												Activate the script rules processor						Ground Command
02/26/94 05:32:50	1:25:25												Execute L029 script						Ground Command
Err:508																			
02/26/94 05:32:50	1:25:25												NIR camera & cryocooler ON; SA mode to AUTO						RULE_NIRON NOTE: Rule scheduled for 05:24:46 but executed late because of late script activation
02/26/94 05:35:00	1:27:35												Downlink SS DR Segment 4						Ground Command
02/26/94 05:40:24	1:32:59		-40.0	199.7	1662.1							S40D							
02/26/94 05:44:45	1:37:20	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						RULE_LWIRON
02/26/94 05:47:18	1:39:53	0											Laser heater ON						RULE_LASERHTR
02/26/94 05:48:41	1:41:16		-50.0	199.7	1431.9							S50D							
02/26/94 05:55:53	1:48:28		-60.0	199.8	1224.0							S60D							
02/26/94 05:56:11	1:48:46	0											Msg "WARNING: Omni/8k in 1 min."; SS DR to IDLE - data dump stopped						RULE_WARNING
02/26/94 05:57:00	1:49:35	0											Execute SCR_OmniOn subscript						RULE_OMNION
SCR_OmniOn Subscript																			

Orbit 29 Timeline - Type B Orbit Mapping Rehearsal (Rules Based Test)

Err:508	Err:508	0								Switch to 2 kbps bypass mode									
Err:508	Err:508	60								Switch to omni antennas									
																			End OmniOn Subscript
02/26/94 05:59:11	1:51:46	0								Slew s/c sensors to SGP (ACSMODE=StarPointing, Index=1); Deselect ST									RULE_SLEWSGP: Slew to South Galactic Pole
02/26/94 06:01:46	1:54:21	0								UV & HR cameras ON									RULE_UV_HR_ON
02/26/94 06:02:12	1:54:47		-70.0	199.9	1041.1					S70D									
02/26/94 06:03:15	1:55:50		-73.6	199.9	982.8				MAD	LOS									
02/26/94 06:04:11	1:56:45	0																	Execute SCR_InitFltr subscript
																			RULE_INITFLTR
																			SCR_InitFltr Subscript
Err:508	Err:508	0								Select ST-A									
Err:508	Err:508	10								Initialize filters (DHU SEQT 28); Record in SSSDR Segment 1									Start in SSSDR Segment 1
																			End InitFltr Subscript
02/26/94 06:04:46	1:57:21	0								Perform LWIR imaging (DHU SEQT 25)									Start dark field imaging RULE_S_LWIRDRK
02/26/94 06:05:16	1:57:51	0								Perform NIR imaging (DHU SEQT 31)									RULE_S_NIRDRK
02/26/94 06:05:46	1:58:21	0								Execute SCR_SlewNadir subscript									RULE_SLEWNADIR FAILED TO EXECUTE!
02/26/94 06:07:18	1:59:53	0								Laser power ON									RULE_LASERON
02/26/94 06:07:30	2:00:05									Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)									Ground Command
02/26/94 06:07:47	2:00:22		-80.0	200.3	883.3					S80D									
02/26/94 06:10:46	2:03:20	0																	Execute SCR_Initlmg subscript
																			RULE_INITIMG
																			SCR_Initlmg Subscript
02/26/94 06:10:46	2:03:20	0								Select ST-A									
Err:508	Err:508	10								Set SA step rate to LO; Load exposure table LUNARZ85S									
																			End Initlmg Subscript
02/26/94 06:11:46	2:04:21	0								Start imaging (DHU SEQT 16)									RULE_STARTIMG
02/26/94 06:12:47	2:05:22		-89.8	293.0	750.1					South Pole									
02/26/94 06:13:32	2:06:07		-88.4	13.3	731.0					LDAWN									
02/26/94 06:17:18	2:09:53	0								S80A									Load exposure table LUNARZ75S; Select DHU SEQT 17
02/26/94 06:17:19	2:09:54		-80.0	18.3	640.4					S80A									RULE_S80A
02/26/94 06:21:29	2:14:04	0	-70.0	18.8	552.5					S70A									Load exposure table LUNARZ65S; Select DHU SEQT 18
02/26/94 06:24:00	2:16:35																		Set SA step rate to LO
02/26/94 06:25:23	2:17:58	0	-60.0	18.9	485.2					S60A									Load exposure table LUNARZ55S; Select DHU SEQT 6
02/26/94 06:29:05	2:21:40	0								S50A									Load exposure table LUNARZ45S; Select DHU SEQT 5
02/26/94 06:29:06	2:21:41		-50.0	19.0	437.3					S50A									RULE_S50A
02/26/94 06:32:40	2:25:15	0	-40.0	19.0	407.9					S40A									Load exposure table LUNARZ35S
02/26/94 06:36:10	2:28:45	0								S30A									Load exposure table LUNARZ25S
02/26/94 06:36:11	2:28:46		-30.0	19.0	396.5					S30A									RULE_S30A

Orbit 29 Timeline - Type B Orbit Mapping Rehearsal (Rules Based Test)

02/26/94 06:36:40	2:29:15		-28.6	19.0	396.3				Periselene									
02/26/94 06:39:40	2:32:15	0							S20A	Load exposure table LUNARZ15S								RULE_S20A
02/26/94 06:39:41	2:32:16		-20.0	19.0	402.9				S20A									
02/26/94 06:43:13	2:35:48	0							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								RULE_S10A
02/26/94 06:43:14	2:35:49		-10.0	19.0	427.1				S10A									
02/26/94 06:46:53	2:39:28	0	0.0	19.0	469.7				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 7								RULE_MEQA
02/26/94 06:50:43	2:43:18	0	10.0	19.0	531.4				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								RULE_N10A
02/26/94 06:54:48	2:47:23	0							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								RULE_N20A
02/26/94 06:54:49	2:47:24		20.0	19.0	613.3				N20A									
02/26/94 06:55:48	2:48:23	0								Laser power OFF								RULE_LASEROFF
02/26/94 06:59:14	2:51:49	0	30.0	19.0	716.7				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								RULE_N30A
02/26/94 07:04:05	2:56:40	0	40.0	19.0	843.0				N40A	Switch to inertial pointing (execute SCR_GNC12 subscript); Load exposure table LUNARZ45N; Select DHU SEQT 11								RULE_N40A; Initiate oblique viewing
02/26/94 07:04:30	2:57:05									Switch to inertial pointing using GNC12WOR29								Ground Command Previous pointing rule failed?
02/26/94 07:09:29	3:02:04	0							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								RULE_N50A
02/26/94 07:09:30	3:02:05		50.0	19.0	993.6				N50A									
02/26/94 07:15:35	3:08:10	0	60.0	19.0	1169.4				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19								RULE_N60A
02/26/94 07:19:03	3:11:38	0								Switch to nadir mapping mode (ACSMODE=LunarMapping)								RULE_RESUMENADIR
02/26/94 07:22:31	3:15:06	0	70.0	19.1	1370.2				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								RULE_N70A
02/26/94 07:30:27	3:23:02	0							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								RULE_N80A
02/26/94 07:30:28	3:23:03		80.0	19.5	1594.5				N80A									
02/26/94 07:39:37	3:32:12		89.8	110.5	1837.8				North Pole									
02/26/94 07:41:12	3:33:47		88.4	192.7	1878.1				LDUSK									
02/26/94 07:41:36	3:34:11	0								Execute SCR_SlewVega subscript								RULE_SLEWVEGA
																		SCR_SlewVega Subscript
Err:508	Err:508	0								Set SA step rate to HI; Stop Imaging - select ST-A								
Err:508	Err:508	10								Park filters (DHU SEQT 27); UV & HR cameras OFF								Three LWIR images
Err:508	Err:508	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)								Slew to Vega
																		End SlewVega Subscript
02/26/94 07:46:36	3:39:11	0								Perform LWIR imaging (DHU SEQT 25)								RULE_N_LWIRDRK Rule did not trigger
02/26/94 07:47:06	3:39:41	0								Perform NIR imaging (DHU SEQT 31)								RULE_N_NIRDRK
02/26/94 07:47:36	3:40:11	0								Execute SCR_EndMap subscript								RULE_ENDMAP

Orbit 29 Timeline - Type B Orbit Manning Rehearsal (Rules Based Test)

											SCR_EndMap Subscript	
Err:508	Err:508	0									Stop imaging - select ST-B	
Err:508	Err:508	10									IR cameras & cryocoolers OFF; Stop all imaging - deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
											End EndMap Subscript	
02/26/94 07:50:08	3:42:43		80.0	197.5	2091.7					N80D		
02/26/94 07:52:00	3:44:35										Set downlink rate to 128 kbps	Ground Command
02/26/94 07:52:36	3:45:10	0									Select ST-A	RULE_STSHOTS
											Err:508	
02/26/94 07:55:00	3:47:35										Switch to HGA	Ground Command
02/26/94 07:56:00	3:48:35										Switch to DHU mode @ 128 kbps	Ground Command
02/26/94 07:58:00	3:50:35										Downlink SDR Segment 1	Ground Command
02/26/94 08:02:08	3:54:43		70.0	197.9	2343.9					N70D		
02/26/94 08:15:41	4:08:16		60.0	197.9	2576.7					N60D		
02/26/94 08:30:38	4:23:13		50.0	197.9	2769.4					N50D		
02/26/94 08:31:00	4:23:35										Reset s/c clock to UTC (zero error)	Ground Command
02/26/94 08:46:43	4:39:18		40.0	197.8	2900.9					N40D		
02/26/94 08:59:00	4:51:35										SSDR to IDLE - downlink paused	Ground Command
02/26/94 09:03:27	4:56:02		30.0	197.7	2955.1					N30D		
02/26/94 09:05:52	4:58:27		28.6	197.6	2956.0					Aposelene		

Orbit 30 Timeline - Apollo 16 Observation

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/26/94 09:05:52	0:00:00		28.6	197.6	2956.0							Aposelene							Downlink paused
02/26/94 09:12:00	0:06:08												Resume downlink SDR Segment 1						Ground Command - orbit 29 data
02/26/94 09:15:00	0:09:08												Ranging B ON						Ground Command
02/26/94 09:19:00	0:13:08												Uplink and schedule L030 scripts						Ground Command
02/26/94 09:20:17	0:14:25		20.0	197.5	2924.8							N20D							
02/26/94 09:24:48	0:18:56		16.7	197.5	2895.8						CAN	AOS							
02/26/94 09:26:00	0:20:08												Cancel Prep1 script						Ground Command
02/26/94 09:28:00	0:22:08												Reschedule Prep1 script						Ground Command
02/26/94 09:36:36	0:30:44		10.0	197.4	2814.0							N10D							
02/26/94 09:41:29	0:35:37		6.2	197.4	2754.0						CAN	MLOSM							
02/26/94 09:44:39	0:38:47		4.2	197.3	2717.8						GDS	MLOSM							
02/26/94 09:45:00	0:39:08												SSDR to IDLE - downlink paused						Ground Command - for occult.
02/26/94 09:45:39	0:39:47		3.5	197.3	2705.5						PMK	MLOSM							Enter occultation
02/26/94 09:51:55	0:46:03		0.0	197.3	2637.0							Equator -D							
02/26/94 10:05:53	1:00:01		-10.0	197.2	2413.7							S10D							
																			LM Prep1 Script
02/26/94 10:11:11	1:05:19	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/26/94 10:18:19	1:12:27		-20.0	197.1	2165.4							S20D							
02/26/94 10:24:18	1:18:26		-26.2	197.1	2006.6						CAN	MAOSM							Exit occultation
02/26/94 10:25:53	1:20:01		-27.7	197.1	1969.0						PMK	MAOSM							
02/26/94 10:25:58	1:20:06		-27.8	197.1	1966.9						GDS	MAOSM							
02/26/94 10:29:16	1:23:24		-30.0	197.0	1910.7							S30D							
02/26/94 10:30:00	1:24:08												Resume downlink SDR Segment 1						Ground Command
02/26/94 10:38:47	1:32:55		-40.0	197.0	1663.7							S40D							
																			LM Prep2 Script
02/26/94 10:41:11	1:35:19	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/26/94 10:47:04	1:41:12		-50.0	197.0	1433.6							S50D							
02/26/94 10:49:00	1:43:08												SSDR to IDLE - downlink completed						Ground Command
02/26/94 10:54:16	1:48:24		-60.0	197.0	1225.9							S60D							
																			LM Prep3 Script
02/26/94 10:56:11	1:50:19	0											Msg "WARNING: Omni/8k in 1 min.."; SSDR to IDLE						
02/26/94 10:57:11	1:51:19	60											Switch to bypass mode @ 8 kbps						
02/26/94 10:58:11	1:52:19	60											Switch to omni antennas						
02/26/94 10:59:11	1:53:19	60											Deselect ST; Slew s/c sensors to SGP (ACSM=StarPointing, Index=1)						Slew to South Galactic Pole

Orbit 30 Timeline - Apollo 16 Observation

02/26/94 11:00:36	1:54:44		-70.0	197.1	1043.0				S70D										
02/26/94 11:01:46	1:55:54	155								UV & HR cameras ON									
02/26/94 11:04:11	1:58:19	145								Select ST-A									
02/26/94 11:04:21	1:58:29	10								Initialize filters (DHU SEQT 28); Record in SDDR Segment 1									Start recording in Segment 1
02/26/94 11:04:46	1:58:54	25								Perform LWIR imaging (DHU SEQT 25)									Start dark fields imaging
02/26/94 11:05:16	1:59:24	30								Perform NIR imaging (DHU SEQT 31)									
02/26/94 11:05:46	1:59:54	30								Stop imaging - select ST-A									
02/26/94 11:05:56	2:00:04	10								Deselect ST; Slew s/c sensors to nadir (ACSMMode=LunarMapping)									Slew to nadir
02/26/94 11:06:11	2:00:19		-80.0	197.4	885.3				S80D										
02/26/94 11:07:27	2:01:35	91								Laser power ON									
End Prep3 Script																			
02/26/94 11:09:13	2:03:21		-88.0	200.3	777.7				PMK	LOS									
02/26/94 11:11:00	2:05:08										Ranging B OFF								Ground Command
Err:508																			
02/26/94 11:11:11	2:05:19	0									Load exposure table LUNARZ85S; Select DHU SEQT 9								
02/26/94 11:11:12	2:05:20		-89.9	292.7	752.0					South Pole									
02/26/94 11:11:57	2:06:05		-88.4	11.4	732.9					LDAWN									
02/26/94 11:15:44	2:09:52	273	-80.0	15.7	642.3					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3								
02/26/94 11:19:54	2:14:02	250									Load exposure table LUNARZ65S; Select DHU SEQT 4								
02/26/94 11:19:55	2:14:03		-70.0	16.1	554.4					S70A									
02/26/94 11:23:49	2:17:57	235									Load exposure table LUNARZ55S								
Err:508																			
02/26/94 11:23:49	2:17:57		-60.0	16.2	487.0					S60A									
02/26/94 11:27:32	2:21:40		-50.0	16.3	439.1					S50A									
SeeApollo16 Script																			
02/26/94 11:30:00	2:24:08	0									Start imaging (DHU SEQT 24); Load exposure table LUNARZ05S; Slew to Apollo 16 using quaternion table apollo30								START APOLLO 16 OBSERVATION Compressed and uncompressed
02/26/94 11:31:00	2:25:08	60									Load Qtable apollo31								
02/26/94 11:31:07	2:25:15		-40.0	16.3	409.6					S40A									
02/26/94 11:32:00	2:26:08	60									Load Qtable apollo32								
02/26/94 11:33:00	2:27:08	60									Load Qtable apollo33								
02/26/94 11:34:00	2:28:08	60									Load Qtable apollo34								
02/26/94 11:34:37	2:28:45		-30.0	16.3	398.2					S30A									
02/26/94 11:35:00	2:29:08	60									Load Qtable apollo35								
02/26/94 11:35:08	2:29:16		-28.5	16.3	398.0					Periselene									
02/26/94 11:36:00	2:30:08	60									Load Qtable apollo36								
02/26/94 11:37:00	2:31:08	60									Load Qtable apollo37								
02/26/94 11:38:00	2:32:08	60									Load Qtable apollo38								No Data Not all data downlinked

Orbit 30 Timeline - Apollo 16 Observation

02/26/94 11:38:08	2:32:16		-20.0	16.3	404.5				S20A				
02/26/94 11:39:00	2:33:08	60								Load Qtable apollo39			
02/26/94 11:40:00	2:34:08	60								Load Qtable apollo40			
02/26/94 11:41:00	2:35:08	60								Load Qtable apollo41			
02/26/94 11:41:41	2:35:49		-10.0	16.3	428.6				S10A				
02/26/94 11:42:00	2:36:08	60								Load Qtable apollo42			Apollo 16 nadir (8.97°S)
02/26/94 11:43:00	2:37:08	60								Load Qtable apollo43			
02/26/94 11:44:00	2:38:08	60								Load Qtable apollo44			
02/26/94 11:45:00	2:39:08	60								Load Qtable apollo45			
02/26/94 11:45:21	2:39:29		0.0	16.3	471.1				Equator -A				
02/26/94 11:46:00	2:40:08	60								Load Qtable apollo46			
02/26/94 11:47:00	2:41:08	60								Load Qtable apollo47			
02/26/94 11:48:00	2:42:08	60								Load Qtable apollo48			No Data Not all data downlinked
02/26/94 11:49:00	2:43:08	60								Load Qtable apollo49			
02/26/94 11:49:11	2:43:19		10.0	16.3	532.8				N10A				
02/26/94 11:50:00	2:44:08	60								Load Qtable apollo50			
02/26/94 11:51:00	2:45:08	60								Load Qtable apollo51			
02/26/94 11:52:00	2:46:08	60								Load Qtable apollo52			
02/26/94 11:52:30	2:46:38									Cancel L030Wrapup script			Ground Command - failed
02/26/94 11:53:00	2:47:08	60								Load Qtable apollo53			
02/26/94 11:53:17	2:47:25		20.0	16.2	614.6				N20A				
02/26/94 11:54:00	2:48:08	60								Load Qtable apollo54			
02/26/94 11:54:00	2:48:08									Cancel LM_Post script			Ground Command - failed
02/26/94 11:55:00	2:49:08	60								Msg "Done: SeeApollo16"			
													End SeeApollo16 Script
													Err:508
02/26/94 11:57:42	2:51:50	0	30.0	16.2	717.8				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
02/26/94 11:59:30	2:53:38									Set SA step rate to HI			Ground Command
02/26/94 12:01:00	2:55:08									Abort Script			Ground Command
02/26/94 12:02:00	2:56:08									Cancel LM Post script			Ground Command
02/26/94 12:02:33	2:56:41	291								Script aborted			Occurred at end of WAIT
													Err:508
02/26/94 12:02:34	2:56:42		40.0	16.2	844.0				N40A				
													LM Post Script
02/26/94 12:03:24	2:57:32	0	89.9	103.8	1837.2					Select ST-A; Set SA step rate to HI			Script started by Ground Command
02/26/94 12:03:34	2:57:42	10								Park filters (DHU SEQT 27); UV & HR cameras OFF			
02/26/94 12:03:44	2:57:52	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0)			Slew to Vega
02/26/94 12:07:58	3:02:06		50.0	16.2	994.5				N50A				
02/26/94 12:08:24	3:02:32	280								Perform LWIR imaging (DHU SEQT 25)			No Data
02/26/94 12:08:54	3:03:02	30								Perform NIR imaging (DHU SEQT 31)			No Data

Orbit 30 Timeline - Apollo 16 Observation

02/26/94 12:09:24	3:03:32	30									Stop imaging - select ST-A							
02/26/94 12:09:34	3:03:42	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)							
02/26/94 12:14:04	3:08:12		60.0	16.2	1170.0					N60A								
02/26/94 12:14:24	3:08:32	290									Select ST-A; Laser power OFF							READY FOR DATA DUMP
End Post Script																		
02/26/94 12:16:00	3:10:08										Switch to HGA							Ground Command
02/26/94 12:18:00	3:12:08										Switch to DHU mode @ 128 kbps							Ground Command
02/26/94 12:21:00	3:15:08		70.0	16.3	1370.6					N70A								
02/26/94 12:28:57	3:23:05		80.0	16.7	1594.5					N80A								
02/26/94 12:31:00	3:25:08										Downlink SSDR Segment 1							Ground Command
02/26/94 12:37:00	3:31:08										Stop and restart SCL							Ground Command
02/26/94 12:38:05	3:32:13		89.9	103.8	1837.2					North Pole								
02/26/94 12:39:41	3:33:49		88.4	190.8	1877.8					LDUSK								
02/26/94 12:48:00	3:42:08										Read dosimeter latch values							Ground Command
02/26/94 12:48:36	3:42:44		80.0	194.9	2090.9					N80D								
02/26/94 12:59:00	3:53:08										Expose dosimeter							Ground Command
02/26/94 13:00:36	3:54:44		70.0	195.2	2342.7					N70D								
02/26/94 13:03:00	3:57:08										Read dosimeter latch values							Ground Command
02/26/94 13:05:00	3:59:08										Read dosimeter latch values							Ground Command
02/26/94 13:11:00	4:05:08										Expose dosimeter							Ground Command
02/26/94 13:14:08	4:08:16		60.0	195.2	2575.2					N60D								
02/26/94 13:29:04	4:23:12		50.0	195.1	2767.6					N50D								
02/26/94 13:35:00	4:29:08										Ranging A OFF Ranging B ON							Ground Command
02/26/94 13:45:08	4:39:16		40.0	195.1	2899.1					N40D								
02/26/94 13:53:56	4:48:04		34.1	195.0	2940.5				GDS	LOS								
02/26/94 14:01:52	4:56:00		30.0	194.9	2953.4					N30D								
02/26/94 14:04:20	4:58:28		28.5	194.9	2954.3					Aposelene								

Orbit 32 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
02/26/94 19:02:47	0:00:00		28.5	192.2	2952.6							Aposelene							Downlinking SDR Seg 1 (Orbit 30)
02/26/94 19:17:04	0:14:17		20.0	192.1	2922.1							N20D							
02/26/94 19:20:00	0:24:13												Uplink & schedule L032 scripts						Ground Command
02/26/94 19:27:00	0:24:13												SSDR to IDLE						Ground Command Stop downlink for occultation
02/26/94 19:30:49	0:29:12										CAN	MLOSM							Enter occultation
02/26/94 19:33:22	0:30:35		10.0	192.0	2812.4							N10D							
02/26/94 19:48:40	0:45:53		0.0	191.8	2636.6							Equator - D							
02/26/94 20:02:37	0:59:49		-10.0	191.7	2414.6							S10D							
02/26/94 20:15:04	1:12:17		-20.0	191.6	2167.4							S20D							
																			Standard Prep1 Script
02/26/94 20:20:31	1:17:44	00:00											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/26/94 20:26:01	1:23:14		-30.0	191.6	1913.5							S30D							
02/26/94 20:28:16	1:24:12		-33.3	191.5	1831.6						MAD	MAOSM							Exit occultation
02/26/94 20:35:33	1:32:46		-40.0	191.5	1667.1							S40D							
																			Standard Prep2 Script
02/26/94 20:40:31	1:37:44	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/26/94 20:41:00	1:38:13												Resume SDR Downlink (Seg 1)						Ground Command
02/26/94 20:43:50	1:41:03		-50.0	191.5	1437.4							S50D							
02/26/94 20:51:04	1:48:16		-60.0	191.5	1230.0							S60D							
																			Standard Prep3 Script
02/26/94 20:52:56	1:50:09	0											Msg "WRNG: Omni/8k in 1 min.."						
02/26/94 20:53:56	1:51:09	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking data
02/26/94 20:54:56	1:52:09	60											Switch to omni antennas						
02/26/94 20:55:56	1:53:09	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMMode=StarPointing, Index=1)						Slew to SGP
02/26/94 20:57:01	1:54:14	65											UV & HR cameras ON						
02/26/94 20:57:24	1:54:37		-70.0	191.5	1047.2							S70D							
02/26/94 20:59:56	1:57:09	175											Select ST-A						
02/26/94 21:00:06	1:57:19	10											Initialize filters (DHU SEQT 28); Record in SDR Seg 1						SSDR Segment 1
02/26/94 21:00:31	1:57:44	25											Perform LWIR imaging (DHU SEQT 25)						No data Downlinked

Orbit 32 Timeline - Type A Orbit

02/26/94 21:00:46	1:57:59	15								Perform NIR imaging (DHU SEQT 31)			No data Downlinked
02/26/94 21:01:01	1:58:14	15								Stop imaging, select ST-A			
02/26/94 21:01:11	1:58:24	10								Deselect ST; Slew s/c sensors to nadir (ACSMoDe=LunarMapping)			Slew to nadir
02/26/94 21:02:34	1:59:47	83								Laser power ON			
													End Prep3 Script
02/26/94 21:03:00	2:00:13		-80.0	191.8	889.5				S80D				
													L032 Mapping Script
02/26/94 21:06:01	2:03:13	0								Select ST-A			
02/26/94 21:06:10	2:03:23	10								Set SA step rate to LO; Load exposure table LUNARZ85S			
02/26/94 21:07:00	2:04:13	50								Start imaging (DHU SEQT 9)			START TYPE A MAPPING
02/26/94 21:08:02	2:05:15		-89.9	286.6	756.2				South Pole				
02/26/94 21:08:48	2:06:01		-88.4	7.2	737.0				LDAWN				
02/26/94 21:12:33	2:09:46	333							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3			
02/26/94 21:12:35	2:09:47		-80.0	10.4	646.4				S80A				
02/26/94 21:16:45	2:13:58	252							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
02/26/94 21:16:47	2:14:00		-70.0	10.7	558.4				S70A				
02/26/94 21:20:40	2:17:53	235							S60A	Record in SDR Segment 2; Load exposure table LUNARZ55S; Select DHU SEQT 6			SSDR Segment 2
02/26/94 21:20:42	2:17:55		-60.0	10.8	490.9				S60A				
02/26/94 21:24:23	2:21:36	223							S50A	Load exposure table LUNARZ45S; Select DHU SEQT 5			
02/26/94 21:24:25	2:21:37		-50.0	10.8	442.8				S50A				
02/26/94 21:27:59	2:25:12	216	-40.0	10.8	413.3				S40A	Load exposure table LUNARZ35S			
02/26/94 21:31:30	2:28:43	211							S30A	Load exposure table LUNARZ25S			
02/26/94 21:31:32	2:28:44		-30.0	10.8	401.7				S30A				
02/26/94 21:32:04	2:29:17		-28.5	10.8	401.5				PERISELENE				
02/26/94 21:35:01	2:32:14	211							S20A	Load exposure table LUNARZ15S			
02/26/94 21:35:03	2:32:16		-20.0	10.8	407.8				S20A				
02/26/94 21:38:36	2:35:48	214	-10.0	10.8	431.8				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
02/26/94 21:42:15	2:39:28	220							MEQA	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
02/26/94 21:42:17	2:39:30		0.0	10.8	474.2				Equator-A				
02/26/94 21:46:06	2:43:19	231							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
02/26/94 21:46:08	2:43:21		10.0	10.8	535.6				N10A				
02/26/94 21:50:13	2:47:25	246							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
02/26/94 21:50:14	2:47:26		20.0	10.8	617.2				N20A				
02/26/94 21:51:13	2:48:25	60								Laser power OFF			

Orbit 32 Timeline - Type A Orbit

02/26/94 21:54:39	2:51:51	206								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
02/26/94 21:54:40	2:51:52		30.0	10.8	720.2					N30A									
02/26/94 21:59:30	2:56:43	292								N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								Images only to ~38°N (21:58:20) Data from SSSR Seg 4 lost due to communication problems.
02/26/94 21:59:32	2:56:45		40.0	10.7	846.1					N40A									
02/26/94 22:04:55	3:02:08	325	50.0	10.7	996.1					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
02/26/94 22:11:01	3:08:14	366	60.0	10.7	1171.2					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
02/26/94 22:17:58	3:15:10	416	70.0	10.8	1371.2					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								
02/26/94 22:25:54	3:23:06	476								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
02/26/94 22:25:55	3:23:08		80.0	11.0	1594.4					N80A									
																			End L032 Script
																			Standard PostMap Script
02/26/94 22:35:03	3:32:15	0	89.9	98.6	1836.4					North Pole	Stop imaging, select ST-A								
02/26/94 22:35:13	3:32:25	10									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF								Slew to Vega
02/26/94 22:36:39	3:33:52		88.4	186.5	1876.9					LDUSK									
02/26/94 22:40:03	3:37:15	290									Perform LWIR imaging (DHU SEQT 25)								Data lost due to communications problem
02/26/94 22:40:17	3:37:30	15									Perform NIR imaging (DHU SEQT 31)								Data lost due to communications problem
02/26/94 22:40:32	3:37:45	15									Stop imaging, select ST-A								
02/26/94 22:40:42	3:37:55	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
02/26/94 22:45:33	3:42:46		80	189.6	2089.2					N80D									
02/26/94 22:46:32	3:43:45	360									Select ST-A								
																			End PostMap Script
02/26/94 22:48:00	3:53:13										Switch to DHU mode @ 128 kbps								Ground Command
02/26/94 22:56:00	3:53:13										Start Downlinking SSSR Segment 1								Ground Command
02/26/94 22:57:32	3:54:45		70	189.8	2340.1					N70D									
02/26/94 23:11:02	4:08:15		60	189.8	2571.8					N60D									
02/26/94 23:20:00	4:17:12										Downlink SSSR Segment 2								Ground Command
02/26/94 23:25:56	4:23:09		50	189.7	2763.7					N50D									
02/26/94 23:41:58	4:39:10		40	189.6	2895.1					N40D									
02/26/94 23:58:40	4:55:53		30	189.5	2949.8					N30D									
02/27/94 00:01:16	4:58:29		28.5	189.5	2950.8					Aposelene									

Orbit 33 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser
02/27/94 00:01:15	0:00:00		28.5	189.5	2950.8							Aposelene						
02/27/94 00:10:00	0:08:45												SSDR to IDLE					
02/27/94 00:15:27	0:14:12		20	189.4	2920.7							N20D						
02/27/94 00:25:29	0:24:14										MAD	MLOSM						
02/27/94 00:31:44	0:30:29		10	189.2	2811.6							N10D						
02/27/94 00:47:01	0:45:46		0	189.1	2636.4							MEQD						
02/27/94 01:24:23	1:23:08		-30	188.8	1914.9							S30D						
02/27/94 01:27:50	1:26:35										PMK	MAOSM						
02/27/94 01:28:01	1:26:46										MAD	MAOSM						
02/27/94 01:33:55	1:32:40		-40	188.8	1668.8							S40D						
02/27/94 01:36:00	1:34:45	0											NIR camera & cryocooler ON; SA mode to AUTO					
02/27/94 01:36:10	1:34:55												Uplink & schedule L033 scripts; Resume SSDR Downlink (seg 3)					
02/27/94 01:36:00	1:34:45	0											LWIR camera & cryocooler ON					
02/27/94 01:41:16	1:40:01	316											Laser heater ON; Open sensor door if closed					
02/27/94 01:42:13	1:40:58		-50	188.7	1439.4							S50D						
02/27/94 01:49:27	1:48:12		-60	188.7	1232.1							S60D						
02/27/94 01:45:00	1:43:45	65											UV & HR cameras ON					
02/27/94 01:46:00	1:44:45	65											Laser power ON					
02/27/94 01:55:48	1:54:33		-70	188.8	1049.3							S70D						
02/27/94 02:01:25	2:00:10		-80	189.0	891.7							S80D						
02/27/94 02:06:00	2:04:45												Switch to omni antennas @ 8 kbps					
02/27/94 02:06:15	2:05:00												Slew s/c sensors to nadir (ACSMODE=LunarMapping)					
02/27/94 02:06:26	2:05:11		-89.9	270.2	758.7							South Pole						
02/27/94 02:07:00	2:05:45												Initialize filters (DHU SEQT 27); Record in SSDR Segment 5; Load exposure table LUNAR65S					
02/27/94 02:11:00	2:09:45		-80	7.8	648.5							S80A						
02/27/94 02:14:01	2:12:46												Select DHU SEQT 18					
02/27/94 02:15:12	2:13:57		-70	8.0	560.5							S70A						
02/27/94 02:19:08	2:17:53		-60	8.1	492.9							S60A						

Orbit 33 Timeline - Type B Orbit

02/27/94 02:20:00	2:18:45																		Load exposure table LUNARZ55S; Select DHU SEQT 6
02/27/94 02:22:00	2:20:45																		Load exposure table LUNARZ45S; Select DHU SEQT 5
02/27/94 02:22:51	2:21:36		-50	8.1	444.7													S50A	
02/27/94 02:26:00	2:24:45																		Load exposure table LUNARZ35S
02/27/94 02:26:27	2:25:12		-40	8.1	415.1													S40A	
02/27/94 02:29:00	2:27:45																		Load exposure table LUNARZ25S
02/27/94 02:29:59	2:28:44		-30	8.1	403.4													S30A	
02/27/94 02:30:32	2:29:17		-28.4	8.1	403.2													Periselene	
02/27/94 02:33:00	2:31:45																		Load exposure table LUNARZ15S
02/27/94 02:33:30	2:32:15		-20	8.1	409.5													S20A	
02/27/94 02:37:00	2:35:45																		Load exposure table LUNARZ05S;
02/27/94 02:37:04	2:35:49		-10	8.1	433.5													S10A	
02/27/94 02:40:00	2:38:45																		Load exposure table LUNARZ05N;
02/27/94 02:40:45	2:39:30		0	8.1	475.7													Equator - A	
02/27/94 02:44:00	2:42:45																		Load exposure table LUNARZ15N;
02/27/94 02:44:36	2:43:21		10	8.1	537.1													N10A	
02/27/94 02:48:42	2:47:27		20	8.0	618.5													N20A	
02/27/94 02:49:00	2:47:45																		Laser power OFF
02/27/94 02:49:02	2:47:47																		Load exposure table LUNARZ25N; Select DHU SEQT 9 (Uncompressed UV and IR)
02/27/94 02:53:08	2:51:53		30	8.0	721.4													N30A	
02/27/94 02:53:49	2:52:34																		Load exposure table LUNARZ35N; Select DHU SEQT 10
02/27/94 02:57:30	2:56:15																		
02/27/94 02:57:48	2:56:33																		
02/27/94 02:58:00	2:56:45																		Load exposure table LUNARZ45N; Select DHU SEQT 11
02/27/94 02:58:00	2:56:45		40	8.0	847.1													N40A	
02/27/94 03:03:00	3:01:45																		Load exposure table LUNARZ55N; Select DHU SEQT 12
02/27/94 03:03:25	3:02:10		50	8.0	997.0													N50A	
02/27/94 03:04:00	3:02:45																		Switch to interial pointing (ORBIT33RW)
02/27/94 03:04:01	3:02:46																		
02/27/94 03:09:00	3:07:45																		Load exposure table LUNARZ65N; Select DHU SEQT 19
02/27/94 03:09:31	3:08:16		60	8.0	1171.8													N60A	
02/27/94 03:13:00	3:11:45																		Slew s/c sensors to nadir (ACSMMode=LunarMapping)
02/27/94 03:16:00	3:14:45																		Load exposure table LUNARZ75N; Select DHU SEQT 20
02/27/94 03:16:27	3:15:12		70	8.0	1371.5													N70A	
02/27/94 03:22:11	3:20:56																	GDS	AOS

Orbit 33 Timeline - Type B Orbit

02/27/94 03:24:00	3:22:45										Load exposure table LUNARZ85N; Select DHU SEQT 21				
02/27/94 03:24:24	3:23:09		80	8.2	1594.3					N80A					
02/27/94 03:33:32	3:32:17		89.9	100.1	1836.1					North Pole					
02/27/94 03:33:32	3:32:17	0									Stop imaging, select ST-A; Set SA step rate to HI				
02/27/94 03:33:42	3:32:27	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF				
02/27/94 03:38:32	3:37:17	300									Perform LWIR imaging (DHU SEQT 25)				
02/27/94 03:38:47	3:37:32	15									Perform NIR imaging (DHU SEQT 31)				
02/27/94 03:39:01	3:37:46	15									Select ST-A				
02/27/94 03:39:11	3:37:56	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)				
02/27/94 03:44:01	3:42:46		80	186.9	2088.3					N80D					
02/27/94 03:45:01	3:43:46	360									Select ST-A				
02/27/94 03:52:00	3:50:45										Switch to DHU mode @ 128 kbps				
02/27/94 03:53:00	3:51:45										Downlink SSSDR Segment 5				
02/27/94 03:56:00	3:54:45		70	187.1	2338.8					N70D					
02/27/94 04:09:29	4:08:14		60	187.1	2570.1					N60D					
02/27/94 04:24:23	4:23:08		50	187.0	2761.7					N50D					
02/27/94 04:40:23	4:39:08		40	186.9	2893.1					N40D					
02/27/94 04:42:00	4:40:45										Uplink & schedule L034 scripts				
02/27/94 04:57:04	4:55:49		30	186.8	2948.0					N30D					
02/27/94 04:59:43	4:58:28		28.4	186.7	2949.1					Aposelene					

Orbit 33 Timeline - Type B Orbit

Comment
Downlinking SDR Segment 2 (Orbit 32)
Ground Command
Stop SDR Downlink
Enter occultation
Exit occultation
Standard Prep1 Script
Ground Commanded script
End Prep1 Script
Ground Command
Standard Prep2 Script
Ground Commanded script
End Prep2 Script
Ground Command
Ground Command
L033 Mapping Script
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command

Orbit 33 Timeline - Type B Orbit

Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Ground Command
Data lost. Commanding problems during playback.
Ground Command
Ground Command
Ground Command
Ground Command
Data lost. Commanding problems during playback.
Ground Command
Ground Command
Ground Command
Ground Command

Orbit 33 Timeline - Type B Orbit

Ground Command
End L033 Script
Standard PostMap Script
Ground Commanded script;
Ground Commanded script
Data lost. Commanding problems during playback.
Data lost. Commanding problems during playback.
Slew HGA to Earth
READY FOR DATA DUMP
End PostMap Script
Ground Command
Ground Command
Ground Command

Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/27/94 04:59:44	0:00:00		28.4	186.7	2949.1							Aposelene							Downlinking SSSDR Seg 5 (Orbit 33)
02/27/94 05:13:51	0:14:07		20.0	186.6	2919.3							N20D							
02/27/94 05:21:00	0:21:16												SSDR to IDLE						Ground Command Stop downlinking SSSDR
02/27/94 05:20:53	0:21:09										GDS	MLOSM							
02/27/94 05:21:29	0:21:45										PMK	MLOSM							
02/27/94 05:22:29	0:22:45										MAD	MLOSM							Enter occultation
02/27/94 05:30:07	0:30:23		10.0	186.5	2810.8							N10D							
02/27/94 05:45:24	0:45:40		0.0	186.4	2636.3							Equator - D							
02/27/94 05:59:21	0:59:37		-10.0	186.3	2415.5							S10D							
02/27/94 06:11:48	1:12:04		-20.0	186.2	2169.4							S20D							
																			Standard Prep1 Script
02/27/94 06:17:22	1:17:38	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/27/94 06:22:46	1:23:02		-30.0	186.1	1916.5							S30D							
02/27/94 06:26:59	1:27:15										GDS	MAOSM							Emerge from occultation
02/27/94 06:27:12	1:27:28										PMK	MAOSM							
02/27/94 06:27:22	1:27:37										MAD	MAOSM							
02/27/94 06:32:19	1:32:35		-40.0	186.0	1670.7							S40D							
																			Standard Prep2 Script
02/27/94 06:37:22	1:37:38	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/27/94 06:40:02	1:40:18										MAD	LOS							
02/27/94 06:40:37	1:40:53		-50.0	186.0	1441.5							S50D							
02/27/94 06:44:00	1:44:16												Resume SSSDR Downlink (seg 5)						Ground Command
02/27/94 06:47:52	1:48:08		-60.0	186.0	1234.3							S60D							
																			Standard Prep3 Script
02/27/94 06:49:47	1:50:03	0											Msg "WRNG: Omni/8k in 1 min.."						
02/27/94 06:50:47	1:51:03	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SSSDR
02/27/94 06:51:47	1:52:03	60											Switch to omni antennas						
02/27/94 06:52:47	1:53:03	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMMode=StarPointing, Index=1)						Slew to SGP
02/27/94 06:53:52	1:54:08	65											UV & HR cameras ON						
02/27/94 06:54:13	1:54:29		-70.0	186.0	1051.6							S70D							
02/27/94 06:56:47	1:57:03	175											Select ST-A						

Orbit

02/27/94 06:56:57	1:57:13	10									Initialize filters (DHU SEQT 28); Record in SDDR Segment 1							Start recorder in SDDR Seg 1
02/27/94 06:57:22	1:57:38	25									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
02/27/94 06:57:37	1:57:53	15									Perform NIR imaging (DHU SEQT 31)							
02/27/94 06:57:52	1:58:08	15									Stop imaging, select ST-A							
02/27/94 06:58:02	1:58:18	10									Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)							Slew to nadir
02/27/94 06:59:25	1:59:41	83									Laser power ON							
End Prep3 Script																		
02/27/94 06:59:50	2:00:06		-80.0	186.2	893.9					S80D								
L034 Mapping Script																		
02/27/94 07:02:52	2:03:08	0									Select ST-A							
02/27/94 07:03:02	2:03:17	10									Set SA step rate to LO; Load exposure table LUNARZ85S							
02/27/94 07:03:52	2:04:08	50									Start imaging (DHU SEQT 9)							START MAPPING Uncompressed imaging due to table CEQ_09U not being replaced at end of Orbit 33
02/27/94 07:04:52	2:05:08		-89.9	268.7	760.9					South Pole								
02/27/94 07:05:38	2:05:54		-88.4	2.5	741.4					LDAWN								
02/27/94 07:09:26	2:09:42	334	-80.0	5.1	650.7					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3							
02/27/94 07:13:38	2:13:54	252	-70.0	5.3	562.6					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4							
02/27/94 07:13:39	2:13:55		-70.0	5.3	562.6					S70A								
02/27/94 07:17:33	2:17:49	235								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
02/27/94 07:17:35	2:17:51		-60.0	5.4	495.0					S60A								
02/27/94 07:21:18	2:21:34	224								S50A	Record in SDDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5							SSDR Segment 2
02/27/94 07:21:19	2:21:35		-50.0	5.4	446.7					S50A								
02/27/94 07:24:54	2:25:10	216								S40A	Load exposure table LUNARZ35S							
02/27/94 07:24:55	2:25:10		-40.0	5.4	417.0					S40A								
02/27/94 07:28:26	2:28:42	212								S30A	Load exposure table LUNARZ25S							
02/27/94 07:28:27	2:28:43		-30.0	5.4	405.3					S30A								
02/27/94 07:29:01	2:29:17		-28.4	5.4	405.1					Periselene								
02/27/94 07:31:58	2:32:14	212	-20.0	5.4	411.3					S20A	Load exposure table LUNARZ15S							
02/27/94 07:35:32	2:35:48	214								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
02/27/94 07:35:33	2:35:49		-10.0	5.4	435.1					S10A								
02/27/94 07:39:13	2:39:29	221								MEQA	Record in SDDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7							SSDR Segment 3 UV and IR uncompressed
02/27/94 07:39:14	2:39:30		0.0	5.3	477.3					Equator - A								
02/27/94 07:43:05	2:43:21	232	10.0	5.3	538.5					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							Resume compression

Orbit

02/27/94 07:47:11	2:47:27	246								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								UV and IR uncompressed
02/27/94 07:47:12	2:47:28		20.0	5.3	619.9					N20A									
02/27/94 07:48:11	2:48:27	60									Laser power OFF								
02/27/94 07:51:37	2:51:53	206								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								Resume compression
02/27/94 07:51:38	2:51:54		30.0	5.3	722.7					N30A									
02/27/94 07:53:00	2:53:16										Uplink compression tables (dump_quant_tbls, dump_scalar_tbls, dump_huff_tbls)								Ground Command
02/27/94 07:56:30	2:56:46	293	40.0	5.3	848.2					N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4
02/27/94 08:01:55	3:02:11	325	50.0	5.2	997.8					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
02/27/94 08:08:01	3:08:17	366	60.0	5.2	1172.4					N60A	Lunar Auto Exposure ON; Select DHU SEQT 19								Start Lunar Auto Exposure Test
02/27/94 08:14:57	3:15:13	416	70.0	5.3	1371.8					N70A	Select DHU SEQT 20								
02/27/94 08:22:53	3:23:09	476								N80A	Select DHU SEQT 21								
02/27/94 08:22:54	3:23:10		80.0	5.4	1594.3					N80A									
02/27/94 08:32:02	3:32:18	548	89.9	97.1	1835.5					North Pole	Lunar Auto Exposure OFF								End Lunar Auto Exposure Test
																			End L034 Script
																			Standard PostMap Script
02/27/94 08:33:01	3:33:17	0									Stop imaging, select ST-A; Set SA step rate to HI								
02/27/94 08:33:11	3:33:27	10									Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF								Slew to Vega
02/27/94 08:33:38	3:33:54		88.4	181.7	1875.8					LDUSK									
02/27/94 08:38:01	3:38:16	290									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
02/27/94 08:38:15	3:38:31	15									Perform NIR imaging (DHU SEQT 31)								
02/27/94 08:38:30	3:38:46	15									Select ST-A								
02/27/94 08:38:40	3:38:56	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)								Slew HGA to Earth
02/27/94 08:42:31	3:42:47		80.0	184.3	2087.3					N80D									
02/27/94 08:44:00	3:44:16										Switch to HGA								Ground Command
02/27/94 08:44:30	3:44:46	350									Select ST-A								
																			End PostMap Script
02/27/94 08:45:00	3:45:16										Switch to DHU mode @ 128 kbps								Ground Command
02/27/94 08:47:00	3:47:16										Downlink SSDR Segment 4								Ground Command
02/27/94 08:50:00	3:50:16										Load CEQ_07.UMI into SEQT 7								Ground Command
02/27/94 08:54:29	3:54:45		70.0	184.4	2337.4					N70D									
02/27/94 08:57:00	3:57:16										Uplink & schedule L035 scripts								Ground Command

Orbit

02/27/94 09:01:00	4:01:16															Downlink SSDR Segment 3							Ground Command		
02/27/94 09:07:57	4:08:13		60.0	184.4	2568.3										N60D										
02/27/94 09:22:50	4:23:06		50.0	184.3	2759.7										N50D										
02/27/94 09:38:50	4:39:06		40.0	184.2	2891.0										N40D										
02/27/94 09:49:00	4:49:16																								
02/27/94 09:55:29	4:55:45		30.0	184.0	2946.1										N30D										
02/27/94 09:56:49	4:57:05													CAN	AOS										
02/27/94 09:58:13	4:58:29		28.4	184.0	2947.2										Aposelene										

Orbit 35 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/27/94 09:58:13	0:00:00		28.4	184.0	2947.2							Aposelene							Downlinking SDR Segment 2 (Orbit 34)
02/27/94 10:12:14	0:14:00		20.0	183.9	2917.8							N20D							
02/27/94 10:16:06	0:17:53										CAN	MLOSM							
02/27/94 10:18:39	0:20:26										GDS	MLOSM							
02/27/94 10:19:00	0:20:47												SSDR to IDLE - stop SDR downlink						Ground Command
02/27/94 10:19:04	0:20:51										PMK	MLOSM							Enter occultation
02/27/94 10:28:30	0:30:17		10.0	183.8	2809.9							N10D							
02/27/94 10:43:46	0:45:33		0.0	183.6	2636.1							Equator - D							
02/27/94 10:57:43	0:59:30		-10.0	183.5	2416.0							S10D							
02/27/94 11:10:11	1:11:57		-20.0	183.4	2170.5							S20D							
																			Standard Prep1 Script
02/27/94 11:16:47	1:18:34	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/27/94 11:21:08	1:22:54		-30.0	183.4	1918.0							S30D							
02/27/94 11:24:13	1:26:00										CAN	MAOSM							Exit occultation
02/27/94 11:26:05	1:27:52										GDS	MAOSM							
02/27/94 11:26:12	1:27:59										PMK	MAOSM							
02/27/94 11:30:42	1:32:29		-40.0	183.3	1672.5							S40D							
02/27/94 11:32:00	1:33:47												Resume SDR Downlink (seg 2)						Ground Command
																			Standard Prep2 Script
02/27/94 11:36:47	1:38:34	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/27/94 11:39:01	1:40:47		-50.0	183.2	1443.5							S50D							
02/27/94 11:41:00	1:42:47												Downlink SDR Segment 1						Ground Command
02/27/94 11:44:19	0:21:50										PMK	LOS							
02/27/94 11:46:16			-60.0	183.2	1236.4							S60D							
																			Standard Prep3 Script
02/27/94 11:49:12	1:50:59	0											Msg "WRNG: Omni/8k in 1 min."; SSDR to IDLE						Stop of dump should have been one minute later
02/27/94 11:50:12	1:51:59	60											Switch to 8 kbps bypass mode						
02/27/94 11:51:12	1:52:59	60											Switch to omni antennas						
02/27/94 11:52:12	1:53:59	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMODE=StarPointing, Index=1)						Slew to SGP
02/27/94 11:52:37	1:54:24		-70.0	183.3	1053.8							S70D							
02/27/94 11:53:17	1:55:04	65											UV & HR cameras ON						

Orbit 35 Timeline - Type B Orbit

02/27/94 11:56:12	1:57:59	175								Select ST-A									
02/27/94 11:56:22	1:58:09	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 5									HiRes Camera left in filter position 6
02/27/94 11:56:47	1:58:34	25								Perform LWIR imaging (DHU SEQT 25)									Data lost due to communication problems
02/27/94 11:57:02	1:58:49	15								Perform NIR imaging (DHU SEQT 31)									Data lost due to communication problems
02/27/94 11:57:17	1:59:04	15								Stop imaging, select ST-A									
02/27/94 11:57:27	1:59:14	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)									Slew to nadir
02/27/94 11:58:02	1:59:49	35								Laser power ON									
End Prep3 Script																			
02/27/94 11:58:15	2:00:02			-80.0	183.4	896.2				S80D									
L035 Mapping Script																			
02/27/94 12:01:17	2:03:03	0								Select ST-A; Load exposure table LUNARZ85S									
02/27/94 12:02:17	2:04:04	60								Start imaging (DHU SEQT16)									START MAPPING Data lost due to communication problems
02/27/94 12:03:17	2:05:04	60								Set SA step rate to LO									
02/27/94 12:03:18	2:05:04			-89.9	278.3	762.8				South Pole									
02/27/94 12:04:04	2:05:50			-88.4	359.9	743.6				LDAWN									
02/27/94 12:07:52	2:09:38	275		-80.0	2.4	652.9				S80A									
02/27/94 12:12:04	2:13:51	252								S70A									
02/27/94 12:12:05	2:13:51			-70.0	2.6	564.7				S70A									
02/27/94 12:16:01	2:17:48	237		-60.0	2.7	497.0				S60A									
02/27/94 12:17:00	2:18:47									Ranging A ON									Ground Command
02/27/94 12:19:45	2:21:31	224								S50A									SSDR Segment 6
02/27/94 12:19:46	2:21:33			-50.0	2.7	448.7				S50A									
02/27/94 12:23:21	2:25:08	216								S40A									
02/27/94 12:23:22	2:25:09			-40.0	2.7	418.9				S40A									
02/27/94 12:26:54	2:28:41	213		-30.0	2.7	407.1				S30A									
02/27/94 12:27:30	2:29:16			-28.3	2.7	406.9				Periselene									
02/27/94 12:28:07	2:29:54																		Data lost due to communication problems
02/27/94 12:30:26	2:32:13	212		-20.0	2.6	413.0				S20A									
02/27/94 12:32:30	2:34:17																		Valid data resumes
02/27/94 12:34:00	2:35:46	214								S10A									
02/27/94 12:34:01	2:35:48			-10.0	2.6	436.8				S10A									
02/27/94 12:34:31	2:36:18																		Data lost due to communication problems

Orbit 35 Timeline - Type B Orbit

02/27/94 12:37:42	2:39:29	222	0.0	2.6	478.9				Equator - A	Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7									SDDR Segment 7
02/27/94 12:41:33	2:43:20	231								Load exposure table LUNARZ15N; Select DHU SEQT 8									
02/27/94 12:41:34	2:43:21		10.0	2.6	540.0				N10A										
02/27/94 12:45:40	2:47:26	247								Load exposure table LUNARZ25N; Select DHU SEQT 9									
02/27/94 12:45:41	2:47:28		20.0	2.6	621.3				N20A										
02/27/94 12:46:40	2:48:27	60								Laser power OFF									
02/27/94 12:50:07	2:51:54	207	30.0	2.5	723.9				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10									
02/27/94 12:54:59	2:56:45	292							N40A	Switch to inertial pointing (ORBIT35RW); Load exposure table LUNARZ45N; Select DHU SEQT 11									Initiate oblique viewing
02/27/94 12:55:00	2:56:47		40.0	2.5	849.3				N40A										
02/27/94 13:00:24	3:02:10	325							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12									
02/27/94 13:00:25	3:02:12		50.0	2.5	998.7				N50A										
02/27/94 13:06:30	3:08:16	366							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19									
02/27/94 13:06:31	3:08:18		60.0	2.5	1173.0				N60A										
02/27/94 13:09:58	3:11:45	208	65.0							Slew s/c sensors to nadir (ACSMODE=LunarMapping)									End oblique viewing - resume nadir pointing
02/27/94 13:13:26	3:15:13	208							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20									
02/27/94 13:13:27	3:15:13		70.0	2.5	1372.1				N70A										
02/27/94 13:21:23	3:23:09	477							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21									
02/27/94 13:21:24	3:23:11		80.0	2.7	1594.2				N80A										
																			End L037 Script
02/27/94 13:28:00	3:29:47									Set SA step rate to HI									Ground Command
																			Standard PostMap Script
02/27/94 13:30:31	3:32:17	0	89.9	88.8	1834.8				North Pole	Stop imaging, select ST-A; Set SA step rate to HI									
02/27/94 13:30:41	3:32:27	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF									Slew to Vega
02/27/94 13:32:07	3:33:54		88.4	179.1	1875.1				LDUSK										
02/27/94 13:35:30	3:37:17	300								Perform LWIR imaging (DHU SEQT 25)									Data lost due to communication problems
02/27/94 13:35:45	3:37:32	15								Perform NIR imaging (DHU SEQT 31)									Data lost due to communication problems
02/27/94 13:36:00	3:37:47	15								Select ST-A									

Orbit 35 Timeline - Type B Orbit

02/27/94 13:36:10	3:37:57	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
02/27/94 13:41:00	3:42:47		80.0	181.5	2086.4					N80D							
02/27/94 13:43:00	3:44:47										Switch to HGA						Ground Command
02/27/94 13:44:00	3:45:47										Ranging A OFF						Ground Command
02/27/94 13:45:00	3:46:47										Switch to DHU mode @ 128 kbps						Ground Command
02/27/94 13:46:50	3:48:37	350									Select ST-A						
End PostMap Script																	
02/27/94 13:50:00	3:51:47										Downlink SDDR Seg 1 (Orbit 34)						Ground Command
02/27/94 13:52:57	3:54:44		70.0	181.7	2336.0					N70D							
02/27/94 13:56:00	3:57:47										Load CEQ_09.UMI into SEQT 9						Ground Command
02/27/94 14:03:00	4:04:47										Uplink & schedule L036 scripts						Ground Command
02/27/94 14:06:25	4:08:12		60.0	181.6	2566.5					N60D							
02/27/94 14:21:17	4:23:04		50.0	181.6	2757.7					N50D							
02/27/94 14:26:58	4:28:45								GDS	LOS							
02/27/94 14:30:00	4:31:47										SIP RESET						Ground Command - due to memory problems
02/27/94 14:50:00	4:51:47										Update state vector (GNC53_27FEB_1445)						Ground Command - time approximate
02/27/94 14:37:15	4:39:02		40.0	181.4	2888.9					N40D							
02/27/94 14:53:54	4:55:41		30.0	181.3	2944.2					N30D							
02/27/94 14:56:41	4:58:28		28.3	181.3	2945.4					Aposelene							

Orbit 36 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HIRes	NIR	LWIR	Laser
02/27/94 14:56:41	0:00:00		28.3	181.3	2945.4							Aposelene						
02/27/94 15:10:38	0:13:57		20.0	181.2	2916.4							N20D						
02/27/94 15:12:00	0:15:18												SSDR to IDLE					
02/27/94 15:14:09	0:17:28										CAN	MLOSM						
02/27/94 15:26:53	0:30:11		10.0	181.0	2809.1							N10D						
02/27/94 15:42:09	0:45:28		0.0	180.9	2635.9							Equator - D						
02/27/94 15:45:22	0:48:41		-2.2	180.9	2590.4							INPM						
02/27/94 15:53:15	0:56:34		-7.9	180.8	2466.0							OUTPM						
02/27/94 15:56:06	0:59:24		-10.0	180.8	2416.5							S10D						
02/27/94 16:08:33	1:11:52		-20.0	180.7	2171.5							S20D						
02/27/94 16:16:29	1:19:48	0											NIR camera & cryocooler ON; SA mode to AUTO					
02/27/94 16:19:31	1:22:50		-30.0	180.6	1919.5							S30D						
02/27/94 16:23:05	1:26:24										CAN	MAOSM						
02/27/94 16:29:05	1:32:23		-40.0	180.6	1674.3							S40D						
02/27/94 16:30:00	1:33:18												Downlink SDR Segment 6 (Orbit 35)					
02/27/94 16:36:14	1:39:33	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed					
02/27/94 16:37:24	1:40:43		-50.0	180.5	1445.5							S50D						
02/27/94 16:44:40	1:47:59		-60.0	180.5	1238.6							S60D						
02/27/94 16:47:39	1:50:57	0											Msg "WRNG: Omni/8k in 1 min.."					
02/27/94 16:48:39	1:51:58	60											SSDR to IDLE; Switch to 8 kbps bypass mode					
02/27/94 16:49:00	1:52:19												Ranging A ON					
02/27/94 16:49:39	1:52:58	60											Switch to omni antennas					
02/27/94 16:50:39	1:53:58	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMODE=StarPointing, Index=1)					
02/27/94 16:51:02	1:54:21		-70.0	180.5	1056.1							S70D						
02/27/94 16:51:44	1:55:03	65											UV & HR cameras ON					
02/27/94 16:54:39	1:57:58	175											Select ST-A					
02/27/94 16:54:49	1:58:08	10											Initialize filters (DHU SEQT 28); Record in SDR Segment 1					

Orbit 36 Timeline - Type A Orbit

02/27/94 16:55:14	1:58:33	25																	Perform LWIR imaging (DHU SEQT 25)
02/27/94 16:55:29	1:58:48	15																	Perform NIR imaging (DHU SEQT 31)
02/27/94 16:55:44	1:59:03	15																	Stop imaging, select ST-A
02/27/94 16:55:54	1:59:22	10																	Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)
02/27/94 16:56:40	1:59:58		-80.0	180.7	898.4					S80D									
02/27/94 16:57:17	2:00:45	83																	Laser power ON
02/27/94 16:59:44	2:03:02	0																	Select ST-A
02/27/94 16:59:53	2:03:12	10																	Set SA step rate to LO; Load exposure table LUNARZ85S
02/27/94 17:00:43	2:04:02	50																	Start imaging (DHU SEQT 9)
02/27/94 17:01:43	2:05:01		-89.9	263.4	765.3					South Pole									
02/27/94 17:02:29	2:05:47		-88.4	357.2	745.9					LDAWN									
02/27/94 17:05:18	2:08:37	275								S80A									Load exposure table LUNARZ75S; Select DHU SEQT 3
02/27/94 17:06:18	2:09:36		-80.0	359.7	655.1					S80A									
02/27/94 17:09:32	2:12:51	254								S70A									Load exposure table LUNARZ65S; Select DHU SEQT 4
02/27/94 17:10:31	2:13:49		-70.0	359.9	566.8					S70A									
02/27/94 17:13:28	2:16:47	236								S60A									Load exposure table LUNARZ55S; Select DHU SEQT 6
02/27/94 17:14:28	2:17:47		-60.0	359.9	499.1					S60A									
02/27/94 17:17:13	2:20:32	225								S50A									Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5
02/27/94 17:18:13	2:21:31		-50.0	359.9	450.7					S50A									
02/27/94 17:20:51	2:24:10	218								S40A									Load exposure table LUNARZ35S
02/27/94 17:21:50	2:25:09		-40.0	359.9	420.8					S40A									
02/27/94 17:24:23	2:27:42	212								S30A									Load exposure table LUNARZ25S
02/27/94 17:25:22	2:28:41		-30.0	359.9	409.0					S30A									
02/27/94 17:25:58	2:29:16		-28.3	359.9	408.7					Periselene									
02/27/94 17:27:55	2:31:14	212								S20A									Load exposure table LUNARZ15S
02/27/94 17:28:54	2:32:13		-20.0	359.9	414.8					S20A									
02/27/94 17:31:30	2:34:49	215								S10A									Load exposure table LUNARZ05S; Select DHU SEQT 6
02/27/94 17:32:29	2:35:48		-10.0	359.9	438.5					S10A									
02/27/94 17:35:12	2:38:31	222								MEQA									Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7
02/27/94 17:36:11	2:39:29		0.0	359.9	480.5					Equator-A									
02/27/94 17:39:04	2:42:23	232								N10A									Load exposure table LUNARZ15N; Select DHU SEQT 8
02/27/94 17:40:03	2:43:21		10.0	359.9	541.5					N10A									

Orbit 36 Timeline - Type A Orbit

02/27/94 17:43:11	2:46:30	247								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
02/27/94 17:44:10	2:47:28		20.0	359.8	622.6					N20A							
02/27/94 17:44:11	2:47:30	60									Laser power OFF						
02/27/94 17:47:38	2:50:57	207								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
02/27/94 17:48:37	2:51:56		30.0	359.8	725.1					N30A							
02/27/94 17:52:30	2:55:49	292								N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11						
02/27/94 17:53:29	2:56:47		40.0	359.8	850.3					N40A							
02/27/94 17:57:56	3:01:15	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12						
02/27/94 17:58:55	3:02:13		50.0	359.8	999.5					N50A							
02/27/94 18:04:02	3:07:21	366								N60A	Load exposure table LUNARZ65N; DHU SEQT 13						
02/27/94 18:05:01	3:08:19		60.0	359.8	1173.6					N60A							
02/27/94 18:10:58	3:14:17	416								N70A	Load exposure table LUNARZ75N; DHU SEQT 14						
02/27/94 18:11:57	3:15:15		70.0	359.8	1372.3					N70A							
02/27/94 18:18:54	3:22:13	476								N80A	Load exposure table LUNARZ85N; DHU SEQT 15						
02/27/94 18:19:53	3:23:11		80.0	360.0	1594.1					N80A							
02/27/94 18:29:01	3:32:20		89.9	89.2	1834.5					North Pole							
02/27/94 18:29:02	3:32:20	0									Stop imaging, select ST-A; Set SA step rate to HI						
02/27/94 18:29:12	3:32:30	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF						
02/27/94 18:30:36	3:33:54		88.4	176.4	1874.4					LDUSK							
02/27/94 18:34:11	3:37:30	300									Perform LWIR imaging (DHU SEQT 25)						
02/27/94 18:34:26	3:37:45	15									Perform NIR imaging (DHU SEQT 31)						
02/27/94 18:34:41	3:38:00	15									Select ST-A						
02/27/94 18:34:51	3:38:10	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						
02/27/94 18:39:29	3:42:47		80.0	178.8	2085.4					N80D							
02/27/94 18:40:51	3:44:10	360									Select ST-A						
02/27/94 18:42:00	3:45:19										Switch to DHU mode @ 128 kbps; Switch to HGA						
02/27/94 18:45:00	3:48:19										Ranging A OFF						

Orbit 36 Timeline - Type A Orbit

02/27/94 18:50:00	3:53:18										Redownload bad data from SSDR Segment 6 (Orbit 35)						
02/27/94 18:51:26	3:54:44		70.0	179.0	2334.6					N70D							
02/27/94 19:04:53	4:08:11		60.0	178.9	2564.7					N60D							
02/27/94 19:19:43	4:23:01		50.0	178.8	2755.6					N50D							
02/27/94 19:20:00	4:23:18										Downlink SSDR Segment 1 (Orbit 36)						
02/27/94 19:31:00	4:34:19										Uplink & schedule L037 scripts						
02/27/94 19:35:41	4:38:59		40.0	178.7	2886.9					N40D							
02/27/94 19:40:00	4:43:19										Downlink SSDR Segment 2						
02/27/94 19:52:18	4:55:36		30.0	178.6	2942.4					N30D							
02/27/94 19:55:10	4:58:29		28.3	178.6	2943.6					Aposelene							

Orbit 36 Timeline - Type A Orbit

Comment
Downlinking SDR Segment 1 (Orbit 34)
Ground Command - stop data dump
Enter occultation
Enter penumbra
Exit penumbra
Standard Prep1 Script
End Prep1 Script
Exit occultation
Ground Command
Standard Prep2 Script
End Prep2 Script
Standard Prep3 Script
Stop downlinking SDR
Ground Command
Slew to SGP
Start SDR in Segment 1

Orbit 36 Timeline - Type A Orbit

Dark Field imaging starts
Slew to nadir
End Prep3 Script
L036 Mapping Script
START MAPPING
SSDR Segment 2
Data lost due to communication problems.

Orbit 36 Timeline - Type A Orbit

SSDR Segment 4
End L036 Script
Standard PostMap Script
Slew to Vega
Data lost due to commutation problems.
Data lost due to commutation problems.
Slew HGA to Earth
READY FOR DATA DUMP
End PostMap Script
Ground Command
Ground Command

Last Update: 02/01/2021 21:22:04
By: tcs

Orbit 36
Actual Timeline

Orbit 36 Timeline - Type A Orbit

Ground Command
Ground Command
Ground Command
Ground Command

Orbit 37 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/27/94 19:55:10	0:00:00		28.3	178.6	2943.6							Aposelene							Downlinking SSSDR Segment 2 (Orbit 36)
02/27/94 20:09:01	0:13:50		20.0	178.5	2914.9							N20D							
02/27/94 20:12:00	0:16:49												SSDR to IDLE						Ground Command - stop data dump
02/27/94 20:12:33	0:17:23										CAN	MLOSM							Enter occultation
02/27/94 20:25:16	0:30:05		10.0	178.3	2808.2							N10D							
02/27/94 20:40:31	0:45:20		0.0	178.2	2635.7							Equator - D							
02/27/94 20:41:21	0:46:10		-0.6	178.2	2624.4							INPM							Enter penumbra
02/27/94 20:53:47	0:58:36		-9.5	178.1	2428.9							OUTPM							Exit penumbra
02/27/94 20:54:28	0:59:17		-10.0	178.1	2416.9							S10D							
02/27/94 21:06:56	1:11:45		-20.0	178.0	2172.6							S20D							
																			Standard Prep1 Script
02/27/94 21:13:39	1:18:29	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/27/94 21:17:54	1:22:43		-30.0	177.9	1920.9							S30D							
02/27/94 21:22:01	1:26:51										MAD	MAOSM							Exit occultation
02/27/94 21:26:00	1:30:49												Resume SSSDR Downlink (seg 6); Update state vector (GNC53_27FEB_2115)						Ground Command
02/27/94 21:27:28	1:32:17		-40.0	177.8	1676.1							S40D							
																			Standard Prep2 Script
02/27/94 21:33:39	1:38:29	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/27/94 21:35:48	1:40:37		-50.0	177.8	1447.6							S50D							
02/27/94 21:43:04	1:47:53		-60.0	177.8	1240.8							S60D							
																			Standard Prep3 Script
02/27/94 21:46:04	1:50:54	0											Msg "WRNG: Omni/8k in 1 min.."						
02/27/94 21:47:04	1:51:54	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SSSDR
02/27/94 21:48:04	1:52:53	60											Switch to omni antennas						
02/27/94 21:49:04	1:53:54	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMMode=StarPointing, Index=1)						Slew to SGP
02/27/94 21:49:27	1:54:16		-70.0	177.8	1058.3							S70D							
02/27/94 21:50:09	1:54:58	65											UV & HR cameras ON						
02/27/94 21:53:04	1:57:54	175											Select ST-A						
02/27/94 21:53:14	1:58:03	10											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 5						Start recorder in Segment 5
02/27/94 21:53:39	1:58:29	25											Perform LWIR imaging (DHUSEL25)						Dark Field imaging starts

Orbit 37 Timeline - Tyne B Orbit

02/27/94 21:53:54	1:58:44	15										Perform NIR imaging (DHUSEL31)				
02/27/94 21:54:09	1:58:58	15										Stop imaging, select ST-A				
02/27/94 21:54:19	1:59:08	10										Deselect ST; Slew s/c sensors to nadir (ACSMMode=LunarMapping)				Slew to nadir
02/27/94 21:55:05	1:59:54		-80.0	178.0	900.7					S80D						
02/27/94 21:55:42	2:00:31	83										Laser power ON				
																End Prep3 Script
																L037 Mapping Script
02/27/94 21:58:09	2:02:58	0										Select ST-A; Load exposure table LUNARZ85S				
02/27/94 21:59:09	2:03:58	60										Start imaging (DHU SEQT16)				START MAPPING
02/27/94 22:00:09	2:04:58	60	-89.9	270.8	767.3					South Pole		Set SA step rate to LO				
02/27/94 22:00:55	2:05:44		-88.4	354.4	748.1					LDAWN						
02/27/94 22:04:44	2:09:33	275	-80.0	356.9	657.2					S80A		Load exposure table LUNARZ75S; Select DHU SEQT 17				
02/27/94 22:08:58	2:13:47	254	-70.0	357.2	568.9					S70A		Load exposure table LUNARZ65S; Select DHU SEQT 18				
02/27/94 22:12:55	2:17:44	237	-60.0	357.2	501.1					S60A		Load exposure table LUNARZ55S; Select DHU SEQT 6				
02/27/94 22:16:40	2:21:29	225	-50.0	357.2	452.7					S50A		Record in SDDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 6
02/27/94 22:20:17	2:25:06	217	-40.0	357.2	422.7					S40A		Load exposure table LUNARZ35S				
02/27/94 22:23:50	2:28:39	213	-30.0	357.2	410.8					S30A		Load exposure table LUNARZ25S				
02/27/94 22:24:27	2:29:16		-28.3	357.2	410.5					Periselene						
02/27/94 22:27:22	2:32:11	212	-20.0	357.2	416.6					S20A		Load exposure table LUNARZ15S				
02/27/94 22:30:58	2:35:47	216	-10.0	357.2	440.2					S10A		Load exposure table LUNARZ05S; Select DHU SEQT 6				
02/27/94 22:34:39	2:39:28	221	0.0	357.2	482.1					Equator - A		Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 7
02/27/94 22:38:32	2:43:21	233	10.0	357.1	543.0					N10A		Load exposure table LUNARZ15N; Select DHU SEQT 8				
02/27/94 22:42:39	2:47:28	247	20.0	357.1	624.0					N20A		Load exposure table LUNARZ25N; Select DHU SEQT 9				
02/27/94 22:43:39	2:48:29	60										Laser power OFF				
02/27/94 22:47:06	2:51:55	207	30.0	357.1	726.3					N30A		Load exposure table LUNARZ35N; Select DHU SEQT 10				
02/27/94 22:51:59	2:56:48	293	40.0	357.1	851.4					N40A		Switch to inertial pointing (ORBIT37RW); Load exposure table LUNARZ45N; Select DHU SEQT 11				Initiate oblique viewing
02/27/94 22:57:24	3:02:13	325								N50A		Load exposure table LUNARZ55N; Select DHU SEQT 12				
02/27/94 22:57:25	3:02:14		50.0	357.0	1000.4					N50A						
02/27/94 23:03:31	3:08:20	367	60.0	357.0	1174.2					N60A		Load exposure table LUNARZ65N; Select DHU SEQT 19				
02/27/94 23:06:59	3:11:48	208	65.0									Slew s/c sensors to nadir (ACSMMode=LunarMapping)				End oblique viewing - resume nadir pointing

Orbit 37 Timeline - Type B Orbit

02/27/94 23:10:27	3:15:16	208	70.0	357.1	1372.6					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						
02/27/94 23:18:23	3:23:12	476	80.0	357.2	1594.0					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
End L037 Script																	
Standard PostMap Script																	
02/27/94 23:27:30	3:32:19	0	89.9	81.4	1833.8					North Pole	Stop imaging, select ST-A; Set SA step rate to HI						
02/27/94 23:27:40	3:32:27	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF						Slew to Vega
02/27/94 23:29:06	3:33:55		88.4	173.6	1873.7					LDUSK							
02/27/94 23:32:30	3:37:19	300									Perform LWIR imaging (DHUSEL25)						Dark Field imaging starts
02/27/94 23:32:44	3:37:34	15									Perform NIR imaging (DHUSEL31)						
02/27/94 23:32:59	3:37:49	15									Select ST-A						
02/27/94 23:33:09	3:37:57	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
02/27/94 23:37:58	3:42:47		80.0	176.1	2084.5					N80D							
02/27/94 23:38:59	3:43:49	360									Select ST-A						READY FOR DATA DUMP
End PostMap Script																	
02/27/94 23:40:00	3:44:47										Switch to DHU mode @ 128 kbps; Switch to HGA						Ground Command
02/27/94 23:43:43	3:48:32										Downlink SDR Segment 6						Ground Command
02/27/94 23:49:55	3:54:44		70.0	176.2	2333.2					N70D							
02/28/94 00:03:21	4:08:10		60.0	176.2	2563.0					N60D							
02/28/94 00:18:10	4:22:59		50.0	176.1	2753.6					N50D							
02/28/94 00:22:00	4:26:49										Downlink SDR Segment 7						Ground Command
02/28/94 00:34:07	4:38:56		40.0	176.0	2884.8					N40D							
02/28/94 00:39:00	4:43:50										Update state vector (GNC53_28FEB_0000)						Ground Command
02/28/94 00:45:00	4:49:50										Uplink & schedule L037 scripts						Ground Command
02/28/94 00:50:43	4:55:32		30.0	175.9	2940.5					N30D							
02/28/94 00:53:39	4:58:28		28.3	175.8	2941.8					Aposelene							

Orbit 38 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/28/94 00:53:59	0:00:00		28.3	175.8	2941.8							Aposelene							Downlinking SSSR Segment 7 (Orbit 37)
02/28/94 01:02:00	0:08:01												Downlink SSSR Segment 5						Ground Command
02/28/94 01:07:25	0:13:26		20.0	175.7	2913.5							N20D							
02/28/94 01:12:00	0:18:01												SSDR to IDLE						Ground Command - stop downlink
02/28/94 01:12:33	0:18:34										MAD	MLOSM							Enter occultation
02/28/94 01:23:39	0:30:00		10.0	175.6	2807.4							N10D							
02/28/94 01:37:59	0:44:20		0.6	175.5	2647.8							INPM							Enter penumbra
02/28/94 01:38:54	0:45:14		0.0	175.5	2635.5							Equator - D							
02/28/94 01:44:38	0:50:59		-4.0	175.4	2553.0							INUM							Enter umbra
02/28/94 01:47:13	0:53:34		-5.8	175.4	2512.3							OUTUM							Exit umbra
02/28/94 01:52:50	0:59:11		-10.0	175.4	2417.4							S10D							Exit penumbra
02/28/94 01:53:40	1:00:01		-10.6	175.3	2402.6							OUTPM							Exit penumbra
02/28/94 02:05:18	1:11:38		-20.0	175.3	2173.6							S20D							
																			Standard Prep1 Script
02/28/94 02:12:06	1:18:27	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/28/94 02:16:17	1:22:37		-30.0	175.2	1922.4							S30D							
02/28/94 02:19:36	1:25:36										PMK	MAOSM							Exit occultation
02/28/94 02:20:15	1:26:16										MAD	MAOSM							
02/28/94 02:23:00	1:29:01												Resume SSSR Downlink (seg 5)						Ground Command
02/28/94 02:25:51	1:32:12		-40.0	175.1	1677.9							S40D							
																			Standard Prep2 Script
02/28/94 02:32:06	1:38:27	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/28/94 02:34:12	1:40:33		-50.0	175.1	1449.6							S50D							
02/28/94 02:41:28	1:47:48		-60.0	175.1	1242.9							S60D							
																			Standard Prep3 Script
02/28/94 02:44:06	1:50:27	0											Msg "WRNG: Omni/8k in 1 min.."						
02/28/94 02:45:06	1:51:27	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SSSR
02/28/94 02:46:06	1:52:27	60											Switch to omni antennas						
02/28/94 02:47:06	1:53:27	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMMode=StarPointing, Index=1)						Slew to SGP
02/28/94 02:47:51	1:54:11		-70.0	175.1	1060.5							S70D							
02/28/94 02:48:11	1:54:32	65											UV & HR cameras ON						
02/28/94 02:51:06	1:57:27	175											Select ST-A						

Orbit 38 Timeline - Type A Orbit

02/28/94 02:51:16	1:57:37	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 1									Start SDR in Segment 1
02/28/94 02:51:41	1:58:02	25								Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts
02/28/94 02:51:56	1:58:17	15								Perform NIR imaging (DHU SEQT 31)									
02/28/94 02:52:11	1:58:32	15								Stop imaging, select ST-A									
02/28/94 02:52:21	1:58:42	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)									Slew to nadir
02/28/94 02:53:31	1:59:52		-80.0	175.3	902.9				S80D										
02/28/94 02:53:44	2:00:05	83								Laser power ON									
																			End Prep3 Script
																			L038 Mapping Script
02/28/94 02:56:35	2:02:56	0								Select ST-A									
02/28/94 02:56:46	2:03:06	10								Set SA step rate to LO; Load exposure table LUNARZ85S									
02/28/94 02:57:36	2:03:56	50								Start imaging (DHU SEQT 9)									START MAPPING
02/28/94 02:58:35	2:04:56		-89.9	275.0	769.4				South Pole										
02/28/94 02:59:20	2:05:41		-88.4	351.5	750.4				LDAWN										
02/28/94 03:03:10	2:09:30		-80.0	354.2	659.4				S80A										
02/28/94 03:03:11	2:09:32	335							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3									
02/28/94 03:07:24	2:13:45		-70.0	354.4	571.0				S70A										
02/28/94 03:07:25	2:13:46	254							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4									
02/28/94 03:11:21	2:17:42	236							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6									
02/28/94 03:11:22	2:17:42		-60.0	354.5	503.1				S60A										
02/28/94 03:15:06	2:21:26	225							S50A	Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5									SSDR Segment 2
02/28/94 03:15:07	2:21:28		-50.0	354.5	454.6				S50A										
02/28/94 03:18:44	2:25:04	218							S40A	Load exposure table LUNARZ35S									
02/28/94 03:18:45	2:25:06		-40.0	354.5	424.6				S40A										
02/28/94 03:22:12	2:28:33	212							S30A	Load exposure table LUNARZ25S									
02/28/94 03:22:18	2:28:38		-30.0	354.5	412.6				S30A										
02/28/94 03:22:56	2:29:16		-28.2	354.5	412.3				Periselene										
02/28/94 03:25:50	2:32:11		-20.0	354.5	418.3				S20A										
02/28/94 03:25:50	2:32:11	212							S20A	Load exposure table LUNARZ15S									
02/28/94 03:29:25	2:35:46	215							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6									
02/28/94 03:29:26	2:35:46		-10.0	354.4	441.8				S10A										
02/28/94 03:33:07	2:39:27	222							MEQA	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7									SSDR Segment 3
02/28/94 03:33:08	2:39:29		0.0	354.4	483.6				Equator - A										
02/28/94 03:37:01	2:43:21		10.0	354.4	544.5				N10A										

Orbit 38 Timeline - Type A Orbit

02/28/94 03:37:09	2:43:29	232							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8									
02/28/94 03:41:06	2:47:26	247							N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9									Uncompressed images from 20N to 30N
02/28/94 03:41:08	2:47:28		20.0	354.4	625.4				N20A										
02/28/94 03:42:06	2:48:27	60								Laser power OFF									
02/28/94 03:45:33	2:51:54	207							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10									
02/28/94 03:45:35	2:51:56		30.0	354.4	727.6				N30A										
02/28/94 03:50:25	2:56:45	292							N40A	Load CEQ_09.UMI into SEQT 9; Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11									SSDR Segment 4
02/28/94 03:50:29	2:56:50		40.0	354.3	852.4				N40A										
02/28/94 03:55:51	3:02:12	326							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12									
02/28/94 03:55:54	3:02:15		50.0	354.3	1001.2				N50A										
02/28/94 04:01:57	3:08:18	366							N60A	Load exposure table LUNARZ65N; DHU SEQT 13									
02/28/94 04:02:01	3:08:21		60.0	354.3	1174.8				N60A										
02/28/94 04:08:53	3:15:13	416							N70A	Load exposure table LUNARZ75N; DHU SEQT 14									
02/28/94 04:08:57	3:15:18		70.0	354.3	1372.9				N70A										
02/28/94 04:16:49	3:23:09	476							N80A	Load exposure table LUNARZ85N; DHU SEQT 15									
02/28/94 04:16:53	3:23:14		80.0	354.5	1593.9				N80A										
																			End L038 Script
02/28/94 04:26:00	3:32:20		89.9	83.3	1833.5				North Pole										
																			Standard PostMap Script
02/28/94 04:26:01	3:32:22	0								Stop imaging, select ST-A; Set SA step rate to HI									
02/28/94 04:26:11	3:32:32	10								Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF									Slew to Vega
02/28/94 04:27:35	3:33:56		88.4	170.6	1873.0				LDUSK										
02/28/94 04:31:01	3:37:21	290								Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts
02/28/94 04:31:16	3:37:36	15								Perform NIR imaging (DHU SEQT 31)									Data lost due to communication problems.
02/28/94 04:31:30	3:37:51	15								Select ST-A									
02/28/94 04:31:41	3:38:02	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)									Slew HGA to Earth
02/28/94 04:32:45	3:38:46							GDS	AOS										
02/28/94 04:36:28	3:42:49		80.0	173.3	2083.6				N80D										
02/28/94 04:36:31	3:42:32	290								Select ST-A									READY FOR DATA DUMP

Orbit 38 Timeline - Type A Orbit

											End PostMap Script					
02/28/98 04:37:00	3:43:01										Switch to HGA					Ground Command
02/28/94 04:39:00	3:45:01										Switch to DHU mode @ 128 kbps; Downlink SDR Segment 2					Ground Command
02/28/94 04:45:00	3:51:01										Uplink & schedule L039 scripts					Ground Command
02/28/94 04:48:23	3:54:24		70.0	173.5	2331.8					N70D						
02/28/94 05:01:49	4:07:50		60.0	173.5	2561.2					N60D						
02/28/94 05:16:37	4:22:38		50.0	173.4	2751.6					N50D						
02/28/94 05:17:00	4:23:00										Downlink SDR Segment 3					Ground Command
02/28/94 05:32:32	4:38:33		40.0	173.3	2882.7					N40D						
02/28/94 05:49:08	4:55:08		30.0	173.1	2938.6					N30D						
02/28/94 05:51:00	4:57:01										Downlink SDR Segment 1					Ground Command
02/28/94 05:52:08	4:58:09		28.2	173.1	2940.0					Aposelene						

Orbit 39 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/28/94 05:52:08	0:00:00		28.2	173.1	2940.0							Aposelene							Downlinking SDDR Segment 1 (Orbit 38)
02/28/94 06:05:49	0:13:40		20.0	173.0	2912.0							N20D							
02/28/94 06:12:00	0:19:51												SSDR to IDLE						Ground Command - stop data dump
02/28/94 06:11:43	0:19:35										GDS	MLOSM							
02/28/94 06:11:54	0:19:45										PMK	MLOSM							
02/28/94 06:11:56	0:19:48										MAD	MLOSM							Enter occultation
02/28/94 06:22:02	0:29:53		10.0	172.9	2806.5							N10D							
02/28/94 06:34:56	0:42:47		1.6	172.8	2666.2							INPM							Enter penumbra
02/28/94 06:37:17	0:45:08		0.0	172.7	2635.3							Equator - D							
02/28/94 06:39:16	0:47:07		-1.4	172.7	2607.9							INUM							Enter umbra
02/28/94 06:49:07	0:56:58		-8.4	172.6	2454.4							OUTUM							Exit umbra
02/28/94 06:51:13	0:59:04		-10.0	172.6	2417.8							S10D							
02/28/94 06:53:15	1:01:06		-11.6	172.6	2381.2							OUTPM							Exit penumbra
02/28/94 07:03:41	1:11:32		-20.0	172.5	2174.6							S20D							
																			Standard Prep1 Script
02/28/94 07:10:30	1:18:22												NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/28/94 07:14:39	1:22:30		-30.0	172.5	1923.8							S30D							
02/28/94 07:17:02	1:24:54										GDS	MAOSM							Exit occultation
02/28/94 07:17:32	1:25:24										PMK	MAOSM							
02/28/94 07:20:00	0:19:51												Resume SDDR Downlink (seg 1)						Ground Command
02/28/94 07:24:15	1:32:06		-40.0	172.4	1679.7							S40D							
																			Standard Prep2 Script
02/28/94 07:30:30	1:38:22												LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/28/94 07:32:35	1:40:26		-50.0	172.4	1451.5							S50D							
02/28/94 07:39:52	1:47:43		-60.0	172.3	1245.0							S60D							
																			Standard Prep3 Script
02/28/94 07:42:55	1:50:47	0											Msg "WRNG: Omni/8k in 1 min.."						
02/28/94 07:43:55	1:51:47	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SDDR
02/28/94 07:44:55	1:52:27	60											Switch to omni antennas						
02/28/94 07:45:55	1:53:47	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMODE=StarPointing, Index=1)						Slew to SGP

Orbit 39 Timeline - Type B Orbit

02/28/94 07:46:16	1:54:07		-70.0	172.4	1062.6				S70D				
02/28/94 07:47:00	1:54:51	44								UV & HR cameras ON			
02/28/94 07:49:55	1:57:27	175								Select ST-A			
02/28/94 07:50:05	1:57:47	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5			Start SSSR in Segment 5
02/28/94 07:50:30	1:58:22	25								Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
02/28/94 07:50:45	1:58:37	15								Perform NIR imaging (DHU SEQT 31)			
02/28/94 07:51:00	1:58:52	15								Stop imaging, select ST-A			
02/28/94 07:51:10	1:59:01	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)			Slew to nadir
02/28/94 07:51:36	1:59:27	36								Laser power ON			
													End Prep3 Script
02/28/94 07:51:56	1:59:47		-80.0	172.6	905.0				S80D				
													L039 Mapping Script
02/28/94 07:55:00	2:02:51	0								Select ST-A; Load exposure table LUNARZ85S			
02/28/94 07:56:00	2:03:51	60								Start imaging (DHU SEQT 16)			START MAPPING
02/28/94 07:57:00	2:04:51	60	-89.9	261.8	771.7				South Pole	Set SA step rate to LO			
02/28/94 07:57:46	2:05:37		-88.4	348.5	752.6				LDAWN				
02/28/94 08:01:35	2:09:26	275	-80.0	351.4	661.5				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17			
02/28/94 08:05:49	2:13:40	254	-70.0	351.7	573.1				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18			
02/28/94 08:09:48	2:17:39	237	-60.0	351.7	505.1				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
02/28/94 08:13:33	2:21:24	225	-50.0	351.7	456.5				S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSSR Segment 6
02/28/94 08:17:10	2:25:01	217	-40.0	351.7	426.5				S40A	Load exposure table LUNARZ35S			
02/28/94 08:20:45	2:28:36	213							S30A	Load exposure table LUNARZ25S			
02/28/94 08:20:46	2:28:37		-30.0	351.7	414.4				S30A				
02/28/94 08:21:24	2:29:15		-28.2	351.7	414.1				Periselene				
02/28/94 08:24:18	2:32:10	212							S20A	Load exposure table LUNARZ15S			
02/28/94 08:24:19	2:32:10		-20.0	351.7	420.0				S20A				
02/28/94 08:27:54	2:35:45	216	-10.0	351.7	443.5				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
02/28/94 08:31:35	2:39:26	221	0.0	351.7	485.2				Equator - A	Record in SSSR Segment 7 Load exposure table LUNARZ05N; Select DHU SEQT 7			SSSR Segment 7
02/28/94 08:35:28	2:43:19	233							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
02/28/94 08:35:30	2:43:21		10.0	351.7	545.9				N10A				
02/28/94 08:39:35	2:47:26	247	20.0	351.7	626.7				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
02/28/94 08:40:37	2:48:29	60								Laser power OFF			
02/28/94 08:44:04	2:51:55	207	30.0	351.6	728.8				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			

Orbit 39 Timeline - Type B Orbit

02/28/94 08:48:57	2:56:48	293	40.0	351.6	853.5					N40A	Switch to inertial pointing (ORBIT39RW); Load exposure table LUNARZ45N; Select DHU SEQT 11	Initiate oblique viewing
02/28/94 08:54:22	3:02:13	325	50.0	351.6	1002.1					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	
02/28/94 09:00:29	3:08:20	367	60	351.6	1175.3					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19	
												End L039 Script
												Standard PostMap Script
02/28/94 09:03:33	3:11:24	0									Stop imaging, select ST-A; Set SA step rate to HI	
02/28/94 09:03:43	3:11:34	10									Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF	Slew to Vega
02/28/94 09:07:27	3:15:18		70.0	351.6	1373.2					N70A		
02/28/94 09:08:33	3:16:24	290									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
02/28/94 09:08:48	3:16:39	15									Perform NIR imaging (DHU SEQT 31)	
02/28/94 09:09:03	3:16:54	15									Select ST-A	
02/28/94 09:09:13	3:17:04	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)	Slew HGA to Earth
02/28/94 09:14:03	3:21:54	290									Select ST-A	READY FOR DATA DUMP
												End PostMap Script
02/28/94 09:15:00	3:22:51										Switch to HGA	Ground Command
02/28/94 09:15:23	3:23:15		80.0	351.9	1593.9					N80A		
02/28/94 09:16:00	3:23:52										Switch to DHU mode @ 128 kbps	Ground Command
02/28/94 09:17:00	3:24:52										Downlink SSSDR Segment 6	Ground Command
02/28/94 09:24:30	3:32:21		89.9	85.2	1833.2					North Pole		
02/28/94 09:26:04	3:33:55		88.4	167.6	1872.2					LDUSK		
02/28/94 09:34:57	3:42:49		80.0	170.6	2082.6					N80D		
02/28/94 09:46:52	3:54:43		70.0	170.7	2330.4					N70D		
02/28/94 09:54:00	4:01:52										Downlink SSSDR Segment 5	Ground Command
02/28/94 09:56:00	4:03:52										Uplink & schedule L040 scripts	Ground Command
02/28/94 10:00:16	4:08:07		60.0	170.7	2559.5					N60D		
02/28/94 10:15:04	4:22:56		50.0	170.6	2749.7					N50D		
02/28/94 10:17:00	4:24:52										Downlink SSSDR Segment 7	Ground Command
02/28/94 10:30:58	4:38:49		40.0	170.5	2880.7					N40D		
02/28/94 10:41:19	4:49:11								CAN	AOS		
02/28/94 10:47:32	4:55:24		30.0	170.4	2936.8					N30D		
02/28/94 10:50:36	4:58:27		28.2	170.4	2938.2					Aposelene		

Orbit 40 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/28/94 10:50:36	0:00:00		28.2	170.4	2938.2							Aposelene							Downlinking SDDR Segment 7 (Orbit 37)
02/28/94 11:04:13	0:13:37		20.0	170.3	2910.6							N20D							
02/28/94 11:09:52	0:19:16										CAN	MLOSM							
02/28/94 11:11:53	0:21:17										PMK	MLOSM							
02/28/94 11:11:56	0:21:20										GDS	MLOSM							Enter occultation
02/28/94 11:20:25	0:29:49		10.0	170.1	2805.6							N10D							
02/28/94 11:32:04	0:41:28		2.4	170.0	2681.6							INPM							Enter penumbra
02/28/94 11:35:38	0:45:02		0.0	170.0	2635.4							INUM							Enter umbra
02/28/94 11:35:39	0:45:03		0.0	170.0	2635.1							Equator - D							
02/28/94 11:49:16	0:58:40		-9.8	169.9	2423.9							OUTUM							Exit umbra
02/28/94 11:49:35	0:58:59		-10.0	169.9	2418.2							S10D							
02/28/94 11:52:39	1:02:03		-12.3	169.9	2362.9							OUTPM							Exit penumbra
02/28/94 12:02:03	1:11:27		-20.0	169.8	2175.5							S20D							
																			Standard Prep1 Script
02/28/94 12:09:33	1:18:57	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/28/94 12:12:21	1:21:45										CAN	MAOSM							Exit occultation
02/28/94 12:13:02	1:22:26		-30.0	169.7	1925.2							S30D							
02/28/94 12:14:45	1:24:09										GDS	MAOSM							
02/28/94 12:15:00	1:24:24										PMK	MAOSM							
02/28/94 12:19:00	1:28:24												Ranging B ON						Ground Command
02/28/94 12:20:12	1:29:36										PMK	LOS							
02/28/94 12:22:38	1:32:02		-40.0	169.7	1681.3							S40D							
																			Standard Prep2 Script
02/28/94 12:29:33	1:38:57	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/28/94 12:30:59	1:40:23		-50.0	169.6	1453.4							S50D							
02/28/94 12:38:17	1:47:41		-60.0	169.6	1247.0							S60D							
																			Standard Prep3 Script
02/28/94 12:41:33	1:50:57	0											Msg "WRNG: Omni/8k in 1 min.."						
02/28/94 12:42:33	1:51:57	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SDDR
02/28/94 12:43:33	1:52:57	60											Switch to omni antennas						
02/28/94 12:44:33	1:53:57	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMODE=StarPointing, Index=1)						Slew to SGP
02/28/94 12:45:38	1:55:02	65											UV & HR cameras ON						

Orbit 40 Timeline - Type A Orbit

02/28/94 12:44:41	1:54:05		-70.0	169.7	1064.7				S70D										
02/28/94 12:48:33	1:57:57	175								Select ST-A									
02/28/94 12:48:43	1:58:07	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 1									Start SSSR in Segment 1
02/28/94 12:49:08	1:58:32	25								Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts
02/28/94 12:49:23	1:58:47	15								Perform NIR imaging (DHU SEQT 31)									
02/28/94 12:50:21	1:59:45		-80.0	169.9	907.1				S80D										
02/28/94 12:49:38	1:59:02	15								Stop imaging, select ST-A									
02/28/94 12:49:48	1:59:12	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)									Slew to nadir
02/28/94 12:51:11	2:00:35	83								Laser power ON									
																			End Prep3 Script
																			L040 Mapping Script
02/28/94 12:53:27	2:02:50	0								Select ST-A									
02/28/94 12:53:27	2:02:50	10								Set SA step rate to LO; Load exposure table LUNARZ85S									
02/28/94 12:54:27	2:03:51	50								Start imaging (DHU SEQT 9)									START MAPPING
02/28/94 12:55:26	2:04:50		-89.9	267.7	773.6				South Pole										
02/28/94 12:56:11	2:05:34		-88.4	345.4	754.8				LDAWN										
02/28/94 13:00:02	2:09:26		-80.0	348.6	663.5				S80A										
02/28/94 13:00:02	2:09:26	335							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3									
02/28/94 13:04:16	2:13:40	254							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4									
02/28/94 13:04:17	2:13:41		-70.0	348.9	575.1				S70A										
02/28/94 13:08:12	2:17:36	236							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6									
02/28/94 13:08:15	2:17:39		-60.0	349.0	507.1				S60A										
02/28/94 13:11:57	2:21:21	225							S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5									SSDR Segment 2
02/28/94 13:12:01	2:21:25		-50.0	349.0	458.4				S50A										
02/28/94 13:15:35	2:24:59	218							S40A	Load exposure table LUNARZ35S									
02/28/94 13:15:39	2:25:03		-40.0	349.0	428.3				S40A										
02/28/94 13:19:07	2:28:31	212							S30A	Load exposure table LUNARZ25S									
02/28/94 13:19:13	2:28:37		-30.0	349.0	416.1				S30A										
02/28/94 13:19:53	2:29:17		-28.1	349.0	415.8				Periselene										
02/28/94 13:22:39	2:32:03	212							S20A	Load exposure table LUNARZ15S									
02/28/94 13:22:46	2:32:10		-20.0	349.0	421.7				S20A										
02/28/94 13:26:14	2:35:38	215							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6									
02/28/94 13:26:23	2:35:47		-10.0	349.0	445.1				S10A										
02/28/94 13:29:56	2:39:19	222							MEQA	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7									SSDR Segment 3
02/28/94 13:30:05	2:39:29		0.0	349.0	486.7				Equator - A										

Orbit 40 Timeline - Type A Orbit

02/28/94 13:33:48	2:43:12	232						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8										
02/28/94 13:33:58	2:43:21		10.0	349.0	547.4			N10A											
02/28/94 13:37:55	2:47:19	247						N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9										
02/28/94 13:38:06	2:47:30		20.0	348.9	628.0			N20A											
02/28/94 13:38:55	2:48:19	60							Laser power OFF										
02/28/94 13:42:22	2:51:46	207						N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10										
02/28/94 13:42:34	2:51:58		30.0	348.9	730.0			N30A											
02/28/94 13:47:14	2:56:38	292						N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11										SSDR Segment 4
02/28/94 13:47:28	2:56:52		40.0	348.9	854.5			N40A											
02/28/94 13:52:40	3:02:04	326						N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12										
02/28/94 13:52:54	3:02:18		50.0	348.9	1002.9			N50A											
02/28/94 13:58:46	3:08:10	366						N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13										
02/28/94 13:59:00	3:08:24		60.0	348.9	1175.9			N60A											
02/28/94 14:05:42	3:15:05	416						N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14										
02/28/94 14:05:56	3:15:20		70.0	348.9	1373.5			N70A											
02/28/94 14:13:38	3:23:01	476						N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15										
02/28/94 14:13:52	3:23:16		80.0	349.2	1593.8			N80A											
																			End L040 Script
02/28/94 14:22:59	3:32:23		89.9	78.0	1832.5			North Pole											
																			Standard PostMap Script
02/28/94 14:23:00	3:32:24	0							Stop imaging, select ST-A; Set SA step rate to HI										
02/28/94 14:23:10	3:32:34	10							Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF										Slew to Vega
02/28/94 14:24:33	3:33:57		88.4	164.5	1871.5			LDUSK											
02/28/94 14:28:00	3:37:24	290							Perform LWIR imaging (DHU SEQT 25)										Dark Field imaging starts
02/28/94 14:28:15	3:37:39	15							Perform NIR imaging (DHU SEQT 31)										
02/28/94 14:28:29	3:37:53	15							Select ST-A										
02/28/94 14:28:40	3:38:04	10							IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)										Slew HGA to Earth
02/28/94 14:32:00	3:41:24								Switch to HGA										Ground Command
02/28/94 14:33:26	3:42:50		80.0	167.8	2081.8			N80D											
02/28/94 14:33:30	3:42:54	290							Select ST-A										READY FOR DATA DUMP

Orbit 40 Timeline - Type A Orbit

													End PostMap Script	
02/28/94	14:37:00	3:46:24											Switch to 128 kbps	Ground Command
02/28/94	14:39:00	3:48:24											Switch to DHU mode	Ground Command
02/28/94	14:43:00	3:52:24											Downlink SSSR Segment 1	Ground Command
02/28/94	14:45:00	3:54:24											Uplink & schedule L041 scripts	Ground Command
02/28/94	14:45:20	3:54:44	70.0	168.0	2329.1							N70D		
02/28/94	14:58:44	4:08:08	60.0	168.0	2557.8							N60D		
02/28/94	15:12:00	4:21:24											Downlink SSSR Segment 2	Ground Command
02/28/94	15:12:23	4:21:47	45.8	167.8	2809.9			GDS				LOS		
02/28/94	15:13:31	4:22:55	50.0	167.9	2747.7							N50D		
02/28/94	15:29:24	4:38:48	40.0	167.8	2878.8							N40D		
02/28/94	15:45:57	4:55:21	30.0	167.7	2935.0							N30D		
02/28/94	15:49:05	4:58:29	28.1	167.6	2936.5							Aposelene		

Orbit 41 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/28/94 15:49:05	0:00:00		28.1	167.6	2936.5							Aposelene							Not Downlinking SSSDR due to comm problems
02/28/94 16:02:37	0:13:32		20.0	167.5	2909.2							N20D							
02/28/94 16:11:50	0:22:45										CAN	MLOSM							Enter occultation
02/28/94 16:18:48	0:29:43		10.0	167.4	2804.8							N10D							
02/28/94 16:29:19	0:40:14		3.2	167.3	2694.9							INPM							Enter penumbra
02/28/94 16:32:27	0:43:22		1.1	167.3	2655.8							INUM							Enter umbra
02/28/94 16:34:02	0:44:57		0.0	167.3	2634.9							Equator - D							
02/28/94 16:47:58	0:58:53		-10.0	167.2	2418.6							S10D							
02/28/94 16:48:59	0:59:54		-10.8	167.2	2400.5							OUTUM							Exit umbra
02/28/94 16:51:56	1:02:51		-13.0	167.2	2346.6							OUTPM							Exit penumbra
02/28/94 17:00:26	1:11:21		-20.0	167.1	2176.4							S20D							
																			Standard Prep1 Script
02/28/94 17:07:21	1:18:16												NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
02/28/94 17:10:36	1:21:31										CAN	MAOSM							Exit occultation
02/28/94 17:11:25	1:22:20		-30.0	167.0	1926.5							S30D							
02/28/94 17:13:00	1:23:55												Downlink SSSDR Segment 2 (orb 40)						Ground Command
02/28/94 17:21:01	1:31:56		-40.0	167.0	1683.0							S40D							
																			Standard Prep2 Script
02/28/94 17:27:21	1:38:16	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/28/94 17:29:23	1:40:18		-50.0	166.9	1455.3							S50D							
02/28/94 17:36:41	1:47:36		-60.0	166.9	1249.0							S60D							
																			Standard Prep3 Script
02/28/94 17:39:46	1:50:41	0											Msg "WRNG: Omni/8k in 1 min.."						
02/28/94 17:40:46	1:51:41	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SSSDR
02/28/94 17:41:46	1:52:41	60											Switch to omni antennas						
02/28/94 17:42:46	1:53:41	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMODE=StarPointing, Index=1)						Slew to SGP
02/28/94 17:43:05	1:54:00		-70.0	167.0	1066.7							S70D							
02/28/94 17:43:51	1:54:46	65											UV & HR cameras ON						
02/28/94 17:46:46	1:57:41	175											Select ST-A						
02/28/94 17:46:56	1:57:51	10											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 5						Start SSSDR in Segment 5

Orbit 41 Timeline - Tyne B Orbit

02/28/94 17:47:21	1:58:16	25									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
02/28/94 17:47:36	1:58:31	15									Perform NIR imaging (DHU SEQT 31)						
02/28/94 17:47:51	1:58:46	15									Stop imaging, select ST-A						
02/28/94 17:47:51	1:58:46	10									Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)						Slew to nadir
02/28/94 17:48:46	1:59:41		-80.0	167.3	909.2					S80D							
02/28/94 17:49:24	2:00:19	83									Laser power ON						
																	End Prep3 Script
																	L041 Mapping Script
02/28/94 17:51:50	2:02:45	0									Select ST-A; Load exposure table LUNARZ85S						
02/28/94 17:52:51	2:03:46	60									Start imaging (Select DHU SEQT 16)						START MAPPING
02/28/94 17:53:51	2:04:46	60	-89.9	256.4	775.8					South Pole	Set SA step rate to LO						
02/28/94 17:54:36	2:05:31		-88.4	342.2	757.0					LDAWN							
02/28/94 17:58:26	2:09:21	275	-80.0	345.8	665.6					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17						
02/28/94 18:02:43	2:13:38	254	-70.0	346.2	577.0					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18						
02/28/94 18:06:42	2:17:37	237	-60.0	346.2	509.0					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
02/28/94 18:10:28	2:21:23	225	-50.0	346.3	460.3					S50A	Record in SSSR Segment 6 Load exposure table LUNARZ45S; Select DHU SEQT 5						SSDR Segment 6
02/28/94 18:14:06	2:25:01	217								S40A	Load exposure table LUNARZ35S						
02/28/94 18:14:07	2:25:02		-40.0	346.3	430.1					S40A							
02/28/94 18:17:41	2:28:36	213	-30.0	346.3	417.9					S30A	Load exposure table LUNARZ25S						
02/28/94 18:18:21	2:29:16		-28.1	346.3	417.5					Periselene							
02/28/94 18:21:14	2:32:09	212	-20.0	346.3	423.3					S20A	Load exposure table LUNARZ15S						
02/28/94 18:24:51	2:35:46	216	-10.0	346.3	446.6					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						
02/28/94 18:28:34	2:39:29	221	0.0	346.2	488.2					Equator - A	Record in SSSR Segment 7 Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 7
02/28/94 18:32:27	2:43:22	233	10.0	346.2	548.8					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
02/28/94 18:36:35	2:47:30	247	20.0	346.2	629.3					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
02/28/94 18:37:35	2:48:30	60									Laser power OFF						
02/28/94 18:41:03	2:51:58	207	30.0	346.2	731.1					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
02/28/94 18:45:57	2:56:52	293	40.0	346.2	855.5					N40A	Switch to inertial pointing (ORBIT41RW); Load exposure table LUNARZ45N; Select DHU SEQT 11						Initiate oblique viewing
02/28/94 18:51:23	3:02:18	325	50.0	346.2	1003.7					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12						
02/28/94 18:57:29	3:08:24	367								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19						

Orbit 41 Timeline - Type B Orbit

02/28/94 18:57:30	3:08:25		60.0	346.2	1176.5				N60A										End L041 Script
																			Standard PostMap Script
02/28/94 19:00:57	3:11:52	0																	Stop imaging, select ST-A; Set SA step rate to HI
02/28/94 19:01:07	3:12:02	10																	Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF
02/28/94 19:04:26	3:15:21		70.0	346.2	1373.8				N70A										Slew to Vega
02/28/94 19:05:57	3:16:52	290																	Perform LWIR imaging (DHU SEQT 25)
02/28/94 19:06:12	3:17:07	15																	Dark Field imaging starts
02/28/94 19:06:27	3:17:22	15																	Perform NIR imaging (DHU SEQT 31)
																			Select ST-A
02/28/94 19:06:37	3:17:32	10																	IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)
02/28/94 19:11:27	3:22:22	290																	Slew HGA to Earth
																			Select ST-A
																			READY FOR DATA DUMP
																			End PostMap Script
02/28/94 19:12:00	3:22:55																		Switch to HGA
02/28/94 19:13:00	3:23:55																		Ground Command
02/28/94 19:12:22	3:23:17		80.0	346.5	1593.8				N80A										Switch to DHU mode @ 128 kbps
02/28/94 19:16:00	3:26:55																		Downlink SDR Segment 2 patches
02/28/94 19:21:28	3:32:23		89.9	73.1	1832.0				North Pole										Ground Command
02/28/94 19:23:00	3:33:55																		Downlink SDR Segment 3 (orb 40)
02/28/94 19:23:01	3:33:56		88.4	161.3	1870.7				LDUSK										Ground Command
02/28/94 19:31:55	3:42:50		80.0	165.0	2080.9				N80D										Ground Command
02/28/94 19:42:00	3:52:55																		Downlink SDR Segment 4 (orb 40)
02/28/94 19:43:49	3:54:44		70.0	165.2	2327.9				N70D										Ground Command
02/28/94 19:45:00	3:55:55																		Uplink & schedule L042 scripts
02/28/94 19:57:00	4:07:55																		Downlink SDR Segment 5 (orb 41)
02/28/94 19:57:12	4:08:07		60.0	165.2	2556.2				N60D										Ground Command
02/28/94 20:11:58	4:22:53		50.0	165.1	2745.9				N50D										Downlink SDR Segment 6 (orb 41)
02/28/94 20:19:00	4:29:55																		Ground Command
02/28/94 20:27:50	4:38:45		40.0	165.0	2876.8				N40D										Ground Command
02/28/94 20:44:22	4:55:17		30.0	164.9	2933.3				N30D										Ground Command
02/28/94 20:47:33	4:58:28		28.1	164.9	2934.8				Aposelene										Ground Command

Orbit 42 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
02/28/94 20:47:33	0:00:00		28.1	164.9	2934.8							Aposelene							Downlinking SDDR Segment 6 (Orbit 41)
02/28/94 21:00:00	0:12:27												Downlink SDDR Segment 7						Ground Command
02/28/94 21:01:00	0:13:27		20.0	164.8	2907.8							N20D							
02/28/94 21:13:04	0:25:31										CAN	MLOSM							Enter occultation
02/28/94 21:17:11	0:29:38		10.0	164.7	2803.9							N10D							
02/28/94 21:26:41	0:39:08		3.9	164.6	2706.6							INPM							Enter penumbra
02/28/94 21:29:30	0:41:57		2.0	164.6	2672.4							INUM							Enter umbra
02/28/94 21:32:25	0:44:52		0.0	164.6	2634.6							Equator - D							
02/28/94 21:46:21	0:58:48		-10.0	164.5	2418.9							S10D							
02/28/94 21:48:28	1:00:55		-11.6	164.4	2381.0							OUTUM							Exit umbra
02/28/94 21:51:06	1:03:33		-13.7	164.4	2332.0							OUTPM							Exit penumbra
02/28/94 21:58:49	1:11:16		-20.0	164.4	2177.2							S20D							
02/28/94 22:05:45	1:18:12										MAD	MAOSM							Exit occultation
																			Prep1 Script
02/28/94 22:06:25	1:18:52	0											NIR camera & cryocooler ON; SA mode to AUTO						
02/28/94 22:06:27	1:18:54	2											Load lunar dark tables						
																			End Prep1 Script
02/28/94 22:06:55	1:19:22										CAN	MAOSM							Exit occultation
02/28/94 22:09:48	1:22:15		-30.0	164.3	1927.8							S30D							
02/28/94 22:15:00	1:27:27												Resume Downlink SDDR Seg 7						Ground Command
02/28/94 22:18:00	1:30:27												Ranging B ON; Uplink new SEQT (LUNAR_D)						Ground Command
02/28/94 22:19:24	1:31:51		-40.0	164.2	1684.5							S40D							
																			Standard Prep2 Script
02/28/94 22:26:25	1:38:52	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
02/28/94 22:27:46	1:40:13		-50.0	164.2	1457.1							S50D							
02/28/94 22:35:05	1:47:32		-60.0	164.2	1250.9							S60D							
02/28/94 22:38:10	1:50:37										CAN	LOS							Enter occultation
																			Standard Prep3 Script
02/28/94 22:38:25	1:50:52	0											Msg "WRNG: Omni/8k in 1 min.."						
02/28/94 22:39:25	1:51:52	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SDDR
02/28/94 22:40:25	1:52:52	60											Switch to omni antennas						
02/28/94 22:41:25	1:53:52	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMODE=StarPointing, Index=1)						Slew to SGP

Orbit 42 Timeline - Type A Orbit

02/28/94 22:41:30	1:53:57		-70.0	164.3	1068.7				S70D										
02/28/94 22:42:30	1:54:57	65								UV & HR cameras ON									
02/28/94 22:45:25	1:57:52	175								Select ST-A									
02/28/94 22:45:35	1:58:02	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 1									Start SSSR in Segment 1
02/28/94 22:46:00	1:58:27	25								Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts
02/28/94 22:46:15	1:58:42	15								Perform NIR imaging (DHU SEQT 31)									
02/28/94 22:46:30	1:58:57	15								Laser power ON									
02/28/94 22:47:11	1:59:38		-80.0	164.6	911.2				S80D										
02/28/94 22:46:40	1:59:07	10								Stop imaging, select ST-A									
02/28/94 22:46:50	1:59:17	10								Deselect ST; Slew s/c sensors to nadir (ACSMMode=LunarMapping)									Slew to nadir
02/28/94 22:48:23	2:00:50	83								Laser power ON									
																			End Prep3 Script
																			L042 Mapping Script
02/28/94 22:50:17	2:02:44	0								Select ST-A									
02/28/94 22:50:28	2:02:54	10								Set SA step rate to LO; Load exposure table LUNARZ85S									
02/28/94 22:51:18	2:03:44	50								Start imaging (DHU SEQT 9)									START MAPPING NOTE: D-Series SEQT are now being used!
02/28/94 22:52:16	2:04:42		-89.9	248.0	778.0				South Pole										
02/28/94 22:53:01	2:05:27		-88.4	338.9	759.1				LDAWN										
02/28/94 22:56:54	2:09:20		-80.0	343.0	667.5				S80A										
02/28/94 22:56:55	2:09:21	337							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3									
02/28/94 23:01:09	2:13:35		-70.0	343.4	578.9				S70A										
02/28/94 23:01:11	2:13:37	256							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4									
02/28/94 23:05:08	2:17:34		-60.0	343.5	510.8				S60A										
02/28/94 23:05:09	2:17:36	238							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6									
02/28/94 23:08:55	2:21:22		-50.0	343.5	462.1				S50A										
02/28/94 23:08:56	2:21:22	227							S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5									SSSR Segment 2
02/28/94 23:12:34	2:25:00		-40.0	343.5	431.8				S40A										
02/28/94 23:12:35	2:25:01	219							S40A	Load exposure table LUNARZ35S									
02/28/94 23:16:08	2:28:35		-30.0	343.5	419.5				S30A										
02/28/94 23:16:09	2:28:35	214							S30A	Load exposure table LUNARZ25S									
02/28/94 23:16:50	2:29:16		-28.1	343.5	419.2				Periselene										
02/28/94 23:19:42	2:32:08		-20.0	343.5	424.9				S20A										
02/28/94 23:19:43	2:32:10	214							S20A	Load exposure table LUNARZ15S									
02/28/94 23:23:19	2:35:45		-10.0	343.5	448.2				S10A										
02/28/94 23:23:20	2:35:46	217							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6									

Orbit 42 Timeline - Type A Orbit

02/28/94 23:27:02	2:39:29		0.0	343.5	489.7					Equator - A				
02/28/94 23:27:03	2:39:29	223								MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
02/28/94 23:30:55	2:43:21		10.0	343.5	550.1					N10A				
02/28/94 23:30:57	2:43:23	234								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
02/28/94 23:35:04	2:47:30		20.0	343.5	630.6					N20A				
02/28/94 23:35:05	2:47:31	248								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
02/28/94 23:36:05	2:48:32	60									Laser power OFF			
02/28/94 23:39:32	2:51:59		30.0	343.5	732.3					N30A				
02/28/94 23:39:33	2:51:59	208								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
02/28/94 23:44:26	2:56:52		40.0	343.5	856.5					N40A				
02/28/94 23:44:27	2:56:53	294								N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SSDR Segment 4
02/28/94 23:49:52	3:02:18		50.0	343.5	1004.5					N50A				
02/28/94 23:49:53	3:02:20	326								N50A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ55N; Select DHU SEQT 12			No uncompressed images due to erroneous DHU table onboard
02/28/94 23:55:59	3:08:26		60.0	343.5	1177.1					N60A				
02/28/94 23:56:00	3:08:26	367								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13			
03/01/94 00:02:55	3:15:21		70.0	343.6	1374.1					N70A				
03/01/94 00:02:56	3:15:23	416								N70A	Load CEQ_12.UMI into SEQT 12; Load exposure table LUNARZ75N; Select DHU SEQT 14			
03/01/94 00:10:51	3:23:17		80.0	343.9	1593.8					N80A				
03/01/94 00:10:52	3:23:19	476								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15			
End L042 Script														
03/01/94 00:19:57	3:32:23		89.9	70.1	1831.5					North Pole				
Standard PostMap Script														
03/01/94 00:19:59	3:32:25	0									Stop imaging, select ST-A; Set SA step rate to HI			
03/01/94 00:20:09	3:32:35	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF			Slew to Vega
03/01/94 00:21:29	3:33:56		88.4	157.9	1870.0					LDUSK				
03/01/94 00:24:59	3:37:25	290									Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
03/01/94 00:25:13	3:37:40	15									Perform NIR imaging (DHU SEQT 31)			
03/01/94 00:25:28	3:37:55	15									Select ST-A			

Orbit 42 Timeline - Type A Orbit

03/01/94 00:25:39	3:38:06	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMode=EarthPointing, Center)					Slew HGA to Earth
03/01/94 00:30:24	3:42:51		80.0	162.1	2080.1				N80D						
03/01/94 00:31:28	3:43:55	290								Switch to HGA; Select ST-A					READY FOR DATA DUMP
															End PostMap Script
03/01/94 00:33:00	3:45:27									Switch to 128 kbps					Ground Command
03/01/94 00:36:00	3:48:27									Switch to DHU mode					Ground Command
03/01/94 00:38:00	3:55:24									Downlink SDR Segment 1					Ground Command
03/01/94 00:42:17	3:54:44		70.0	162.4	2326.6				N70D						
03/01/94 00:48:00	3:55:24									Update state vector (GNC53_01MAR_0000)					Ground Command
03/01/94 00:55:39	4:08:05		60.0	162.5	2554.6				N60D						
03/01/94 01:08:00	4:48:24									Uplink & schedule L043 scripts					Ground Command
03/01/94 01:10:24	4:22:50		50.0	162.4	2744.1				N50D						
03/01/94 01:26:15	4:38:42		40.0	162.3	2875.0				N40D						
03/01/94 01:36:00	4:48:24									Downlink SDR Segment 2					Ground Command
03/01/94 01:42:47	4:55:13		30.0	162.2	2931.6				N30D						
03/01/94 01:46:01	4:58:28		28.1	162.2	2933.2				Aposelene						

Orbit 43 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/01/94 01:46:01	0:00:00		28.1	162.2	2933.2							Aposelene							Downlinking SSSDR Segment 3 (Orbit 42)
03/01/94 01:53:00	0:06:59												Downlink SSSDR Segment 4 (orb 42)						Ground Command
03/01/94 01:59:24	0:13:23		20.0	162.1	2906.5							N20D							
03/01/94 02:04:00	0:17:59												SSDR to IDLE - Downlink complete						Ground Command
03/01/94 02:15:35	0:29:34		10.0	162.0	2803.1							N10D							
03/01/94 02:20:25	0:34:24										MAD	MLOSM							Enter occultation
03/01/94 02:24:07	0:38:06		4.5	161.9	2717.0							INPM							Enter penumbra
03/01/94 02:26:43	0:40:42		2.8	161.9	2686.5							INUM							Enter umbra
03/01/94 02:30:48	0:44:46		0.0	161.8	2634.4							Equator - D							
03/01/94 02:44:43	0:58:42		-10.0	161.7	2419.2							S10D							
03/01/94 02:47:48	1:01:47		-12.4	161.7	2364.0							OUTUM							Exit umbra
03/01/94 02:50:13	1:04:12		-14.3	161.7	2318.7							OUTPM							Exit penumbra
03/01/94 02:57:11	1:11:10		-20.0	161.7	2178.1							S20D							
03/01/94 03:00:59	1:14:58										MAD	MAOSM							Exit occultation
03/01/94 03:02:32	1:16:30										PMK	AOS							
																			Standard Prep1 Script
03/01/94 03:04:12	1:18:11												NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/01/94 03:08:11	1:22:10		-30.0	161.6	1929.0							S30D							
03/01/94 03:14:00	1:27:59												Ranging B ON						Ground Command
03/01/94 03:17:48	1:31:47		-40.0	161.5	1686.0							S40D							
																			Standard Prep2 Script
03/01/94 03:24:12	1:38:11	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/01/94 03:26:10	1:40:09		-50.0	161.5	1458.7							S50D							
03/01/94 03:33:29	1:47:28		-60.0	161.5	1252.7							S60D							
																			Standard Prep3 Script
03/01/94 03:36:37	1:50:36	0											Msg "WRNG: Omni/8k in 1 min.."						
03/01/94 03:37:37	1:51:36	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SSSDR
03/01/94 03:38:37	1:52:36	60											Switch to omni antennas						
03/01/94 03:39:37	1:53:36	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMMode=StarPointing, Index=1)						Slew to SGP
03/01/94 03:39:54	1:53:53		-70.0	161.6	1070.6							S70D							
03/01/94 03:40:42	1:54:41	48											UV & HR cameras ON						

Orbit 43 Timeline - Tyne B Orbit

03/01/94 03:43:37	1:57:36	175								Select ST-A									
03/01/94 03:43:47	1:57:46	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 5									Start recorder in Segment 5
03/01/94 03:44:12	1:58:11	25								Perform LWIR imaging (DHU SEQT25)									Dark Field imaging starts
03/01/94 03:44:27	1:58:26	15								Perform NIR imaging (DHU SEQT31)									
03/01/94 03:44:42	1:58:41	15								Stop imaging, select ST-A									
03/01/94 03:44:52	1:58:51	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)									Slew to nadir
03/01/94 03:45:19	1:59:18	37								Laser power ON									
End Prep3 Script																			
03/01/94 03:45:36	1:59:35			-80.0	162.0	913.0				S80D									
L043 Mapping Script																			
03/01/94 03:48:42	2:02:40	0								Select ST-A; Load exposure table LUNARZ85S									
03/01/94 03:49:42	2:03:41	60								Start imaging (DHU SEQT16)									START MAPPING
03/01/94 03:50:42	2:04:41	60		-89.8	255.2	779.5				South Pole Set SA step rate to LO									
03/01/94 03:51:26	2:05:24			-88.4	335.4	761.1				LDAWN									
03/01/94 03:55:19	2:09:18	277		-80.0	340.2	669.3				S80A Load exposure table LUNARZ75S; Select DHU SEQT 17									
03/01/94 03:59:35	2:13:34	256		-70.0	340.6	580.7				S70A Load exposure table LUNARZ65S; Select DHU SEQT 18									
03/01/94 04:03:34	2:17:33	239		-60.0	340.7	512.6				S60A Load exposure table LUNARZ55S; Select DHU SEQT 6									
03/01/94 04:07:21	2:21:20	227								S50A Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5									SSDR Segment 6
03/01/94 04:07:22	2:21:21			-50.0	340.8	463.8				S50A									
03/01/94 04:11:00	2:24:59	219								S40A Load exposure table LUNARZ35S									
03/01/94 04:11:01	2:25:00			-40.0	340.8	433.5				S40A									
03/01/94 04:14:35	2:28:34	215		-30.0	340.8	421.1				S30A Load exposure table LUNARZ25S									
03/01/94 04:15:18	2:29:17			-28.0	340.8	420.8				Periselene									
03/01/94 04:18:09	2:32:08	214		-20.0	340.8	426.5				S20A Load exposure table LUNARZ15S									
03/01/94 04:21:46	2:35:45	217		-10.0	340.8	449.6				S10A Load exposure table LUNARZ05S; Select DHU SEQT 6									
03/01/94 04:25:30	2:39:29	224		0.0	340.8	491.0				Equator - A Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7									SSDR Segment 7 Uncompressed SEQT CEQ_07U.UMI was loaded
03/01/94 04:29:23	2:43:22	233								N10A Load exposure table LUNARZ15N; Select DHU SEQT 8									Uncompressed SEQT CEQ_08U.UMI was loaded
03/01/94 04:29:24	2:43:23			10.0	340.8	551.4				N10A									
03/01/94 04:33:32	2:47:31	249		20.0	340.8	631.8				N20A Load exposure table LUNARZ25N; Select DHU SEQT 9									
03/01/94 04:34:32	2:48:31	60								Laser power OFF									
03/01/94 04:38:00	2:51:59	208								N30A Load exposure table LUNARZ35N; Select DHU SEQT 10									
03/01/94 04:38:01	2:52:00			30.0	340.8	733.4				N30A									

Orbit 43 Timeline - Type B Orbit

03/01/94 04:42:54	2:56:53	294							N40A	Switch to inertial pointing (ORBIT43RW); Load exposure table LUNARZ45N; Select DHU SEQT 11	Initiate oblique viewing
03/01/94 04:42:55	2:56:54		40.0	340.8	857.4				N40A		
03/01/94 04:48:21	3:02:20	327	50.0	340.8	1005.3				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	
03/01/94 04:54:28	3:08:27	367	60.0	340.8	1177.6				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19	
End L043 Script											
Standard PostMap Script											
03/01/94 04:57:56	3:11:54	0								Stop imaging, select ST-A; Set SA step rate to HI	
03/01/94 04:58:06	3:12:05	10								Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF	Slew to Vega
03/01/94 05:01:24	3:15:23		70.0	340.9	1374.4				N70A		
03/01/94 05:02:55	3:16:54	290								Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/01/94 05:03:10	3:17:09	15								Perform NIR imaging (DHU SEQT 31)	
03/01/94 05:03:25	3:17:24	15								Select ST-A	
03/01/94 05:03:36	3:17:35	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)	Slew HGA to Earth
03/01/94 05:08:26	3:22:25	290								Switch to HGA; Select ST-A	READY FOR DATA DUMP
End PostMap Script											
03/01/94 05:09:20	3:23:19		80.0	341.3	1593.7				N80A		
03/01/94 05:18:26	3:32:25		89.8	68.7	1831.2				North Pole		
03/01/94 05:19:58	3:33:57		88.4	154.4	1869.2				LDUSK		
03/01/94 05:28:52	3:42:51		80.0	159.3	2079.3				N80D		
03/01/94 05:40:45	3:54:43		70.0	159.7	2325.5				N70D		
03/01/94 05:43:18	3:57:17							GDS	AOS		
03/01/94 05:49:00	4:02:59									Switch to HGA; Switch to DHU mode @ 128 kbps	Ground Command
03/01/94 05:54:07	4:08:06		60.0	159.7	2553.1				N60D		
03/01/94 05:56:00	4:09:59									Downlink SSSDR Segment 6 (orb 43); Ranging A & B OFF; Load DEQ_07.UMI into SEQT 7; Load DEQ_08.UMI into SEQT 8	Ground Command
03/01/94 06:08:51	4:22:50		50.0	159.7	2742.4				N50D		
03/01/94 06:23:00	4:36:59									Downlink SSSDR Segment 7 (orb 43)	Ground Command
03/01/94 06:24:41	4:38:40		40.0	159.6	2873.2				N40D		
03/01/94 06:29:00	4:42:59									Uplink & schedule L044 scripts	Ground Command

Orbit 44 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/01/94 06:44:29	0:00:00		28.0	159.4	2931.6							Aposelene							Downlinking SDDR Segment 7 (Orbit 43)
03/01/94 06:57:48	0:13:18		20.0	159.3	2905.2							N20D							
03/01/94 07:13:58	0:29:29		10.0	159.2	2802.3							N10D							
03/01/94 07:20:00	0:35:31												SSDR to IDLE						Ground Command - stop data dump
03/01/94 07:21:36	0:37:06		5.1	159.2	2726.5							INPM							Enter penumbra
03/01/94 07:24:02	0:39:33		3.5	159.1	2698.8							INUM							Enter umbra
03/01/94 07:25:23	0:40:54										MAD	MLOSM							
03/01/94 07:28:25	0:43:55										PMK	MLOSM							Enter occultation
03/01/94 07:29:11	0:44:42		0.0	159.1	2634.1							Equator - D							
03/01/94 07:30:28	0:45:59										GDS	MLOSM							
03/01/94 07:43:06	0:58:37		-10.0	159.0	2419.5							S10D							
03/01/94 07:47:01	1:02:31		-13.0	159.0	2348.8							OUTUM							Exit umbra
03/01/94 07:48:37	1:04:08										GDS	MAOSM							Exit occultation
03/01/94 07:49:15	1:04:46		-14.8	159.0	2306.4							OUTPM							Exit penumbra
03/01/94 07:50:00	1:05:31												Resume SDDR Downlink (seg 5)						Ground Command
03/01/94 07:51:17	1:06:48										PMK	MAOSM							
03/01/94 07:55:34	1:11:05		-20.0	158.9	2178.8							S20D							
																			Prep1 Script
03/01/94 08:03:38	1:19:09	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/01/94 08:03:40	1:19:11	2											Load lunar dark tables						
																			End Prep1 Script
03/01/94 08:06:34	1:22:05		-30.0	158.9	1930.1							S30D							
03/01/94 08:16:11	1:31:42		-40.0	158.8	1687.4							S40D							
03/01/94 08:17:00	1:32:30												SSDR to IDLE - Downlink complete; Load CEQ_07U.UMI into SEQT 7; Load CEQ_08U.UMI into SEQT 8						Ground Command
																			Standard Prep2 Script
03/01/94 08:23:38	1:39:09	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/01/94 08:24:34	1:40:05		-50.0	158.8	1460.3							S50D							
03/01/94 08:31:53	1:47:24		-60.0	158.8	1254.4							S60D							
																			Standard Prep3 Script
03/01/94 08:35:38	1:51:09	0											Msg "WRNG: Omni/8k in 1 min.."						
03/01/94 08:36:38	1:52:09	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking data
03/01/94 08:37:38	1:53:09	60											Switch to omni antennas						
03/01/94 08:38:19	1:53:50		-70.0	159.0	1072.3							S70D							

Orbit 44 Timeline - Type A Orbit

03/01/94 09:20:15	2:35:46	217							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6									
03/01/94 09:23:58	2:39:29		0.0	338.1	492.4				Equator - A										
03/01/94 09:23:59	2:39:30	224							MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Load CEQ_07U.UMI into SEQT 7; Select DHU SEQT 7									SSDR Segment 3
03/01/94 09:27:52	2:43:23		10.0	338.1	552.7				N10A										
03/01/94 09:27:53	2:43:24	234							N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8									
03/01/94 09:32:00	2:47:31		20.0	338.1	632.9				N20A										
03/01/94 09:32:02	2:47:33	249							N20A	Load CEQ_07.UMI into SEQT 7; Load exposure table LUNARZ25N; Select DHU SEQT 9									Compressed images
03/01/94 09:33:02	2:48:33	60								Laser power OFF									
03/01/94 09:36:29	2:52:00		30.0	338.0	734.4				N30A										
03/01/94 09:36:30	2:52:01	208							N30A	Load CEQ_08.UMI into SEQT 8; Load exposure table LUNARZ35N; Select DHU SEQT 10									
03/01/94 09:41:23	2:56:54		40.0	338.1	858.4				N40A										
03/01/94 09:41:24	2:56:55	294							N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11									SSDR Segment 4
03/01/94 09:46:50	3:02:21		50.0	338.1	1006.0				N50A										
03/01/94 09:46:51	3:02:22	327							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12									
03/01/94 09:52:57	3:08:28		60.0	338.1	1178.2				N60A										
03/01/94 09:52:58	3:08:29	367							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13									
03/01/94 09:59:53	3:15:24		70.0	338.2	1374.7				N70A										
03/01/94 09:59:54	3:15:25	416							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14									
03/01/94 10:07:49	3:23:20		80.0	338.7	1593.7				N80A										
03/01/94 10:07:50	3:23:21	476							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15									
03/01/94 10:16:55	3:32:26		89.8	68.3	1831.0				North Pole										
																			End L044 Script
																			Standard PostMap Script
03/01/94 10:16:56	3:32:27	0								Stop imaging, select ST-A; Set SA step rate to HI									
03/01/94 10:17:06	3:32:37	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF									Slew to Vega
03/01/94 10:18:25	3:33:55		88.5	150.8	1868.5				LDUSK										
03/01/94 10:21:59	3:37:30	290								Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts

Orbit 45 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HIRes	NIR	LWIR	Laser	Comment
03/01/94 11:42:57	0:00:00		28.0	156.7	2930.1							Aposelene							Downlinking SDDR Segment 3 (Orbit 44)
03/01/94 11:56:12	0:13:15		20.0	156.6	2904.0							N20D							
03/01/94 12:12:21	0:29:24		10.0	156.5	2801.5							N10D							
03/01/94 12:19:09	0:36:12		5.6	156.4	2735.1							INPM							Enter penumbra
03/01/94 12:21:26	0:38:29		4.1	156.4	2709.7							INUM							Enter umbra
03/01/94 12:27:33	0:44:36		0.0	156.4	2633.9							Equator - D							
03/01/94 12:36:00	0:53:03												SSDR to IDLE - Downlink complete						Ground Command
03/01/94 12:41:29	0:58:32		-10.0	156.3	2419.7							S10D							
03/01/94 12:43:00	1:00:03												Ranging A ON; Ranging B ON						Ground Command
03/01/94 12:46:09	1:03:12		-13.6	156.3	2335.0							OUTUM							Exit umbra
03/01/94 12:48:15	1:05:18		-15.3	156.2	2294.9							OUTPM							Exit penumbra
03/01/94 12:53:57	1:11:00		-20.0	156.2	2179.5							S20D							
03/01/94 12:58:13	1:15:16										PMK	LOS							
																			Standard Prep1 Script
03/01/94 13:01:03	1:18:06	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/01/94 13:04:57	1:22:00		-30.0	156.2	1931.1							S30D							
03/01/94 13:14:34	1:31:37		-40.0	156.1	1688.8							S40D							
																			Standard Prep2 Script
03/01/94 13:21:03	1:38:06	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/01/94 13:22:57	1:40:00		-50.0	156.1	1461.8							S50D							
03/01/94 13:30:17	1:47:20		-60.0	156.2	1256.0							S60D							
																			Standard Prep3 Script
03/01/94 13:33:28	1:50:31	0											Msg "WRNG: Omni/8k in 1 min.."						
03/01/94 13:34:00	1:51:03												Ranging A OFF						Ground Command
03/01/94 13:34:28	1:51:31	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking data
03/01/94 13:35:28	1:52:31	60											Switch to omni antennas						
03/01/94 13:36:00	1:53:03												Switch to 2 kbps						Ground Command due to problem locking up @ 8k
03/01/94 13:36:28	1:53:31	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMODE=StarPointing, Index=1)						Slew to SGP
03/01/94 13:36:43	1:53:46		-70.0	156.3	1074.0							S70D							
03/01/94 13:37:33	1:54:36	65											UV & HR cameras ON						

Orbit 45 Timeline - Tyne B Orbit

03/01/94 13:40:28	1:57:31	175								Select ST-A									
03/01/94 13:40:38	1:57:41	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5									Start recorder in Segment 5
03/01/94 13:41:03	1:58:06	25								Perform LWIR imaging (DHU SEQT25)									Dark Field imaging starts
03/01/94 13:41:18	1:58:21	15								Perform NIR imaging (DHU SEQT31)									
03/01/94 13:41:33	1:58:36	15								Stop imaging, select ST-A									
03/01/94 13:41:43	1:58:46	10								Deselect ST; Slew s/c sensors to nadir (ACSMODE=LunarMapping)									Slew to nadir
03/01/94 13:42:25	1:59:28		-80.0	156.8	916.5				S80D										
03/01/94 13:43:06	2:00:09	83								Laser power ON									
																			End Prep3 Script
																			L045 Mapping Script
03/01/94 13:45:33	2:02:36	0								Select ST-A; Load exposure table LUNARZ85S									
03/01/94 13:46:33	2:03:36	60								Start imaging (DHU SEQT16)									START MAPPING
03/01/94 13:47:32	2:04:35		-89.8	246.8	783.1				South Pole										
03/01/94 13:47:33	2:04:36	60							MAXS	Set SA step rate to LO									
03/01/94 13:48:16	2:05:19		-88.5	328.2	764.9				LDAWN										
03/01/94 13:52:10	2:09:13		-80.0	334.5	672.8				S80A										
03/01/94 13:52:12	2:09:15	279							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17									
03/01/94 13:56:27	2:13:30		-70.0	335.0	584.1				S70A										
03/01/94 13:56:28	2:13:31	256							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18									
03/01/94 14:00:27	2:17:30		-60.0	335.2	515.8				S60A										
03/01/94 14:00:28	2:17:31	240							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6									
03/01/94 14:04:14	2:21:17		-50.0	335.3	466.9				S50A										
03/01/94 14:04:16	2:21:19	228							S50A	Record in SSSR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5									SSDR Segment 6 Opaque filter did not park
03/01/94 14:07:54	2:24:57		-40.0	335.3	436.5				S40A										
03/01/94 14:07:55	2:24:58	219							S40A	Load exposure table LUNARZ35S									
03/01/94 14:11:29	2:28:32		-30.0	335.3	424.1				S30A										
03/01/94 14:11:30	2:28:33	215							S30A	Load exposure table LUNARZ25S									
03/01/94 14:12:13	2:29:16		-28.0	335.3	423.7				Periselene										
03/01/94 14:15:04	2:32:07		-20.0	335.3	429.3				S20A										
03/01/94 14:15:05	2:32:08	215							S20A	Load exposure table LUNARZ15S									
03/01/94 14:18:41	2:35:44		-10.0	335.3	452.4				S10A										
03/01/94 14:18:42	2:35:45	217							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6									
03/01/94 14:22:25	2:39:28		0.0	335.3	493.6				Equator - A										

Orbit 45 Timeline - Type B Orbit

03/01/94 14:22:26	2:39:29	224							MEQA	Record in SDR Segment 7 Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 7
03/01/94 14:26:19	2:43:22		10.0	335.3	553.9				N10A							
03/01/94 14:26:21	2:43:24	235							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						CEQ_08U.UMI left in from last orbit IR and UV uncompressed
03/01/94 14:30:28	2:47:31		20.0	335.3	634.0				N20A							
03/01/94 14:30:30	2:47:33	249							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						Resume compression
03/01/94 14:31:30	2:48:33	60								Laser power OFF						
03/01/94 14:34:57	2:52:00		30.0	335.3	735.4				N30A							
03/01/94 14:34:58	2:52:01	208							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
03/01/94 14:39:51	2:56:54		40.0	335.3	859.2				N40A							
03/01/94 14:39:53	2:56:56	295							N40A	Switch to inertial pointing (ORBIT45RW); Load exposure table LUNARZ45N; Select DHU SEQT 11						Initiate oblique viewing
03/01/94 14:45:18	3:02:21		50.0	335.4	1006.7				N50A							
03/01/94 14:45:19	3:02:22	326							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12						
03/01/94 14:51:25	3:08:28		60.0	335.4	1178.7				N60A							
03/01/94 14:51:26	3:08:29	367							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19						
																End L045 Script
																Standard PostMap Script
03/01/94 14:54:54	3:11:57	0								Stop imaging, select ST-A; Set SA step rate to HI						
03/01/94 14:55:04	3:12:07	10								Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF						Slew to Vega
03/01/94 14:58:22	3:15:25		70.0	335.6	1375.0				N70A							
03/01/94 14:59:54	3:16:57	290								Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/01/94 15:00:09	3:17:12	15								Perform NIR imaging (DHU SEQT 31)						
03/01/94 15:00:24	3:17:27	15								Select ST-A						
03/01/94 15:00:34	3:17:37	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)						Slew HGA to Earth
03/01/94 15:06:18	3:23:21		80.0	336.1	1593.7				N80A							
03/01/94 15:05:24	3:22:27	290								Switch to HGA; Select ST-A						READY FOR DATA DUMP
																End PostMap Script
03/01/94 15:15:23	3:32:26		89.8	64.1	1830.6				North Pole							
03/01/94 15:16:53	3:33:56		88.5	147.1	1867.8				LDUSK							

Orbit 45 Timeline - Type B Orbit

03/01/94 15:25:48	3:42:51		80.0	153.6	2077.9						N80D						
03/01/94 15:37:40	3:54:43		70.0	154.1	2323.4						N70D						
03/01/94 15:50:08	4:07:11									GDS	LOS						
03/01/94 15:51:01	4:08:04		60.0	154.2	2550.4						N60D						
03/01/94 16:05:43	4:22:46		50.0	154.1	2739.2						N50D						
03/01/94 16:09:00	4:26:03											Update state vector (GNC53_01MAR_1600); Switch to DHU mode @ 128 kbps					Ground Command
03/01/94 16:16:00	4:33:03											Downlink SDR Segment 5; Ranging A & B OFF					Ground Command
03/01/94 16:21:32	4:38:35		40.0	154.1	2870.0						N40D						
03/01/94 16:31:00	4:48:03											IMU test					Ground Command
03/01/94 16:38:01	4:55:04		30.0	154.0	2927.0						N30D						
03/01/94 16:40:00	4:57:03											Downlink SDR Segment 6					Ground Command
03/01/94 16:41:25	4:58:28		28.0	154.0	2928.7						Aposelene						

Orbit 46 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/01/94 16:41:25	0:00:00		28.0	154.0	2928.7							Aposelene							Downlinking SSSR Segment 6 (Orbit 45)
03/01/94 16:54:36	0:13:11		20.0	153.9	2902.8							N20D							
03/01/94 17:00:00	0:18:35												Uplink & schedule L046 script						Ground Command
03/01/94 17:10:44	0:29:19		10.0	153.8	2800.8							N10D							Enter penumbra
03/01/94 17:16:45	0:35:20		6.1	153.7	2743.0							INPM							Enter umbra
03/01/94 17:18:54	0:37:29		4.7	153.7	2719.5							INUM							
03/01/94 17:25:56	0:44:31		0.0	153.7	2633.6							Equator - D							
03/01/94 17:28:00	0:46:35												Downlink SSSR Segment 7						Ground Command
03/01/94 17:39:52	0:58:27		-10.0	153.6	2419.9							S10D							
03/01/94 17:45:14	1:03:49		-14.2	153.5	2322.2							OUTUM							Exit umbra
03/01/94 17:47:13	1:05:48		-15.7	153.5	2284.1							OUTPM							Exit penumbra
03/01/94 17:52:20	1:10:55		-20.0	153.5	2180.1							S20D							
																			Prep1 Script
03/01/94 18:00:28	1:19:03	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/01/94 18:03:20	1:21:55		-30.0	153.4	1932.1							S30D							
03/01/94 18:12:58	1:31:33		-40.0	153.4	1689.9							S40D							
																			Standard Prep2 Script
03/01/94 18:20:28	1:39:03	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/01/94 18:21:21	1:39:56		-50.0	153.4	1463.2							S50D							
03/01/94 18:28:41	1:47:16		-60.0	153.5	1257.5							S60D							
																			Standard Prep3 Script
03/01/94 18:32:28	1:51:03	0											Msg "WRNG: Omni/8k in 1 min.."						
03/01/94 18:33:28	1:52:03	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking data
03/01/94 18:34:28	1:53:03	60											Switch to omni antennas						
03/01/94 18:35:28	1:54:03	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to South Galactic Pole (ACSMODE=StarPointing, Index=1)						Slew to SGP
03/01/94 18:36:33	1:55:08	65											UV & HR cameras ON						
03/01/94 18:35:07	1:53:42		-70.0	153.6	1075.5							S70D							
03/01/94 18:39:28	1:58:03	175											Select ST-A						
03/01/94 18:39:38	1:58:13	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1						Start SSSR in Segment 1
03/01/94 18:40:03	1:58:38	25											Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts

Orbit 46 Timeline - Type A Orbit

03/01/94 18:40:18	1:58:53	15								Perform NIR imaging (DHU SEQT 31)									
03/01/94 18:40:33	1:59:08	15								Stop imaging, select ST-A									
03/01/94 18:40:43	1:59:18	10								Deselect ST; Slew s/c sensors to nadir (ACSMode=LunarMapping)									Slew to nadir
03/01/94 18:40:50	1:59:25		-80.0	154.3	918.1				S80D										
03/01/94 18:42:06	2:00:41	83								Laser power ON									
																			End Prep3 Script
																			L046 Mapping Script
03/01/94 18:43:57	2:02:33	0								Select ST-A									
03/01/94 18:44:08	2:02:43	10								Set SA step rate to LO; Load exposure table LUNARZ85S									
03/01/94 18:44:58	2:03:33	50								Start imaging (DHU SEQT 9)									START MAPPING
03/01/94 18:45:57	2:04:32		-89.8	244.6	784.6				South Pole										
03/01/94 18:46:40	2:05:15		-88.5	324.4	766.6				LDAWN										
03/01/94 18:50:36	2:09:11		-80.0	331.6	674.3				S80A										
03/01/94 18:50:37	2:09:12	339							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3									
03/01/94 18:54:52	2:13:27		-70.0	332.2	585.6				S70A										
03/01/94 18:54:54	2:13:29	257							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4									
03/01/94 18:58:52	2:17:27		-60.0	332.4	517.3				S60A										
03/01/94 18:58:54	2:17:29	240							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6									
03/01/94 19:02:40	2:21:15		-50.0	332.5	468.4				S50A										
03/01/94 19:02:42	2:21:17	228							S50A	Record in SSSR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5									SSDR Segment 2 Opaque filter did not park
03/01/94 19:06:20	2:24:55		-40.0	332.6	437.9				S40A										
03/01/94 19:06:21	2:24:56	219							S40A	Load exposure table LUNARZ35S									
03/01/94 19:09:56	2:28:31		-30.0	332.6	425.4				S30A										
03/01/94 19:09:57	2:28:32	216							S30A	Load exposure table LUNARZ25S									
03/01/94 19:10:40	2:29:15		-27.9	332.6	425.0				Periselene										
03/01/94 19:13:30	2:32:05		-20.0	332.6	430.6				S20A										
03/01/94 19:13:32	2:32:07	215							S20A	Load exposure table LUNARZ15S									
03/01/94 19:17:08	2:35:43		-10.0	332.6	453.6				S10A										
03/01/94 19:17:09	2:35:44	217							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6									
03/01/94 19:20:52	2:39:27		0.0	332.6	494.8				Equator - A										
03/01/94 19:20:53	2:39:28	224							MEQA	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7									SSDR Segment 3
03/01/94 19:24:47	2:43:22		10.0	332.6	555.0				N10A										
03/01/94 19:24:48	2:43:23	235							N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8									UV and IR uncompressed

Orbit 46 Timeline - Type A Orbit

03/01/94 19:28:56	2:47:31		20.0	332.6	635.1					N20A				
03/01/94 19:28:57	2:47:32	249								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			Resume compression
03/01/94 19:29:57	2:48:32	60									Laser power OFF			
03/01/94 19:33:25	2:52:00		30.0	332.6	736.3					N30A				
03/01/94 19:33:26	2:52:01	209								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/01/94 19:38:19	2:56:54		40.0	332.6	860.1					N40A				
03/01/94 19:38:21	2:56:56	295								N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SSDR Segment 4
03/01/94 19:43:46	3:02:21		50.0	332.7	1007.4					N50A				
03/01/94 19:43:47	3:02:22	326								N50A	Reset filters (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12			
03/01/94 19:49:53	3:08:28		60.0	332.7	1179.2					N60A				
03/01/94 19:49:55	3:08:30	368								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13			
03/01/94 19:56:50	3:15:25		70.0	332.9	1375.3					N70A				
03/01/94 19:56:51	3:15:26	416								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14			
03/01/94 20:04:46	3:23:21		80.0	333.5	1593.8					N80A				
03/01/94 20:04:47	3:23:22	476								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15			
														End L046 Script
03/01/94 20:13:51	3:32:26		89.8	61.3	1830.3					North Pole				
														Standard PostMap Script
03/01/94 20:13:52	3:32:27	0									Stop imaging, select ST-A; Set SA step rate to HI			
03/01/94 20:14:02	3:32:37	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF			Slew to Vega
03/01/94 20:15:20	3:33:55		88.5	143.3	1867.1					LDUSK				
03/01/94 20:18:52	3:37:27	290									Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
03/01/94 20:19:06	3:37:41	15									Perform NIR imaging (DHU SEQT 31)			
03/01/94 20:19:21	3:37:56	15									Select ST-A			
03/01/94 20:19:32	3:38:07	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)			Slew HGA to Earth
03/01/94 20:24:16	3:42:51		80.0	150.7	2077.3					N80D				
03/01/94 20:24:00	3:42:35										Switch to HGA			Ground Command
03/01/94 20:24:22	3:42:57	290									Select ST-A			READY FOR DATA DUMP
														End PostMap Script

Orbit 47 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/01/94 21:39:52	0:00:00		27.9	151.2	2927.4							Aposelene							Downlinking SSSR Segment 3 (Orbit 46)
03/01/94 21:40:00	0:00:08												Load DEQ_11.UMI into SEQT 11						Ground Command - restore compressed SEQT 11
03/01/94 21:53:00	0:13:08		20.0	151.1	2901.8							N20D							
03/01/94 22:09:00	0:29:08												Downlink SSSR Segment 4						Ground Command
03/01/94 22:09:08	0:29:16		10.0	151.0	2800.1							N10D							
03/01/94 22:14:23	0:34:30		6.6	151.0	2750.3							INPM							Enter penumbra
03/01/94 22:16:26	0:36:34		5.3	151.0	2728.5							INUM							Enter umbra
03/01/94 22:21:00	0:41:08												SSDR to IDLE - Downlink complete						Ground Command
03/01/94 22:24:20	0:44:27		0.0	150.9	2633.3							Equator - D							
03/01/94 22:38:15	0:58:23		-10.0	150.8	2420.1							S10D							
03/01/94 22:44:15	1:04:23		-14.7	150.8	2310.3							OUTUM							Exit umbra
03/01/94 22:46:08	1:06:16		-16.2	150.8	2273.8							OUTPM							Exit penumbra
03/01/94 22:50:43	1:10:51		-20.0	150.8	2180.6							S20D							
																			Standard Prep1 Script
03/01/94 22:57:53	1:18:01	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/01/94 23:01:43	1:21:50		-30.0	150.7	1932.9							S30D							
03/01/94 23:11:21	1:31:28		-40.0	150.7	1691.0							S40D							
03/01/94 23:14:32	1:34:39										MAD	AOS							
																			Standard Prep2 Script
03/01/94 23:17:53	1:38:01	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/01/94 23:19:45	1:39:53		-50.0	150.7	1464.4							S50D							
03/01/94 23:27:05	1:47:12		-60.0	150.8	1258.8							S60D							
																			L047 Prep3 Script
03/01/94 23:30:18	1:50:26	0											Msg "WRNG: Omni/8k in 1 min.."						
03/01/94 23:31:18	1:51:25	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking data
03/01/94 23:32:18	1:52:26	60											Switch to omni antennas						
03/01/94 23:33:18	1:53:26	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/01/94 23:33:31	1:53:39		-70.0	151.0	1076.9							S70D							
03/01/94 23:34:23	1:54:31	65											UV & HR cameras ON						
03/01/94 23:37:18	1:57:25	175											Select ST-A						
03/01/94 23:37:28	1:57:36	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5						Start recorder in Segment 5

Orbit 47 Timeline - Type B Orbit

03/01/94 23:37:53	1:58:00	25								Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/01/94 23:38:08	1:58:16	15								Perform NIR imaging (DHU SEQT 31)						
03/01/94 23:38:23	1:58:31	15								Stop imaging, select ST-A						
03/01/94 23:38:33	1:58:41	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR47)						Slew to nadir using inertial pointing
03/01/94 23:39:02	1:59:10	29								Laser power ON						
End L047 Prep3 Script																
03/01/94 23:39:14	1:59:21			-80.0	151.7	919.5				S80D						
03/01/94 23:41:12	2:01:19								CAN	LOS						
L047 Mapping Script																
03/01/94 23:42:53	2:03:01	0									Load exposure table LUNARZ85S					
03/01/94 23:43:23	2:03:31	30									Switch to lunar mapping mode (ACSMMode=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/01/94 23:44:22	2:04:30			-89.7	243.4	786.0				South Pole						
03/01/94 23:44:23	2:04:30	60								MAXS	Set SA step rate to LO					
03/01/94 23:45:05	2:05:13			-88.5	320.6	768.2				LDAWN						
03/01/94 23:49:01	2:09:09			-80.0	328.7	675.7				S80A						
03/01/94 23:49:02	2:09:10	279								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/01/94 23:53:18	2:13:25			-70.0	329.4	587.0				S70A						
03/01/94 23:53:19	2:13:27	257								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18					
03/01/94 23:57:18	2:17:26			-60.0	329.6	518.7				S60A						
03/01/94 23:57:19	2:17:27	240								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/02/94 00:01:06	2:21:13			-50.0	329.7	469.7				S50A						
03/02/94 00:01:07	2:21:15	228								S50A	Record in SDR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 6 Opaque filter did not park
03/02/94 00:04:46	2:24:54			-40.0	329.8	439.2				S40A						
03/02/94 00:04:47	2:24:55	220								S40A	Load exposure table LUNARZ35S					
03/02/94 00:08:22	2:28:29			-30.0	329.8	426.7				S30A						
03/02/94 00:08:23	2:28:31	216								S30A	Load exposure table LUNARZ25S					
03/02/94 00:09:07	2:29:15			-27.9	329.8	426.3				Periselene						
03/02/94 00:11:57	2:32:04			-20.0	329.9	431.8				S20A						
03/02/94 00:11:58	2:32:06	215								S20A	Load exposure table LUNARZ15S					
03/02/94 00:15:35	2:35:43			-10.0	329.9	454.8				S10A						
03/02/94 00:15:36	2:35:44	218								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/02/94 00:19:19	2:39:27			0.0	329.9	495.9				Equator - A						
03/02/94 00:19:20	2:39:28	224								MEQA	Record in SDR Segment 7 Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 7

Orbit 47 Timeline - Type B Orbit

03/02/94 00:23:14	2:43:22		10.0	329.9	556.0					N10A									
03/02/94 00:23:15	2:43:23	235								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/02/94 00:27:23	2:47:31		20.0	329.9	636.1					N20A									
03/02/94 00:27:24	2:47:32	249								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/02/94 00:28:24	2:48:31	60									Laser power OFF								
03/02/94 00:31:52	2:52:00		30.0	329.9	737.2					N30A									
03/02/94 00:31:53	2:52:01	209								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/02/94 00:36:47	2:56:55		40.0	329.9	860.8					N40A									
03/02/94 00:36:48	2:56:56	295								N40A	Switch to inertial pointing (ORBIT47RW); Load exposure table LUNARZ45N; Select DHU SEQT 11								Initiate oblique viewing UV and IR uncompressed (CEQ_11U.UMI loaded)
03/02/94 00:42:14	3:02:22		50.0	330.0	1008.1					N50A									
03/02/94 00:42:15	3:02:22	327								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12								HiRes imaging had not stopped Resume compression
03/02/94 00:48:21	3:08:29		60.0	330.1	1179.7					N60A									
03/02/94 00:48:22	3:08:30	367								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19								
03/02/94 00:51:51	3:11:59	209									Slew s/c sensors to nadir (ACSMMode=LunarMapping)								End oblique viewing - resume nadir pointing
03/02/94 00:55:18	3:15:26		70.0	330.3	1375.6					N70A									
03/02/94 00:55:19	3:15:27	209								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								
03/02/94 01:03:14	3:23:22		80.0	331.0	1593.9					N80A									
03/02/94 01:03:15	3:23:23	476								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
											End L047 Script								
03/02/94 01:12:19	3:32:27		89.7	59.7	1830.2					North Pole									
											Standard PostMap Script								
03/02/94 01:13:20	3:33:28	0									Stop imaging, select ST-A; Set SA step rate to HI								
03/02/94 01:13:30	3:33:38	10									Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF								Slew to Vega
03/02/94 01:13:47	3:33:55		88.5	139.5	1866.5					LDUSK									
03/02/94 01:18:20	3:38:28	290									Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/02/94 01:18:35	3:38:43	15									Perform NIR imaging (DHU SEQT 31)								
03/02/94 01:18:50	3:38:58	15									Select ST-A								

Orbit 47 Timeline - Type B Orbit

03/02/94 01:19:00	3:39:07	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/02/94 01:22:44	3:42:52		80.0	147.8	2076.8				N80D							
03/02/94 01:23:50	3:43:58	290								Switch to HGA; Select ST-A						READY FOR DATA DUMP
																End PostMap Script
03/02/94 01:25:00	3:45:08									Switch to DHU mode @ 128 kbps						Ground Command
03/02/94 01:29:00	3:49:08									Downlink SSSR Segment 5						Ground Command
03/02/94 01:34:35	3:54:43		70.0	148.5	2321.7				N70D							
03/02/94 01:47:54	4:08:02		60.0	148.6	2548.1				N60D							
03/02/94 02:00:00	4:20:08									Downlink SSSR Segment 6; Update state vector (GNC53_02MAR0000)						Ground Command
03/02/94 02:02:36	4:22:44		50.0	148.6	2736.6				N50D							
03/02/94 02:18:23	4:38:31		40.0	148.6	2867.2				N40D							
03/02/94 02:32:00	4:52:08									Downlink SSSR Segment 7						Ground Command
03/02/94 02:34:50	4:54:57		30.0	148.5	2924.4				N30D							
03/02/94 02:38:18	4:58:26		27.9	148.5	2926.2				Aposelene							

Orbit 48 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/02/94 02:38:18	0:00:00		27.9	148.5	2926.2							Aposelene							Downlinking SSSR Segment 7 (Orbit 47)
03/02/94 02:51:24	0:13:06		20.0	148.4	2900.7							N20D							
03/02/94 03:07:32	0:29:14		10.0	148.3	2799.4							N10D							
03/02/94 03:12:03	0:33:45		7.1	148.3	2757.0							INPM							Enter penumbra
03/02/94 03:14:02	0:35:44		5.8	148.3	2736.6							INUM							Enter umbra
03/02/94 03:20:00	0:41:42												SSDR to IDLE - Downlink complete						Ground Command
03/02/94 03:22:00	0:43:42												Uplink & schedule L048 scripts						Ground Command
03/02/94 03:22:43	0:44:25		0.0	148.2	2633.0							Equator - D							
03/02/94 03:36:38	0:58:20		-10.0	148.1	2420.2							S10D							
03/02/94 03:43:14	1:04:56		-15.1	148.1	2299.2							OUTUM							Exit umbra
03/02/94 03:45:02	1:06:44		-16.6	148.1	2264.1							OUTPM							Exit penumbra
																			Prep1 Script
03/02/94 03:46:18	1:08:00	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/02/94 03:49:06	1:10:48		-20.0	148.1	2181.0							S20D							
03/02/94 04:00:06	1:21:48		-30.0	148.0	1933.6							S30D							
03/02/94 04:09:44	1:31:26		-40.0	148.0	1691.9							S40D							
03/02/94 14:15:30	11:37:12										PMK	AOS							
																			Standard Prep2 Script
03/02/94 04:16:18	1:38:00	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/02/94 04:18:08	1:39:50		-50.0	148.0	1465.5							S50D							
03/02/94 04:25:29	1:47:11		-60.0	148.1	1260.0							S60D							
																			L048 Prep3 Script
03/02/94 04:27:43	1:49:25	0											Msg "WRNG: Omni/8k in 1 min.."						
03/02/94 04:28:43	1:50:25	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking data
03/02/94 04:29:43	1:51:25	60											Switch to omni antennas						
03/02/94 04:30:43	1:52:25	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/02/94 04:31:47	1:53:30	65											UV & HR cameras ON						
03/02/94 04:31:56	1:53:38		-70.0	148.3	1078.2							S70D							
03/02/94 04:35:43	1:57:25	235											Select ST-A						
03/02/94 04:35:53	1:57:35	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1						Start SSSR in Segment 1
03/02/94 04:36:18	1:58:00	25											Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts

Orbit 48 Timeline - Type A Orbit

03/02/94	04:36:33	1:58:15	15							Perform NIR imaging (DHU SEQT 31)									
03/02/94	04:36:48	1:58:30	15							Stop imaging, select ST-A									
03/02/94	04:36:58	1:58:40	10							Deselect ST; Slew s/c sensors to nadir (GNC12NADIR48)									Slew to nadir using inertial pointing
03/02/94	04:37:27	1:59:09	29							Laser power ON									
											End L048 Prep3 Script								
03/02/94	04:37:39	1:59:21		-80.0	149.1	920.7				S80D									
											L048 Mapping Script								
03/02/94	04:40:47	2:02:29	0							Load exposure table LUNARZ85S									
03/02/94	04:41:48	2:03:30	60							Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)									START MAPPING
03/02/94	04:42:47	2:04:29		-89.7	239.8	787.3				South Pole									
03/02/94	04:42:48	2:04:30	60							MAXS									
03/02/94	04:43:29	2:05:11		-88.5	316.6	769.7				LDAWN									
03/02/94	04:47:25	2:09:07		-80.0	325.8	677.0				S80A									
03/02/94	04:47:27	2:09:09	279							S80A									
03/02/94	04:51:43	2:13:25		-70.0	326.6	588.2				S70A									
03/02/94	04:51:44	2:13:26	257							S70A									
03/02/94	04:55:43	2:17:25		-60.0	326.9	519.9				S60A									
03/02/94	04:55:45	2:17:27	241							S60A									
03/02/94	04:59:32	2:21:14		-50.0	327.0	470.9				S50A									
03/02/94	04:59:33	2:21:15	228							S50A									Record in SDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5
03/02/94	05:03:12	2:24:54		-40.0	327.0	440.4				S40A									
03/02/94	05:03:13	2:24:55	220							S40A									Load exposure table LUNARZ35S
03/02/94	05:06:48	2:28:30		-30.0	327.1	427.8				S30A									
03/02/94	05:06:49	2:28:31	216							S30A									Load exposure table LUNARZ25S
03/02/94	05:07:33	2:29:15		-27.9	327.1	427.4				Periselene									
03/02/94	05:10:23	2:32:05		-20.0	327.1	432.9				S20A									
03/02/94	05:10:24	2:32:06	215							S20A									Load exposure table LUNARZ15S
03/02/94	05:14:01	2:35:43		-10.0	327.1	455.8				S10A									
03/02/94	05:14:02	2:35:44	218							S10A									Load exposure table LUNARZ05S; Select DHU SEQT 6
03/02/94	05:17:46	2:39:28		0.0	327.2	496.9				Equator - A									
03/02/94	05:17:47	2:39:29	225							MEQA									Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7
03/02/94	05:21:40	2:43:22		10.0	327.2	557.0				N10A									
03/02/94	05:21:42	2:43:24	235							N10A									Load exposure table LUNARZ15N; Select DHU SEQT 8

Orbit 48 Timeline - Type A Orbit

03/02/94 05:25:50	2:47:32		20.0	327.2	637.0				N20A				
03/02/94 05:25:51	2:47:33	249							N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9			UV and IR uncompressed
03/02/94 05:26:51	2:48:33	60								Laser power OFF			
03/02/94 05:30:19	2:52:01		30.0	327.2	738.1				N30A				
03/02/94 05:30:21	2:52:03	210							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			Resume compression
03/02/94 05:35:14	2:56:56		40.0	327.2	861.6				N40A				
03/02/94 05:35:15	2:56:57	294							N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SSDR Segment 4 UV and IR uncompressed (CEQ_11U.UMI still loaded after last orbit)
03/02/94 05:40:41	3:02:23		50.0	327.3	1008.7				N50A				
03/02/94 05:40:42	3:02:24	327							N50A	Reset filters (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12			Reset did not occur Resume compression
03/02/94 05:46:49	3:08:31		60.0	327.4	1180.2				N60A				
03/02/94 05:46:50	3:08:32	368							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13			
03/02/94 05:53:45	3:15:27		70.0	327.6	1375.9				N70A				
03/02/94 05:53:46	3:15:28	416							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14			
03/02/94 06:01:41	3:23:23		80.0	328.4	1594.0				N80A				
03/02/94 06:01:42	3:23:24	476							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15			
03/02/94 06:02:42	3:24:24	60							MAXN	Load CEQ_09.UMI into SEQT 9			Restore compressed SEQT 9
											End L048 Script		
03/02/94 06:10:46	3:32:28		89.7	55.6	1830.0				North Pole				
											Standard PostMap Script		
03/02/94 06:11:48	3:33:30	0								Stop imaging, select ST-A; Set SA step rate to HI			
03/02/94 06:11:58	3:33:40	10								Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF			Slew to Vega
03/02/94 06:12:13	3:33:55		88.5	135.5	1866.0				LDUSK				
03/02/94 06:16:48	3:38:30	290								Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
03/02/94 06:17:03	3:38:45	15								Perform NIR imaging (DHU SEQT 31)			
03/02/94 06:17:17	3:38:59	15								Select ST-A			
03/02/94 06:17:28	3:39:10	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)			Slew HGA to Earth
03/02/94 06:21:11	3:42:53		80.0	144.9	2076.4				N80D				

Orbit 48 Timeline - Type A Orbit

03/02/94 06:22:18	3:44:00	290								Select ST-A; Switch to HGA @ 8 kbps						READY FOR DATA DUMP
																End PostMap Script
03/02/94 06:27:00	3:48:42									Switch to DHU mode @ 128kbps; Downlink SDR Segment 1						Ground Command
03/02/94 06:33:02	3:54:44		70.0	145.7	2321.0				N70D							
03/02/94 06:46:21	4:08:03		60.0	145.8	2547.2				N60D							
03/02/94 06:52:55	4:14:37								GDS	AOS						
03/02/94 07:01:00	4:22:42									Downlink SDR Segment 2						Ground Command
03/02/94 07:01:02	4:22:44		50.0	145.9	2735.5				N50D							
03/02/94 07:16:48	4:38:30		40.0	145.8	2866.0				N40D							
03/02/94 07:30:00	4:51:42									Uplink & schedule L049 scripts						Ground Command
03/02/94 07:33:15	4:54:57		30.0	145.7	2923.3				N30D							
03/02/94 07:36:45	4:58:27		27.9	145.7	2925.1				Aposelene							

Orbit 49 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/02/94 07:36:45	0:00:00		27.9	145.7	2925.1							Aposelene							
03/02/94 07:37:00	0:00:15												Downlink SDR Segment 3 (orb 48)						Ground Command
03/02/94 07:49:48	0:13:03		20.0	145.7	2899.8							N20D							
03/02/94 08:05:55	0:29:10		10.0	145.6	2798.7							N10D							
03/02/94 08:09:00	0:32:15												Downlink SDR Segment 4						Ground Command
03/02/94 08:09:45	0:33:00		7.5	145.5	2763.3							INPM							Enter penumbra
03/02/94 08:11:39	0:34:54		6.3	145.5	2744.1							INUM							Enter umbra
03/02/94 08:21:06	0:44:21		0.0	145.5	2632.6							Equator - D							
03/02/94 08:32:00	0:55:15												Update state vector (GNC53_02MAR0800)						Ground Command
03/02/94 08:33:08	0:56:23										MAD	LOS							
03/02/94 08:35:01	0:58:16		-10.0	145.4	2420.2							S10D							
03/02/94 08:42:11	1:05:26		-15.6	145.4	2288.5							OUTUM							Exit umbra
03/02/94 08:43:54	1:07:09		-17.0	145.4	2254.7							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/02/94 08:44:42	1:07:57	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/02/94 08:44:44	1:07:59	2											Load lunar dark tables						
																			End Prep1 Script
03/02/94 08:47:29	1:10:44		-20.0	145.4	2181.3							S20D							
03/02/94 08:58:30	1:21:45		-30.0	145.3	1934.2							S30D							
03/02/94 09:08:08	1:31:23		-40.0	145.3	1692.7							S40D							
																			Standard Prep2 Script
03/02/94 09:14:42	1:37:57	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/02/94 09:16:32	1:39:47		-50.0	145.3	1466.4							S50D							
03/02/94 09:23:52	1:47:07		-60.0	145.4	1261.0							S60D							
																			L049 Prep3 Script
03/02/94 09:27:07	1:50:22	0											Msg "WRNG: Omni/8k in 1 min.."						
03/02/94 09:28:07	1:51:22	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking data
03/02/94 09:29:07	1:52:22	60											Switch to omni antennas						
03/02/94 09:30:07	1:53:22	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/02/94 09:30:20	1:53:35		-70.0	145.7	1079.2							S70D							
03/02/94 09:31:12	1:54:27	65											UV & HR cameras ON						
03/02/94 09:34:07	1:57:22	175											Select ST-A						
03/02/94 09:34:17	1:57:32	10											Initialize filters (DHU SEQT 28); Record in SDR Segment 5						Start recorder in Segment 5

Orbit 49 Timeline - Tyne B Orbit

03/02/94 09:34:42	1:57:57	25								Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/02/94 09:34:57	1:58:12	15								Perform NIR imaging (DHU SEQT 31)				
03/02/94 09:35:12	1:58:27	15								Stop imaging, select ST-A				
03/02/94 09:35:22	1:58:37	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR49)				Slew to nadir using inertial pointing
03/02/94 09:36:02	1:59:17	40								Laser power ON				
End L049 Prep3 Script														
03/02/94 09:36:03	1:59:18		-80.0	146.6	921.8				S80D					
L049 Mapping Script														
03/02/94 09:39:12	2:02:27	0								Load exposure table LUNARZ85S; Select ST-A				
03/02/94 09:40:12	2:03:27	60								Deselect ST; Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)				START MAPPING
03/02/94 09:41:11	2:04:26		-89.7	236.1	788.4				South Pole					
03/02/94 09:41:12	2:04:27	60							MAXS	Set SA step rate to LO				
03/02/94 09:41:53	2:05:08		-88.5	312.6	771.0				LDAWN					
03/02/94 09:45:50	2:09:05		-80.0	322.9	678.2				S80A					
03/02/94 09:45:52	2:09:07	280							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17				
03/02/94 09:50:08	2:13:23		-70.0	323.8	589.4				S70A					
03/02/94 09:50:09	2:13:24	257							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18				
03/02/94 09:54:08	2:17:23		-60.0	324.1	521.0				S60A					
03/02/94 09:54:10	2:17:25	241							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/02/94 09:57:57	2:21:12		-50.0	324.2	472.0				S50A					
03/02/94 09:57:58	2:21:13	228							S50A	Record in SDR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 6
03/02/94 10:01:37	2:24:52		-40.0	324.3	441.4				S40A					
03/02/94 10:01:39	2:24:54	221							S40A	Load exposure table LUNARZ35S				
03/02/94 10:05:14	2:28:29		-30.0	324.3	428.8				S30A					
03/02/94 10:05:15	2:28:30	216							S30A	Load exposure table LUNARZ25S				
03/02/94 10:05:59	2:29:14		-27.9	324.4	428.4				Periselene					
03/02/94 10:08:49	2:32:04		-20.0	324.4	433.9				S20A					
03/02/94 10:08:50	2:32:05	215							S20A	Load exposure table LUNARZ15S				
03/02/94 10:12:27	2:35:42		-10.0	324.4	456.8				S10A					
03/02/94 10:12:29	2:35:44	219							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/02/94 10:16:12	2:39:27		0.0	324.4	497.9				Equator - A					
03/02/94 10:16:13	2:39:28	224							MEQA	Record in SDR Segment 7 Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 7

Orbit 49 Timeline - Type B Orbit

03/02/94 10:20:07	2:43:22		10.0	324.4	557.9					N10A									
03/02/94 10:20:08	2:43:23	235								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/02/94 10:24:17	2:47:32		20.0	324.5	637.8					N20A									
03/02/94 10:24:18	2:47:33	250								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/02/94 10:25:18	2:48:33	60									Laser power OFF								
03/02/94 10:28:46	2:52:01		30.0	324.5	738.9					N30A									
03/02/94 10:28:47	2:52:02	209								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/02/94 10:33:41	2:56:56		40.0	324.5	862.3					N40A									
03/02/94 10:33:42	2:56:57	295								N40A	Switch to inertial pointing; Load exposure table LUNARZ45N; Select DHU SEQT 11								Initiate oblique viewing UV and IR uncompressed (CEQ_11U.UMI still loaded)
03/02/94 10:39:08	3:02:23		50.0	324.6	1009.4					N50A									
03/02/94 10:39:09	3:02:24	327								N50A	Reset filters (DHU SEQT 28); Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ55N; Select DHU SEQT 12								Filter reset did not occur Load uncompressed SEQT 12
03/02/94 10:45:16	3:08:31		60.0	324.7	1180.8					N60A									
03/02/94 10:45:17	3:08:32	368								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19								Resume compression
03/02/94 10:48:45	3:12:00	209									Reset filters to resume HiRes (DHU SEQT 28)								Filter reset did not occur
03/02/94 10:52:12	3:15:27		70.0	325.0	1376.3					N70A									
03/02/94 10:52:14	3:15:29	209								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								
03/02/94 11:00:08	3:23:23		80.0	325.8	1594.3					N80A									
03/02/94 11:00:10	3:23:25	476								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21; Load CEQ_12.UMI into SEQT12								Restore compressed SEQT 12
																			End L049 Script
03/02/94 11:09:13	3:32:28		89.7	52.5	1829.9					North Pole									
																			Standard PostMap Script
03/02/94 11:10:15	3:33:30	0									Stop imaging, select ST-A; Set SA step rate to HI								
03/02/94 11:10:25	3:33:40	10									Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF								Slew to Vega
03/02/94 11:10:39	3:33:54		88.5	131.5	1865.5					LDUSK									
03/02/94 11:15:15	3:38:30	290									Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/02/94 11:15:29	3:38:45	15									Perform NIR imaging (DHU SEQT 31)								
03/02/94 11:15:44	3:38:59	15									Select ST-A								

Orbit 49 Timeline - Type B Orbit

03/02/94 11:15:55	3:39:10	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/02/94 11:19:38	3:42:53		80.0	142.0	2076.1					N80D						
03/02/94 11:20:45	3:44:00	290									Select ST-A; Switch to HGA @ 128kbps					READY FOR DATA DUMP
																End PostMap Script
03/02/94 11:25:00	3:48:15										Downlink SSDR Segment 5					Ground Command
03/02/94 11:31:29	3:54:44		70.0	142.8	2320.5					N70D						
03/02/94 11:44:47	4:08:02		60.0	143.1	2546.4					N60D						
03/02/94 11:51:00	4:14:15										Downlink SSDR Segment 6					Ground Command
03/02/94 11:59:28	4:22:43		50.0	143.1	2734.5					N50D						
03/02/94 12:03:54	4:27:09								CAN	AOS						
03/02/94 12:15:14	4:38:29		40.0	143.1	2865.0					N40D						
03/02/94 12:22:00	4:45:15										Downlink SSDR Segment 7					Ground Command
03/02/94 12:31:40	4:54:55		30.0	143.0	2922.3					N30D						
03/02/94 12:35:11	4:58:26		27.9	143.0	2924.1					Aposelene						

Orbit 50 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/02/94 12:35:11	0:00:00		27.9	143.0	2924.1							Aposelene							Downlinking SSDR Segment 7 (Orbit 49)
03/02/94 12:41:00	0:05:49												Uplink L050 scripts						Ground Command
03/02/94 12:48:13	0:13:02		20.0	142.9	2898.9							N20D							
03/02/94 12:58:00	0:22:49												Uplink scripts baseline						Ground Command
03/02/94 13:04:19	0:29:08		10.0	142.8	2798.1							N10D							
03/02/94 13:05:00	0:29:49												Uplink L050 scripts again & schedule						Ground Command
03/02/94 13:07:29	0:32:18		8.0	142.8	2769.1							INPM							Enter penumbra
03/02/94 13:09:19	0:34:08		6.8	142.8	2751.1							INUM							Enter umbra
03/02/94 13:14:00	0:38:49												SSDR to IDLE - Downlink complete						Ground Command
03/02/94 13:19:30	0:44:19		0.0	142.8	2632.3							Equator - D							
03/02/94 13:33:24	0:58:13		-10.0	142.7	2420.1							S10D							
03/02/94 13:39:41	1:04:30										PMK	LOS							
03/02/94 13:41:05	1:05:54		-16.0	142.7	2278.5							OUTUM							Exit umbra
03/02/94 13:42:44	1:07:33		-17.4	142.6	2245.8							OUTPM							Exit penumbra
																			Prep1 Script
03/02/94 13:44:07	1:08:56	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/02/94 13:44:09	1:08:58	2											Load lunar dark tables						
																			End Prep1 Script
03/02/94 13:45:52	1:10:41		-20.0	142.6	2181.6							S20D							
03/02/94 13:47:00	1:11:49												Update state vector (GNC53_02MAR1200)						Ground Command
03/02/94 13:56:53	1:21:42		-30.0	142.6	1934.7							S30D							
03/02/94 14:06:31	1:31:20		-40.0	142.6	1693.4							S40D							
																			Standard Prep2 Script
03/02/94 14:14:07	1:38:56	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/02/94 14:14:55	1:39:44		-50.0	142.7	1467.2							S50D							
03/02/94 14:22:16	1:47:05		-60.0	142.8	1261.9							S60D							
																			L050 Prep3 Script
03/02/94 14:26:07	1:50:56	0											Msg "WRNG: Omni/8k in 1 min.."						
03/02/94 14:27:07	1:51:56	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking data
03/02/94 14:28:07	1:52:56	60											Switch to omni antennas						
03/02/94 14:29:07	1:53:56	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/02/94 14:30:12	1:55:01	65											UV & HR cameras ON						
03/02/94 14:28:44	1:53:33		-70.0	143.1	1080.2							S70D							

Orbit 50 Timeline - Type A Orbit

03/02/94 14:33:12	1:58:01	175								Select ST-A									
03/02/94 14:33:22	1:58:11	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 1									Start SDR in Segment 1
03/02/94 14:33:47	1:58:36	25								Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts
03/02/94 14:34:00	1:58:49									Switch to 2 kbps									Ground Command (problems keeping lock at 8 kbps)
03/02/94 14:34:02	1:58:51	15								Perform NIR imaging (DHU SEQT 31)									
03/02/94 14:34:27	1:59:16		-80.0	144.0	922.8				S80D										
03/02/94 14:34:37	1:59:26	15								Stop imaging, select ST-A									
03/02/94 14:34:47	1:59:36	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR50)									Slew to nadir (inertial pointing)
03/02/94 14:35:27	2:00:16	40								Laser Power ON									
																			End L050 Prep3 Script
																			L050 Mapping Script
03/02/94 14:37:37	2:02:26	0								Load exposure table LUNARZ85S; Select ST-A (DHU SEQT1)									
03/02/94 14:38:37	2:03:26	60								Deselect ST; Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)									START MAPPING
03/02/94 14:39:37	2:04:26	60								Set SA step rate to LO									
03/02/94 14:39:35	2:04:24		-89.7	232.2	789.5				South Pole										
03/02/94 14:40:17	2:05:06		-88.5	308.5	772.2				LDAWN										
03/02/94 14:44:15	2:09:04		-80.0	320.0	679.2				S80A										
03/02/94 14:44:16	2:09:05	279							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3									
03/02/94 14:48:32	2:13:21		-70.0	321.0	590.4				S70A										
03/02/94 14:48:34	2:13:23	258							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4									
03/02/94 14:52:33	2:17:22		-60.0	321.3	522.0				S60A										
03/02/94 14:52:35	2:17:24	241							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6									
03/02/94 14:56:22	2:21:11		-50.0	321.5	473.0				S50A										
03/02/94 14:56:24	2:21:13	229							S50A	Record in SDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5									Opaque filter did not park SSDR Segment 2
03/02/94 14:57:00	2:21:49									Initialize filters (DHU SEQT 28); Select DHU SEQT 5									Ground Command
03/02/94 15:00:03	2:24:52		-40.0	321.5	442.4				S40A										
03/02/94 15:00:04	2:24:53	220							S40A	Load exposure table LUNARZ35S									
03/02/94 15:03:39	2:28:28		-30.0	321.6	429.8				S30A										
03/02/94 15:03:40	2:28:29	216							S30A	Load exposure table LUNARZ25S									
03/02/94 15:04:25	2:29:14		-27.9	321.6	429.4				Periselene										
03/02/94 15:07:15	2:32:04		-20.0	321.6	434.8				S20A										
03/02/94 15:07:16	2:32:05	216							S20A	Load exposure table LUNARZ15S									

Orbit 50 Timeline - Type A Orbit

03/02/94 15:10:53	2:35:42		-10.0	321.7	457.7				S10A				
03/02/94 15:10:54	2:35:43	218							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/02/94 15:14:38	2:39:27		0.0	321.7	498.8				Equator - A				
03/02/94 15:14:39	2:39:28	225							MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
03/02/94 15:18:33	2:43:22		10.0	321.7	558.7				N10A				
03/02/94 15:18:34	2:43:23	235							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/02/94 15:22:43	2:47:32		20.0	321.8	638.6				N20A				
03/02/94 15:22:44	2:47:33	250							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/02/94 15:23:44	2:48:33	60								Laser power OFF			
03/02/94 15:27:12	2:52:01		30.0	321.8	739.6				N30A				
03/02/94 15:27:14	2:52:03	210							N30A	Load CEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10			UV and IR uncompressed
03/02/94 15:32:07	2:56:56		40.0	321.8	863.0				N40A				
03/02/94 15:32:09	2:56:58	295							N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SSDR Segment 4 SEQT CEQ_11U.UMI still loaded
03/02/94 15:37:35	3:02:24		50.0	321.9	1010.0				N50A				
03/02/94 15:37:36	3:02:25	327							N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12			HiRes imaging had not stopped Resume compression
03/02/94 15:43:42	3:08:31		60.0	322.0	1181.3				N60A				
03/02/94 15:43:44	3:08:33	368							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13			
03/02/94 15:50:39	3:15:28		70.0	322.3	1376.7				N70A				
03/02/94 15:50:40	3:15:29	416							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14			
03/02/94 15:58:35	3:23:24		80.0	323.3	1594.5				N80A				
03/02/94 15:58:37	3:23:26	477							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15; Load CEQ_10U.UMI into SEQT 10			Restore compressed SEQT 10
										End L050 Script			
03/02/94 16:07:41	3:32:30		89.6	52.5	1830.3				North Pole				
										Standard PostMap Script			
03/02/94 16:07:42	3:32:31	0								Stop imaging, select ST-A; Set SA step rate to HI			
03/02/94 16:07:52	3:32:41	10								Deselect ST; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF			Slew to Vega
03/02/94 16:09:05	3:33:54		88.5	127.3	1865.1				LDUSK				

Orbit 50 Timeline - Type A Orbit

03/02/94 16:12:42	3:37:31	290								Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/02/94 16:12:57	3:37:46	15								Perform NIR imaging (DHU SEQT 31)								
03/02/94 16:13:11	3:38:00	15								Select ST-A								
03/02/94 16:13:22	3:38:11	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)								Slew HGA to Earth
03/02/94 16:18:04	3:42:53		80.0	139.1	2075.9					N80D								
03/02/94 16:18:12	3:43:01	290								Select ST-A; Switch to HGA; Switch to DHU mode @ 128 kbps								Unable to gain lock
																		End PostMap Script
03/02/94 16:29:55	3:54:44		70.0	140.0	2320.0					N70D								
03/02/94 16:36:21	4:01:10								GDS	LOS								
03/02/94 16:43:13	4:08:02		60.0	140.3	2545.8					N60D								
03/02/94 16:57:53	4:22:42		50.0	140.3	2733.7					N50D								
03/02/94 17:10:00	4:34:49										Reset HKP; Start software reload							Ground Command Lock achieved @128kbps, but bad data
03/02/94 17:13:39	4:38:28		40.0	140.3	2864.1					N40D								
03/02/94 17:30:04	4:54:53		30.0	140.3	2921.4					N30D								
03/02/94 17:33:37	4:58:26		27.9	140.2	2923.2					Aposelene								

Orbit 51 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/02/94 17:33:37	0:00:00		27.9	140.2	2923.2							Aposelene	Reloading software to recover from HKP reset on Orbit 50						Reloading software to recover from HKP reset on Orbit 50
03/02/94 17:46:37	0:13:00		20.0	140.2	2898.1							N20D							
03/02/94 18:02:43	0:29:06		10.0	140.1	2797.5							N10D							
03/02/94 18:05:15	0:31:38		8.4	140.1	2774.6							INPM							
03/02/94 18:07:02	0:33:25		7.2	140.1	2757.4							INUM							
03/02/94 18:17:54	0:44:17		0.0	140.0	2631.9							Equator - D							
03/02/94 18:31:48	0:58:11		-10.0	140.0	2420.0							S10D							
03/02/94 18:39:59	1:06:22		-16.4	139.9	2268.7							OUTUM							
03/02/94 18:41:34	1:07:57		-17.7	139.9	2237.0							OUTPM							
03/02/94 18:44:16	1:10:39		-20.0	139.9	2181.7							S20D							
03/02/94 18:55:17	1:21:40		-30.0	139.9	1934.9							S30D							
03/02/94 19:04:55	1:31:18		-40.0	139.9	1693.8							S40D							
03/02/94 19:13:19	1:39:42		-50.0	140.0	1467.8							S50D							
03/02/94 19:20:40	1:47:03		-60.0	140.1	1262.5							S60D							
03/02/94 19:27:08	1:53:31		-70.0	140.4	1080.9							S70D							
03/02/94 19:32:52	1:59:15		-80.0	141.5	923.6							S80D							
03/02/94 19:37:59	2:04:22		-89.6	226.9	790.5							South Pole							
03/02/94 19:38:41	2:05:04		-88.5	304.4	773.2							LDAWN							
03/02/94 19:42:39	2:09:02		-80.0	317.1	680.0							S80A							
03/02/94 19:46:57	2:13:20		-70.0	318.2	591.2							S70A							
03/02/94 19:50:58	2:17:21		-60.0	318.5	522.8							S60A							
03/02/94 19:54:47	2:21:10		-50.0	318.7	473.8							S50A							
03/02/94 19:58:28	2:24:51		-40.0	318.8	443.2							S40A							
03/02/94 20:02:04	2:28:27		-30.0	318.9	430.6							S30A	Cameras & cryocoolers ON; Uplink state vector (GNC53_02MAR1600); Switch to LunarMapping mode; Sensor door OPEN; Record on SDR Segment 5;						Set up for mapping - by ground command
03/02/94 20:02:50	2:29:12		-27.9	318.9	430.2							Periselene							
03/02/94 20:05:40	2:32:03		-20.0	318.9	435.6							S20A							
03/02/94 20:09:18	2:35:41		-10.0	318.9	458.5							S10A							
03/02/94 20:13:03	2:39:26		0.0	319.0	499.5							Equator - A							
03/02/94 20:14:00	2:40:23	0											Load exposure table LUNARZ05N; Select DHU SEQT 7						START MAPPING Ground Command
03/02/94 20:16:59	2:43:22		10.0	319.0	559.5							N10A							
03/02/94 20:17:00	2:43:23	180										N10A	Load exposure table LUNARZ15N; Initialize filters (DHU SEQT 28); Select DHU SEQT 8						Ground Command
03/02/94 20:21:09	2:47:32		20.0	319.0	639.4							N20A							
03/02/94 20:21:10	2:47:33	250										N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						Ground Command

Orbit 51 Timeline - Type B Orbit

03/02/94 20:25:38	2:52:01	268	30.0	319.1	740.4					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10; Record in SSSR Segment 6	Ground Command SSDR Segment 6
03/02/94 20:30:34	2:56:57		40.0	319.1	863.7					N40A		
03/02/94 20:30:35	2:56:58	297								N40A	Switch to inertial pointing (ORBIT51RW)	Initiate oblique viewing - by ground command
03/02/94 20:31:00	2:57:23	25									Load exposure table LUNARZ45N; Select DHU SEQT 11	Ground Command
03/02/94 20:36:01	3:02:24		50.0	319.2	1010.6					N50A		
03/02/94 20:36:02	3:02:25	302								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	Ground Command
03/02/94 20:42:09	3:08:32		60.0	319.4	1181.8					N60A		
03/02/94 20:42:10	3:08:33	368								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19	Ground Command
03/02/94 20:45:38	3:12:01	209									Slew s/c sensors to nadir (ACSMMode=LunarMapping); Record in SSSR Segment 7	Ground Command: • end oblique viewing - resume nadir pointing • SSSR Segment 7
03/02/94 20:49:06	3:15:29	207	70.0	319.7	1377.2					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	Ground Command
03/02/94 20:57:02	3:23:25	476	80.0	320.8	1594.9					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	Ground Command
03/02/94 21:06:07	3:32:30		89.6	48.9	1830.3					North Pole		
												Standard PostMap Script
03/02/94 21:07:08	3:33:31	0									Stop imaging, select ST-A; Set SA step rate to HI	Script started by ground
03/02/94 21:07:18	3:33:41	10									Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF	Slew to Vega
03/02/94 21:07:31	3:33:54		88.5	123.2	1864.9					LDUSK		
03/02/94 21:12:08	3:38:31	290									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/02/94 21:12:23	3:38:45	15									Perform NIR imaging (DHU SEQT 31)	
03/02/94 21:12:37	3:39:00	15									Select ST-A	
03/02/94 21:12:48	3:39:11	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)	Slew HGA to Earth
03/02/94 21:16:31	3:42:53		80.0	136.2	2075.8					N80D		
03/02/94 21:17:38	3:44:01	290									Select ST-A; Switch to HGA	READY FOR DATA DUMP
												End PostMap Script
03/02/94 21:20:00	3:46:23										Switch to DHU mode @ 128 kbps	Ground Command
03/02/94 21:25:00	3:51:23										Downlink SSSR Segment 1 (orb 50)	Ground Command
03/02/94 21:28:21	3:54:43		70.0	137.2	2319.8					N70D		
03/02/94 21:41:40	4:08:03		60.0	137.5	2545.4					N60D		
03/02/94 21:56:19	4:22:42		50.0	137.6	2733.1					N50D		

Orbit 51 Timeline - Tyne B Orbit

03/02/94 21:58:00	4:24:23										Downlink SDDR Segment 2 (orb 50)						Ground Command
03/02/94 22:12:05	4:38:28		40.0	137.6	2863.4					N40D							
03/02/94 22:28:30	4:54:52		30.0	137.5	2920.6					N30D							
03/02/94 22:30:00	4:56:23										Downlink SDDR Segment 3 (orb 50)						Ground Command
03/02/94 22:32:02	4:58:25		27.9	137.5	2922.5					Aposelene							

Orbit 52 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
03/02/94 22:32:02	0:00:00		27.9	137.5	2922.5							Aposelene							Downlinking SDR Segment 3 (Orbit 50)
03/02/94 22:45:02	0:13:00		20.0	137.4	2897.4							N20D							
03/02/94 22:52:00	0:19:58												Uplink & schedule L052 scripts						Ground Command
03/02/94 23:01:08	0:29:06		10.0	137.4	2796.8							N10D							
03/02/94 23:03:00	0:30:58												Downlink SDR Segment 4 (Orbit 50)						Ground Command
03/02/94 23:03:03	0:31:01		8.8	137.4	2779.7							INPM							Enter penumbra
03/02/94 23:04:46	0:32:44		7.7	137.4	2763.4							INUM							Enter umbra
03/02/94 23:16:18	0:44:16		0.0	137.3	2631.5							Equator - D							
03/02/94 23:30:00	0:57:58												Downlink SDR Segment 5 (Orbit 51)						Ground Command
03/02/94 23:30:12	0:58:10		-10.0	137.2	2419.7							S10D							
03/02/94 23:38:51	1:06:49		-16.8	137.2	2259.2							OUTUM							Exit umbra
03/02/94 23:40:23	1:08:21		-18.1	137.2	2228.4							OUTPM							Exit penumbra
																			Prep1 Script
03/02/94 23:41:10	1:09:08	0											NIR camera & cryocooler ON; SA mode to AUTO						NOTE: S/C time was off by 15 sec. Script was scheduled to start at 23:40:55
03/02/94 23:41:12	1:09:09	2											Load lunar dark tables						
																			End Prep1 Script
03/02/94 23:42:40	1:10:38		-20.0	137.2	2181.6							S20D							
03/02/94 23:45:00	1:12:58												Downlink SDR Segment 6						Ground Command
03/02/94 23:53:40	1:21:38		-30.0	137.2	1935.0							S30D							
03/02/94 23:56:00	1:23:58												Downlink SDR Segment 7						Ground Command
03/03/94 00:03:19	1:31:17		-40.0	137.2	1694.0							S40D							
03/03/94 00:05:00	1:32:57												SSDR idle - Downlink complete						Ground Command
																			Standard Prep2 Script
03/03/94 00:11:10	1:39:08	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						NOTE: S/C time was off by 15 sec. Script was scheduled to start at 00:10:55
																			End Prep2 Script
03/03/94 00:11:43	1:39:41		-50.0	137.3	1468.1							S50D							
03/03/94 00:19:04	1:47:02		-60.0	137.4	1263.0							S60D							
																			L052 Prep3 Script
03/03/94 00:23:10	1:51:08	0											Msg "WRNG: Omni/8k in 1 min.."						NOTE: S/C time was off by 15 sec. Script was scheduled to start at 00:22:55
03/03/94 00:24:10	1:52:08	60											SSDR to IDLE; Switch to 8 kbps bypass mode						
03/03/94 00:25:10	1:53:08	60											Switch to omni antennas						
03/03/94 00:25:32	1:53:30		-70.0	137.8	1081.4							S70D							
03/03/94 00:25:40	1:53:38	30											UV & HR cameras ON						

Orbit 52 Timeline - Type A Orbit

03/03/94 00:26:10	1:54:08	30								Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMoDe=StarPointing, Index=3)					Slew to Crux
03/03/94 00:27:32	1:55:30							MAD	AOS						
03/03/94 00:30:35	1:58:33	265								Select ST-A					
03/03/94 00:30:45	1:58:43	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 1					Start SSSR in Segment 1
03/03/94 00:31:10	1:59:08	25								Perform LWIR imaging (DHU SEQT 25)					Dark field imaging starts
03/03/94 00:31:16	1:59:14		-80.0	139.0	924.1				S80D						
03/03/94 00:31:20	1:59:18	10								Laser Power ON					
03/03/94 00:31:25	1:59:23	5								Perform NIR imaging (DHU SEQT 31)					
03/03/94 00:31:40	1:59:38	15								Stop imaging, select ST-A					
03/03/94 00:31:50	1:59:48	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR52)					Slew to nadir (inertial pointing)
															End L052 Prep3 Script
															L052 Mapping Script
															NOTE: S/C time was off by 15 sec. Script was scheduled to start at 00:34:25
03/03/94 00:34:40	2:02:38	0								Select ST-A (DHU SEQT1)					
03/03/94 00:34:50	2:02:48	10								Load exposure table LUNARZ85S					
03/03/94 00:35:40	2:03:38	50								Deselect ST; Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)					START MAPPING
03/03/94 00:36:24	2:04:22		-89.6	228.1	790.8				South Pole						
03/03/94 00:36:40	2:04:38	60							MAXS	Set SA step rate to LO					
03/03/94 00:37:05	2:05:03		-88.5	300.3	774.0				LDAWN						
03/03/94 00:41:03	2:09:01		-80.0	314.2	680.7				S80A						
03/03/94 00:41:19	2:09:17	280							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3					
03/03/94 00:45:22	2:17:21		-70.0	315.3	591.9				S70A						
03/03/94 00:45:37	2:13:35	258							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/03/94 00:49:23	2:17:21		-60.0	315.7	523.5				S60A						
03/03/94 00:49:39	2:17:37	241							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/03/94 00:53:12	2:21:10		-50.0	315.9	474.5				S50A						
03/03/94 00:53:28	2:21:26	229							S50A	Record in SSSR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5					Filter did not park SSSR Segment 2
03/03/94 00:56:53	2:24:51		-40.0	316.0	443.9				S40A						
03/03/94 00:57:08	2:25:06	221							S40A	Load exposure table LUNARZ35S					
03/03/94 00:57:53	2:25:51							CAN	LOS						

Orbit 52 Timeline - Type A Orbit

03/03/94	01:00:29	2:28:27		-30.0	316.1	431.3					S30A							
03/03/94	01:00:46	2:28:44	217								S30A	Load exposure table LUNARZ25S						
03/03/94	01:01:15	2:29:12		-27.9	316.1	430.9					Periselene							
03/03/94	01:04:05	2:32:03		-20.0	316.2	436.4					S20A							
03/03/94	01:04:21	2:32:19	215								S20A	Load exposure table LUNARZ15S						
03/03/94	01:07:44	2:35:42		-10.0	316.2	459.2					S10A							
03/03/94	01:07:59	2:35:57	219								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						
03/03/94	01:11:29	2:39:27		0.0	316.2	500.3					Equator - A							
03/03/94	01:11:45	2:39:43	225								MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 3	
03/03/94	01:15:24	2:43:22		10.0	316.3	560.2					N10A							
03/03/94	01:15:40	2:43:37	235								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/03/94	01:19:34	2:47:32		20.0	316.3	640.1					N20A							
03/03/94	01:19:51	2:47:48	251								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/03/94	01:20:51	2:48:49	60									Laser power OFF						
03/03/94	01:24:04	2:52:02		30.0	316.4	741.1					N30A							
03/03/94	01:24:20	2:52:17	209								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
03/03/94	01:28:59	2:56:57		40.0	316.4	864.4					N40A							
03/03/94	01:29:16	2:57:14	296								N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11					SSDR Segment 4	
03/03/94	01:34:27	3:02:25		50.0	316.5	1011.3					N50A							
03/03/94	01:34:43	3:02:40	327								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12					HiRes already imaging	
03/03/94	01:40:35	3:08:33		60.0	316.7	1182.4					N60A							
03/03/94	01:40:51	3:08:49	368								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13						
03/03/94	01:47:32	3:15:30		70.0	317.1	1377.7					N70A							
03/03/94	01:47:47	3:15:45	417								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						
03/03/94	01:55:28	3:23:26		80.0	318.2	1595.3					N80A							
03/03/94	01:55:45	3:23:42	477								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15						
																		End L052 Script
03/03/94	02:04:33	3:32:31		89.6	45.3	1830.5					North Pole							Standard PostMap Script
03/03/94	02:04:50	3:32:48	0									Stop imaging - select ST-A						

Orbit 52 Timeline - Type A Orbit

03/03/94 02:05:00	3:32:58	10									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF						Slew to Vega
03/03/94 02:05:56	3:33:54		88.5	119.1	1864.8						LDUSK						
03/03/94 02:09:50	3:37:48	290										Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/03/94 02:10:05	3:38:02	15										Perform NIR imaging (DHU SEQT 31)					
03/03/94 02:10:19	3:38:17	15										Select ST-A					
03/03/94 02:10:29	3:38:27	10										IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)					Slew HGA to Earth
03/03/94 02:14:57	3:42:55		80.0	133.3	2076.0						N80D						
03/03/94 02:15:19	3:43:17	290										Select ST-A; Switch to HGA					READY FOR DATA DUMP
End PostMap Script																	
03/03/94 02:19:00	3:46:58											Switch to DHU mode @ 128 kbps					Ground Command
03/03/94 02:26:48	3:54:46		70.0	134.4	2319.8						N70D						
03/03/94 02:30:00	3:57:58											Downlink SDR Segment 1					Ground Command
03/03/94 02:40:06	4:08:04		60.0	134.7	2545.2						N60D						
03/03/94 02:54:45	4:22:43		50.0	134.8	2732.7						N50D						
03/03/94 03:10:30	4:38:28		40.0	134.8	2862.8						N40D						
03/03/94 03:26:00	4:53:58											Downlink SDR Segment 2					Ground Command
03/03/94 03:26:55	4:54:52		30.0	134.8	2919.9						N30D						
03/03/94 03:30:27	4:58:25		27.9	134.7	2921.8						Aposelene						

Orbit 53 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/03/94 03:30:27	0:00:00		27.9	134.7	2921.8							Aposelene							Downlinking SSSDR Segment 2 (Orbit 52)
03/03/94 03:43:27	0:13:00		20.0	134.7	2896.7							N20D							
03/03/94 03:59:00	0:28:33												Downlink SSSDR Segment 3						Ground Command
03/03/94 03:59:32	0:29:05		10.0	134.6	2796.2							N10D							Enter penumbra
03/03/94 04:00:52	0:30:25		9.1	134.6	2784.4							INPM							Enter umbra
03/03/94 04:02:33	0:32:05		8.1	134.6	2768.9							INUM							
03/03/94 04:14:42	0:44:15		0.0	134.6	2630.9							Equator - D							
03/03/94 04:18:00	0:47:33												Downlink SSSDR Segment 4; Uplink & schedule L053 scripts						Ground Command
03/03/94 04:28:36	0:58:09		-10.0	134.5	2419.3							S10D							
03/03/94 04:37:42	1:07:15		-17.2	134.5	2250.0							OUTUM							Exit umbra
																			Standard Prep1 Script
03/03/94 04:38:43	1:08:16	0											NIR camera & cryocooler ON; SA mode to AUTO						NOTE: S/C time was off by 15 sec. Script was scheduled to start at 04:38:18
03/03/94 04:38:45	1:08:18	2											Load lunar dark tables						
																			End Prep1 Script
03/03/94 04:39:11	1:08:44		-18.4	134.5	2220.0							OUTPM							Exit penumbra
03/03/94 04:41:04	1:10:37		-20.0	134.5	2181.3							S20D							
03/03/94 04:52:04	1:21:37		-30.0	134.5	1935.0							S30D							
03/03/94 05:01:42	1:31:15		-40.0	134.5	1694.1							S40D							
																			Standard Prep2 Script
03/03/94 05:08:33	1:38:06	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						NOTE: S/C time was off by 15 sec. Script was scheduled to start at 05:08:18
																			End Prep2 Script
03/03/94 05:10:07	1:39:40		-50.0	134.6	1468.3							S50D							
03/03/94 05:17:28	1:47:01		-60.0	134.8	1263.3							S60D							
																			L053 Prep3 Script
03/03/94 05:20:58	1:50:31	0											Msg "WRNG: Omni/8k in 1 min.."						NOTE: S/C time was off by 15 sec. Script was scheduled to start at 05:20:43
03/03/94 05:21:58	1:51:31	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop downlinking SSSDR
03/03/94 05:22:58	1:52:31	60											Switch to omni antennas						
03/03/94 05:23:56	1:53:29		-70.0	135.2	1081.8							S70D							
03/03/94 05:23:58	1:53:31	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/03/94 05:24:28	1:54:00	30											UV & HR cameras ON						
03/03/94 05:26:43	1:56:16										PMK	AOS							
03/03/94 05:28:23	1:57:56	235											Select ST-A						

Orbit 53 Timeline - Tyne B Orbit

03/03/94	05:28:33	1:58:06	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 5							Start recorder in Segment 5
03/03/94	05:28:58	1:58:31	25								Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/03/94	05:29:13	1:58:46	15								Perform NIR imaging (DHU SEQT 31)							
03/03/94	05:29:28	1:59:01	15								Stop imaging, select ST-A							
03/03/94	05:29:38	1:59:10	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR53)							Slew to nadir (inertial pointing)
03/03/94	05:30:08	1:59:41	30								Laser power ON							
End L053 Prep3 Script																		
03/03/94	05:29:40	1:59:13		-80.0	136.4	924.5					S80D							
L053 Mapping Script																		
NOTE: S/C time was off by 15 sec. Script was scheduled to start at 05:32:48																		
03/03/94	05:33:03	2:02:36	0								Load exposure table LUNARZ85S							
03/03/94	05:34:03	2:03:36	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/03/94	05:34:48	2:04:21		-89.6	225.7	791.2					South Pole							
03/03/94	05:35:03	2:04:36	60								MAXS							Set SA step rate to LO
03/03/94	05:35:29	2:05:02		-88.5	296.1	774.6					LDAWN							
03/03/94	05:39:28	2:09:01		-80.0	311.3	681.2					S80A							
03/03/94	05:39:43	2:09:16	280								S80A							Load exposure table LUNARZ75S; Select DHU SEQT 17
03/03/94	05:43:46	2:13:19		-70.0	312.5	592.4					S70A							
03/03/94	05:44:01	2:13:34	258								S70A							Load exposure table LUNARZ65S; Select DHU SEQT 18
03/03/94	05:47:47	2:17:20		-60.0	312.9	524.1					S60A							
03/03/94	05:48:02	2:17:35	241								S60A							Load exposure table LUNARZ55S; Select DHU SEQT 6
03/03/94	05:51:36	2:21:09		-50.0	313.2	475.1					S50A							
03/03/94	05:51:51	2:21:24	229								S50A							Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5
03/03/94	05:55:17	2:29:12		-40.0	313.3	444.5					S40A							SSDR Segment 6
03/03/94	05:55:32	2:32:03	221								S40A							Load exposure table LUNARZ35S
03/03/94	05:58:54	2:28:27		-30.0	313.4	431.9					S30A							
03/03/94	05:59:09	2:28:42	217								S30A							Load exposure table LUNARZ25S
03/03/94	05:59:40	2:29:12		-27.9	313.4	431.5					Periselene							
03/03/94	06:02:30	2:32:03		-20.0	313.4	437.0					S20A							
03/03/94	06:02:45	2:32:18	216								S20A							Load exposure table LUNARZ15S
03/03/94	06:06:08	2:35:41		-10.0	313.5	459.8					S10A							
03/03/94	06:06:23	2:35:56	218								S10A							Load exposure table LUNARZ05S; Select DHU SEQT 6
03/03/94	06:09:54	2:39:27		0.0	313.5	500.9					Equator - A							
03/03/94	06:10:09	2:39:42	226								MEQA							Record in SDR Segment 7 Load exposure table LUNARZ05N; Select DHU SEQT 7

Orbit 53 Timeline - Type B Orbit

03/03/94 06:13:49	2:43:22		10.0	313.6	560.9				N10A				
03/03/94 06:14:04	2:43:37	235							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/03/94 06:17:59	2:47:32		20.0	313.6	640.8				N20A				
03/03/94 06:18:14	2:47:47	250							N20A	Load CEQ_9U.UMI into SEQT 9; Load exposure table LUNARZ55N; Select DHU SEQT 9			UV and IR uncompressed
03/03/94 06:19:14	2:48:47	60								Laser power OFF			
03/03/94 06:22:29	2:52:02		30.0	313.7	741.7				N30A				
03/03/94 06:22:44	2:52:17	210							N30A	Load exposure table LUNARZ35N Select DHU SEQT 10			Resume compression
03/03/94 06:25:00	2:54:33									Reset s/c clock			Ground Command Time error reduced from ~15 sec to ~2 sec
03/03/94 06:27:25	2:56:58	296	40.0	313.7	865.1				N40A	Switch to inertial pointing (ORBIT53RW); Load exposure table LUNARZ45N; Select DHU SEQT 11			Initiate oblique viewing
03/03/94 06:32:53	3:02:26	328	50.0	313.8	1011.9				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12			
03/03/94 06:39:01	3:08:34	368	60.0	314.0	1183.1				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19			
03/03/94 06:42:29	3:12:02	209								Slew s/c sensors to nadir (ACSMMode=LunarMapping)			End oblique viewing - resume nadir pointing
03/03/94 06:45:58	3:15:31	209	70.0	314.4	1378.3				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20			
03/03/94 06:53:54	3:23:27	476	80.0	315.7	1595.9				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21			
03/03/94 06:54:54	3:24:27	60								Load CEQ_9.UMI into SEQT 9			Restore compressed SEQT 9
													End L053 Script
03/03/94 07:02:59	3:32:32	485	89.5	42.1	1830.8				North Pole				
													Standard PostMap Script
03/03/94 07:03:59	3:33:32	0								Stop imaging, select ST-A; Set SA step rate to HI			
03/03/94 07:04:09	3:33:42	10								Deselect ST; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF			Slew yo Vega
03/03/94 07:04:22	3:33:55		88.5	114.9	1864.9				LDUSK				
03/03/94 07:08:59	3:38:32	290								Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
03/03/94 07:09:14	3:38:47	15								Perform NIR imaging (DHU SEQT 31)			
03/03/94 07:09:29	3:39:01	15								Select ST-A			
03/03/94 07:09:39	3:39:12	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)			Slew HGA to Earth

Orbit 53 Timeline - Type B Orbit

03/03/94 07:13:23	3:42:56		80.0	130.3	2076.2						N80D							
03/03/94 07:14:29	3:44:02	290										Select ST-A; Switch to HGA						READY FOR DATA DUMP
																		End PostMap Script
03/03/94 07:16:00	3:45:33											Switch to DHU mode @ 128 kbps						Ground Command
03/03/94 07:23:00	3:52:33											Downlink SSSDR Segment 5; Uplink & schedule L054 scripts						Ground Command Time of script upload approximate
03/03/94 07:25:14	3:54:47		70.0	131.6	2319.9						N70D							
03/03/94 07:38:32	4:08:05		60.0	131.9	2545.1						N60D							
03/03/94 07:49:00	4:18:33											Downlink SSSDR Segment 6						Ground Command
03/03/94 07:53:11	4:22:44		50.0	132.0	2732.5						N50D							
03/03/94 08:00:15	4:29:48									GDS	AOS							
03/03/94 08:08:56	4:38:29		40.0	132.0	2862.4						N40D							
03/03/94 08:25:00	4:54:33											Update state vector (GNC53_03MAR0800)						Ground Command
03/03/94 08:25:21	4:54:54		30.0	132.0	2919.4						N30D							
03/03/94 08:28:00	4:57:33											SSDR to IDLE - Segment 6 complete						Ground Command
03/03/94 08:28:51	4:58:24		27.9	132.0	2921.2						Aposelene							

Orbit 54 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
03/03/94 08:28:51	0:00:00		27.9	132.0	2921.2							Aposelene							SSDR idle
03/03/94 08:38:00	0:09:09												Downlink SSDR Segment 7 (Orbit 53)						Ground Command
03/03/94 08:41:52	0:13:01		20.0	132.0	2896.1							N20D							
03/03/94 08:57:57	0:29:06		10.0	131.9	2795.6							N10D							
03/03/94 08:58:43	0:29:52		9.5	131.9	2788.9							INPM							Enter penumbra
03/03/94 09:00:21	0:31:30		8.5	131.9	2774.1							INUM							Enter umbra
03/03/94 09:13:07	0:44:16		0.0	131.8	2630.4							Equator - D							
03/03/94 09:18:45	0:49:54										MAD	LOS							
03/03/94 09:26:00	0:57:09												SSDR to IDLE - Downlink complete						Ground Command
03/03/94 09:27:01	0:58:10		-10.0	131.8	2418.8							S10D							
03/03/94 09:36:32	1:07:41		-17.5	131.8	2240.9							OUTUM							Exit umbra
																			Prep1 Script
03/03/94 09:36:43	1:07:52	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/03/94 09:36:45	1:07:54	2											Load lunar dark tables						
																			End Prep1 Script
03/03/94 09:37:59	1:09:08		-18.7	131.8	2211.6							OUTPM							Exit penumbra
03/03/94 09:39:28	1:10:37		-20.0	131.8	2181.0							S20D							
03/03/94 09:50:28	1:21:37		-30.0	131.8	1934.7							S30D							
03/03/94 10:00:06	1:31:15		-40.0	131.8	1694.0							S40D							
																			Standard Prep2 Script
03/03/94 10:06:43	1:37:52	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/03/94 10:08:31	1:39:40		-50.0	131.9	1468.3							S50D							
03/03/94 10:15:52	1:47:01		-60.0	132.1	1263.3							S60D							
																			L054 Prep3 Script
03/03/94 10:18:43	1:49:52	0											Msg "WRNG: Omni/8k in 1 min.."						
03/03/94 10:19:43	1:50:52	60											SSDR to IDLE; Switch to 8 kbps bypass mode						
03/03/94 10:20:43	1:51:52	60											Switch to omni antennas						
03/03/94 10:21:43	1:52:52	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/03/94 10:22:13	1:53:22	30											UV & HR cameras ON						
03/03/94 10:22:20	1:53:29		-70.0	132.5	1081.9							S70D							
03/03/94 10:26:08	1:57:17	235											Select ST-A						
03/03/94 10:26:18	1:57:27	10											Initialize filters (DHU SEQT 28); Record in SSDR Segment 1						Start SSDR in Segment 1

Orbit 54 Timeline - Tyne A Orbit

03/03/94 10:26:43	1:57:52	25									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/03/94 10:26:58	1:58:07	15									Perform NIR imaging (DHU SEQT 31)								
03/03/94 10:27:13	1:58:22	15									Stop imaging, select ST-A								
03/03/94 10:27:23	1:58:32	10									Deselect ST; Slew s/c sensors to nadir (GNC12NADIR54)								Slew to nadir (inertial pointing)
03/03/94 10:27:53	1:59:02	30									Laser Power ON								
End L054 Prep3 Script																			
03/03/94 10:28:04	1:59:13		-80.0	133.9	924.7						S80D								
L054 Mapping Script																			
03/03/94 10:31:12	2:02:21	0									Load exposure table LUNARZ85S								
03/03/94 10:32:13	2:03:22	60									Switch to lunar mapping mode (ACSMMode=LunarMapping); Start imaging (DHU SEQT 9)								START MAPPING
03/03/94 10:33:12	2:04:21		-89.5	221.8	791.6						South Pole								
03/03/94 10:33:13	2:04:22	60									MAXS								
03/03/94 10:33:52	2:05:01		-88.5	292.0	775.1						LDAWN								
03/03/94 10:37:52	2:09:01		-80.0	308.4	681.5						S80A								
03/03/94 10:37:53	2:09:02	280									S80A								
03/03/94 10:42:10	2:13:19		-70.0	309.7	592.8						S70A								
03/03/94 10:42:11	2:13:20	258									S70A								
03/03/94 10:45:00	2:16:09																		Ground Command
03/03/94 10:46:11	2:17:20		-60.0	310.2	524.5						S60A								
03/03/94 10:46:13	2:17:22	242									S60A								
03/03/94 10:50:00	2:21:09		-50.0	310.4	475.5						S50A								
03/03/94 10:50:02	2:21:11	229									S50A								z SSDR Segment 2
03/03/94 10:53:42	2:24:51		-40.0	310.5	445.0						S40A								
03/03/94 10:53:43	2:24:52	221									S40A								
03/03/94 10:57:18	2:28:27		-30.0	310.6	432.4						S30A								
03/03/94 10:57:20	2:28:29	217									S30A								
03/03/94 10:58:04	2:29:13		-27.9	310.6	432.0						Periselene								
03/03/94 11:00:54	2:32:03		-20.0	310.7	437.5						S20A								
03/03/94 11:00:56	2:32:05	216									S20A								
03/03/94 11:04:33	2:35:42		-10.0	310.7	460.4						S10A								
03/03/94 11:04:35	2:35:44	219									S10A								
03/03/94 11:08:18	2:39:27		0.0	310.8	501.5						Equator - A								
03/03/94 11:08:20	2:39:29	225									MEQA								SSDR Segment 3
03/03/94 11:12:14	2:43:23		10.0	310.8	561.5						N10A								

Orbit 54 Timeline - Type A Orbit

03/03/94 11:12:15	2:43:24	235								N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8	z	z	z	UV and IR uncompressed
03/03/94 11:16:24	2:47:33		20.0	310.9	641.4					N20A		z	z	z	
03/03/94 11:16:26	2:47:35	251								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				Resume compression
03/03/94 11:17:26	2:48:35	60									Laser power OFF				
03/03/94 11:20:55	2:52:04		30.0	311.0	742.4					N30A					
03/03/94 11:20:56	2:52:05	210								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				
03/03/94 11:25:50	2:56:59		40.0	311.0	865.7					N40A					
03/03/94 11:25:52	2:57:01	296								N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11				SSDR Segment 4
03/03/94 11:31:18	3:02:27		50.0	311.2	1012.6					N50A					
03/03/94 11:31:19	3:02:28	327								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12				
03/03/94 11:37:26	3:08:35		60.0	311.4	1183.8					N60A					
03/03/94 11:37:28	3:08:37	369								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13				
03/03/94 11:44:24	3:15:33		70.0	311.8	1379.0					N70A					
03/03/94 11:44:25	3:15:34	417								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14				
03/03/94 11:52:20	3:23:29		80.0	313.2	1596.5					N80A					
03/03/94 11:52:22	3:23:31	477								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15				
03/03/94 11:53:22	3:24:31	60									Load CEQ_08.UMI into SEQT 8				Restore compressed SEQT 8
															End L054 Script
03/03/94 12:01:25	3:32:34		89.5	39.4	1831.4					North Pole					
															Standard PostMap Script
03/03/94 12:02:27	3:33:36	0									Stop imaging - select ST-A				
03/03/94 12:02:37	3:33:46	10									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF				Slew to Vega
03/03/94 12:02:47	3:33:56		88.5	110.9	1865.1					LDUSK					
03/03/94 12:07:27	3:38:36	290									Load lunardark tables; Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/03/94 12:07:42	3:38:51	15									Perform NIR imaging (DHU SEQT 31)				
03/03/94 12:07:57	3:39:06	15									Select ST-A				
03/03/94 12:08:07	3:39:16	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)				Slew HGA to Earth
03/03/94 12:11:49	3:42:58		80.0	127.4	2076.6					N80D					

Orbit 54 Timeline - Tyne A Orbit

03/03/94 12:12:57	3:44:06	290									Select ST-A; Switch to HGA						READY FOR DATA DUMP
																	End PostMap Script
03/03/94 12:18:00	3:49:09										Switch to DHU mode @ 128 kbps						Ground Command
03/03/94 12:23:40	3:54:49		70.0	128.8	2320.1						N70D						
03/03/94 12:27:00	3:58:09										Downlink SSSR Segment 1						Ground Command
03/03/94 12:36:58	4:08:07		60.0	129.1	2545.2						N60D						
03/03/94 12:51:38	4:22:47		50.0	129.3	2732.4						N50D						
03/03/94 12:54:09	4:25:18									CAN	AOS						
03/03/94 13:00:00	4:31:09										Uplink& schedule L055 scripts						Ground Command
03/03/94 13:04:00	4:35:09										Downlink SSSR Segment 2						Ground Command
03/03/94 13:07:23	4:38:32		40.0	129.3	2862.2						N40D						
03/03/94 13:23:47	4:54:56		30.0	129.3	2919.0						N30D						
03/03/94 13:27:15	4:58:24		27.9	129.3	2920.7						Aposelene						

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/03/94 13:27:15	0:00:00		27.9	129.3	2920.7							Aposelene							Downlinking SSSDR Segment 2 (Orbit 54)
03/03/94 13:40:18	0:13:03		20.0	129.2	2895.5							N20D							
03/03/94 13:49:00	0:21:45												Update state vector (GNC53_03MAR1330)						Ground Command
03/03/94 13:56:23	0:29:08		10.0	129.2	2794.9							N10D							
03/03/94 13:56:36	0:29:21		9.9	129.2	2793.0							INPM							Enter penumbra
03/03/94 13:58:11	0:30:56		8.8	129.2	2778.9							INUM							Enter umbra
03/03/94 14:00:00	0:32:45												Downlink SSSDR Segment 3						Ground Command
03/03/94 14:11:32	0:44:17		0.0	129.1	2629.7							Equator - D							
03/03/94 14:16:00	0:48:45												SSDR to IDLE - downlink complete						Ground Command
03/03/94 14:25:25	0:58:10		-10.0	129.1	2418.2							S10D							
03/03/94 14:25:51	0:58:36										PMK	LOS							
																			Standard Prep1 Script
03/03/94 14:35:06	1:07:51	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/03/94 14:35:08	1:07:53	2											Load lunar dark tables						
																			End Prep1 Script
03/03/94 14:35:22	1:08:07		-17.9	129.1	2232.0							OUTUM							Exit umbra
03/03/94 14:36:47	1:09:32		-19.1	129.1	2203.3							OUTPM							Exit penumbra
03/03/94 14:37:53	1:10:38		-20.0	129.1	2180.4							S20D							
03/03/94 14:48:53	1:21:38		-30.0	129.1	1934.3							S30D							
03/03/94 14:58:31	1:31:16		-40.0	129.1	1693.6							S40D							
																			Standard Prep2 Script
03/03/94 15:05:06	1:37:51	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/03/94 15:06:00	1:38:45												Ranging B ON						Ground Command
03/03/94 15:06:55	1:39:40		-50.0	129.2	1468.1							S50D							
03/03/94 15:14:16	1:47:01		-60.0	129.4	1263.2							S60D							
																			L055 Prep3 Script
03/03/94 15:17:06	1:49:51	0											Msg "WRNG: Omni/8k in 1 min.."						
03/03/94 15:16:00	1:48:45												Ranging A ON						
03/03/94 15:18:06	1:50:51	60											SSDR to IDLE; Switch to 8 kbps bypass mode						
03/03/94 15:19:06	1:51:51	60											Switch to omni antennas						
03/03/94 15:20:06	1:52:51	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/03/94 15:20:36	1:53:21	30											UV & HR cameras ON						
03/03/94 15:20:44	1:53:29		-70.0	129.9	1081.9							S70D							

03/03/94 15:24:31	1:57:16	235								Select ST-A				
03/03/94 15:24:41	1:57:26	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5				Start recorder in Segment 5
03/03/94 15:25:06	1:57:51	25								Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/03/94 15:25:21	1:58:06	15								Perform NIR imaging (DHU SEQT 31)				
03/03/94 15:25:36	1:58:21	15								Stop imaging, select ST-A				
03/03/94 15:25:46	1:58:31	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR55)				Slew to nadir (inertial pointing)
03/03/94 15:26:16	1:59:01	30								Laser power ON				
End L055 Prep3 Script														
03/03/94 15:26:28	1:59:13		-80.0	131.3	924.8				S80D					
L055 Mapping Script														
03/03/94 15:29:36	2:02:21	0								Load exposure table LUNARZ85S				
03/03/94 15:30:00	2:02:45									Switch to 2 kbps				Ground Command
03/03/94 15:30:36	2:03:21	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)				START MAPPING
03/03/94 15:31:35	2:04:20		-89.5	216.6	792.0				South Pole					
03/03/94 15:31:36	2:04:21	60							MAXS	Set SA step rate to LO				
03/03/94 15:32:16	2:05:01		-88.5	288.1	775.4				LDAWN					
03/03/94 15:36:16	2:09:01	280	-80.0	305.5	681.7				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17				
03/03/94 15:40:34	2:13:19	258	-70.0	306.9	593.0				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18				
03/03/94 15:44:35	2:17:20	241	-60.0	307.4	524.8				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/03/94 15:48:24	2:21:09	229							S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 6
03/03/94 15:48:25	2:21:10		-50.0	307.6	475.8				S50A					
03/03/94 15:52:06	2:24:51	222	-40.0	307.8	445.4				S40A	Load exposure table LUNARZ35S				
03/03/94 15:55:42	2:28:27	216							S30A	Load exposure table LUNARZ25S				
03/03/94 15:55:43	2:28:28		-30.0	307.9	432.8				S30A					
03/03/94 15:56:28	2:29:13		-27.9	307.9	432.4				Periselene					
03/03/94 15:59:19	2:32:04	217	-20.0	307.9	438.0				S20A	Load exposure table LUNARZ15S				
03/03/94 16:02:57	2:35:42	218							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/03/94 16:02:58	2:35:43		-10.0	308.0	460.9				S10A					
03/03/94 16:06:43	2:39:28	226	0.0	308.1	502.0				Equator - A	Record in SSSR Segment 7 Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 7
03/03/94 16:10:39	2:43:24	236	10.0	308.1	562.1				N10A	Load CEQ_8U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8				UV and IR uncompressed
03/03/94 16:14:49	2:47:34	250	20.0	308.2	642.0				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				Resume compression

03/03/94 16:15:49	2:48:34	60									Laser power OFF								
03/03/94 16:19:19	2:52:04	210								N30A	Load exposure table LUNARZ35N DHU SEQT 10	Select							
03/03/94 16:19:20	2:52:05		30.0	308.2	743.0					N30A									
03/03/94 16:24:15	2:57:00	296	40.0	308.3	866.4					N40A	Switch to inertial pointing (ORBIT55RW); Load exposure table LUNARZ45N; Select DHU SEQT 11								Initiate oblique viewing
03/03/94 16:29:43	3:02:28	328	50.0	308.5	1013.4					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
03/03/94 16:35:51	3:08:36	368								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 19								
03/03/94 16:35:52	3:08:37		60.0	308.7	1184.5					N60A									
03/03/94 16:39:20	3:12:05	209									Slew s/c sensors to nadir (ACSMMode=LunarMapping)								End oblique viewing - resume nadir pointing
03/03/94 16:42:49	3:15:34	209	70.0	309.1	1379.8					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								
03/03/94 16:50:46	3:23:31	477	80.0	310.6	1597.3					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
03/03/94 16:51:46	3:24:31	60									Load CEQ_8.UMI into SEQT 8								Restore compressed SEQT 8
																			End L055 Script
03/03/94 16:59:51	3:32:36		89.5	36.8	1832.1					North Pole									
																			Standard PostMap Script
03/03/94 17:00:51	3:33:36	0									Stop imaging - select ST-A								
03/03/94 17:01:01	3:33:46	10									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF								Slew to Vega
03/03/94 17:01:12	3:33:57		88.5	106.9	1865.4					LDUSK									
03/03/94 17:05:51	3:38:36	290									Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/03/94 17:06:06	3:38:51	15									Perform NIR imaging (DHU SEQT 31)								
03/03/94 17:06:20	3:39:06	15									Select ST-A								
03/03/94 17:06:31	3:39:16	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)								Slew HGA to Earth
03/03/94 17:10:15	3:43:00		80.0	124.5	2077.2					N80D									
03/03/94 17:11:21	3:44:06	290									Select ST-A; Switch to HGA								READY FOR DATA DUMP
																			End PostMap Script
03/03/94 17:15:00	3:47:45										Switch to DHU mode @ 128 kbps; Ranging A & B OFF								Ground Command
03/03/94 17:17:00	3:49:45										Downlink SDR Segment 2 (Orb 54)								Ground Command
03/03/94 17:22:06	3:54:51		70.0	126.0	2320.6					N70D									
03/03/94 17:24:35	3:57:20									GDS	LOS								

03/03/94 17:25:00	3:57:45															Downlink SSSR Segment 3 (Orb 54)					Ground Command				
03/03/94 17:35:25	4:08:10		60.0	126.4	2545.5											N60D									
03/03/94 17:43:00	4:15:45																					Update state vector (GNC53_03MAR1730)	Ground Command		
03/03/94 17:50:04	4:22:49		50.0	126.5	2732.5											N50D									
03/03/94 17:53:00	4:25:45																						Downlink SSSR Segment 4 (Orb 54)	Ground Command	
03/03/94 18:05:49	4:38:34		40.0	126.5	2862.0											N40D									
03/03/94 18:11:00	4:43:45																							Downlink SSSR Segment 5	Ground Command
03/03/94 18:22:13	4:54:58		30.0	126.5	2918.6											N30D									
03/03/94 18:25:39	4:58:24		27.9	126.5	2920.4											Aposelene									

Orbit 56 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/03/94 18:25:39	0:00:00		27.9	126.5	2920.4							Aposelene							Downlinking SSSR Segment 5 (Orbit 55)
03/03/94 18:38:44	0:13:05		20.0	126.5	2895.0							N20D							
03/03/94 18:43:00	0:17:21												Downlink SSSR Segment 6						Ground Command
03/03/94 18:54:30	0:28:51		10.2	126.4	2797.0							INPM							Enter penumbra
03/03/94 18:54:48	0:29:09		10.0	126.4	2794.3							N10D							
03/03/94 18:56:03	0:30:24		9.2	126.4	2783.4							INUM							Enter umbra
03/03/94 19:09:57	0:44:18		0.0	126.4	2629.0							Equator - D							
03/03/94 19:23:50	0:58:11		-10.0	126.4	2417.5							S10D							
03/03/94 19:27:00	1:01:21												Downlink SSSR Segment 7						Ground Command
																			Prep1 Script
03/03/94 19:33:31	1:07:52	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/03/94 19:33:33	1:07:54	2											Load lunar dark tables						
																			End Prep1 Script
03/03/94 19:34:11	1:08:32		-18.2	126.3	2223.2							OUTUM							Exit umbra
03/03/94 19:35:33	1:09:54		-19.4	126.3	2195.2							OUTPM							Exit penumbra
03/03/94 19:36:17	1:10:38		-20.0	126.3	2179.8							S20D							
03/03/94 19:47:17	1:21:38		-30.0	126.4	1933.7							S30D							
03/03/94 19:56:55	1:31:16		-40.0	126.4	1693.2							S40D							
																			Standard Prep2 Script
03/03/94 20:03:31	1:37:52	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/03/94 20:05:19	1:39:40		-50.0	126.5	1467.7							S50D							
03/03/94 20:12:40	1:47:01		-60.0	126.7	1263.0							S60D							
																			L056 Prep3 Script
03/03/94 20:15:31	1:49:52	0											Msg "WRNG: Omni/8k in 1 min.."						
03/03/94 20:16:31	1:50:52	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop SSSR data dump
03/03/94 20:17:31	1:51:52	60											Switch to omni antennas						
03/03/94 20:18:31	1:52:52	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/03/94 20:19:01	1:53:22	30											UV & HR cameras ON						
03/03/94 20:19:08	1:53:29		-70.0	127.2	1081.7							S70D							
03/03/94 20:22:56	1:57:17	235											Select ST-A						
03/03/94 20:23:06	1:57:27	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1						Start SSSR in Segment 1
03/03/94 20:23:31	1:57:52	25											Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts

Orbit 56 Timeline - Type A Orbit

03/03/94 20:23:46	1:58:07	15								Perform NIR imaging (DHU SEQT 31)		
03/03/94 20:24:01	1:58:22	15								Stop imaging, select ST-A		
03/03/94 20:24:11	1:58:32	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR56)		Slew to nadir (inertial pointing)
03/03/94 20:24:41	1:59:02	30								Laser Power ON		
											End L056 Prep3 Script	
03/03/94 20:24:52	1:59:13		-80.0	128.8	924.7				S80D			
											L056 Mapping Script	
03/03/94 20:28:01	2:02:21	0								Load exposure table LUNARZ85S		
03/03/94 20:29:01	2:03:22	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)		START MAPPING
03/03/94 20:30:00	2:04:21		-89.5	216.5	791.8				South Pole			
03/03/94 20:30:01	2:04:22	60							MAXS	Set SA step rate to LO		
03/03/94 20:30:39	2:05:00		-88.5	284.1	775.6				LDAWN			
03/03/94 20:34:40	2:09:01		-80.0	302.6	681.8				S80A			
03/03/94 20:34:41	2:09:02	280							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3		
03/03/94 20:38:58	2:13:19		-70.0	304.1	593.2				S70A			
03/03/94 20:38:59	2:13:20	258							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4		
03/03/94 20:42:59	2:17:20		-60.0	304.6	525.0				S60A			
03/03/94 20:43:01	2:17:22	242							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6		
03/03/94 20:46:49	2:21:10		-50.0	304.9	476.1				S50A			
03/03/94 20:46:50	2:21:11	229							S50A	Record in SDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5		SSDR Segment 2 Opaque filter did not park
03/03/94 20:50:30	2:24:51		-40.0	305.0	445.7				S40A			
03/03/94 20:50:31	2:24:52	221							S40A	Load exposure table LUNARZ35S		
03/03/94 20:54:07	2:28:28		-30.0	305.1	433.2				S30A			
03/03/94 20:54:08	2:28:29	217							S30A	Load exposure table LUNARZ25S		
03/03/94 20:54:51	2:29:12		-27.9	305.1	432.8				Periselene			
03/03/94 20:57:43	2:32:04		-20.0	305.2	438.3				S20A			
03/03/94 20:57:44	2:32:05	216							S20A	Load exposure table LUNARZ15S		
03/03/94 21:01:22	2:35:43		-10.0	305.3	461.3				S10A			
03/03/94 21:01:23	2:35:44	219							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6		
03/03/94 21:05:07	2:39:28		0.0	305.3	502.5				Equator - A			
03/03/94 21:05:08	2:39:29	225							MEQA	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7		SSDR Segment 3
03/03/94 21:09:03	2:43:24		10.0	305.4	562.6				N10A			
03/03/94 21:09:04	2:43:25	236							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8		

Orbit 56 Timeline - Type A Orbit

03/03/94 21:13:14	2:47:35		20.0	305.5	642.6					N20A								
03/03/94 21:13:15	2:47:36	251								N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9							UV and IR uncompressed
03/03/94 21:14:15	2:48:36	60									Laser power OFF							
03/03/94 21:17:44	2:52:05		30.0	305.5	743.6					N30A								
03/03/94 21:17:45	2:52:06	210								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							Resume compression
03/03/94 21:22:40	2:57:01		40.0	305.6	867.1					N40A								
03/03/94 21:22:41	2:57:02	296								N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11							SSDR Segment 4
03/03/94 21:28:08	3:02:29		50.0	305.8	1014.1					N50A								
03/03/94 21:28:09	3:02:30	328								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12							HiRes already imaging
03/03/94 21:34:17	3:08:38		60.0	306.0	1185.3					N60A								
03/03/94 21:34:18	3:08:39	369								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13							
03/03/94 21:41:15	3:15:36		70.0	306.5	1380.5					N70A								
03/03/94 21:41:16	3:15:37	418								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14							
03/03/94 21:49:12	3:23:33		80.0	308.0	1598.1					N80A								
03/03/94 21:49:13	3:23:34	477								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15							
03/03/94 21:50:13	3:24:34	60									Load CEQ_09.UMI into SEQT 9							Restore compressed SEQT 9
End L056 Script																		
03/03/94 21:58:17	3:32:38		89.5	34.8	1833.0					North Pole								
Standard PostMap Script																		
03/03/94 21:59:18	3:33:39	0									Stop imaging - select ST-A							
03/03/94 21:59:28	3:33:49	10									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF							Slew to Vega
03/03/94 21:59:37	3:33:58		88.5	102.9	1865.9					LDUSK								
03/03/94 22:04:18	3:38:39	290									Load lunardark tables; Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/03/94 22:04:32	3:38:53	15									Perform NIR imaging (DHU SEQT 31)							
03/03/94 22:04:48	3:39:09	15									Select ST-A							
03/03/94 22:04:58	3:39:19	10									IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)							Slew HGA to Earth
03/03/94 22:08:41	3:43:02		80.0	121.7	2077.8					N80D								

Orbit 56 Timeline - Tyne A Orbit

03/03/94 22:09:48	3:44:09	290									Select ST-A; Switch to HGA @ 8kbps						READY FOR DATA DUMP
End PostMap Script																	
03/03/94 22:11:00	3:45:21										Switch to DHU mode @ 128 kbps						
03/03/94 22:16:00	3:50:21										Downlink SSSDR Segment 6 (orb 55)						
03/03/94 22:20:32	3:54:53		70.0	123.1	2321.2						N70D						
03/03/94 22:24:00	3:58:21										Downlink SSSDR Segment 7 (orb 55)						
03/03/94 22:33:51	4:08:12		60.0	123.6	2545.9						N60D						
03/03/94 22:39:00	4:13:21										Downlink SSSDR Segment 1						Ground Command
03/03/94 22:48:30	4:22:51		50.0	123.7	2732.7						N50D						
03/03/94 22:49:00	4:23:21										Uplink & schedule L057 scripts						Ground Command
03/03/94 23:04:15	4:38:36		40.0	123.8	2862.0						N40D						
03/03/94 23:20:39	4:55:00		30.0	123.8	2918.4						N30D						
03/03/94 23:23:00	4:57:21										Downlink SSSDR Segment 2						Ground Command
03/03/94 23:24:03	4:58:24		27.9	123.8	2920.1						Aposelene						

Orbit 57 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/03/94 23:24:02	0:00:00		27.9	123.8	2920.1							Aposelene							Downlinking SSSR Segment 2 (Orbit 56)
03/03/94 23:37:10	0:13:08		20.0	123.7	2894.6							N20D							
03/03/94 23:52:25	0:28:23		10.5	123.7	2800.7							INPM							Enter penumbra
03/03/94 23:53:14	0:29:12		10.0	123.7	2793.7							N10D							
03/03/94 23:53:55	0:29:53		9.6	123.7	2787.7							INUM							Enter umbra
03/04/94 00:04:00	0:39:58												Downlink SSSR Segment 3						Ground Command
03/04/94 00:08:23	0:44:21		0.0	123.7	2628.3							Equator - D							
03/04/94 00:22:16	0:58:14		-10.0	123.6	2416.8							S10D							
																			Standard Prep1 Script
03/04/94 00:31:53	1:07:51	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/04/94 00:31:55	1:07:53	2											Load lunar dark tables						
																			End Prep1 Script
03/04/94 00:32:59	1:08:57		-18.5	123.6	2214.6							OUTUM							Exit umbra
03/04/94 00:34:19	1:10:17		-19.7	123.6	2187.1							OUTPM							Exit penumbra
03/04/94 00:34:42	1:10:40		-20.0	123.6	2179.1							S20D							
03/04/94 00:38:00	1:13:58												Downlink SSSR Segment 4						Ground Command
03/04/94 00:45:42	1:21:40		-30.0	123.6	1933.0							S30D							
03/04/94 00:52:00	1:27:58												SSDR to IDLE						Ground Command - lost lock
03/04/94 00:55:19	1:31:17		-40.0	123.7	1692.6							S40D							
																			Standard Prep2 Script
03/04/94 01:01:53	1:37:51	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/04/94 01:03:43	1:39:41		-50.0	123.8	1467.2							S50D							
03/04/94 01:11:04	1:47:02		-60.0	124.1	1262.6							S60D							
																			L057 Prep3 Script
03/04/94 01:13:53	1:49:51	0											Msg "WRNG: Omni/8k in 1 min.."						
03/04/94 01:14:53	1:50:51	60											SSDR to IDLE; Switch to 8 kbps bypass mode						
03/04/94 01:15:53	1:51:51	60											Switch to omni antennas						
03/04/94 01:16:53	1:52:51	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/04/94 01:17:23	1:53:21	30											UV & HR cameras ON						
03/04/94 01:17:32	1:53:30		-70.0	124.6	1081.4							S70D							
03/04/94 01:21:18	1:57:16	235											Select ST-A						
03/04/94 01:21:28	1:57:26	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5						Start recorder in Segment 5

Orbit 57 Timeline - Type B Orbit

03/04/94 01:21:53	1:57:51	25								Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/04/94 01:22:08	1:58:06	15								Perform NIR imaging (DHU SEQT 31)				
03/04/94 01:22:23	1:58:21	15								Stop imaging, select ST-A				
03/04/94 01:22:33	1:58:31	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR57)				Slew to nadir (inertial pointing)
03/04/94 01:23:03	1:59:01	30								Laser power ON				
End L057 Prep3 Script														
03/04/94 01:23:16	1:59:14		-80.0	126.2	924.4					S80D				
03/04/94 01:25:00	2:00:58									Switch to 2 kbps				Ground Command - lost lock
L057 Mapping Script														
03/04/94 01:26:23	2:02:21	0								Load exposure table LUNARZ85S				
03/04/94 01:27:23	2:03:21	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)				START MAPPING
03/04/94 01:28:23	2:04:21	60								MAXS				Set SA step rate to LO
03/04/94 01:28:24	2:04:22		-89.4	214.4	791.5					South Pole				
03/04/94 01:29:03	2:05:01		-88.5	280.1	775.6					LDAWN				
03/04/94 01:33:03	2:09:01	280	-80.0	299.7	681.8					S80A				Load exposure table LUNARZ75S; Select DHU SEQT 17
03/04/94 01:35:51	2:11:49									MAD				AOS
03/04/94 01:37:21	2:13:19	258								S70A				Load exposure table LUNARZ65S; Select DHU SEQT 18
03/04/94 01:37:22	2:13:20		-70.0	301.3	593.2					S70A				
03/04/94 01:41:23	2:17:21	242	-60.0	301.8	525.1					S60A				Load exposure table LUNARZ55S; Select DHU SEQT 6
03/04/94 01:45:12	2:21:10	229	-50.0	302.1	476.2					S50A				Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5
03/04/94 01:48:53	2:24:51	221								S40A				SSDR Segment 6
03/04/94 01:48:54	2:24:52		-40.0	302.3	445.8					S40A				Load exposure table LUNARZ35S
03/04/94 01:52:30	2:28:28	217								S30A				Load exposure table LUNARZ25S
03/04/94 01:52:31	2:28:29		-30.0	302.4	433.4					S30A				
03/04/94 01:53:14	2:29:12		-28.0	302.4	433.0					Periselene				
03/04/94 01:56:06	2:32:04	216								S20A				Load exposure table LUNARZ15S
03/04/94 01:56:07	2:32:05		-20.0	302.5	438.6					S20A				
03/04/94 01:56:08	2:32:06									CAN				LOS
03/04/94 01:59:45	2:35:43	219								S10A				Load exposure table LUNARZ05S; Select DHU SEQT 6
03/04/94 01:59:46	2:35:44		-10.0	302.5	461.7					S10A				
03/04/94 02:03:31	2:39:29	226	0.0	302.6	502.9					Equator - A				Record in SSSR Segment 7; Load CEQ_7U.UMI into seq 7; Load exposure table LUNARZ05N; Select DHU SEQT 7
03/04/94 02:07:27	2:43:25	236	10.0	302.7	563.0					N10A				UV and IR uncompressed
03/04/94 02:11:38	2:47:36	251	20.0	302.7	643.1					N20A				Load exposure table LUNARZ25N; Select DHU SEQT 9

Orbit 57 Timeline - Tyne B Orbit

03/04/94 02:12:38	2:48:36	60														Laser power OFF				
03/04/94 02:16:08	2:52:06	210	30.0	302.8	744.2											N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/04/94 02:21:04	2:57:02	296	40.0	302.9	867.7											N40A	Switch to inertial pointing (ORBIT57RW); Load exposure table LUNARZ45N		Initiate oblique viewing	
03/04/94 02:26:33	3:02:31	329	50.0	303.1	1014.8											N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11			
03/04/94 02:32:41	3:08:39	368														N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12			
03/04/94 02:32:42	3:08:40		60.0	303.3	1186.0											N60A				
03/04/94 02:36:10	3:12:08	209																Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing	
03/04/94 02:39:39	3:15:37	209														N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20			
03/04/94 02:39:40	3:15:38		70.0	303.9	1381.4											N70A				
03/04/94 02:47:37	3:23:35	478	80.0	305.5	1599.0											N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21			
03/04/94 02:48:37	3:24:35	60																Load CEQ_7.UMI into SEQT 7	Restore compressed SEQT 7	
																	End L057 Script			
03/04/94 02:56:42	3:32:40		89.4	31.8	1833.7											North Pole				
																	L057 PostMap Script			
03/04/94 02:57:42	3:33:40	0																Stop imaging - select ST-A		
03/04/94 02:57:52	3:33:50	10																Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF; Execute NIRSTEST2	Slew to Vega Execute NIR test sequence	
03/04/94 02:58:02	3:34:00		88.5	99.0	1866.4											LDUSK				
03/04/94 03:02:42	3:38:40	300																Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts	
03/04/94 03:02:57	3:38:55	15																Perform NIR imaging (DHU SEQT 31)		
03/04/94 03:03:12	3:39:10	15																Select ST-A		
03/04/94 03:03:21	3:39:20	10																IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth	
03/04/94 03:07:07	3:43:05		80.0	118.8	2078.6											N80D				
03/04/94 03:08:11	3:44:10	290																Select ST-A; Switch to HGA	READY FOR DATA DUMP	
																	End L057 PostMap Script			
03/04/94 03:18:58	3:54:56		70.0	120.3	2321.9											N70D				
03/04/94 03:32:17	4:08:15		60.0	120.8	2546.5											N60D				
03/04/94 03:46:57	4:22:55		50.0	121.0	2733.0											N50D				
03/04/94 04:02:41	4:38:39		40.0	121.0	2862.1											N40D				

Orbit 57 Timeline - Type B Orbit

03/04/94 04:03:00	4:38:58										Downlink SSSR Segment 5				Ground Command
03/04/94 04:19:05	4:55:03		30.0	121.0	2918.2						N30D				
03/04/94 04:22:26	4:58:24		28.0	121.0	2919.9						Aposelene				
		0									Load 1st exposure set (NIR21_1 - 21_6); Select DHU SEQT 31; Stop imaging				NIR TEST 2
		5									Load exposure set (NIR22_1 - 22_6)				
		5									Select DHU SEQT 31; Stop imaging				
		5									Load exposure set (NIR23_1 - 23_6)				
		5									Select DHU SEQT 31; Stop imaging				
		120									Load 2nd exposure set (NIR21_1 - 21_6); Select DHU SEQT 31; Stop imaging				
		5									Load exposure set (NIR22_1 - 22_6)				
		5									Select DHU SEQT 31; Stop imaging				
		5									Load exposure set (NIR23_1 - 23_6)				
		5									Select DHU SEQT 31; Stop imaging				
		120									Load 3rd exposure set (NIR21_1 - 21_6); Select DHU SEQT 31; Stop imaging				
		5									Load exposure set (NIR22_1 - 22_6)				
		5									Select DHU SEQT 31; Stop imaging				
		5									Load exposure set (NIR23_1 - 23_6)				
		5									Select DHU SEQT 31; Stop imaging				END OF NIRTEST2

Orbit 58 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/04/94 04:22:26	0:00:00		28.0	121.0	2919.9							Aposelene							Downlinking SSSDR Segment 5 (orbit 57)
03/04/94 04:30:00	0:07:34												Downlink SSSDR Segment 4 patches						Ground Command
03/04/94 04:35:36	0:13:10		20.0	121.0	2894.1							N20D							
03/04/94 04:45:00	0:22:34												Downlink SSSDR Segment 6						Ground Command
03/04/94 04:50:21	0:27:55		10.8	121.0	2804.3							INPM							Enter penumbra
03/04/94 04:51:40	0:29:14		10.0	121.0	2793.1							N10D							
03/04/94 04:51:50	0:29:24		9.9	121.0	2791.7							INUM							Enter umbra
03/04/94 05:06:48	0:44:22		0.0	120.9	2627.5							Equator - D							
03/04/94 05:20:41	0:58:15		-10.0	120.9	2415.9							S10D							
03/04/94 05:25:00	1:02:34												Downlink SSSDR Segment 7						Ground Command
																			Prep1 Script
03/04/94 05:30:18	1:07:52	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/04/94 05:30:20	1:07:54	2											Load lunar dark tables						
																			End Prep1 Script
03/04/94 05:31:46	1:09:20		-18.9	120.9	2206.1							OUTUM							Exit umbra
03/04/94 05:33:05	1:10:39		-20.0	120.9	2179.1							OUTPM							Exit penumbra
03/04/94 05:33:07	1:10:41		-20.0	120.9	2178.2							S20D							
03/04/94 05:44:07	1:21:41		-30.0	120.9	1932.2							S30D							
03/04/94 05:53:44	1:31:18		-40.0	121.0	1691.9							S40D							
																			Standard Prep2 Script
03/04/94 06:00:18	1:37:52	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/04/94 06:02:08	1:39:42		-50.0	121.1	1466.6							S50D							
																			UVHRON SCRIPT
03/04/94 06:05:09	1:42:43												Turn on UV and HiRes cameras						
																			End UVHRON Script
03/04/94 06:09:28	1:47:02		-60.0	121.4	1262.0							S60D							
																			L058 Prep3 Script
03/04/94 06:12:18	1:49:52	0											Msg "WRNG: Omni/8k in 1 min.."						
03/04/94 06:13:18	1:50:52	60											SSDR to IDLE; Switch to 8 kbps bypass mode						Stop SSSDR data dump
03/04/94 06:14:18	1:51:52	60											Switch to omni antennas						
03/04/94 06:15:18	1:52:52	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (GNC12CRX01)						Slew to Crux (inertial pointing)
03/04/94 06:15:56	1:53:30		-70.0	121.9	1080.9							S70D							
03/04/94 06:16:00	1:53:34	42											Initialize filters at special settings (DHU SEQT 26)						

Orbit 58 Timeline - Type A Orbit

03/04/94 06:16:05	1:53:39	5								Load exposure table CRXABSRAD; Select DHU SEQT 29				Special radiometric observation of Crux - DATA NOT RECORDED!
03/04/94 06:16:10	1:53:44	5								Select DHU SEQT 30				
03/04/94 06:19:43	1:57:17	213								Select ST-A				
03/04/94 06:19:53	1:57:27	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 1				Start SSSR in Segment 1
03/04/94 06:20:18	1:57:52	25								Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/04/94 06:20:33	1:58:07	15								Perform NIR imaging (DHU SEQT 31)				
03/04/94 06:20:48	1:58:22	15								Stop imaging, select ST-A				
03/04/94 06:20:58	1:58:32	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR58)				Slew to nadir (inertial pointing)
03/04/94 06:21:28	1:59:02	30								Laser Power ON				
End L058 Prep3 Script														
03/04/94 06:21:40	1:59:14		-80.0	123.6	924.1					S80D				
L058 Mapping Script														
03/04/94 06:24:48	2:02:21	0												
										Load exposure table LUNARZ85S				
03/04/94 06:25:48	2:03:22	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)				START MAPPING
03/04/94 06:26:47	2:04:21		-89.4	209.2	791.6					South Pole				
03/04/94 06:26:48	2:04:22	60								MAXS				
03/04/94 06:27:26	2:05:00		-88.5	276.3	775.5					LDAWN				
03/04/94 06:31:27	2:09:01		-80.0	296.8	681.6					S80A				
03/04/94 06:31:28	2:09:02	280								S80A				
03/04/94 06:33:06	2:10:40								PMK	AOS				
03/04/94 06:35:45	2:13:19		-70.0	298.5	593.1					S70A				
03/04/94 06:35:46	2:13:20	258								S70A				
03/04/94 06:39:47	2:17:21		-60.0	299.1	525.0					S60A				
03/04/94 06:39:48	2:17:22	242								S60A				
03/04/94 06:43:36	2:21:10		-50.0	299.3	476.3					S50A				
03/04/94 06:43:37	2:21:11	229								S50A				SSSR Segment 2
03/04/94 06:47:17	2:24:51		-40.0	299.5	446.0					S40A				
03/04/94 06:47:18	2:24:52	221								S40A				
03/04/94 06:50:54	2:28:28		-30.0	299.6	433.6					S30A				
03/04/94 06:50:55	2:28:29	217								S30A				
03/04/94 06:51:37	2:29:11		-28.0	299.7	433.2					Periselene				
03/04/94 06:54:30	2:32:04		-20.0	299.7	438.9					S20A				
03/04/94 06:54:32	2:32:06	217								S20A				
03/04/94 06:58:10	2:35:44		-10.0	299.8	462.0					S10A				
03/04/94 06:58:11	2:35:45	219								S10A				

Orbit 58 Timeline - Type A Orbit

03/04/94 07:01:55	2:39:29		0.0	299.9	503.2					Equator - A									
03/04/94 07:01:56	2:39:30	225								MEQA	Record in SDDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 3
03/04/94 07:05:51	2:43:25		10.0	300.0	563.5					N10A									
03/04/94 07:05:52	2:43:26	236								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/04/94 07:10:02	2:47:36		20.0	300.0	643.6					N20A									
03/04/94 07:10:03	2:47:37	251								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/04/94 07:11:03	2:48:37	60									Laser power OFF								
03/04/94 07:14:32	2:52:06		30.0	300.1	744.8					N30A									
03/04/94 07:14:34	2:52:08	211								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/04/94 07:19:29	2:57:03		40.0	300.2	868.4					N40A									
03/04/94 07:19:30	2:57:04	296								N40A	Record in SDDR Segment 4; Load CEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4 UV and IR uncompressed
03/04/94 07:24:57	3:02:31		50.0	300.4	1015.5					N50A									
03/04/94 07:24:58	3:02:32	328								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								Resume compression
03/04/94 07:31:06	3:08:40		60.0	300.7	1186.8					N60A									
03/04/94 07:31:07	3:08:41	369								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/04/94 07:38:04	3:15:38		70.0	301.2	1382.2					N70A									
03/04/94 07:38:05	3:15:39	418								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								
03/04/94 07:46:02	3:23:36		80.0	302.9	1599.9					N80A									
03/04/94 07:46:03	3:23:37	478								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
03/04/94 07:46:03	3:23:37	60									Load CEQ_11.UMI into SEQT 11								Restore compressed SEQT 11
											End L058 Script								
03/04/94 07:55:08	3:32:42		89.4	29.7	1834.8					North Pole									
											Standard PostMap Script								
03/04/94 07:56:09	3:33:43	0									Stop imaging - select ST-A								
03/04/94 07:56:19	3:33:53	10									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF								Slew to Vega
03/04/94 07:56:26	3:34:00		88.5	95.2	1867.1					LDUSK									
03/04/94 08:01:09	3:38:43	290									Load lunardark tables; Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/04/94 08:01:24	3:38:58	15									Perform NIR imaging (DHU SEQT 31)								
03/04/94 08:01:38	3:39:12	15									Select ST-A								

Orbit 58 Timeline - Type A Orbit

03/04/94 08:01:49	3:39:23	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/04/94 08:05:32	3:43:06		80.0	115.9	2079.4				N80D							
03/04/94 08:06:39	3:44:13	290								Select ST-A; Switch to HGA						READY FOR DATA DUMP
																End PostMap Script
03/04/94 08:07:00	3:44:34									Switch to DHU mode @ 128 kbps						Ground Command
03/04/94 08:15:00	3:52:34									Resume downlinking SDR Seg 7 (orbit 57)						Ground Command
03/04/94 08:17:24	3:54:58		70.0	117.5	2322.6				N70D							
03/04/94 08:29:00	4:06:34									Downlink SDR Segment 1						Ground Command
03/04/94 08:30:43	4:08:17		60.0	118.0	2547.1				N60D							
03/04/94 08:45:23	4:22:57		50.0	118.2	2733.5				N50D							
03/04/94 08:55:00	4:32:34									Uplink & schedule L059 scripts; Downlink SDR Segment 2						Ground Command
03/04/94 09:01:08	4:38:42		40.0	118.3	2862.3				N40D							
03/04/94 09:03:35	4:41:09							GDS	AOS							
03/04/94 09:17:32	4:55:06		30.0	118.3	2918.1				N30D							
03/04/94 09:20:49	4:58:23		28.0	118.3	2919.7				Aposelene							

Orbit 59 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/04/94 09:20:48	0:00:00		28.0	118.3	2919.7							Aposelene							Downlinking SSSR Segment 2 (Orbit 58)
03/04/94 09:34:02	0:13:14		20.0	118.3	2893.8							N20D							
03/04/94 09:45:00	0:24:12												Downlink SSSR Segment 3						Ground Command
03/04/94 09:48:18	0:27:30		11.1	118.2	2807.6							INPM							Enter penumbra
03/04/94 09:49:45	0:28:57		10.2	118.2	2795.5							INUM							Enter umbra
03/04/94 09:50:06	0:29:18		10.0	118.2	2792.5							N10D							
03/04/94 10:05:14	0:44:26		0.0	118.2	2626.7							Equator - D							
03/04/94 10:08:18	0:47:30										MAD	LOS							
03/04/94 10:19:06	0:58:18		-10.0	118.2	2415.0							S10D							
03/04/94 10:20:00	0:59:12												Downlink SSSR Segment 4						Ground Command
																			Standard Prep1 Script
03/04/94 10:28:41	1:07:53	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/04/94 10:28:42	1:07:54	2											Load lunar dark exposure tables						
																			End Prep1 Script
03/04/94 10:30:33	1:09:45		-19.2	118.2	2197.7							OUTUM							Exit umbra
03/04/94 10:31:32	1:10:44		-20.0	118.2	2177.3							S20D							
03/04/94 10:31:50	1:11:02		-20.2	118.2	2171.2							OUTPM							Exit penumbra
03/04/94 10:42:31	1:21:43		-30.0	118.2	1931.3							S30D							
03/04/94 10:52:08	1:31:20		-40.0	118.3	1691.0							S40D							
																			Standard Prep2 Script
03/04/94 10:58:41	1:37:53	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/04/94 11:00:32	1:39:44		-50.0	118.4	1465.8							S50D							
03/04/94 11:07:52	1:47:04		-60.0	118.7	1261.4							S60D							
																			L059 Prep3 Script
03/04/94 11:10:41	1:49:53	0											Msg "WRNG: Omni/8k in 1 min.."						
03/04/94 11:11:41	1:50:53	60											SSDR to idle; Switch to 8 kbps bypass mode						
03/04/94 11:12:41	1:51:53	60											Switch to omni antennas						
03/04/94 11:13:41	1:52:53	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/04/94 11:14:11	1:53:23	30											UV & HR cameras ON						
03/04/94 11:14:20	1:53:32		-70.0	119.3	1080.4							S70D							
03/04/94 11:18:06	1:57:18	235											Select ST-A						
03/04/94 11:18:16	1:57:28	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5						Start recorder in Segment 5

Orbit 59 Timeline - Tyne B Orbit

03/04/94 11:18:41	1:57:53	25								Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/04/94 11:18:56	1:58:08	15								Perform NIR imaging (DHU SEQT 31)					
03/04/94 11:19:11	1:58:23	15								Stop imaging, select ST-A					
03/04/94 11:19:21	1:58:33	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR59)					Slew to nadir (inertial pointing)
03/04/94 11:19:51	1:59:03	30								Laser power ON					
End L059 Prep3 Script															
03/04/94 11:20:03	1:59:15		-80.0	121.0	923.6				S80D						
L059 Mapping Script															
03/04/94 11:23:11	2:02:23	0								Load exposure table LUNARZ85S					
03/04/94 11:24:11	2:03:23	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/04/94 11:25:11	2:04:23	60	-89.4	207.6	791.1				South Pole	Set SA step rate to LO					
03/04/94 11:25:50	2:05:02		-88.5	272.5	775.2				LDAWN						
03/04/94 11:29:50	2:09:02	279	-80.0	293.9	681.4				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/04/94 11:34:08	2:13:20	258							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18					
03/04/94 11:34:09	2:13:21		-70.0	295.7	592.9				S70A						
03/04/94 11:38:10	2:17:22	242	-60.0	296.3	524.9				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/04/94 11:41:59	2:21:11	229	-50.0	296.6	476.2				S50A	Record in SDDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5					SDDR Segment 6
03/04/94 11:45:40	2:24:52	221							S40A	Load exposure table LUNARZ35S					
03/04/94 11:45:41	2:24:53		-40.0	296.8	446.0				S40A						
03/04/94 11:49:17	2:28:29	217							S30A	Load exposure table LUNARZ25S					
03/04/94 11:49:18	2:28:30		-30.0	296.9	433.7				S30A						
03/04/94 11:50:00	2:29:12		-28.0	296.9	433.3				Periselene						
03/04/94 11:52:53	2:32:05	216							S20A	Load exposure table LUNARZ15S					
03/04/94 11:52:54	2:32:06		-20.0	297.0	439.0				S20A						
03/04/94 11:56:33	2:35:45	220	-10.0	297.1	462.2				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/04/94 12:00:18	2:39:30	225							MEQA	Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SDDR Segment 7
03/04/94 12:00:19	2:39:31		0.0	297.2	503.6				Equator - A						
03/04/94 12:04:14	2:43:26	236							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/04/94 12:04:15	2:43:27		10.0	297.2	563.8				N10A						
03/04/94 12:08:25	2:47:37	251							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					
03/04/94 12:08:26	2:47:38		20.0	297.3	644.0				N20A						
03/04/94 12:09:25	2:48:37	60								Laser power OFF					
03/04/94 12:12:56	2:52:08	211	30.0	297.4	745.3				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					

Orbit 59 Timeline - Type B Orbit

03/04/94 12:17:52	2:57:04	296							N40A	Switch to inertial pointing; Load exposure table LUNARZ45N									Initiate oblique viewing
03/04/94 12:17:53	2:57:05		40.0	297.5	869.0				N40A										
03/04/94 12:23:21	3:02:33	329	50.0	297.7	1016.2				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11									
03/04/94 12:29:30	3:08:42	369							N60A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ65N; Select DHU SEQT 12									UV & IR uncompressed
03/04/94 12:29:31	3:08:43		60.0	298.0	1187.6				N60A										
03/04/94 12:33:40	3:12:52	251								Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19									End oblique viewing - resume nadir pointing Resume compression
03/04/94 12:36:28	3:15:40	167							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20									
03/04/94 12:36:29	3:15:41		70.0	298.5	1383.1				N70A										
03/04/94 12:44:26	3:23:38	478							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21									
03/04/94 12:44:27	3:23:39		80.0	300.3	1600.8				N80A										
03/04/94 12:45:26	3:24:38	60								Load CEQ_12.UMI into SEQT 12									Restore compressed SEQT 12
																			End L059 Script
03/04/94 12:53:33	3:32:45		89.4	26.5	1835.6				North Pole										
																			Standard PostMap Script
03/04/94 12:54:32	3:33:44	0								Stop imaging - select ST-A									
03/04/94 12:54:42	3:33:54	10								Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA01); Park filters (DHU SEQT 27); UV & HR cameras OFF; Laser power OFF									Slew to Vega
03/04/94 12:54:51	3:34:03		88.5	91.5	1867.8				LDUSK										
03/04/94 12:59:32	3:38:44	290								Load lunar dark tables; Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts
03/04/94 12:59:47	3:38:59	15								Perform NIR imaging (DHU SEQT 31)									
03/04/94 13:00:02	3:39:14	15								Select ST-A									
03/04/94 13:00:12	3:39:24	10								IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)									Slew HGA to Earth
03/04/94 13:03:58	3:43:10		80.0	113.0	2080.4				N80D										
03/04/94 13:05:02	3:44:14	290								Select ST-A; Switch to HGA									READY FOR DATA DUMP
																			End PostMap Script
03/04/94 13:07:00	3:46:12									Switch to DHU mode @ 128 kbps									Ground Command
03/04/94 13:09:00	3:48:12									Downlink SSSR Segment 5									Ground Command
03/04/94 13:15:50	3:55:02		70.0	114.8	2323.5				N70D										
03/04/94 13:29:09	4:08:21		60.0	115.3	2547.9				N60D										
03/04/94 13:35:00	4:14:12									Downlink SSSR Segment 6									Ground Command

Orbit 59 Timeline - Type B Orbit

03/04/94 13:43:49	4:23:01		50.0	115.5	2734.0						N50D						
03/04/94 13:49:02	4:28:14								CAN		AOS						
03/04/94 13:59:34	4:38:46		40.0	115.5	2862.6						N40D						
03/04/94 14:15:58	4:55:10		30.0	115.6	2918.1						N30D						
03/04/94 14:19:00	4:58:12											Uplink & schedule L060 scripts					Ground Command
03/04/94 14:19:11	4:58:23		28.1	115.6	2919.6						Aposelene						

Orbit 60 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/04/94 14:19:11	0:00:00		28.1	115.6	2919.6							Aposelene							Downlinking SDDR Segment 7 (orbit 59)
03/04/94 14:32:29	0:13:18		20.0	115.5	2893.4							N20D							
03/04/94 14:46:17	0:27:06		11.4	115.5	2810.8							INPM							Enter penumbra
03/04/94 14:47:42	0:28:31		10.5	115.5	2799.0							INUM							Enter umbra
03/04/94 14:48:32	0:29:21		10.0	115.5	2791.8							N10D							
03/04/94 15:03:40	0:44:29		0.0	115.5	2625.9							Equator - D							
03/04/94 15:05:00	0:45:49												SSDR to IDLE - Downlink complete						Ground Command
03/04/94 15:17:32	0:58:21		-10.0	115.5	2414.1							S10D							
03/04/94 15:17:25	0:58:14										PMK	LOS							
																			Standard Prep1 Script
03/04/94 15:27:05	1:07:54	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/04/94 15:27:07	1:07:56	2											Load lunar dark exposure tables						
																			End Prep1 Script
03/04/94 15:29:20	1:10:09		-19.5	115.5	2189.5							OUTUM							Exit umbra
03/04/94 15:29:58	1:10:47		-20.0	115.5	2176.3							S20D							
03/04/94 15:30:35	1:11:24		-20.5	115.5	2163.4							OUTPM							Exit penumbra
03/04/94 15:40:56	1:21:45		-30.0	115.5	1930.3							S30D							
03/04/94 15:50:33	1:31:22		-40.0	115.6	1690.1							S40D							
																			Standard Prep2 Script
03/04/94 15:57:05	1:37:54	0											LWIR camera & cryocooler ON; Laser heater ON; UV camera ON; Open sensor door if closed						UV camera on moved here for this orbit only
																			End Prep2 Script
03/04/94 15:58:56	1:39:45		-50.0	115.7	1465.0							S50D							
03/04/94 16:06:16	1:47:05		-60.0	116.0	1260.6							S60D							
																			L060 Prep3 Script
03/04/94 16:09:05	1:49:54	0											Msg "WRNG: Omni/8k in 1 min.."						
03/04/94 16:10:05	1:50:54	60											SSDR to IDLE; Switch to 8 kbps bypass mode						
03/04/94 16:11:05	1:51:54	60											Switch to omni antennas						
03/04/94 16:12:05	1:52:54	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/04/94 16:12:35	1:53:23	30											HR cameras ON; Select ST-A						
03/04/94 16:12:43	1:53:32		-70.0	116.6	1079.7							S70D							
03/04/94 16:12:45	1:53:34	10											Initialize filters (DHU SEQT 28); Record in SDDR Segment 1						Start SDDR in Segment 1
03/04/94 16:13:10	1:53:59	25											Perform NIR imaging (DHU SEQT 31)						Special NIR test

Orbit 60 Timeline - Type A Orbit

03/04/94 16:13:25	1:54:14	15									Stop imaging - DHU to IDLE;			
03/04/94 16:16:59	1:57:48	214									Perform UV0 imaging (DHU SEQT 29)			Special UV/Vis test
03/04/94 16:17:05	1:57:54	6									Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
03/04/94 16:17:20	1:58:09	15									Perform NIR imaging (DHU SEQT 31)			
03/04/94 16:17:35	1:58:24	15									Stop imaging, select ST-A			
03/04/94 16:17:45	1:58:34	10									Deselect ST; Slew s/c sensors to nadir (GNC12NADIR60)			Slew to nadir (inertial pointing)
03/04/94 16:18:15	1:59:04	30									Laser Power ON			
End L060 Prep3 Script														
03/04/94 16:18:27	1:59:16		-80.0	118.4	923.1					S80D				
L060 Mapping Script														
03/04/94 16:21:35	2:02:23	0									Load exposure table LUNARZ85S			
03/04/94 16:22:35	2:03:23	60									Switch to lunar mapping mode (ACSMMode=LunarMapping); Start imaging (DHU SEQT 9)			START MAPPING
03/04/94 16:23:35	2:04:24	60	-89.4	206.1	790.5					South Pole	Set SA step rate to LO			
03/04/94 16:24:13	2:05:02		-88.5	268.9	774.9					LDAWN				
03/04/94 16:28:14	2:09:03		-80.0	291.1	681.1					S80A				
03/04/94 16:28:15	2:09:04	280								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3			
03/04/94 16:32:32	2:13:20		-70.0	292.9	592.7					S70A				
03/04/94 16:32:33	2:13:22	258								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/04/94 16:36:34	2:17:22		-60.0	293.5	524.8					S60A				
03/04/94 16:36:35	2:17:24	242								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/04/94 16:40:23	2:21:12		-50.0	293.8	476.1					S50A				
03/04/94 16:40:24	2:21:13	229								S50A	Record in SSDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 2
03/04/94 16:44:04	2:24:53		-40.0	294.0	446.0					S40A				
03/04/94 16:44:05	2:24:54	221								S40A	Load exposure table LUNARZ35S			
03/04/94 16:47:41	2:28:29		-30.0	294.2	433.7					S30A				
03/04/94 16:47:42	2:28:31	217								S30A	Load exposure table LUNARZ25S			
03/04/94 16:48:23	2:29:12		-28.1	294.2	433.4					Periselene				
03/04/94 16:51:17	2:32:06		-20.0	294.3	439.2					S20A				
03/04/94 16:51:18	2:32:07	216								S20A	Load exposure table LUNARZ15S			
03/04/94 16:54:56	2:35:45		-10.0	294.4	462.4					S10A				
03/04/94 16:54:57	2:35:46	219								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/04/94 16:58:42	2:39:31		0.0	294.4	503.8					Equator - A				
03/04/94 16:58:43	2:39:32	226								MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
03/04/94 17:02:38	2:43:27		10.0	294.5	564.2					N10A				

Orbit 60 Timeline - Type A Orbit

03/04/94 17:02:39	2:43:28	236							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8									
03/04/94 17:06:49	2:47:38		20.0	294.6	644.5				N20A										
03/04/94 17:06:50	2:47:39	251							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9									
03/04/94 17:07:50	2:48:39	60								Laser power OFF									
03/04/94 17:11:20	2:52:09		30.0	294.7	745.8				N30A										
03/04/94 17:11:21	2:52:10	211							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10									
03/04/94 17:16:17	2:57:06	296	40.0	294.8	869.6				N40A	Record in SSSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4	
03/04/94 17:21:45	3:02:34		50.0	295.0	1016.9				N50A										
03/04/94 17:21:46	3:02:35	329							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12									
03/04/94 17:27:55	3:08:44		60.0	295.3	1188.4				N60A										
03/04/94 17:27:56	3:08:45	370							N60A	Load CEQ_19U.UMI into SEQT 19; Load exposure table LUNARZ65N; Select DHU SEQT 19								UV & IR uncompressed	
03/04/94 17:34:53	3:15:42		70.0	295.9	1384.0				N70A										
03/04/94 17:34:54	3:15:43	418							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								Resume compression	
03/04/94 17:42:52	3:23:41		80.0	297.7	1601.8				N80A										
03/04/94 17:42:53	3:23:42	479							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15									
03/04/94 17:43:53	3:24:42	60								Load CEQ_19.UMI into SEQT 19								Restore compressed SEQT 19	
																		End L060 Script	
03/04/94 17:51:58	3:32:47		89.4	24.1	1836.7				North Pole										
																			Standard PostMap Script
03/04/94 17:52:59	3:33:48	0								Stop imaging - select ST-A									
03/04/94 17:53:09	3:33:58	10								Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VGA01); Park filters (DHU SEQT 27); Laser power OFF								Slew to Vega	
03/04/94 17:53:16	3:34:05		88.5	87.9	1868.6				LDUSK										
03/04/94 17:57:59	3:38:48	290								Load lunardark tables; Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts	
03/04/94 17:58:14	3:39:03	15								Perform NIR imaging (DHU SEQT 31)									
03/04/94 17:58:29	3:39:18	15								Perform UV imaging (DHU SEQT 29)								Radiometric imaging starts	
03/04/94 17:58:35	3:39:24	6								Perform HR imaging (DHU SEQT 30)									
03/04/94 17:58:45	3:39:34	10								Stop imaging - select ST-A									

Orbit 60 Timeline - Type A Orbit

03/04/94 17:58:55	3:39:44	10								UV & HR cameras OFF; IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/04/94 18:02:23	3:43:12		80.0	110.2	2081.3				N80D							
03/04/94 18:03:45	3:44:34	290								Switch to HGA; Select ST-A						READY FOR DATA DUMP
																End PostMap Script
03/04/94 18:06:00	3:46:49									Switch to DHU mode @ 128 kbps						Ground Command
03/04/94 18:10:00	3:50:49									Downlink SSSR Segment 1						Ground Command
03/04/94 18:14:15	3:55:04		70.0	112.0	2324.5				N70D							
03/04/94 18:17:30	3:58:19								GDS	LOS						
03/04/94 18:22:00	4:02:49									Uplink & schedule L061 scripts						Ground Command
03/04/94 18:27:35	4:08:24		60.0	112.5	2548.7				N60D							
03/04/94 18:42:15	4:23:04		50.0	112.7	2734.7				N50D							
03/04/94 18:46:00	4:26:49									Downlink SSSR Segment 2						Ground Command
03/04/94 18:58:01	4:38:50		40.0	112.8	2862.9				N40D							
03/04/94 19:14:25	4:55:14		30.0	112.8	2918.1				N30D							
03/04/94 19:17:34	4:58:23		28.1	112.8	2919.6				Aposelene							

Orbit 61 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/04/94 19:17:34	0:00:00		28.1	112.8	2919.6							Aposelene							Downlinking SSSR Segment 2 (Orbit 60)
03/04/94 19:26:00	0:08:26												Downlink SSSR Segment 3						Ground Command
03/04/94 19:30:55	0:13:21		20.0	112.8	2893.1							N20D							
03/04/94 19:44:16	0:26:42		11.7	112.8	2813.8							INPM							Enter penumbra
03/04/94 19:45:40	0:28:06		10.8	112.8	2802.5							INUM							Enter umbra
03/04/94 19:46:59	0:29:25		10.0	112.8	2791.2							N10D							
03/04/94 19:48:00	0:30:26												Downlink SSSR Segment 4						Ground Command
03/04/94 20:02:06	0:44:32		0.0	112.8	2625.1							Equator - D							
03/04/94 20:15:58	0:58:24		-10.0	112.7	2413.1							S10D							
03/04/94 20:20:00	1:02:26												Downlink SSSR Data Patches						Ground Command
																			Standard Prep1 Script
03/04/94 20:25:28	1:07:54	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/04/94 20:25:30	1:07:56	2											Load lunar dark exposure tables						
																			End Prep1 Script
03/04/94 20:28:00	1:10:26												SSDR to IDLE - downlink complete						Ground Command
03/04/94 20:28:06	1:10:32		-19.8	112.8	2181.3							OUTUM							Exit umbra
03/04/94 20:28:23	1:10:49		-20.0	112.8	2175.2							S20D							
03/04/94 20:29:19	1:11:45		-20.8	112.8	2155.7							OUTPM							Exit penumbra
03/04/94 20:39:21	1:21:47		-30.0	112.8	1929.3							S30D							
03/04/94 20:48:58	1:31:24		-40.0	112.9	1689.1							S40D							
																			Standard Prep2 Script
03/04/94 20:55:28	1:37:54	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/04/94 20:57:21	1:39:47		-50.0	113.0	1464.0							S50D							
03/04/94 21:04:40	1:47:06		-60.0	113.3	1259.8							S60D							
																			L061 Prep3 Script
03/04/94 21:07:28	1:49:54	0											Msg "WRNG: Omni/8k in 1 min.."						
03/04/94 21:08:28	1:50:54	60											SSDR to IDLE; Switch to 8 kbps bypass mode						
03/04/94 21:09:28	1:51:54	60											Switch to omni antennas						
03/04/94 21:10:28	1:52:54	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (GNC12CRX01)						Inertial pointing
03/04/94 21:10:58	1:53:24	30											UV & HR cameras ON						
03/04/94 21:11:07	1:53:33		-70.0	113.9	1079.0							S70D							
03/04/94 21:14:53	1:57:19	235											Select ST-A						
03/04/94 21:15:03	1:57:29	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5						Start recorder in Segment 5

Orbit 61 Timeline - Tyne B Orbit

03/04/94 21:15:28	1:57:54	25								Perform LWIR imaging (DHU SEQT 25)			
03/04/94 21:15:43	1:58:09	15								Perform NIR imaging (DHU SEQT 31)			
03/04/94 21:15:58	1:58:24	15								Stop imaging, select ST-A			
03/04/94 21:16:08	1:58:34	10								Deselect ST; Slew s/c sensors to nadir (GNC12NADIR61)			Inertial pointing
03/04/94 21:16:38	1:59:04	30								Laser power ON			
													End L061 Prep3 Script
03/04/94 21:16:51	1:59:17		-80.0	115.8	922.4				S80D				
													L061 Mapping Script
03/04/94 21:19:58	2:02:24	0								Load exposure table LUNARZ85S			
03/04/94 21:20:58	2:03:24	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)			START MAPPING
03/04/94 21:21:58	2:04:24	60	-89.3	201.7	790.2				South Pole	Set SA step rate to LO			
03/04/94 21:22:36	2:05:02		-88.5	265.4	774.5				LDAWN				
03/04/94 21:24:00	2:06:26									Switch to 2 kbps			Ground Command - due to problem maintaining lock
03/04/94 21:26:37	2:09:03	279	-80.0	288.2	680.6				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17			
03/04/94 21:30:55	2:13:21	258							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18			
03/04/94 21:30:56	2:13:22		-70.0	290.1	592.4				S70A				
03/04/94 21:33:00	2:15:26									Ranging A ON			Ground Command
03/04/94 21:34:56	2:17:22	241							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/04/94 21:34:57	2:17:23		-60.0	290.8	524.5				S60A				
03/04/94 21:38:46	2:21:12	230	-50.0	291.1	476.0				S50A	Record in SDDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5			SDDR Segment 6
03/04/94 21:42:27	2:24:53	221	-40.0	291.3	445.9				S40A	Load exposure table LUNARZ35S			
03/04/94 21:46:04	2:28:30	217	-30.0	291.4	433.7				S30A	Load exposure table LUNARZ25S			
03/04/94 21:46:45	2:29:11		-28.1	291.4	433.4				Periselene				
03/04/94 21:49:40	2:32:06	216							S20A	Load exposure table LUNARZ15S			
03/04/94 21:49:41	2:32:07		-20.0	291.5	439.2				S20A				
03/04/94 21:53:19	2:35:45	219							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/04/94 21:53:20	2:35:46		-10.0	291.6	462.5				S10A				
03/04/94 21:57:05	2:39:31	226	0.0	291.7	504.1				Equator - A	Record in SDDR Segment 7; Load CEQ_7U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7			SDDR Segment 7 UV & IR uncompressed
03/04/94 22:01:01	2:43:27	236							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			Resume compression
03/04/94 22:01:02	2:43:28		10.0	291.8	564.5				N10A				
03/04/94 22:05:12	2:47:38	251							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/04/94 22:05:13	2:47:39		20.0	291.9	644.9				N20A				

Orbit 61 Timeline - Tyne B Orbit

03/04/94 22:06:12	2:48:38	60									Laser power OFF					
03/04/94 22:09:43	2:52:09	211								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					
03/04/94 22:09:44	2:52:10		30.0	292.0	746.3					N30A						
03/04/94 22:14:40	2:57:06	297	40.0	292.1	870.2					N40A	Switch to inertial pointing (ORBIT61RW); Load exposure table LUNARZ45N					Initiate oblique viewing
03/04/94 22:20:09	3:02:35	329	50.0	292.3	1017.6					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11					
03/04/94 22:26:18	3:08:44	369								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12					
03/04/94 22:26:19	3:08:45		60.0	292.6	1189.2					N60A						
03/04/94 22:29:00	3:11:26										Ranging A OFF					Ground Command
03/04/94 22:30:29	3:12:55	251									Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19					End oblique viewing - resume nadir pointing
03/04/94 22:33:17	3:15:43	168								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20					
03/04/94 22:33:18	3:15:44		70.0	293.2	1384.9					N70A						
03/04/94 22:41:16	3:23:42	479	80.0	295.0	1602.9					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21					
03/04/94 22:42:16	3:24:42	60									Load CEQ_7.UMI into SEQT 7					Restore compressed SEQT 7
															End L061 Script	
03/04/94 22:50:23	3:32:49		89.3	21.6	1837.8					North Pole						
															PostMap Script	
03/04/94 22:51:22	3:33:48	0									Stop imaging - select ST-A; Set SA step rate to HI					
03/04/94 22:51:32	3:33:58	10									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); Laser power OFF					
03/04/94 22:51:40	3:34:06		88.5	84.4	1869.5					LDUSK						
03/04/94 22:56:22	3:38:48	290									Load lunardark tables; Perform LWIR imaging (DHU SEQT 25)					
03/04/94 22:56:39	3:39:05	15									Perform NIR imaging (DHU SEQT 31)					
03/04/94 22:56:57	3:39:23	15									Perform UV imaging (DHU SEQT 29)					
03/04/94 22:57:04	3:39:30	10									Perform HR imaging (DHU SEQT 30)					
03/04/94 22:57:13	3:39:39	5									Stop imaging - select ST-A					
03/04/94 22:57:14	3:39:40	15									UV & HR cameras OFF; IR cameras & cryocoolers OFF; Deselect ST; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)					
03/04/94 23:00:48	3:43:14		80.0	107.4	2082.4					N80D						

Orbit 61 Timeline - Tyne B Orbit

03/04/94 23:01:52	3:44:18	290									Switch to HGA; Select ST-A						READY FOR DATA DUMP
End PostMap Script																	
03/04/94 23:06:00	3:48:26										Switch to DHU mode @ 128 kbps						Ground Command
03/04/94 23:12:41	3:55:07		70.0	109.2	2325.5						N70D						
03/04/94 23:15:00	3:57:26										Downlink SSSR Segment 5						Ground Command
03/04/94 23:20:00	4:02:26										Uplink & schedule L062 scripts						Ground Command
03/04/94 23:26:01	4:08:27		60.0	109.7	2549.6						N60D						
03/04/94 23:40:42	4:23:08		50.0	110.0	2735.4						N50D						
03/04/94 23:42:00	4:24:26										Downlink SSSR Segment 6						Ground Command
03/04/94 23:56:27	4:38:53		40.0	110.1	2863.3						N40D						
03/05/94 00:12:51	4:55:17		30.0	110.1	2918.2						N30D						
03/05/94 00:15:56	4:58:22		28.1	110.1	2919.6						Aposelene						

Orbit 62 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/05/94 00:15:56	0:00:00		28.1	110.1	2919.6							Aposelene							Downlinking SSDR Segment 6 (orbit 61)
03/05/94 00:25:00	0:09:04												Downlink SSDR Segment 7						Ground Command
03/05/94 00:29:22	0:13:26		20.0	110.1	2892.8							N20D							
03/05/94 00:42:17	0:26:21		12.0	110.1	2816.7							INPM							Enter penumbra
03/05/94 00:43:39	0:27:43		11.1	110.0	2805.7							INUM							Enter umbra
03/05/94 00:45:25	0:29:29		10.0	110.0	2790.6							N10D							
03/05/94 01:00:32	0:44:35		0.0	110.0	2624.2							Equator - D							
03/05/94 01:14:23	0:58:26		-10.0	110.0	2412.1							S10D							
03/05/94 01:26:48	1:10:51		-20.0	110.0	2174.1							S20D							
03/05/94 01:26:51	1:10:55		-20.0	110.0	2173.3							OUTUM							Exit umbra
03/05/94 01:28:03	1:12:07		-21.1	110.0	2148.0							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/05/94 01:32:53	1:16:57	0											NIR camera & cryocooler ON; SA mode to AUTO						
03/05/94 01:32:55	1:16:59	2											Load lunar dark exposure tables						
																			End Prep1 Script
03/05/94 01:37:46	1:21:50		-30.0	110.1	1928.2							S30D							
03/05/94 01:47:22	1:31:26		-40.0	110.2	1688.0							S40D							
																			Standard Prep2 Script
03/05/94 01:52:53	1:36:57	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/05/94 01:55:45	1:39:48		-50.0	110.3	1463.0							S50D							
03/05/94 02:03:04	1:47:08		-60.0	110.6	1258.9							S60D							
																			L062 Prep3 Script
03/05/94 02:04:53	1:48:57	0											Msg "WRNG: Omni/2k in 1 min.."						
03/05/94 02:05:53	1:49:57	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/05/94 02:06:53	1:50:57	60											Switch to omni antennas						
03/05/94 02:07:53	1:51:57	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/05/94 02:08:23	1:52:27	30											UV & HR cameras ON						
03/05/94 02:09:31	1:53:34		-70.0	111.2	1078.2							S70D							
03/05/94 02:12:18	1:56:22	235											Select ST-A						
03/05/94 02:12:28	1:56:32	10											Initialize filters (DHU SEQT 28); Record in SSDR Segment 1; Load lunar dark exposure tables						Start SSDR in Segment 1
03/05/94 02:12:53	1:56:57	25											Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts

Orbit 62 Timeline - Tyne A Orbit

03/05/94 02:13:08	1:57:12	15											Perform NIR imaging (DHU SEQT 31)			
03/05/94 02:13:23	1:57:27	15											Select ST-A; Slew s/c sensors to nadir (GNC12NADIR62)			Slew to nadir (inertial pointing)
03/05/94 02:13:53	1:57:57	30											Laser Power ON			
End L062 Prep3 Script																
03/05/94 02:15:15	1:59:18		-80.0	113.2	921.8								S80D			
L062 Mapping Script																
03/05/94 02:18:23	2:02:26	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/05/94 02:19:23	2:03:27	60											Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)			START MAPPING
03/05/94 02:20:22	2:04:26		-89.3	200.4	789.4								South Pole			
03/05/94 02:20:23	2:04:27	60											MAXS	Set SA step rate to LO		
03/05/94 02:21:00	2:05:04		-88.5	262.0	774.0								LDAWN			
03/05/94 02:25:01	2:09:05		-80.0	285.4	680.2								S80A			
03/05/94 02:25:02	2:09:06	279											S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3		
03/05/94 02:26:35	2:10:39												MAD	AOS		
03/05/94 02:29:19	2:13:23		-70.0	287.4	592.0									S70A		
03/05/94 02:29:20	2:13:24	258												S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4	
03/05/94 02:33:20	2:17:24		-60.0	288.0	524.2									S60A		
03/05/94 02:33:21	2:17:25	241												S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6	
03/05/94 02:37:09	2:21:13		-50.0	288.3	475.8									S50A		
03/05/94 02:37:10	2:21:13	229												S50A	Record in SSDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5	SSDR Segment 2
03/05/94 02:40:50	2:24:54		-40.0	288.5	445.8									S40A		
03/05/94 02:40:51	2:24:55	221												S40A	Load exposure table LUNARZ35S	
03/05/94 02:44:27	2:28:31		-30.0	288.7	433.7									S30A		
03/05/94 02:44:28	2:28:32	217												S30A	Load exposure table LUNARZ25S	
03/05/94 02:45:07	2:29:11		-28.2	288.7	433.4									Periselene		
03/05/94 02:48:04	2:32:08		-20.0	288.8	439.3									S20A		
03/05/94 02:48:05	2:32:09	217												S20A	Load exposure table LUNARZ15S	
03/05/94 02:51:43	2:35:47		-10.0	288.9	462.7									S10A		
03/05/94 02:51:44	2:35:47	219												S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6	
03/05/94 02:53:48	2:37:51												CAN	LOS		
03/05/94 02:55:29	2:39:33		0.0	289.0	504.3									Equator - A		
03/05/94 02:55:30	2:39:33	226												MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 3
03/05/94 02:59:25	2:43:29		10.0	289.1	564.8									N10A		

Orbit 62 Timeline - Type A Orbit

03/05/94 02:59:26	2:43:30	236							N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8	UV & IR uncompressed
03/05/94 03:03:36	2:47:40		20.0	289.1	645.2				N20A		
03/05/94 03:03:37	2:47:40	251							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	Resume compression
03/05/94 03:04:37	2:48:41	60								Laser power OFF	
03/05/94 03:08:07	2:52:11		30.0	289.2	746.8				N30A		
03/05/94 03:08:08	2:52:12	211							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/05/94 03:13:04	2:57:07		40.0	289.4	870.8				N40A		
03/05/94 03:13:05	2:57:09	297							N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4
03/05/94 03:18:33	3:02:37		50.0	289.6	1018.3				N50A		
03/05/94 03:18:34	3:02:38	329							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	
03/05/94 03:24:43	3:08:47	369	60.0	289.9	1190.0				N60A	Park opaque filter on HiRes (DHU SEQT 27); Activate Lunar Auto Exposure; Load exposure table LUNARZ65N; Select DHU SEQT 13	Opaque filter did not park LUNAR AUTO EXPOSURE TEST
03/05/94 03:31:42	3:15:46		70.0	290.5	1385.8				N70A		
03/05/94 03:31:43	3:15:46	420							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
03/05/94 03:39:41	3:23:45		80.0	292.4	1603.9				N80A		
03/05/94 03:39:42	3:23:46	479							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
03/05/94 03:40:42	3:24:46	60								Load CEQ_08.UMI into SEQT 8	Restore compressed SEQT 8
03/05/94 03:48:47	3:32:51		89.3	17.8	1838.6				North Pole		
03/05/94 03:48:48	3:32:52	486							MAXN	Auto Exposure OFF	END AUTO EXPOSURE TEST
											End L062 Script
											Standard PostMap Script
03/05/94 03:49:48	3:33:52	0								Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table	Slew to Vega
03/05/94 03:50:04	3:34:08		88.5	81.0	1870.4				LDUSK		
03/05/94 03:55:48	3:39:52	360								Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/05/94 03:56:03	3:40:06	15								Perform NIR imaging (DHU SEQT 31)	
03/05/94 03:56:18	3:40:22	15								Perform UV0 imaging (DHU SEQT 29)	Radiometric imaging starts
03/05/94 03:56:24	3:40:28	6								Perform HR imaging (DHU SEQT 30)	

Orbit 62 Timeline - Type A Orbit

03/05/94 03:56:34	3:40:38	10									Stop imaging - select ST-A; UV/VIS & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)								Slew HGA to Earth
03/05/94 03:59:13	3:43:17		80.0	104.5	2083.5					N80D									
03/05/94 04:02:34	3:46:38	360									Switch to HGA								READY FOR DATA DUMP
																			End PostMap Script
03/05/94 04:03:00	3:47:03										Switch to HGA								Ground Command
03/05/94 04:04:00	3:48:04										Switch to DHU mode @ 128 kbps								Ground Command
03/05/94 04:08:00	3:52:04										Downlink SDR Segment 4								Ground Command
03/05/94 04:11:06	3:55:10		70.0	106.4	2326.5					N70D									
03/05/94 04:23:00	4:07:04										Downlink SDR Segment 1								Ground Command
03/05/94 04:24:27	4:08:31		60.0	107.0	2550.5					N60D									
03/05/94 04:39:08	4:23:12		50.0	107.2	2736.1					N50D									
03/05/94 04:54:54	4:38:57		40.0	107.3	2863.8					N40D									
03/05/94 04:58:00	4:42:04										Downlink SDR Segment 1								Ground Command
03/05/94 05:11:18	4:55:22		30.0	107.3	2918.3					N30D									
03/05/94 05:14:18	4:58:22		28.2	107.3	2919.6					Aposelene									

Orbit 63 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/05/94 05:14:18	0:00:00		28.2	107.3	2919.6							Aposelene							Downlinking SSSR Segment 2 (Orbit 62)
03/05/94 05:27:48	0:13:29		20.0	107.3	2892.6							N20D							
03/05/94 05:40:18	0:26:00		12.3	107.3	2819.4							INPM							Enter penumbra
03/05/94 05:41:39	0:27:21		11.4	107.3	2808.8							INUM							Enter umbra
03/05/94 05:42:00	0:27:42												Downlink SSSR Segment 3						Ground Command
03/05/94 05:43:52	0:29:34		10.0	107.3	2790.1							N10D							
03/05/94 05:58:58	0:44:40		0.0	107.3	2623.4							Equator - D							
03/05/94 06:12:49	0:58:31		-10.0	107.3	2411.1							S10D							
03/05/94 06:19:00	1:04:42												SSDR to IDLE - downlinking complete						Ground Command
03/05/94 06:25:14	1:10:56		-20.0	107.3	2173.0							S20D							
03/05/94 06:25:35	1:11:17		-20.3	107.3	2165.4							OUTUM							Exit umbra
03/05/94 06:26:46	1:12:28		-21.3	107.3	2140.5							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/05/94 06:31:29	1:17:10	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/05/94 06:36:11	1:21:53		-30.0	107.4	1927.0							S30D							
03/05/94 06:45:47	1:31:29		-40.0	107.4	1686.9							S40D							
																			Standard Prep2 Script
03/05/94 06:51:14	1:36:56	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/05/94 06:54:09	1:39:51		-50.0	107.6	1462.0							S50D							
03/05/94 07:01:29	1:47:11		-60.0	107.9	1258.0							S60D							
																			L063 Prep3 Script
03/05/94 07:03:14	1:48:56	0											Msg "WRNG: Omni/2k in 1 min.."						
03/05/94 07:04:14	1:49:56	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/05/94 07:05:14	1:50:56	60											Switch to omni antennas						
03/05/94 07:06:14	1:51:56	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/05/94 07:06:44	1:52:26	30											UV & HR cameras ON						
03/05/94 07:07:55	1:53:37		-70.0	108.6	1077.4							S70D							
03/05/94 07:10:39	1:56:21	235											Select ST-A						
03/05/94 07:10:49	1:56:31	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5
03/05/94 07:11:14	1:56:56	25											Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts

Orbit 63 Timeline - Type B Orbit

03/05/94 08:02:59	2:48:41	60											Laser power OFF	
03/05/94 08:06:30	2:52:12	211	30.0	286.5	747.3					N30A			Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/05/94 08:11:26	2:57:08	296								N40A			Switch to inertial pointing (ORB_063RW); Load exposure table LUNARZ45N	Initiate oblique viewing
03/05/94 08:11:27	2:57:09		40.0	286.7	871.4					N40A				
03/05/94 08:16:56	3:02:38	330								N50A			Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11	HiRes imaging had not stopped
03/05/94 08:16:57	3:02:38		50.0	286.9	1019.0					N50A				
03/05/94 08:23:06	3:08:48	370	60.0	287.2	1190.9					N60A			Park opaque filter on HiRes (DHU SEQT 27); Activate Lunar Auto Exposure; Load exposure table LUNARZ65N; Select DHU SEQT 12	LUNAR AUTO EXPOSURE TEST
03/05/94 08:27:17	3:12:59	251											Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing
03/05/94 08:30:05	3:15:46	168								N70A			Load exposure table LUNARZ75N; Select DHU SEQT 20	
03/05/94 08:30:06	3:15:48		70.0	287.8	1386.8					N70A				
03/05/94 08:38:04	3:23:46	479								N80A			Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/05/94 08:38:05	3:23:47		80.0	289.8	1604.9					N80A				
03/05/94 08:39:04	3:24:46	60											Load CEQ_8.UMI into SEQT 8	Restore compressed SEQT 8
03/05/94 08:47:12	3:32:54	488	89.3	15.6	1839.9					North Pole			Auto Exposure OFF	END AUTO EXPOSURE TEST
End L063 Script														
PostMap Script														
03/05/94 08:48:12	3:33:54	0											Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table	Slew to Vega
03/05/94 08:48:29	3:34:11		88.5	77.7	1871.4					LDUSK				
03/05/94 08:54:12	3:39:54	360											Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/05/94 08:54:27	3:40:09	15											Perform NIR imaging (DHU SEQT 31)	
03/05/94 08:54:42	3:40:24	15											Perform UV0 imaging (DHU SEQT 29)	Radiometric imaging starts
03/05/94 08:54:48	3:40:30	6											Perform HR imaging (DHU SEQT 30)	
03/05/94 08:54:58	3:40:40	10											Stop imaging - select ST-A; UV/VIS & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth

Orbit 63 Timeline - Type B Orbit

03/05/94 08:57:38	3:43:20		80.0	101.7	2084.6						N80D									
03/05/94 09:00:58	3:46:39	360										Switch to HGA								READY FOR DATA DUMP
																				End PostMap Script
03/05/94 09:01:00	3:46:42											Switch to DHU mode @ 128 kbps								Ground Command
03/05/94 09:06:00	3:51:42											Downlink SSSR Segment 5								Ground Command
03/05/94 09:09:32	3:55:14		70.0	103.7	2327.6							N70D								
03/05/94 09:13:00	3:58:42											Uplink & schedule L064 scripts								Ground Command
03/05/94 09:22:53	4:08:34		60.0	104.2	2551.5							N60D								
03/05/94 09:33:00	4:18:42											Downlink SSSR Segment 6								Ground Command
03/05/94 09:37:34	4:23:16		50.0	104.5	2736.9							N50D								
03/05/94 09:53:20	4:39:02		40.0	104.6	2864.3							N40D								
03/05/94 10:01:13	4:46:55										GDS	AOS								
03/05/94 10:09:45	4:55:27		30.0	104.6	2918.4							N30D								
03/05/94 10:12:40	4:58:22		28.2	104.6	2919.7							Aposelene								

Orbit 64 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/05/94 10:12:40	0:00:00		28.2	104.6	2919.7							Aposelene							Downlinking SSDR Segment 6 (orbit 63)
03/05/94 10:17:00	0:04:20												Downlink SSDR Segment 7						Ground Command
03/05/94 10:26:15	0:13:35		20.0	104.6	2892.3							N20D							
03/05/94 10:38:20	0:25:40		12.5	104.6	2822.0							INPM							Enter penumbra
03/05/94 10:39:39	0:26:59		11.7	104.6	2811.7							INUM							Enter umbra
03/05/94 10:42:18	0:29:38		10.0	104.6	2789.5							N10D							
03/05/94 10:57:25	0:44:45		0.0	104.6	2622.5							Equator - D							
03/05/94 11:03:37	0:50:57										MAD	LOS							
03/05/94 11:11:15	0:58:35		-10.0	104.6	2410.0							S10D							
03/05/94 11:14:00	1:01:20												SSDR to IDLE - downlink complete						Ground Command
03/05/94 11:23:39	1:10:59		-20.0	104.6	2171.9							S20D							
03/05/94 11:24:20	1:11:40		-20.6	104.6	2157.7							OUTUM							Exit umbra
03/05/94 11:25:29	1:12:49		-21.6	104.6	2133.1							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/05/94 11:29:54	1:17:13	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/05/94 11:34:36	1:21:56		-30.0	104.6	1925.9							S30D							
03/05/94 11:44:12	1:31:32		-40.0	104.7	1685.8							S40D							
																			Standard Prep2 Script
03/05/94 11:49:39	1:36:59	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/05/94 11:52:34	1:39:54		-50.0	104.9	1461.0							S50D							
03/05/94 11:59:53	1:47:13		-60.0	105.2	1257.0							S60D							
																			L064 Prep3 Script
03/05/94 12:01:39	1:48:59	0											Msg "WRNG: Omni/2k in 1 min.."						
03/05/94 12:02:39	1:49:59	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/05/94 12:03:39	1:50:59	60											Switch to omni antennas						
03/05/94 12:04:39	1:51:59	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/05/94 12:05:09	1:52:29	30											UV & HR cameras ON						
03/05/94 12:06:19	1:53:39		-70.0	105.9	1076.5							S70D							
03/05/94 12:09:04	1:56:24	235											Select ST-A						
03/05/94 12:09:14	1:56:34	10											Initialize filters (DHU SEQT 28); Record in SSDR Segment 1; Load lunar dark exposure tables						Start SSDR in Segment 1

Orbit 64 Timeline - Type A Orbit

03/05/94 12:09:39	1:56:59	25								Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/05/94 12:09:54	1:57:14	15								Perform NIR imaging (DHU SEQT 31)				
03/05/94 12:10:09	1:57:28	15								Select ST-A; Slew s/c sensors to nadir (GNC12NADIR64)				Slew to nadir (inertial pointing)
03/05/94 12:10:39	1:57:59	30								Laser Power ON				
End L064 Prep3 Script														
03/05/94 12:12:02	1:59:22		-80.0	107.9	920.3					S80D				
L064 Mapping Script														
03/05/94 12:15:08	2:02:28	0												
										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/05/94 12:16:09	2:03:28	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)				START MAPPING
03/05/94 12:17:09	2:04:29	60	-89.3	195.2	788.2					South Pole Set SA step rate to LO				
03/05/94 12:17:46	2:05:06		-88.5	255.5	772.9					LDAWN				
03/05/94 12:21:47	2:09:07	278	-80.0	279.8	679.2					S80A Load exposure table LUNARZ75S; Select DHU SEQT 3				
03/05/94 12:26:05	2:13:25	258	-70.0	281.8	591.2					S70A Load exposure table LUNARZ65S; Select DHU SEQT 4				
03/05/94 12:30:06	2:17:26	241	-60.0	282.5	523.6					S60A Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/05/94 12:33:55	2:21:15	229	-50.0	282.9	475.3					S50A Record in SSSR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 2 Opaque filter did not park
03/05/94 12:37:37	2:24:57	222	-40.0	283.1	445.5					S40A Load exposure table LUNARZ35S				
03/05/94 12:41:13	2:28:33	216	-30.0	283.2	433.5					S30A Load exposure table LUNARZ25S				
03/05/94 12:41:51	2:29:11		-28.3	283.2	433.3					Periselene				
03/05/94 12:44:50	2:32:10	217	-20.0	283.3	439.3					S20A Load exposure table LUNARZ15S				
03/05/94 12:48:29	2:35:49	219	-10.0	283.4	462.8					S10A Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/05/94 12:52:15	2:39:35	226	0.0	283.5	504.6					Equator - A Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3
03/05/94 12:56:11	2:43:31	236	10.0	283.6	565.3					N10A Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8				IR and UV Uncompressed
03/05/94 13:00:22	2:47:42	251	20.0	283.7	646.0					N20A Load exposure table LUNARZ25N; Select DHU SEQT 9				Resume compression
03/05/94 13:01:22	2:48:42	60								Laser power OFF				
03/05/94 13:04:53	2:52:13	211								N30A Load exposure table LUNARZ35N; Select DHU SEQT 10				
03/05/94 13:04:54	2:52:14		30.0	283.8	747.8					N30A				
03/05/94 13:09:50	2:57:10	297								N40A Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11				SSDR Segment 4
03/05/94 13:09:51	2:57:11		40.0	283.9	872.0					N40A				

Orbit 64 Timeline - Type A Orbit

03/05/94 13:15:20	3:02:40	330	50.0	284.1	1019.7					N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12	HiRes imaging had not stopped	
03/05/94 13:21:30	3:08:50	370	60.0	284.5	1191.7					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13		
03/05/94 13:28:30	3:15:50	420	70.0	285.1	1387.7					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14		
03/05/94 13:36:29	3:23:49	479	80.0	287.1	1606.0					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15		
03/05/94 13:37:29	3:24:49	60									Load CEQ_08.UMI into SEQT 8	Restore compressed SEQT 8	
													End L064 Script
03/05/94 13:45:37	3:32:57		89.3	13.3	1841.2					North Pole			
													Standard PostMap Script
03/05/94 13:46:37	3:33:57	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table	Slew to Vega	
03/05/94 13:46:53	3:34:13		88.5	74.6	1872.5					LDUSK			
03/05/94 13:52:37	3:39:57	360									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts	
03/05/94 13:52:52	3:40:12	15									Perform NIR imaging (DHU SEQT 31)		
03/05/94 13:53:07	3:40:27	15									Perform UV0 imaging (DHU SEQT 29)	Radiometric imaging starts	
03/05/94 13:53:13	3:40:33	6									Perform HR imaging (DHU SEQT 30)		
03/05/94 13:53:23	3:40:43	10									Stop imaging - select ST-A; UV/VIS & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth	
03/05/94 13:56:03	3:43:23		80.0	99.0	2085.8					N80D			
03/05/94 13:59:23	3:46:43	360									Switch to HGA	READY FOR DATA DUMP	
													End PostMap Script
03/05/94 14:00:00	3:47:20										Switch to DHU mode @ 128 kbps	Ground Command	
03/05/94 14:01:00	3:48:20										Downlink SSSR Segment 1	Ground Command	
03/05/94 14:07:57	3:55:17		70.0	100.9	2328.8					N70D			
03/05/94 14:21:19	4:08:39		60.0	101.5	2552.6					N60D			
03/05/94 14:35:00	4:22:20										Downlink SSSR Segment 2	Ground Command	
03/05/94 14:36:00	4:23:20		50.0	101.7	2737.7					N50D			
03/05/94 14:45:00	4:32:20								CAN	AOS			
03/05/94 14:51:47	4:39:07		40.0	101.8	2864.8					N40D			
03/05/94 15:08:11	4:55:31		30.0	101.9	2918.6					N30D			
03/05/94 15:11:02	4:58:22		28.3	101.9	2919.8					Aposelene			

Orbit 65 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/05/94 15:11:02	0:00:00		28.3	101.9	2919.8							Aposelene							Downlinking SSSDR Segment 2 (Orbit 64)
03/05/94 15:19:00	0:07:58												Downlink SSSDR Segment 3						Ground Command
03/05/94 15:24:42	0:13:40		20.0	101.9	2892.1							N20D							
03/05/94 15:36:23	0:25:21		12.8	101.9	2824.5							INPM							Enter penumbra
03/05/94 15:37:41	0:26:39		11.9	101.9	2814.5							INUM							Enter umbra
03/05/94 15:40:45	0:29:43		10.0	101.9	2788.9							N10D							
03/05/94 15:55:51	0:44:49		0.0	101.8	2621.6							Equator - D							
03/05/94 16:07:00	0:55:58												Downlink SSSDR Segment 4						Ground Command
03/05/94 16:09:41	0:58:39		-10.0	101.8	2408.9							S10D							
03/05/94 16:14:08	1:03:06										PMK	LOS							
03/05/94 16:19:00	1:07:58												Uplink & schedule L066 scripts						Ground Command - attempt failed
03/05/94 16:22:05	1:11:03		-20.0	101.9	2170.7							S20D							
03/05/94 16:23:03	1:12:01		-20.8	101.9	2150.0							OUTUM							Exit umbra
03/05/94 16:24:11	1:13:09		-21.8	101.9	2125.8							OUTPM							Exit penumbra
03/05/94 16:28:00	1:16:58												Downlink SSSDR data patches						Ground Command
																			Standard Prep1 Script
03/05/94 16:28:17	1:17:15	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/05/94 16:33:01	1:21:59		-30.0	101.9	1924.6							S30D							
03/05/94 16:34:00	1:22:58												Uplink & schedule L066 scripts						Ground Command
03/05/94 16:38:00	1:26:58												Update state vector (GNC53_05MAR_1600)						Ground Command
03/05/94 16:42:36	1:31:34		-40.0	102.0	1684.6							S40D							
																			Standard Prep2 Script
03/05/94 16:48:02	1:37:00	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/05/94 16:50:58	1:39:56		-50.0	102.2	1459.8							S50D							
03/05/94 16:58:17	1:47:15		-60.0	102.5	1256.0							S60D							
																			L065 Prep3 Script

Orbit 65 Timeline - Type B Orbit

03/05/94 17:46:52	2:35:50		-10.0	280.7	462.9				S10A				
03/05/94 17:50:38	2:39:36	226	0.0	280.8	504.8				Equator - A	Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7		SDDR Segment 7	
03/05/94 17:54:34	2:43:32	236	10.0	280.9	565.6				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/05/94 17:58:45	2:47:43	251	20.0	281.0	646.3				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/05/94 17:59:45	2:48:43	60								Laser power OFF			
03/05/94 18:03:17	2:52:15	212	30.0	281.1	748.2				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/05/94 18:08:14	2:57:12	297	40.0	281.2	872.5				N40A	Load CEQ_10U.UMI into SEQT 10; Switch to inertial pointing (ORB_065RW); Load exposure table LUNARZ45N		BAD QUATERNION! S/C sensors slewed to EARTH instead of keeping inertial hold Uncompressed images	
03/05/94 18:13:44	3:02:42	330	50.0	281.4	1020.4				N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11		HiRes imaging had not stopped Resume compression	
03/05/94 18:19:54	3:08:52	370	60.0	281.8	1192.5				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12			
03/05/94 18:24:06	3:13:04	252								Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19		End oblique viewing - resume Lunar nadir pointing	
03/05/94 18:26:54	3:15:52	168	70.0	282.4	1388.7				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20			
03/05/94 18:34:54	3:23:52	480	80.0	284.4	1607.1				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21			
03/05/94 18:35:54	3:24:52	60								Load CEQ_10.UMI into SEQT 10		Restore compressed SEQT 10	
													End L065 Script
03/05/94 18:44:02	3:33:00		89.3	10.5	1842.3				North Pole				
													PostMap Script
03/05/94 18:45:01	3:33:59	0								Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table		Slew to Vega	
03/05/94 18:45:18	3:34:16		88.5	71.5	1873.6				LDUSK				
03/05/94 18:51:01	3:39:59	360								Perform LWIR imaging (DHU SEQT 25)		Dark Field imaging starts	
03/05/94 18:51:16	3:40:14	15								Perform NIR imaging (DHU SEQT 31)			
03/05/94 18:51:31	3:40:29	15								Perform UV0 imaging (DHU SEQT 29)		Radiometric imaging starts	
03/05/94 18:51:37	3:40:35	6								Perform HR imaging (DHU SEQT 30)			

Orbit 65 Timeline - Type B Orbit

03/05/94 18:51:47	3:40:44	10									Stop imaging - select ST-A; UV/VIS & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
03/05/94 18:54:28	3:43:26		80.0	96.2	2086.9					N80D								
03/05/94 18:57:47	3:46:44	360									Switch to HGA							READY FOR DATA DUMP
																		End PostMap Script
03/05/94 18:58:00	3:46:58										Switch to DHU mode @ 128 kbps							Ground Command
03/05/94 19:06:23	3:55:21		70.0	98.2	2330.0					N70D								
03/05/94 19:10:00	3:58:58										Downlink SDR Segment 5							Ground Command
03/05/94 19:14:26	4:03:24									GDS	LOS							
03/05/94 19:19:44	4:08:42		60.0	98.8	2553.6						N60D							
03/05/94 19:34:00	4:22:58											Downlink SDR Segment 6						Ground Command
03/05/94 19:34:27	4:23:25		50.0	99.0	2738.6						N50D							
03/05/94 19:50:13	4:39:11		40.0	99.1	2865.3						N40D							
03/05/94 20:06:38	4:55:36		30.0	99.1	2918.7						N30D							
03/05/94 20:09:24	4:58:22		28.3	99.1	2919.9						Aposelene							

Orbit 66 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/05/94 20:09:24	0:00:00		28.3	99.1	2919.9							Aposelene							Downlinking SSSR Segment 6 (orbit 65)
03/05/94 20:20:00	0:10:36												Downlink SSSR Segment 7						Ground Command (time uncertain)
03/05/94 20:23:09	0:13:45		20.0	99.1	2891.9							N20D							
03/05/94 20:25:00	0:15:36												Open Star Tracker B Door						Ground Command
03/05/94 20:30:00	0:20:36												Uplink & schedule L066 scripts						Ground Command
03/05/94 20:34:26	0:25:02		13.0	99.1	2826.9							INPM							Enter penumbra
03/05/94 20:35:44	0:26:20		12.2	99.1	2817.1							INUM							Enter umbra
03/05/94 20:39:11	0:29:47		10.0	99.1	2788.3							N10D							
03/05/94 20:54:17	0:44:53		0.0	99.1	2620.7							Equator - D							
																			LHG66 Script
03/05/94 21:04:00	0:54:35	0											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSSR playback
03/05/94 21:05:00	0:55:36	60											Switch to omni antenna; Record in SSSR Segment 1						Start SSSR in Segment 1
03/05/94 21:06:00	0:56:36	60											Inertial pointing w/ quaternion table (STK_65LIMB000.QTB); Image both ST (DHU SEQT 23)						Lunar Horizon Glow (LHG) Observation Starts Slew ST-B to limb SEQ_ZOOK loaded into SEQT 23
03/05/94 21:08:07	0:58:43		-10.0	99.1	2407.8							S10D							
03/05/94 21:08:30	0:59:06	150											Use QTable STK_65LIMB001.QTB						
03/05/94 21:11:00	1:01:36	150											Use QTable STK_65LIMB002.QTB						
03/05/94 21:13:30	1:04:06	150											Use QTable STK_65LIMB003.QTB						
03/05/94 21:16:00	1:06:36	150											Use QTable STK_65LIMB004.QTB						
03/05/94 21:18:30	1:09:06	150											Use QTable STK_65LIMB005.QTB						Constant stare at sunrise point
03/05/94 21:19:50	1:10:26	80											Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						End LHG Observation Slew HGA to Earth
03/05/94 21:20:30	1:11:06		-20.0	99.1	2169.5							S20D							
03/05/94 21:21:47	1:12:23		-21.1	99.1	2142.5							OUTUM							Exit umbra
03/05/94 21:22:53	1:13:29		-22.1	99.1	2118.6							OUTPM							Exit penumbra
03/05/94 21:23:53	1:14:29	243											Close ST-B door						
03/05/94 21:24:50	1:15:26	57											Switch to HGA						Ready to resume data dump
																			End LHG66 Script
03/05/94 21:25:00	1:15:36												Switch to DHU mode @ 128 kbps; Downlink SSSR Segment 1 (orb 66)						Ground Command
																			Standard Prep1 Script
03/05/94 21:26:41	1:17:17	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/05/94 21:31:27	1:22:03		-30.0	99.2	1923.4							S30D							
03/05/94 21:41:01	1:31:37		-40.0	99.3	1683.4							S40D							

Orbit 66 Timeline - Type A Orbit

											Standard Prep2 Script	
03/05/94 21:46:26	1:37:02	0									LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed	
											End Prep2 Script	
03/05/94 21:49:22	1:39:58		-50.0	99.5	1458.7					S50D		
03/05/94 21:56:41	1:47:17		-60.0	99.8	1254.9					S60D		
											L066 Prep3 Script	
03/05/94 21:58:26	1:49:02	0									Msg "WRNG: Omni/2k in 1 min.."	
03/05/94 21:59:26	1:50:02	60									SSDR to IDLE; Switch to 2 kbps bypass mode	Stop SSDR data dump
03/05/94 22:00:26	1:51:02	60									Switch to omni antennas	
03/05/94 22:01:26	1:52:02	60									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)	Slew to Crux
03/05/94 22:01:56	1:52:32	30									UV & HR cameras ON	
03/05/94 22:03:07	1:53:43		-70.0	100.4	1074.7					S70D		
03/05/94 22:05:51	1:56:27	235									Select ST-A	
03/05/94 22:06:01	1:56:37	10									Initialize filters (DHU SEQT 28); Record in SSDR Segment 1; Load lunar dark exposure tables	Start SSDR in Segment 1
03/05/94 22:06:26	1:57:02	25									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/05/94 22:06:41	1:57:17	15									Perform NIR imaging (DHU SEQT 31)	
03/05/94 22:06:56	1:57:32	15									Select ST-A; Slew s/c sensors to nadir (GNC12N066)	Slew to nadir (inertial pointing)
03/05/94 22:07:26	1:58:02	30									Laser Power ON	
											End L066 Prep3 Script	
03/05/94 22:08:49	1:59:25		-80.0	102.5	918.7					S80D		
											L066 Mapping Script	
03/05/94 22:11:55	2:02:31	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S	
03/05/94 22:12:56	2:03:31	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)	START MAPPING
03/05/94 22:13:55	2:04:31		-89.3	187.5	787.1					South Pole		
03/05/94 22:13:56	2:04:32	60								MAXS	Set SA step rate to LO	
03/05/94 22:14:33	2:05:09		-88.5	249.4	771.7					LDAWN		
03/05/94 22:18:34	2:09:10		-80.0	274.3	678.0					S80A		
03/05/94 22:18:35	2:09:11	279								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3	
03/05/94 22:22:52	2:13:28	257	-70.0	276.3	590.2					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4	
03/05/94 22:26:53	2:17:29	241	-60.0	277.0	522.8					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6	

Orbit 66 Timeline - Type A Orbit

03/05/94 22:30:42	2:21:18	229	-50.0	277.4	474.7					S50A	Record in SSDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5	Opaque filter did not park SSDR Segment 2
03/05/94 22:34:23	2:24:59	221	-40.0	277.6	445.1					S40A	Load exposure table LUNARZ35S	
03/05/94 22:37:59	2:28:35		-30.0	277.8	433.3					S30A		
03/05/94 22:38:00	2:28:36	217								S30A	Load exposure table LUNARZ25S	
03/05/94 22:38:35	2:29:11		-28.4	277.8	433.1					Periselene		
03/05/94 22:41:36	2:32:12	216	-20.0	277.9	439.3					S20A	Load exposure table LUNARZ15S	
03/05/94 22:45:15	2:35:51		-10.0	278.0	463.0					S10A		
03/05/94 22:45:16	2:35:52	220								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6	
03/05/94 22:49:01	2:39:37	225	0.0	278.1	504.9					Equator - A	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 3
03/05/94 22:52:57	2:43:33		10.0	278.2	565.9					N10A		
03/05/94 22:52:58	2:43:34	237								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	
03/05/94 22:57:09	2:47:45	251	20.0	278.3	646.7					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	
03/05/94 22:58:09	2:48:45	60									Laser power OFF	
03/05/94 23:01:40	2:52:16		30.0	278.4	748.7					N30A		
03/05/94 23:01:41	2:52:17	212								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/05/94 23:06:37	2:57:13		40.0	278.5	873.1					N40A		
03/05/94 23:06:38	2:57:14	297								N40A	Record in SSDR Segment 4; Load CEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45N; Select DHU SEQT 11	IR and UV Uncompressed
03/05/94 23:12:07	3:02:43		50.0	278.7	1021.1					N50A		
03/05/94 23:12:08	3:02:44	330								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12	HiRes imaging had not stopped Resume compression
03/05/94 23:18:18	3:08:54	370	60.0	279.0	1193.4					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13	
03/05/94 23:25:18	3:15:54	420	70.0	279.7	1389.7					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
03/05/94 23:33:18	3:23:54		80.0	281.7	1608.2					N80A		
03/05/94 23:33:19	3:23:55	481								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
03/05/94 23:34:19	3:24:55	60									Load CEQ_11.UMI into SEQT 11	Restore compressed SEQT 11
												End L066 Script
03/05/94 23:42:26	3:33:02		89.3	7.5	1843.4					North Pole		
												Standard PostMap Script

Orbit 66 Timeline - Type A Orbit

03/05/94 23:43:27	3:34:03	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table					Slew to Vega
03/05/94 23:43:42	3:34:18		88.5	68.6	1874.7					LDUSK						
03/05/94 23:49:27	3:40:03	360									Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/05/94 23:49:42	3:40:18	15									Perform NIR imaging (DHU SEQT 31)					
03/05/94 23:49:57	3:40:33	15									Perform UV0 imaging (DHU SEQT 29)					Radiometric imaging starts
03/05/94 23:50:03	3:40:39	6									Perform HR imaging (DHU SEQT 30)					
03/05/94 23:50:13	3:40:49	10									Stop imaging - select ST-A; UV/VIS & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)					Slew HGA to Earth
03/05/94 23:52:53	3:43:29		80.0	93.4	2088.2					N80D						
03/05/94 23:56:13	3:46:49	360									Switch to HGA					READY FOR DATA DUMP
																End PostMap Script
03/06/94 00:00:00	3:50:36										Switch to DHU mode @ 128 kbps					Ground Command
03/06/94 00:04:48	3:55:24		70.0	95.4	2331.2					N70D						
03/06/94 00:05:00	3:55:36										Downlink SSSR Seg 7 (orbit 65)					Ground Command
03/06/94 00:13:00	4:03:36										Downlink SSSR Segment 1					Ground Command
03/06/94 00:18:00	4:08:36		60.0	96.0	2554.7					N60D						
03/06/94 00:32:53	4:23:29		50.0	96.3	2739.5					N50D						
03/06/94 00:47:00	4:37:36										Downlink SSSR Segment 2					Ground Command - in & out of lock until 01:30 due to DSN comm problems
03/06/94 00:48:40	4:39:16		40.0	96.4	2865.9					N40D						
03/06/94 01:05:05	4:55:41		30.0	96.4	2918.9					N30D						
03/06/94 01:07:46	4:58:22		28.4	96.4	2920.0					Aposelene						

Orbit 67 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/06/94 01:07:46	0:00:00		28.4	96.4	2920.0							Aposelene							Downlinking SSDR Segment 2 (Orbit 66) with intermittent comm problems
03/06/94 01:21:36	0:13:50		20.0	96.4	2891.6							N20D							
03/06/94 01:32:00	0:24:14												Downlink SSDR Segment 3						Ground Command
03/06/94 01:32:31	0:24:45		13.2	96.4	2829.1							INPM							Enter penumbra
03/06/94 01:33:47	0:26:01		12.4	96.4	2819.6							INUM							Enter umbra
03/06/94 01:37:38	0:29:52		10.0	96.4	2787.6							N10D							
03/06/94 01:52:44	0:44:58		0.0	96.4	2619.8							Equator - D							
03/06/94 01:53:00	0:45:14												Uplink & schedule L067 scripts						Ground Command
03/06/94 01:58:00	0:50:14												Downlink SSDR Segment 4						Ground Command
03/06/94 02:06:33	0:58:47		-10.0	96.4	2406.7							S10D							
03/06/94 02:18:56	1:11:10		-20.0	96.4	2168.2							S20D							
03/06/94 02:20:29	1:12:43		-21.4	96.4	2135.1							OUTUM							Exit umbra
03/06/94 02:21:35	1:13:49		-22.3	96.4	2111.4							OUTPM							Exit penumbra
03/06/94 02:25:00	1:17:14												Re-downlink SSDR Segment 2						Ground Command
																			Standard Prep1 Script
03/06/94 02:25:05	1:17:19	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/06/94 02:29:52	1:22:06		-30.0	96.5	1922.1							S30D							
03/06/94 02:39:26	1:31:40		-40.0	96.6	1682.1							S40D							
																			Standard Prep2 Script
03/06/94 02:44:50	1:37:04	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/06/94 02:47:47	1:40:01		-50.0	96.7	1457.6							S50D							
03/06/94 02:55:05	1:47:19		-60.0	97.1	1253.9							S60D							
																			L067 Prep3 Script
03/06/94 02:56:50	1:49:04	0											Msg "WRNG: Omni/2k in 1 min.."						
03/06/94 02:57:50	1:50:04	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/06/94 02:58:50	1:51:04	60											Switch to omni						

Orbit 67 Timeline - Type B Orbit

03/06/94 02:59:50	1:52:04	60									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/06/94 03:00:20	1:52:34	30									UV & HR cameras ON						
03/06/94 03:01:30	1:53:44		-70.0	97.7	1073.8					S70D							
03/06/94 03:04:15	1:56:29	235									Select ST-A						
03/06/94 03:04:25	1:56:39	10									Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5
03/06/94 03:04:50	1:57:04	25									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/06/94 03:05:05	1:57:19	15									Perform NIR imaging (DHU SEQT 31)						
03/06/94 03:05:20	1:57:34	15									Select ST-A; Slew s/c sensors to nadir (GNC12N067)						Slew to nadir (inertial pointing)
03/06/94 03:05:50	1:58:04	30									Laser Power ON						
End L067 Prep3 Script																	
03/06/94 03:07:13	1:59:27		-80.0	99.8	917.8					S80D							
L067 Mapping Script																	
03/06/94 03:10:20	2:02:34	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/06/94 03:11:20	2:03:34	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)						START MAPPING
03/06/94 03:12:19	2:04:33		-89.3	186.0	786.2					South Pole							
03/06/94 03:12:20	2:04:34	60								MAXS	Set SA step rate to LO						
03/06/94 03:12:56	2:05:10		-88.5	246.6	771.0					LDAWN							
03/06/94 03:16:57	2:09:11		-80.0	271.6	677.4					S80A							
03/06/94 03:16:58	2:09:12	278								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17						
03/06/94 03:21:15	2:13:29		-70.0	273.6	589.7					S70A							
03/06/94 03:21:16	2:13:30	258								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18						
03/06/94 03:25:16	2:17:30	240	-60.0	274.3	522.4					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/06/94 03:28:58	2:21:12									MAD	AOS						
03/06/94 03:29:05	2:21:19	229	-50.0	274.7	474.4					S50A	Record in SSSR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5						SSSR Segment 6
03/06/94 03:32:46	2:25:00	221	-40.0	274.9	444.9					S40A	Load exposure table LUNARZ35S						
03/06/94 03:36:22	2:28:36		-30.0	275.0	433.2					S30A							
03/06/94 03:36:23	2:28:37	217								S30A	Load exposure table LUNARZ25S						
03/06/94 03:36:57	2:29:11		-28.4	275.0	433.0					Periselene							
03/06/94 03:39:59	2:32:13	216	-20.0	275.1	439.2					S20A	Load exposure table LUNARZ15S						
03/06/94 03:43:38	2:35:52		-10.0	275.2	463.1					S10A							

Orbit 67 Timeline - Tyne B Orbit

03/06/94 03:43:39	2:35:53	220							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6		
03/06/94 03:47:24	2:39:38	225	0.0	275.3	505.1				Equator - A	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7		SSDR Segment 7
03/06/94 03:49:44	2:41:58							CAN	LOS			
03/06/94 03:51:20	2:43:34		10.0	275.4	566.1				N10A			
03/06/94 03:51:21	2:43:35	237							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8		
03/06/94 03:55:32	2:47:46	251	20.0	275.5	647.1				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9		Note: Uncompressed band here was deleted from script because of downlinking problems
03/06/94 03:56:32	2:48:46	60								Laser power OFF		
03/06/94 04:00:03	2:52:17		30.0	275.6	749.2				N30A			
03/06/94 04:00:04	2:52:18	212							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10		
03/06/94 04:05:01	2:57:15	297	40.0	275.8	873.8				N40A	Switch to inertial pointing (ORB_067RW); Load exposure table LUNARZ45N		Initiate oblique viewing
03/06/94 04:10:31	3:02:45	330	50.0	276.0	1021.9				N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11		HiRes imaging had not stopped
03/06/94 04:16:41	3:08:55		60.0	276.3	1194.3				N60A			
03/06/94 04:16:42	3:08:56	371							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12		
03/06/94 04:20:54	3:13:08	252								Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19		End oblique viewing - resume nadir pointing
03/06/94 04:23:42	3:15:56	168	70.0	277.0	1390.7				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20		
03/06/94 04:31:42	3:23:56		80.0	279.0	1609.4				N80A			
03/06/94 04:31:43	3:23:57	481							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21		
03/06/94 04:32:43	3:24:57	60								Load CEQ_09.umi into SEQT 9		Not needed
												End L067 Script
03/06/94 04:40:51	3:33:05		89.3	5.1	1844.8				North Pole			PostMap Script
03/06/94 04:41:52	3:34:06	0								Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table		Slew to Vega
03/06/94 04:42:07	3:34:21		88.5	65.7	1876.0				LDUSK			
03/06/94 04:47:52	3:40:06	360								Perform LWIR imaging (DHU SEQT 25)		Dark Field imaging starts
03/06/94 04:48:07	3:40:21	15								Perform NIR imaging (DHU SEQT 31)		

Orbit 67 Timeline - Type B Orbit

03/06/94 04:48:22	3:40:36	15									Perform UV0 imaging (DHU SEQT 29)								Radiometric imaging starts
03/06/94 04:48:28	3:40:42	6									Perform HR imaging (DHU SEQT 30)								
03/06/94 04:48:38	3:40:52	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
03/06/94 04:51:18	3:43:32		80.0	90.7	2089.5					N80D									
03/06/94 04:54:38	3:46:52	360									Switch to HGA								READY FOR DATA DUMP
End PostMap Script																			
03/06/94 04:57:00	3:49:14										Switch to HGA								Ground Command
03/06/94 04:58:00	3:50:14										Switch to DHU mode @ 128 kbps								Ground Command
03/06/94 05:02:00	3:54:14										Downlink SSSR Segment 5								Ground Command
03/06/94 05:03:14	3:55:28		70.0	92.7	2332.5					N70D									
03/06/94 05:12:00	4:04:14										Update state vector (GNC53_06MAR0400)								Ground Command
03/06/94 05:16:37	4:08:51		60.0	93.3	2555.9					N60D									
03/06/94 05:31:20	4:23:34		50.0	93.5	2740.4					N50D									
03/06/94 05:34:00	4:26:14										Downlink SSSR Seg 4 (orbit 66)								Ground Command
03/06/94 05:45:00	4:37:14										Downlink SSSR Seg 1 (orbit 66)								Ground Command
03/06/94 05:47:07	4:39:21		40.0	93.6	2866.5					N40D									
03/06/94 06:03:32	4:55:46		30.0	93.7	2919.1					N30D									
03/06/94 06:06:08	4:58:22		28.4	93.7	2920.1					Aposelene									

Orbit 68 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/06/94 06:06:08	0:00:00		28.4	93.7	2920.1							Aposelene							Downlinking SSDR Segment 1&2 patches (orbit 66)
03/06/94 06:20:03	0:13:55		20.0	93.7	2891.4							N20D							
03/06/94 06:24:00	0:17:52												Downlink SSDR Segment 6 (orb 67)						Ground Command
03/06/94 06:30:36	0:24:28		13.5	93.7	2831.3							INPM							Enter penumbra
03/06/94 06:31:51	0:25:43		12.7	93.7	2821.9							INUM							Enter umbra
03/06/94 06:36:05	0:29:57		10.0	93.7	2787.0							N10D							
03/06/94 06:51:10	0:45:02		0.0	93.7	2618.8							Equator - D							
03/06/94 07:04:59	0:58:51		-10.0	93.7	2405.5							S10D							
03/06/94 07:07:00	1:00:52												Downlink SSDR Segment 7						Ground Command
03/06/94 07:17:22	1:11:14		-20.0	93.7	2166.9							S20D							
03/06/94 07:19:12	1:13:04		-21.6	93.7	2127.7							OUTUM							Exit umbra
03/06/94 07:20:17	1:14:09		-22.5	93.7	2104.4							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/06/94 07:23:28	1:17:20	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/06/94 07:28:17	1:22:09		-30.0	93.7	1920.8							S30D							
03/06/94 07:37:51	1:31:43		-40.0	93.8	1680.9							S40D							
																			Standard Prep2 Script
03/06/94 07:43:13	1:37:05	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/06/94 07:46:11	1:40:03		-50.0	94.0	1456.4							S50D							
03/06/94 07:53:29	1:47:21		-60.0	94.3	1252.8							S60D							
																			L068 Prep3 Script
03/06/94 07:55:13	1:49:05	0											Msg "WRNG: Omni/2k in 1 min.."						
03/06/94 07:56:13	1:50:05	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSDR data dump
03/06/94 07:57:13	1:51:05	60											Switch to omni antennas						
03/06/94 07:58:13	1:52:05	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/06/94 07:58:43	1:52:35	30											UV & HR cameras ON						
03/06/94 07:59:54	1:53:46		-70.0	95.0	1072.8							S70D							
03/06/94 08:02:38	1:56:30	235											Select ST-A						
03/06/94 08:02:48	1:56:40	10											Initialize filters (DHU SEQT 28); Record in SSDR Segment 1; Load lunar dark exposure tables						Start SSDR in Segment 1
03/06/94 08:03:13	1:57:05	25											Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts

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03/06/94 08:58:27	2:52:19	212							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/06/94 09:03:24	2:57:16		40.0	273.1	874.4				N40A									
03/06/94 09:03:25	2:57:17	298							N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4
03/06/94 09:08:54	3:02:46		50.0	273.3	1022.7				N50A									
03/06/94 09:08:55	3:02:47	330							N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12								HiRes imaging had not stopped
03/06/94 09:15:05	3:08:57		60.0	273.6	1195.2				N60A									
03/06/94 09:15:06	3:08:58	371							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/06/94 09:22:06	3:15:58	420	70.0	274.2	1391.8				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								
03/06/94 09:30:07	3:23:59	481	80.0	276.3	1610.6				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
03/06/94 09:31:07	3:24:59	60								Load CEQ_07.UMI into SEQT 7								Restore compressed SEQT 7
End L068 Script																		
03/06/94 09:39:16	3:33:08		89.3	2.5	1846.1				North Pole									
Standard PostMap Script																		
03/06/94 09:40:16	3:34:08	0								Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table								Slew to Vega
03/06/94 09:40:32	3:34:24		88.5	63.0	1877.2				LDUSK									
03/06/94 09:46:16	3:40:08	360								Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/06/94 09:46:31	3:40:23	15								Perform NIR imaging (DHU SEQT 31)								
03/06/94 09:46:46	3:40:38	15								Perform UV0 imaging (DHU SEQT 29)								Radiometric imaging starts
03/06/94 09:46:52	3:40:44	6								Perform HR imaging (DHU SEQT 30)								
03/06/94 09:47:02	3:40:54	10								Stop imaging - select ST-A; UV/VIS & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)								Slew HGA to Earth
03/06/94 09:49:43	3:43:35		80.0	88.0	2090.8				N80D									
03/06/94 09:53:02	3:46:54	360								Switch to HGA								READY FOR DATA DUMP
End PostMap Script																		
03/06/94 09:56:00	3:49:52									Switch to DHU mode @ 128 kbps								Ground Command
03/06/94 09:57:00	3:50:52									Resume downlinking SSDR Segment 7 (orb 67)								Ground Command
03/06/94 10:01:00	3:54:52									Downlink SSDR Segment 1								Ground Command
03/06/94 10:01:40	3:55:32		70.0	90.0	2333.7				N70D									

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03/06/94 10:15:03	4:08:55		60.0	90.6	2557.0						N60D						
03/06/94 10:29:46	4:23:38		50.0	90.8	2741.3						N50D						
03/06/94 10:42:00	4:35:52											Downlink SDR Segment 2					Ground Command
03/06/94 10:45:34	4:39:26		40.0	90.9	2867.1						N40D						
03/06/94 10:52:17	4:46:09								GDS		AOS						
03/06/94 11:01:59	4:55:51		30.0	91.0	2919.2						N30D						
03/06/94 11:04:30	4:58:22		28.5	91.0	2920.2						Aposelene						

Orbit 69 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/06/94 11:04:30	0:00:00		28.5	91.0	2920.2							Aposelene							Downlinking SSSDR Segment 2 (Orbit 68)
03/06/94 11:18:30	0:14:00		20.0	91.0	2891.1							N20D							
03/06/94 11:25:00	0:20:30												Downlink SSSDR Segment 3						Ground Command
03/06/94 11:28:00	0:23:30												Uplink & schedule L069 scripts						Ground Command
03/06/94 11:28:42	0:24:12		13.7	90.9	2833.3							INPM							Enter penumbra
03/06/94 11:29:56	0:25:26		12.9	90.9	2824.2							INUM							Enter umbra
03/06/94 11:34:32	0:30:02		10.0	90.9	2786.3							N10D							
03/06/94 11:49:37	0:45:07		0.0	90.9	2617.9							Equator - D							
03/06/94 12:03:25	0:58:55		-10.0	90.9	2404.3							S10D							
03/06/94 12:04:22	0:59:52										MAD	LOS							
03/06/94 12:09:00	1:04:30												Downlink SSSDR Segment 4						Ground Command
03/06/94 12:15:47	1:11:17		-20.0	91.0	2165.6							S20D							
03/06/94 12:17:54	1:13:24		-21.8	91.0	2120.5							OUTUM							Exit umbra
03/06/94 12:18:58	1:14:28		-22.8	91.0	2097.4							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/06/94 12:21:52	1:17:22	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/06/94 12:26:42	1:22:12		-30.0	91.0	1919.5							S30D							
03/06/94 12:28:00	1:23:30												Downlink SSSDR data patches						Ground Command
03/06/94 12:36:16	1:31:46		-40.0	91.1	1679.6							S40D							
																			Standard Prep2 Script
03/06/94 12:41:37	1:37:07	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/06/94 12:44:36	1:40:06		-50.0	91.3	1455.2							S50D							
03/06/94 12:51:53	1:47:23		-60.0	91.6	1251.7							S60D							
																			L069 Prep3 Script
03/06/94 12:53:37	1:49:07	0											Msg "WRNG: Omni/2k in 1 min.."						
03/06/94 12:54:37	1:50:07	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/06/94 12:55:37	1:51:07	60											Switch to omni						

Orbit 69 Timeline - Type B Orbit

03/06/94 12:56:37	1:52:07	60								Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/06/94 12:57:07	1:52:37	30								UV & HR cameras ON						
03/06/94 12:58:18	1:53:48		-70.0	92.3	1071.9					S70D						
03/06/94 13:01:02	1:56:32	235								Select ST-A						
03/06/94 13:01:12	1:56:42	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5
03/06/94 13:01:37	1:57:07	25								Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/06/94 13:01:52	1:57:22	15								Perform NIR imaging (DHU SEQT 31)						
03/06/94 13:02:07	1:57:37	15								Select ST-A; Slew s/c sensors to nadir (GNC12N069)						Slew to nadir (inertial pointing)
03/06/94 13:02:37	1:58:07	30								Laser Power ON						
End L069 Prep3 Script																
03/06/94 13:04:00	1:59:30		-80.0	94.3	916.2					S80D						
L069 Mapping Script																
03/06/94 13:07:07	2:02:37	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/06/94 13:08:07	2:03:37	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)						START MAPPING
03/06/94 13:09:06	2:04:36		-89.3	180.9	784.8					South Pole						
03/06/94 13:09:07	2:04:37	60								MAXS						
03/06/94 13:09:43	2:05:13		-88.5	241.2	769.6					LDAWN						
03/06/94 13:13:44	2:09:14		-80.0	266.1	676.3					S80A						
03/06/94 13:13:45	2:09:15	278								S80A						
03/06/94 13:18:01	2:13:31		-70.0	268.2	588.8					S70A						
03/06/94 13:18:02	2:13:32	257								S70A						
03/06/94 13:22:02	2:17:32		-60.0	268.9	521.7					S60A						
03/06/94 13:22:03	2:17:33	241								S60A						
03/06/94 13:25:51	2:21:21	228	-50.0	269.2	473.9					S50A						SSDR Segment 6
03/06/94 13:29:32	2:25:02	221								S40A						
03/06/94 13:29:32	2:25:02		-40.0	269.4	444.5					S40A						
03/06/94 13:33:08	2:28:38		-30.0	269.6	433.0					S30A						
03/06/94 13:33:09	2:28:39	217								S30A						
03/06/94 13:33:40	2:29:10		-28.5	269.6	432.8					Periselene						
03/06/94 13:36:45	2:32:15	216	-20.0	269.7	439.2					S20A						
03/06/94 13:40:24	2:35:54		-10.0	269.8	463.3					S10A						

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03/06/94 13:40:25	2:35:55	220						S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/06/94 13:44:10	2:39:40	225	0.0	269.9	505.5			Equator - A	Record in SDDR Segment 7; Load CEQ_07U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7				SDDR Segment 7 IR and UV uncompressed
03/06/94 13:48:06	2:43:36		10.0	270.0	566.7			N10A					
03/06/94 13:48:07	2:43:37	237						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8				Resume compression
03/06/94 13:52:18	2:47:48		20.0	270.1	647.9			N20A					
03/06/94 13:52:19	2:47:49	252						N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				
03/06/94 13:53:19	2:48:49	60							Laser power OFF				
03/06/94 13:56:50	2:52:20	211	30.0	270.2	750.3			N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				
03/06/94 14:01:47	2:57:17		40.0	270.3	875.1			N40A					
03/06/94 14:01:48	2:57:18	298						N40A	Switch to inertial pointing (ORB_069RW); Load exposure table LUNARZ45N				Initiate oblique viewing
03/06/94 14:07:18	3:02:48	330	50.0	270.5	1023.5			N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11				HiRes imaging had not stopped
03/06/94 14:13:29	3:08:59		60.0	270.9	1196.1			N60A					
03/06/94 14:13:30	3:09:00	372						N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12				
03/06/94 14:17:42	3:13:12	253							Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19				End oblique viewing - resume nadir pointing
03/06/94 14:20:30	3:16:00		70.0	271.5	1392.8			N70A					
03/06/94 14:20:31	3:16:01	168						N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20				
03/06/94 14:28:31	3:24:01		80.0	273.5	1611.7			N80A					
03/06/94 14:28:32	3:24:02	481						N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21				
03/06/94 14:29:32	3:25:02	60							Load CEQ_07U.UMI into SEQT 7				Restore compressed SEQT 7
										End L069 Script			
03/06/94 14:37:40	3:33:10		89.3	358.8	1847.0			North Pole					
										PostMap Script			
03/06/94 14:38:41	3:34:11	0							Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table				Slew to Vega using inertial pointing
03/06/94 14:38:57	3:34:27		88.5	60.5	1878.5			LDUSK					
03/06/94 14:44:41	3:40:11	360							Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/06/94 14:44:56	3:40:26	15							Perform NIR imaging (DHU SEQT 31)				

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03/06/94 14:45:11	3:40:41	15									Perform UV0 imaging (DHU SEQT 29)								Radiometric imaging starts
03/06/94 14:45:17	3:40:47	6									Perform HR imaging (DHU SEQT 30)								
03/06/94 14:45:27	3:40:57	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
03/06/94 14:48:09	3:43:39		80.0	85.3	2092.1					N80D									
03/06/94 14:51:27	3:46:57	360									Switch to HGA								READY FOR DATA DUMP
End PostMap Script																			
03/06/94 14:56:00	3:51:30										Switch to DHU mode @ 128 kbps								Ground Command
03/06/94 14:59:00	3:54:30										Downlink SSSR Segment 5								Ground Command
03/06/94 15:00:05	3:55:35		70.0	87.2	2335.0					N70D									
03/06/94 15:13:29	4:08:59		60.0	87.8	2558.2					N60D									
03/06/94 15:26:00	4:21:30										Downlink SSSR Segment 6								Ground Command
03/06/94 15:28:13	4:23:43		50.0	88.1	2742.2					N50D									
03/06/94 15:41:33	4:37:03									CAN	AOS								
03/06/94 15:44:01	4:39:31		40.0	88.2	2867.6						N40D								
03/06/94 16:00:26	4:55:56		30.0	88.2	2919.4						N30D								
03/06/94 16:02:52	4:58:22		28.5	88.2	2920.3						Aposelene								

Orbit 70 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/06/94 16:02:52	0:00:00		28.5	88.2	2920.3							Aposelene							Downlinking SSSR Segment 6 (orbit 69)
03/06/94 16:16:57	0:14:05		20.0	88.2	2890.8							N20D							
03/06/94 16:20:00	0:17:08												Downlink SSSR Segment 7						Ground Command
03/06/94 16:26:49	0:23:57		13.9	88.2	2835.2							INPM							Enter penumbra
03/06/94 16:28:02	0:25:10		13.1	88.2	2826.3							INUM							Enter umbra
03/06/94 16:32:59	0:30:07		10.0	88.2	2785.7							N10D							
03/06/94 16:48:03	0:45:11		0.0	88.2	2616.9							Equator - D							
03/06/94 16:59:00	0:56:08												SSDR to IDLE						Ground Command
03/06/94 17:01:51	0:58:59		-10.0	88.2	2403.2							S10D							
03/06/94 17:14:13	1:11:21		-20.0	88.2	2164.4							S20D							
03/06/94 17:14:48	1:11:56										PMK	LOS							
03/06/94 17:16:36	1:13:44		-22.1	88.2	2113.5							OUTUM							Exit umbra
03/06/94 17:17:38	1:14:46		-23.0	88.2	2090.6							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/06/94 17:20:15	1:17:23	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/06/94 17:25:00	1:22:08												Uplink & schedule L070 scripts; Resume downlinking SSSR Seg 7						Ground Command
03/06/94 17:25:08	1:22:16		-30.0	88.3	1918.3							S30D							
03/06/94 17:34:40	1:31:48		-40.0	88.4	1678.4							S40D							
03/06/94 17:35:00	1:32:08												SSDR to IDLE						Ground Command - due to comm problems with GDS
																			Standard Prep2 Script
03/06/94 17:40:00	1:37:08	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/06/94 17:43:00	1:40:08		-50.0	88.5	1454.1							S50D							
03/06/94 17:50:17	1:47:25		-60.0	88.9	1250.7							S60D							
																			L070 Prep3 Script
03/06/94 17:52:00	1:49:08	0											Msg "WRNG: Omni/2k in 1 min.."						
03/06/94 17:53:00	1:50:08	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSSR data dump
03/06/94 17:54:00	1:51:08	60											Switch to omni antennas						
03/06/94 17:55:00	1:52:08	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/06/94 17:55:30	1:52:38	30											UV & HR cameras ON						
03/06/94 17:56:42	1:53:50		-70.0	89.5	1071.0							S70D							
03/06/94 17:59:25	1:56:33	235											Select ST-A						

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03/06/94 17:59:35	1:56:43	10								Initialize filters (DHU SEQT 28); Record in SDR Segment 1; Load lunar dark exposure tables						Start SDR in Segment 1
03/06/94 18:00:00	1:57:08	25								Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/06/94 18:00:15	1:57:23	15								Perform NIR imaging (DHU SEQT 31)						
03/06/94 18:00:30	1:57:38	15								Select ST-A; Slew s/c sensors to nadir (GNC12N070)						Slew to nadir (inertial pointing)
03/06/94 18:01:00	1:58:08	30								Laser Power ON						
End L070 Prep3 Script																
03/06/94 18:02:24	1:59:32		-80.0	91.5	915.4					S80D						
L070 Mapping Script																
03/06/94 18:05:30	2:02:38	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/06/94 18:06:00	2:03:08									Park opaque filter on HiRes (DHU SEQT 27); Select DHU SEQT 9						Ground Command - HiRes imaging stopped because of problems dumping orb 69 data
03/06/94 18:06:30	2:03:38	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)						START MAPPING
03/06/94 18:07:00	2:04:08									Uplink new SEQT (ORB70_SEQ)						Ground Command
03/06/94 18:07:29	2:04:37		-89.3	176.2	784.4					South Pole						
03/06/94 18:07:30	2:04:38	60								MAXS						Set SA step rate to LO
03/06/94 18:08:07	2:05:15		-88.5	238.7	768.9					LDAWN						
03/06/94 18:12:07	2:09:15		-80.0	263.4	675.7					S80A						
03/06/94 18:12:08	2:09:16	278								S80A						Load exposure table LUNARZ75S; Select DHU SEQT 3
03/06/94 18:16:25	2:13:33	257	-70.0	265.5	588.3					S70A						Load exposure table LUNARZ65S; Select DHU SEQT 4
03/06/94 18:20:25	2:17:33		-60.0	266.1	521.3					S60A						
03/06/94 18:20:26	2:17:34	241								S60A						Load exposure table LUNARZ55S; Select DHU SEQT 6
03/06/94 18:24:14	2:21:22		-50.0	266.5	473.6					S50A						
03/06/94 18:24:15	2:21:23	229								S50A						Record in SDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5
03/06/94 18:27:55	2:25:03	220	-40.0	266.7	444.3					S40A						Load exposure table LUNARZ35S
03/06/94 18:31:32	2:28:40	217	-30.0	266.9	433.0					S30A						Load exposure table LUNARZ25S
03/06/94 18:32:02	2:29:10		-28.6	266.9	432.8					Periselene						
03/06/94 18:35:08	2:32:16	216	-20.0	267.0	439.3					S20A						Load exposure table LUNARZ15S
03/06/94 18:38:47	2:35:55		-10.0	267.1	463.4					S10A						
03/06/94 18:38:48	2:35:56	220								S10A						Load exposure table LUNARZ05S; Select DHU SEQT 6
03/06/94 18:42:33	2:39:41		0.0	267.2	505.7					Equator - A						

Orbit 70 Timeline - Type A Orbit

03/06/94 18:42:34	2:39:42	226							MEQA	Record in SSDR Segment 3; Load CEQ_07U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 3 IR and UV uncompressed
03/06/94 18:46:30	2:43:38	236	10.0	267.2	567.1				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	Resume compression
03/06/94 18:50:41	2:47:49		20.0	267.3	648.4				N20A		
03/06/94 18:50:42	2:47:50	252							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	
03/06/94 18:51:42	2:48:50	60								Laser power OFF	
03/06/94 18:55:13	2:52:21		30.0	267.5	750.8				N30A		
03/06/94 18:55:14	2:52:22	212							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/06/94 19:00:11	2:57:19		40.0	267.6	875.8				N40A		
03/06/94 19:00:12	2:57:20	298							N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4
03/06/94 19:05:42	3:02:50	330	50.0	267.8	1024.3				N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12	Reset did not occur - HiRes opaque filter remained in place
03/06/94 19:11:53	3:09:01		60.0	268.1	1197.1				N60A		
03/06/94 19:11:54	3:09:02	372							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13	
03/06/94 19:18:54	3:16:02		70.0	268.8	1393.9				N70A		
03/06/94 19:18:55	3:16:03	421							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
03/06/94 19:26:56	3:24:04	481	80.0	270.8	1612.9				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
03/06/94 19:27:56	3:25:04	60								Load CEQ_07.UMI into SEQT 7	Restore compressed SEQT 7
End L070 Script											
03/06/94 19:36:06	3:33:14		89.3	357.3	1848.7				North Pole		
Standard PostMap Script											
03/06/94 19:37:06	3:34:14	0								Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table	Slew to Vega using inertial pointing
03/06/94 19:37:22	3:34:30		88.5	58.0	1879.8				LDUSK		
03/06/94 19:44:06	3:41:14	420								Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/06/94 19:44:21	3:41:29	15								Perform NIR imaging (DHU SEQT 31)	
03/06/94 19:44:36	3:41:44	15								Perform UV0 imaging (DHU SEQT 29)	Radiometric imaging starts
03/06/94 19:44:42	3:41:50	6								Perform HR imaging (DHU SEQT 30)	

Orbit 70 Timeline - Type A Orbit

03/06/94 19:44:52	3:42:00	10								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)						Slew HGA to Earth
03/06/94 19:46:34	3:43:42		80.0	82.6	2093.4					N80D						
03/06/94 19:50:52	3:48:00	360									Switch to HGA					READY FOR DATA DUMP
																End PostMap Script
03/06/94 19:53:00	3:50:08										Switch to DHU mode @ 128 kbps; Downlink SSSR Segment 7 (orb 69)					Ground Command
03/06/94 19:58:31	3:55:39		70.0	84.5	2336.3					N70D						
03/06/94 20:11:56	4:09:04		60.0	85.1	2559.3					N60D						
03/06/94 20:14:00	4:11:08								GDS	LOS						
03/06/94 20:26:40	4:23:48		50.0	85.4	2743.1					N50D						
03/06/94 20:30:00	4:27:08										Downlink SSSR Segment 1; Load DEQ_07.UMI into SEQT 7					Ground Command DEQ_07 replaces CEQ_07
03/06/94 20:42:28	4:39:36		40.0	85.5	2868.2					N40D						
03/06/94 20:58:54	4:56:02		30.0	85.5	2919.5					N30D						
03/06/94 21:00:00	4:57:08										Downlink SSSR Segment 2					Ground Command
03/06/94 21:01:14	4:58:22		28.6	85.5	2920.3					Aposelene						

Orbit 71 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/06/94 21:01:14	0:00:00		28.6	85.5	2920.3							Aposelene							Downlinking SSDR Segment 2 (Orbit 70)
03/06/94 21:14:00	0:12:46												Uplink & schedule L071 scripts						Ground Command
03/06/94 21:15:24	0:14:10		20.0	85.5	2890.5							N20D							
03/06/94 21:24:56	0:23:42		14.1	85.5	2837.0							INPM							Enter penumbra
03/06/94 21:26:08	0:24:54		13.4	85.5	2828.3							INUM							Enter umbra
03/06/94 21:31:26	0:30:12		10.0	85.5	2785.0							N10D							
03/06/94 21:35:00	0:33:46												Downlink SSDR Segment 3						Ground Command
03/06/94 21:46:30	0:45:16		0.0	85.5	2615.9							Equator - D							
03/06/94 22:00:18	0:59:04		-10.0	85.5	2402.0							S10D							
03/06/94 22:12:00	1:10:46												Downlink SSDR Segment 4						Ground Command
03/06/94 22:12:39	1:11:25		-20.0	85.5	2163.1							S20D							
03/06/94 22:15:17	1:14:03		-22.3	85.5	2106.4							OUTUM							Exit umbra
03/06/94 22:16:19	1:15:05		-23.2	85.5	2083.8							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/06/94 22:18:38	1:17:24	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/06/94 22:23:33	1:22:19		-30.0	85.5	1917.0							S30D							
03/06/94 22:33:05	1:31:51		-40.0	85.6	1677.2							S40D							
																			Standard Prep2 Script
03/06/94 22:38:23	1:37:09	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/06/94 22:41:25	1:40:11		-50.0	85.8	1452.9							S50D							
03/06/94 22:48:42	1:47:28		-60.0	86.1	1249.7							S60D							
																			L071 Prep3 Script
03/06/94 22:50:23	1:49:09	0											Msg "WRNG: Omni/2k in 1 min.."						
03/06/94 22:51:23	1:50:09	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/06/94 22:52:23	1:51:09	60											Switch to omni antennas						
03/06/94 22:53:23	1:52:09	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux

Orbit 71 Timeline - Type B Orbit

03/06/94 23:53:37	2:52:23	212	30.0	264.7	751.4					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
03/06/94 23:58:35	2:57:21	298	40.0	264.9	876.4					N40A	Switch to inertial pointing (ORB_071RW); Load exposure table LUNARZ45N						Initiate oblique viewing
03/07/94 00:04:06	3:02:52	331	50.0	265.1	1025.1					N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11						HiRes imaging had not stopped
03/07/94 00:10:17	3:09:03	371	60.0	265.4	1198.0					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12						
03/07/94 00:14:30	3:13:16	253									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19						End oblique viewing - resume nadir pointing
03/07/94 00:17:19	3:16:05	169	70.0	266.0	1395.0					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						
03/07/94 00:25:21	3:24:07	482	80.0	268.0	1614.1					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
03/07/94 00:26:21	3:25:07	60									Load DEQ_08.UMI into SEQT 8						Restore compressed SEQT 8
End L071 Script																	
03/07/94 00:34:31	3:33:17		89.3	354.2	1849.8					North Pole							
PostMap Script																	
03/07/94 00:35:31	3:34:17	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table						Slew to Vega using inertial pointing
03/07/94 00:35:48	3:34:34		88.5	55.6	1881.2					LDUSK							
03/07/94 00:42:31	3:41:17	420									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/07/94 00:42:46	3:41:32	15									Perform NIR imaging (DHU SEQT 31)						
03/07/94 00:43:01	3:41:47	15									Perform UV0 imaging (DHU SEQT 29)						Radiometric imaging starts
03/07/94 00:43:07	3:41:53	6									Perform HR imaging (DHU SEQT 30)						
03/07/94 00:43:17	3:42:03	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						SLEW DID NOT EXECUTE BECAUSE PREVIOUS SLEW NOT COMPLETE!
03/07/94 00:45:00	3:43:46		80.0	79.9	2094.7					N80D							
03/07/94 00:48:17	3:47:03	360									Switch to HGA						READY FOR DATA DUMP
End PostMap Script																	
03/07/94 00:55:00	3:53:46										Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Ground Command
03/07/94 00:56:58	3:55:44		70.0	81.8	2337.5					N70D							
03/07/94 00:59:00	3:57:46										Switch to DHU mode @ 128 kbps						Ground Command
03/07/94 01:05:00	4:03:46										Downlink SSSR Segment 5						Ground Command

Orbit 71 Timeline - Type B Orbit

03/07/94 01:10:22	4:09:08		60.0	82.4	2560.4					N60D										
03/07/94 01:20:00	4:18:46										RW Momentum Dump; SSDR to IDLE									MOMENTUM DUMP! Ground Command
03/07/94 01:25:07	4:23:53		50.0	82.7	2743.9					N50D										
03/07/94 01:30:00	4:28:46										Downlink SSDR Segment 6									Ground Command
03/07/94 01:38:00	4:36:46										Uplink & schedule L072 scripts									Ground Command
03/07/94 01:40:55	4:39:41		40.0	82.8	2868.7					N40D										
03/07/94 01:57:21	4:56:07		30.0	82.8	2919.6					N30D										
03/07/94 01:59:36	4:58:22		28.6	82.8	2920.3					Aposelene										

Orbit 72 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/07/94 01:59:36	0:00:00		28.6	82.8	2920.3							Aposelene							Downlinking SSSR Segment 6 (orbit 71)
03/07/94 02:13:52	0:14:16		20.0	82.8	2890.2							N20D							
03/07/94 02:14:00	0:14:24												Downlink SSSR Segment 7						Ground Command
03/07/94 02:23:04	0:23:28		14.3	82.8	2838.7							INPM							Enter penumbra
03/07/94 02:24:15	0:24:39		13.6	82.8	2830.2							INUM							Enter umbra
03/07/94 02:29:53	0:30:17		10.0	82.8	2784.3							N10D							
03/07/94 02:44:57	0:45:21		0.0	82.7	2614.9							Equator - D							
03/07/94 02:58:44	0:59:08		-10.0	82.7	2400.8							S10D							
03/07/94 03:11:05	1:11:29		-20.0	82.8	2161.8							S20D							
03/07/94 03:13:58	1:14:21		-22.5	82.8	2099.6							OUTUM							Exit umbra
03/07/94 03:14:59	1:15:23		-23.4	82.8	2077.2							OUTPM							Exit penumbra
03/07/94 03:17:00	1:17:24												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
03/07/94 03:17:03	1:17:26	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/07/94 03:21:00	1:21:23												Update state vector (GNC53_07MAR0315)						Ground Command
03/07/94 03:21:58	1:22:22		-30.0	82.8	1915.7							S30D							
03/07/94 03:31:30	1:31:54		-40.0	82.9	1676.0							S40D							
																			Standard Prep2 Script
03/07/94 03:36:48	1:37:12	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/07/94 03:39:50	1:40:14		-50.0	83.1	1451.8							S50D							
03/07/94 03:47:06	1:47:30		-60.0	83.4	1248.7							S60D							
																			L070 Prep3 Script
03/07/94 03:48:48	1:49:12	0											Msg "WRNG: Omni/2k in 1 min.."						
03/07/94 03:49:48	1:50:12	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/07/94 03:50:48	1:51:12	60											Switch to omni antennas						
03/07/94 03:51:48	1:52:12	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/07/94 03:52:18	1:52:42	30											UV & HR cameras ON						
03/07/94 03:53:30	1:53:54		-70.0	84.0	1069.2							S70D							
03/07/94 03:56:13	1:56:37	235											Select ST-A						
03/07/94 03:56:23	1:56:47	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1

Orbit 72 Timeline - Type A Orbit

03/07/94 03:56:48	1:57:12	25									Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/07/94 03:57:03	1:57:27	15									Perform NIR imaging (DHU SEQT 31)				
03/07/94 03:57:18	1:57:41	15									Select ST-A; Slew s/c sensors to nadir (GNC12N072)				Slew to nadir (inertial pointing)
03/07/94 03:57:48	1:58:11	30									Laser Power ON				
End L072 Prep3 Script															
03/07/94 03:59:12	1:59:36			-80.0	86.0	913.9					S80D				
L072 Mapping Script															
03/07/94 04:02:17	2:02:41	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/07/94 04:03:18	2:03:41	60										Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)			START MAPPING
03/07/94 04:04:18	2:04:41	60		-89.3	171.8	783.0					South Pole	Set SA step rate to LO			
03/07/94 04:04:55	2:05:19			-88.5	234.1	767.6					LDAWN				
03/07/94 04:08:55	2:09:18	277		-80.0	258.1	674.6					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3			
03/07/94 04:13:12	2:13:36	257		-70.0	260.1	587.5					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/07/94 04:13:32	2:13:55										MAD	AOS			
03/07/94 04:17:12	2:17:36			-60.0	260.7	520.7					S60A				
03/07/94 04:17:13	2:17:37	241									S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/07/94 04:21:01	2:21:24	228		-50.0	261.1	473.2					S50A	Record in SSSR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5			Opaque filter did not park SSDR Segment 2
03/07/94 04:24:42	2:25:06	221		-40.0	261.3	444.1					S40A	Load exposure table LUNARZ35S			
03/07/94 04:28:18	2:28:42			-30.0	261.4	432.9					S30A				
03/07/94 04:28:19	2:28:43	217									S30A	Load exposure table LUNARZ25S			
03/07/94 04:28:47	2:29:11			-28.7	261.4	432.7					Periselene				
03/07/94 04:31:55	2:32:19	216		-20.0	261.5	439.4					S20A	Load exposure table LUNARZ15S			
03/07/94 04:35:34	2:35:58	219		-10.0	261.6	463.7					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/07/94 04:39:00	2:39:24											Ranging A ON			Ground Command
03/07/94 04:39:20	2:39:44	226		0.0	261.7	506.2					Equator - A	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
03/07/94 04:42:57	2:43:21										CAN	LOS			
03/07/94 04:43:17	2:43:41	237		10.0	261.8	567.8					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/07/94 04:47:29	2:47:53	252		20.0	261.9	649.3					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/07/94 04:48:29	2:48:53	60										Laser power OFF			
03/07/94 04:52:01	2:52:25	212		30.0	262.0	752.0					N30A	Load exposure table LUNARZ35N; Load CEQ_10U.UMI into SEQT 10; Select DHU SEQT 10			UV and IR uncompressed

Orbit 72 Timeline - Type A Orbit

03/07/94 04:56:59	2:57:23	298	40.0	262.1	877.1					N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4 Resume compression
03/07/94 05:02:30	3:02:54	331	50.0	262.3	1025.9					N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12	HiRes imaging had not stopped
03/07/94 05:08:42	3:09:06	372	60.0	262.6	1199.0					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13	
03/07/94 05:15:43	3:16:07		70.0	263.3	1396.0					N70A		
03/07/94 05:15:44	3:16:08	422	70.0	263.3	1396.0					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
03/07/94 05:23:46	3:24:09	482	80.0	265.2	1615.2					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
03/07/94 05:24:46	3:25:10	60									Load DEQ_10.UMI into SEQT 10	Restore compressed SEQT 10
												End L072 Script
03/07/94 05:32:56	3:33:20		89.3	351.3	1851.0					North Pole		
												Standard PostMap Script
03/07/94 05:33:56	3:34:20	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table	Slew to Vega using inertial pointing
03/07/94 05:34:13	3:34:37		88.5	53.4	1882.5					LDUSK		
03/07/94 05:40:56	3:41:19	420									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/07/94 05:41:11	3:41:35	15									Perform NIR imaging (DHU SEQT 31)	
03/07/94 05:41:26	3:41:50	15									Perform UV0 imaging (DHU SEQT 29)	Radiometric imaging starts
03/07/94 05:41:32	3:41:56	6									Perform HR imaging (DHU SEQT 30)	
03/07/94 05:41:42	3:42:06	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/07/94 05:43:26	3:43:50		80.0	77.2	2096.0					N80D		
03/07/94 05:47:42	3:48:05	360									Switch to HGA	READY FOR DATA DUMP
												End PostMap Script
03/07/94 05:49:00	3:49:23										Switch to DHU mode @ 128 kbps	Ground Command
03/07/94 05:55:24	3:55:48		70.0	79.1	2338.8					N70D		
03/07/94 05:56:00	3:56:24										Downlink SSSR Segment 1	Ground Command
03/07/94 06:01:00	4:01:24										Ranging A OFF	Ground Command
03/07/94 06:08:49	4:09:13		60.0	79.7	2561.5					N60D		
03/07/94 06:23:34	4:23:58		50.0	79.9	2744.7					N50D		
03/07/94 06:27:00	4:27:24										Downlink SSSR Segment 2	Ground Command
03/07/94 06:28:00	4:28:24										Uplink & schedule L073 scripts	Ground Command

Orbit 72 Timeline - Type A Orbit

03/07/94 06:39:23	4:39:47		40.0	80.0	2869.1						N40D							
03/07/94 06:55:49	4:56:13		30.0	80.1	2919.7						N30D							
03/07/94 06:57:58	4:58:22		28.7	80.1	2920.3						Aposelene							

Orbit 73 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/07/94 06:57:58	0:00:00		28.7	80.1	2920.3							Aposelene							Downlinking SSSDR Segment 2 (Orbit 72)
03/07/94 07:09:00	0:11:02												Downlink SSSDR Segment 3						Ground Command
03/07/94 07:12:19	0:14:21		20.0	80.1	2889.8							N20D							Enter penumbra
03/07/94 07:21:12	0:23:14		14.5	80.0	2840.3							INPM							Enter umbra
03/07/94 07:22:23	0:24:25		13.8	80.0	2832.0							INUM							
03/07/94 07:28:20	0:30:22		10.0	80.0	2783.6							N10D							
03/07/94 07:43:24	0:45:26		0.0	80.0	2613.9							Equator - D							
03/07/94 07:46:00	0:48:02												Downlink SSSDR Segment 4						Ground Command
03/07/94 07:57:10	0:59:12		-10.0	80.0	2399.7							S10D							
03/07/94 08:08:00	1:10:02												Downlink SSSDR data patches						Ground Command
03/07/94 08:09:31	1:11:33		-20.0	80.0	2160.6							S20D							
03/07/94 08:12:39	1:14:41		-22.8	80.0	2092.9							OUTUM							Exit umbra
03/07/94 08:13:39	1:15:41		-23.7	80.0	2070.7							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/07/94 08:15:26	1:17:28	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/07/94 08:20:24	1:22:26		-30.0	80.1	1914.5							S30D							
03/07/94 08:28:00	1:30:02												SSDR to IDLE - downlink complete						Ground Command
03/07/94 08:29:56	1:31:58		-40.0	80.2	1674.8							S40D							
																			Standard Prep2 Script
03/07/94 08:35:11	1:37:13	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/07/94 08:38:14	1:40:16		-50.0	80.3	1450.8							S50D							
03/07/94 08:45:31	1:47:33		-60.0	80.6	1247.8							S60D							
																			L073 Prep3 Script
03/07/94 08:47:11	1:49:13	0											Msg "WRNG: Omni/2k in 1 min.."						
03/07/94 08:48:11	1:50:13	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/07/94 08:49:11	1:51:13	60											Switch to omni antennas						
03/07/94 08:50:11	1:52:13	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/07/94 08:50:41	1:52:43	30											UV & HR cameras ON						
03/07/94 08:51:55	1:53:57		-70.0	81.2	1068.4							S70D							
03/07/94 08:54:36	1:56:38	235											Select ST-A						

Orbit 73 Timeline - Tyne B Orbit

03/07/94 08:54:46	1:56:48	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5
03/07/94 08:55:11	1:57:13	25								Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/07/94 08:55:26	1:57:28	15								Perform NIR imaging (DHU SEQT 31)						
03/07/94 08:55:41	1:57:43	15								Select ST-A; Slew s/c sensors to nadir (GNC12N073)						Slew to nadir (inertial pointing)
03/07/94 08:56:11	1:58:13	30								Laser Power ON						
End L073 Prep3 Script																
03/07/94 08:57:36	1:59:38		-80.0	83.2	913.2					S80D						
L073 Mapping Script																
03/07/94 09:00:41	2:02:42	0														
03/07/94 09:01:41	2:03:43	60														
03/07/94 09:02:41	2:04:43	60	-89.3	168.3	782.5					South Pole						START MAPPING
03/07/94 09:03:19	2:05:21		-88.5	231.9	767.0					LDAWN						
03/07/94 09:07:07	2:09:09									PMK	AOS					
03/07/94 09:07:19	2:09:21	278	-80.0	255.4	674.2					S80A						
03/07/94 09:11:36	2:13:38	257	-70.0	257.4	587.1					S70A						
03/07/94 09:15:36	2:17:38	240	-60.0	258.0	520.5					S60A						
03/07/94 09:19:24	2:21:26		-50.0	258.3	473.0					S50A						
03/07/94 09:19:25	2:21:27	229	-50.0	258.3	473.0					S50A						Opaque filter did not park
03/07/94 09:23:05	2:25:07	220	-40.0	258.5	444.0					S40A						SSDR Segment 6
03/07/94 09:26:42	2:28:44	217	-30.0	258.7	432.9					S30A						
03/07/94 09:27:09	2:29:11		-28.7	258.7	432.8					Periselene						
03/07/94 09:30:18	2:32:20	216	-20.0	258.8	439.5					S20A						
03/07/94 09:33:57	2:35:59		-10.0	258.9	463.9					S10A						
03/07/94 09:33:58	2:36:00	220								S10A						
03/07/94 09:37:44	2:39:46	226	0.0	259.0	506.5					Equator - A						
03/07/94 09:41:40	2:43:42		10.0	259.1	568.2					N10A						UV and IR uncompressed
03/07/94 09:41:41	2:43:43	237								N10A						
03/07/94 09:45:52	2:47:54		20.0	259.1	649.8					N20A						Resume compression
03/07/94 09:45:53	2:47:55	252								N20A						

Orbit 73 Timeline - Tyne B Orbit

03/07/94 09:46:53	2:48:55	60												Laser power OFF		
03/07/94 09:50:25	2:52:27	212	30.0	259.2	752.6									N30A Load exposure table LUNARZ35N; Select DHU SEQT 10		
03/07/94 09:55:23	2:57:25	298	40.0	259.4	877.8									N40A Switch to inertial pointing (ORB_073RW); Load exposure table LUNARZ45N		Initiate oblique viewing
03/07/94 10:00:54	3:02:56	331	50.0	259.6	1026.7									N50A Load exposure table LUNARZ55N; Select DHU SEQT 11; Auto Exposure ON		AUTO EXPOSURE TEST
03/07/94 10:07:06	3:09:08	372	60.0	259.9	1199.9									N60A Load exposure table LUNAUT65N; Select DHU SEQT 12		
03/07/94 10:11:19	3:13:21	253												Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19		End oblique viewing - resume nadir pointing
03/07/94 10:14:08	3:16:10	169	70.0	260.5	1397.0									N70A Load exposure table LUNAUT75N; Select DHU SEQT 20		
03/07/94 10:22:11	3:24:13	483	80.0	262.4	1616.3									N80A Load exposure table LUNAUT85N; Select DHU SEQT 21		
03/07/94 10:23:11	3:25:13	60												Load DEQ_07.UMI into SEQT 7; Auto Exposure OFF		Restore compressed SEQT 7 END AUTOEXPOSURE TEST
End L073 Script																
03/07/94 10:31:22	3:33:24		89.3	349.1	1852.4									North Pole		
PostMap Script																
03/07/94 10:32:22	3:34:24	0												Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table		Slew to Vega using inertial pointing
03/07/94 10:32:39	3:34:41		88.5	51.3	1883.8									LDUSK		
03/07/94 10:39:22	3:41:24	420												Perform LWIR imaging (DHU SEQT 25)		Dark Field imaging starts
03/07/94 10:39:37	3:41:39	15												Perform NIR imaging (DHU SEQT 31)		
03/07/94 10:39:52	3:41:54	15												Perform UV0 imaging (DHU SEQT 29)		Radiometric imaging starts
03/07/94 10:39:58	3:42:00	6												Perform HR imaging (DHU SEQT 30)		
03/07/94 10:40:08	3:42:10	10												Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)		Slew HGA to Earth
03/07/94 10:41:52	3:43:54		80.0	74.6	2097.2									N80D		
03/07/94 10:46:08	3:48:10	360												Switch to HGA		READY FOR DATA DUMP
End PostMap Script																
03/07/94 10:48:00	3:50:02													Switch to DHU mode @ 128 kbps		Ground Command
03/07/94 10:50:00	3:52:02													Downlink SSSDR Segment 5		Ground Command
03/07/94 10:53:50	3:55:52		70.0	76.4	2339.9									N70D		
03/07/94 11:07:16	4:09:18		60.0	77.0	2562.4									N60D		

Orbit 73 Timeline - Tyne B Orbit

03/07/94 11:16:00	4:18:02									Downlink SDR Segment 6						Ground Command
03/07/94 11:22:01	4:24:03		50.0	77.2	2745.4					N50D						
03/07/94 11:36:54	4:38:56							GDS		AOS						
03/07/94 11:37:50	4:39:52		40.0	77.3	2869.5					N40D						
03/07/94 11:54:00	4:56:02										Downlink SDR Segment 7					Ground Command
03/07/94 11:54:16	4:56:18		30.0	77.3	2919.7					N30D						
03/07/94 11:56:21	4:58:23		28.7	77.3	2920.3					Aposelene						

Orbit 74 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/07/94 11:56:21	0:00:00		28.7	77.3	2920.3							Aposelene							Downlinking SSSR Segment 6 (orbit 73)
03/07/94 11:59:00	0:02:39												Downlink SSSR Segment 7						Ground Command
03/07/94 12:10:46	0:14:25		20.0	77.3	2889.5							N20D							
03/07/94 12:18:00	0:21:39												Uplink & schedule L074 scripts						Ground Command
03/07/94 12:19:21	0:23:00		14.7	77.3	2841.8							INPM							Enter penumbra
03/07/94 12:20:31	0:24:10		14.0	77.3	2833.7							INUM							Enter umbra
03/07/94 12:26:47	0:30:26		10.0	77.3	2782.8							N10D							
03/07/94 12:41:50	0:45:29		0.0	77.3	2613.0							Equator - D							
03/07/94 12:55:37	0:59:16		-10.0	77.3	2398.6							S10D							
03/07/94 13:05:00	1:08:39												SSDR to IDLE - downlink complete						Ground Command
03/07/94 13:07:01	1:10:40										MAD	LOS							
03/07/94 13:07:57	1:11:36		-20.0	77.3	2159.4							S20D							
03/07/94 13:11:20	1:14:59		-23.0	77.3	2086.3							OUTUM							Exit umbra
03/07/94 13:12:19	1:15:58		-23.9	77.3	2064.3							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/07/94 13:13:50	1:17:29	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/07/94 13:18:49	1:22:28		-30.0	77.3	1913.3							S30D							
03/07/94 13:28:21	1:32:00		-40.0	77.4	1673.7							S40D							
																			Standard Prep2 Script
03/07/94 13:33:35	1:37:14	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/07/94 13:36:39	1:40:18		-50.0	77.6	1449.8							S50D							
03/07/94 13:43:55	1:47:34		-60.0	77.9	1246.9							S60D							
																			L070 Prep3 Script
03/07/94 13:45:35	1:49:14	0											Msg "WRNG: Omni/2k in 1 min.."						
03/07/94 13:46:35	1:50:14	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/07/94 13:47:35	1:51:14	60											Switch to omni antennas						
03/07/94 13:48:35	1:52:14	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/07/94 13:49:05	1:52:44	30											UV & HR cameras ON						
03/07/94 13:50:19	1:53:58		-70.0	78.5	1067.7							S70D							
03/07/94 13:53:00	1:56:39	235											Select ST-A						
03/07/94 13:53:10	1:56:49	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1

Orbit 74 Timeline - Type A Orbit

03/07/94 13:53:35	1:57:14	25								Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/07/94 13:53:50	1:57:29	15								Perform NIR imaging (DHU SEQT 31)					
03/07/94 13:54:05	1:57:44	15								Select ST-A; Slew s/c sensors to nadir (GNC12N074)					Slew to nadir (inertial pointing)
03/07/94 13:54:35	1:58:14	30								Laser Power ON					
End L074 Prep3 Script															
03/07/94 13:56:00	1:59:39		-80.0	80.3	912.6					S80D					
L074 Mapping Script															
03/07/94 13:59:04	2:02:44	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/07/94 14:00:04	2:03:44	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)				START MAPPING
03/07/94 14:01:05	2:04:44	60	-89.3	166.6	781.8					South Pole	Set SA step rate to LO				
03/07/94 14:01:43	2:05:22		-88.5	229.8	766.5					LDAWN					
03/07/94 14:05:43	2:09:22	278	-80.0	252.8	673.7					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3				
03/07/94 14:09:59	2:13:38	256	-70.0	254.7	586.8					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4				
03/07/94 14:14:00	2:17:39	241	-60.0	255.3	520.3					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/07/94 14:17:48	2:21:27	228	-50.0	255.6	472.9					S50A	Record in SSSR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5				Opaque filter did not park SSDR Segment 2
03/07/94 14:21:29	2:25:08	221	-40.0	255.8	444.0					S40A	Load exposure table LUNARZ35S				
03/07/94 14:25:06	2:28:45	217	-30.0	256.0	433.0					S30A	Load exposure table LUNARZ25S				
03/07/94 14:25:32	2:29:11		-28.8	256.0	432.9					Periselene					
03/07/94 14:28:42	2:32:21	216	-20.0	256.1	439.7					S20A	Load exposure table LUNARZ15S				
03/07/94 14:32:21	2:36:00	219	-10.0	256.2	464.2					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/07/94 14:36:07	2:39:46	226	0.0	256.2	506.9					Equator - A	Record in SSSR Segment 3; Load CEQ_07U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3 UV and IR uncompressed
03/07/94 14:40:04	2:43:43	237	10.0	256.3	568.6					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8				Resume compression
03/07/94 14:44:16	2:47:55	252	20.0	256.4	650.3					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				
03/07/94 14:45:16	2:48:55	60									Laser power OFF				
03/07/94 14:48:49	2:52:28	213	30.0	256.5	753.2					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				
03/07/94 14:53:47	2:57:26	298	40.0	256.6	878.6					N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11				SSDR Segment 4

Orbit 74 Timeline - Type A Orbit

03/07/94 14:59:18	3:02:57	331								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12	HiRes imaging had not stopped
03/07/94 14:59:19	3:02:58		50.0	256.8	1027.6					N50A		
03/07/94 15:05:31	3:09:10	373	60.0	257.1	1200.8					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13	
03/07/94 15:12:33	3:16:12	422	70.0	257.7	1398.1					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
03/07/94 15:20:36	3:24:15	483	80.0	259.5	1617.4					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
03/07/94 15:21:36	3:25:15	60									Load DEQ_07.UMI into SEQT 7	Restore compressed SEQT 7
End L074 Script												
03/07/94 15:29:47	3:33:26		89.3	345.5	1853.3					North Pole		
Standard PostMap Script												
03/07/94 15:30:47	3:34:26	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table	Slew to Vega using inertial pointing
03/07/94 15:31:05	3:34:44		88.5	49.2	1885.1					LDUSK		
03/07/94 15:37:47	3:41:26	420									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/07/94 15:38:02	3:41:41	15									Perform NIR imaging (DHU SEQT 31)	
03/07/94 15:38:17	3:41:56	15									Perform UV0 imaging (DHU SEQT 29)	Radiometric imaging starts
03/07/94 15:38:23	3:42:02	6									Perform HR imaging (DHU SEQT 30)	
03/07/94 15:38:33	3:42:12	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/07/94 15:40:18	3:43:57		80.0	72.0	2098.4					N80D		
03/07/94 15:44:33	3:48:12	360									Switch to HGA	READY FOR DATA DUMP
End PostMap Script												
03/07/94 15:45:00	3:48:39										Switch to DHU mode @ 128 kbps	Ground Command
03/07/94 15:48:00	3:51:39										Downlink SSSR Segment 1	Ground Command
03/07/94 15:52:17	3:55:56		70.0	73.8	2341.0					N70D		
03/07/94 16:05:42	4:09:21		60.0	74.3	2563.4					N60D		
03/07/94 16:10:00	4:13:39										Uplink & schedule L075 scripts	Ground Command
03/07/94 16:20:00	4:23:39										Downlink SSSR Segment 2	Ground Command
03/07/94 16:20:28	4:24:07		50.0	74.5	2746.1					N50D		
03/07/94 16:36:17	4:39:56		40.0	74.6	2869.8					N40D		
03/07/94 16:38:39	4:42:18									CAN	AOS	
03/07/94 16:52:43	4:56:22		30.0	74.6	2919.6					N30D		
03/07/94 16:54:43	4:58:22		28.8	74.6	2920.2					Aposelene		

Orbit 75 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/07/94 16:54:43	0:00:00		28.8	74.6	2920.2							Aposelene							Downlinking SSSDR Segment 2 (Orbit 74)
03/07/94 17:02:00	0:07:17												Downlink SSSDR Segment 3						Ground Command
03/07/94 17:09:13	0:14:30		20.0	74.6	2889.0							N20D							
03/07/94 17:17:31	0:22:48		14.9	74.6	2843.2							INPM							Enter penumbra
03/07/94 17:18:39	0:23:56		14.2	74.6	2835.2							INUM							Enter umbra
03/07/94 17:25:14	0:30:31		10.0	74.6	2782.1							N10D							
03/07/94 17:40:17	0:45:34		0.0	74.6	2612.0							Equator - D							
03/07/94 17:46:00	0:51:16												Downlink SSSDR Segment 4						Ground Command
03/07/94 17:54:03	0:59:20		-10.0	74.5	2397.4						N	S10D							
03/07/94 18:06:00	1:11:17												Downlink SSSDR data patches						Ground Command
03/07/94 18:06:22	1:11:39		-20.0	74.6	2158.3							S20D							
03/07/94 18:08:00	1:13:17												SSDR to IDLE - downlink complete						Ground Command
03/07/94 18:09:59	1:15:16		-23.2	74.6	2080.1							OUTUM							Exit umbra
03/07/94 18:10:58	1:16:15		-24.1	74.6	2058.3							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/07/94 18:12:14	1:17:31	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/07/94 18:17:15	1:22:32		-30.0	74.6	1912.3							S30D							
03/07/94 18:17:36	1:22:53										PMK	LOS							
03/07/94 18:26:46	1:32:03		-40.0	74.7	1672.7							S40D							
																			Standard Prep2 Script
03/07/94 18:31:59	1:37:16	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/07/94 18:35:04	1:40:21		-50.0	74.8	1448.9							S50D							
03/07/94 18:42:20	1:47:36		-60.0	75.1	1246.2							S60D							
																			Err:508
03/07/94 18:43:59	1:49:16	0											Msg "WRNG: Omni/2k in 1 min.."						
03/07/94 18:44:59	1:50:16	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/07/94 18:45:59	1:51:16	60											Switch to omni antennas						
03/07/94 18:46:59	1:52:16	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/07/94 18:47:29	1:52:46	30											UV & HR cameras ON						
03/07/94 18:48:43	1:54:00		-70.0	75.7	1067.1							S70D							

Orbit 75 Timeline - Tyne B Orbit

03/07/94 18:51:24	1:56:41	235								Select ST-A									
03/07/94 18:51:34	1:56:51	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables									Start SSSR in Segment 5
03/07/94 18:51:59	1:57:16	25								Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts
03/07/94 18:52:14	1:57:31	15								Perform NIR imaging (DHU SEQT 31)									
03/07/94 18:52:29	1:57:46	15																	Err:508
03/07/94 18:52:59	1:58:16	30								Laser Power ON									
Err:508																			
03/07/94 18:54:24	1:59:41		-80.0	77.5	912.1					S80D									
Err:508																			
03/07/94 18:57:29	2:02:45	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S									
03/07/94 18:58:29	2:03:46	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)									START MAPPING
03/07/94 18:59:29	2:04:46	60	-89.4	163.9	781.5					South Pole Set SA step rate to LO									
03/07/94 19:00:07	2:05:24		-88.5	227.9	766.0					LDAWN									
03/07/94 19:04:06	2:09:23	277								S80A Load exposure table LUNARZ75S; Select DHU SEQT 17									
03/07/94 19:04:07	2:09:23		-80.0	250.2	673.4					S80A									
03/07/94 19:08:23	2:13:40	257	-70.0	252.0	586.6					S70A Load exposure table LUNARZ65S; Select DHU SEQT 18									
03/07/94 19:12:23	2:17:40	240								S60A Load exposure table LUNARZ55S; Select DHU SEQT 6									
03/07/94 19:12:24	2:17:41		-60.0	252.6	520.1					S60A									
03/07/94 19:16:12	2:21:29	229	-50.0	252.9	472.9					S50A Record in SSSR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5									Opaque filter did not park SSSR Segment 6
03/07/94 19:19:53	2:25:10	221	-40.0	253.1	444.1					S40A Load exposure table LUNARZ35S									
03/07/94 19:23:29	2:28:45	216	-30.0	253.3	433.1					S30A Load exposure table LUNARZ25S									
03/07/94 19:23:55	2:29:12		-28.8	253.3	433.0					Periselene									
03/07/94 19:27:06	2:32:23	217	-20.0	253.4	439.9					S20A Load exposure table LUNARZ15S									
03/07/94 19:30:45	2:36:02	219	-10.0	253.4	464.4					S10A Load exposure table LUNARZ05S; Select DHU SEQT 6									
03/07/94 19:34:31	2:39:48	226	0.0	253.5	507.2					Equator - A Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7									SSSR Segment 7
03/07/94 19:38:28	2:43:45	237	10.0	253.6	569.0					N10A Load exposure table LUNARZ15N; Select DHU SEQT 8									
03/07/94 19:42:40	2:47:56	252								N20A Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9									IR and UV uncompressed
03/07/94 19:42:41	2:47:58		20.0	253.7	650.8					N20A									
03/07/94 19:43:40	2:48:57	60								Laser power OFF									

Orbit 75 Timeline - Type B Orbit

03/07/94 19:47:13	2:52:30	213	30.0	253.8	753.8				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				Resume compression
03/07/94 19:52:11	2:57:28	298							N40A	Err:508				Initiate oblique viewing
03/07/94 19:52:12	2:57:29		40.0	253.9	879.3				N40A					
03/07/94 19:57:43	3:03:00	332	50.0	254.1	1028.3				N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11				HiRes imaging had not stopped
03/07/94 20:03:55	3:09:12	372							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12				
03/07/94 20:03:56	3:09:13		60.0	254.3	1201.7				N60A					
03/07/94 20:08:08	3:13:25	254								Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19				End oblique viewing - resume nadir pointing
03/07/94 20:10:58	3:16:15	169	70.0	254.9	1399.0				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20				
03/07/94 20:19:01	3:24:17	483	80.0	256.7	1618.4				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21				
03/07/94 20:20:01	3:25:18	60								Load DEQ_09.umi into SEQT 9				Restore compressed SEQT 9
Err:508														
03/07/94 20:28:13	3:33:30		89.4	343.1	1854.4				North Pole					
PostMap Script														
03/07/94 20:29:13	3:34:30	0								Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table				Slew to Vega using inertial pointing
03/07/94 20:29:31	3:34:48		88.5	47.3	1886.3				LDUSK					
03/07/94 20:36:13	3:41:30	420								Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/07/94 20:36:28	3:41:45	15								Perform NIR imaging (DHU SEQT 31)				
03/07/94 20:36:43	3:41:59	15								Perform UV0 imaging (DHU SEQT 29)				Radiometric imaging starts
03/07/94 20:36:49	3:42:06	6								Perform HR imaging (DHU SEQT 30)				
03/07/94 20:36:59	3:42:15	10								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)				Slew HGA to Earth
03/07/94 20:38:44	3:44:00		80.0	69.4	2099.5				N80D					
03/07/94 20:42:59	3:48:15	360								Switch to HGA				READY FOR DATA DUMP
End PostMap Script														
03/07/94 20:44:00	3:49:17									Switch to DHU mode @ 128 kbps				Ground Command
03/07/94 20:47:00	3:52:17									Downlink SDR Segment 5				Ground Command
03/07/94 20:50:43	3:56:00		70.0	71.1	2341.9				N70D					

Orbit 76 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/07/94 21:53:06	0:00:00		28.8	71.9	2920.0							Aposelene							Downlinking SSSR Segment 6 (orbit 75)
03/07/94 21:59:00	0:05:54												Downlink SSSR Segment 7						Ground Command
03/07/94 22:07:40	0:14:34		20.0	71.9	2888.6							N20D							
03/07/94 22:15:40	0:22:34		15.1	71.9	2844.6							INPM							Enter penumbra
03/07/94 22:16:48	0:23:42		14.4	71.9	2836.8							INUM							Enter umbra
03/07/94 22:23:41	0:30:35		10.0	71.9	2781.4							N10D							
03/07/94 22:38:43	0:45:37		0.0	71.8	2611.1							Equator - D							
03/07/94 22:52:29	0:59:23		-10.0	71.8	2396.5							S10D							
03/07/94 23:01:00	1:07:54												Downlink SSSR data patches						Ground Command
03/07/94 23:04:48	1:11:42		-20.0	71.8	2157.4							S20D							
03/07/94 23:08:38	1:15:32		-23.4	71.8	2074.1							OUTUM							Exit umbra
03/07/94 23:09:36	1:16:30		-24.3	71.8	2052.5							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/07/94 23:10:38	1:17:32	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/07/94 23:15:40	1:22:34		-30.0	71.9	1911.4							S30D							
03/07/94 23:18:00	1:24:54												SSDR to IDLE - downlink complete						Ground Command
03/07/94 23:25:10	1:32:04		-40.0	71.9	1671.9							S40D							
																			Standard Prep2 Script
03/07/94 23:30:23	1:37:17	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/07/94 23:33:28	1:40:22		-50.0	72.1	1448.2							S50D							
03/07/94 23:40:44	1:47:38		-60.0	72.3	1245.6							S60D							
																			Err:508
03/07/94 23:42:23	1:49:17	0											Msg "WRNG: Omni/2k in 1 min.."						
03/07/94 23:43:23	1:50:17	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/07/94 23:44:23	1:51:17	60											Switch to omni antennas						
03/07/94 23:45:23	1:52:17	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/07/94 23:45:53	1:52:47	30											UV & HR cameras ON						
03/07/94 23:47:07	1:54:01		-70.0	72.9	1066.6							S70D							
03/07/94 23:49:48	1:56:42	235											Select ST-A						
03/07/94 23:49:58	1:56:52	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1

Orbit 76 Timeline - Type A Orbit

03/07/94 23:50:23	1:57:17	25								Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/07/94 23:50:38	1:57:32	15								Perform NIR imaging (DHU SEQT 31)							
03/07/94 23:50:53	1:57:47	15															Slew to nadir (inertial pointing)
03/07/94 23:51:23	1:58:17	30								Laser Power ON							
Err:508																	
03/07/94 23:52:48	1:59:42			-80.0	74.7	911.8				S80D							
Err:508																	
03/07/94 23:55:52	2:02:47	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S							
03/07/94 23:56:53	2:03:47	60								Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)							START MAPPING
03/07/94 23:57:53	2:04:47	60		-89.4	161.0	781.2				South Pole Set SA step rate to LO							
03/07/94 23:58:31	2:05:25			-88.5	226.0	765.7				LDAWN							
03/08/94 00:02:30	2:09:24	277								S80A Load exposure table LUNARZ75S; Select DHU SEQT 3							
03/08/94 00:02:31	2:09:25			-80.0	247.6	673.2				S80A							
03/08/94 00:06:47	2:13:41	257		-70.0	249.3	586.5				S70A Load exposure table LUNARZ65S; Select DHU SEQT 4							
03/08/94 00:10:47	2:17:41	240								S60A Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/08/94 00:10:48	2:17:42			-60.0	249.9	520.1				S60A							
03/08/94 00:14:36	2:21:30	229		-50.0	250.2	472.9				S50A Record in SSSR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5							Opaque filter did not park SSDR Segment 2
03/08/94 00:18:16	2:25:10	220								S40A Load exposure table LUNARZ35S							
03/08/94 00:18:17	2:25:11			-40.0	250.4	444.2				S40A							
03/08/94 00:21:53	2:28:47	217		-30.0	250.5	433.3				S30A Load exposure table LUNARZ25S							
03/08/94 00:22:18	2:29:12			-28.9	250.6	433.2				Periselene							
03/08/94 00:25:29	2:32:23	216								S20A Load exposure table LUNARZ15S							
03/08/94 00:25:30	2:32:24			-20.0	250.6	440.1				S20A							
03/08/94 00:29:09	2:36:03	220		-10.0	250.7	464.7				S10A Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/08/94 00:32:55	2:39:49	226								MEQA Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7							SSDR segment 3
03/08/94 00:32:56	2:39:50			0.0	250.8	507.6				Equator - A							
03/08/94 00:36:52	2:43:46	237								N10A Load exposure table LUNARZ15N; Select DHU SEQT 8							
03/08/94 00:36:53	2:43:47			10.0	250.9	569.5				N10A							
03/08/94 00:41:05	2:47:59	253		20.0	250.9	651.3				N20A Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9							UV and IR uncompressed
03/08/94 00:42:05	2:48:59	60								Laser power OFF							

Orbit 76 Timeline - Type A Orbit

03/08/94 00:45:37	2:52:31	212	30.0	251.0	754.4					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						Resume compression
03/08/94 00:50:36	2:57:30	299	40.0	251.1	879.9					N40A	Record in SSSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11						SSDR Segment 4
03/08/94 00:56:07	3:03:01	331								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12						HiRes imaging had not stopped
03/08/94 00:56:08	3:03:02		50.0	251.3	1029.1					N50A							
03/08/94 01:02:20	3:09:14	373	60.0	251.6	1202.5					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13						
03/08/94 01:09:23	3:16:17	423	70.0	252.1	1399.9					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						
03/08/94 01:17:26	3:24:20	483								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15						
03/08/94 01:17:27	3:24:21		80.0	253.9	1619.3					N80A							
03/08/94 01:18:26	3:25:20	60									Load DEQ_09.UMI into SEQT 9						Restore compressed SEQT 9
Err:508																	
03/08/94 01:26:38	3:33:32		89.4	339.7	1855.2					North Pole							
Standard PostMap Script																	
03/08/94 01:27:38	3:34:32	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table						Slew to Vega using inertial pointing
03/08/94 01:27:57	3:34:51		88.5	45.4	1887.3					LDUSK							
03/08/94 01:34:38	3:41:32	420									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/08/94 01:34:53	3:41:47	15									Perform NIR imaging (DHU SEQT 31)						
03/08/94 01:35:08	3:42:02	15									Perform UV0 imaging (DHU SEQT 29)						Radiometric imaging starts
03/08/94 01:35:14	3:42:08	6									Perform HR imaging (DHU SEQT 30)						
03/08/94 01:35:24	3:42:18	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/08/94 01:37:10	3:44:04		80.0	66.7	2100.4					N80D							
03/08/94 01:41:24	3:48:18	360									Switch to HGA						READY FOR DATA DUMP
End PostMap Script																	
03/08/94 01:43:00	3:49:54										Switch to DHU mode @ 128 kbps; Downlink SSSDR Segment 1						Ground Command
03/08/94 01:49:09	3:56:03		70.0	68.4	2342.8					N70D							
03/08/94 01:52:00	3:58:54										Uplink & schedule L077 scripts						Ground Command
03/08/94 02:02:36	4:09:30		60.0	68.9	2564.8					N60D							
03/08/94 02:17:22	4:24:16		50.0	69.1	2747.1					N50D							

Orbit 77 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/08/94 02:51:30	0:00:00		28.9	69.2	2919.8							Aposelene							Downlinking SSSR Segment 2 (Orbit 76)
03/08/94 03:04:00	0:12:30												Downlink SSSR Segment 3						Ground Command
03/08/94 03:06:07	0:14:37		20.0	69.2	2888.1							N20D							
03/08/94 03:13:50	0:22:20		15.2	69.2	2845.9							INPM							Enter penumbra
03/08/94 03:14:57	0:23:26		14.5	69.2	2838.2							INUM							Enter umbra
03/08/94 03:22:07	0:30:37		10.0	69.1	2780.7							N10D							
03/08/94 03:37:09	0:45:39		0.0	69.1	2610.3							Equator - D							
03/08/94 03:41:00	0:49:30												Downlink SSSR Segment 4						Ground Command
03/08/94 03:50:54	0:59:24		-10.0	69.1	2395.6					N		S10D							
03/08/94 04:03:13	1:11:43		-20.0	69.1	2156.5					N		S20D							
03/08/94 04:07:17	1:15:47		-23.6	69.1	2068.3							OUTUM							Exit umbra
03/08/94 04:08:14	1:16:44		-24.5	69.1	2046.9							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/08/94 04:09:02	1:17:32	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/08/94 04:14:05	1:22:35		-30.0	69.1	1910.6							S30D							
03/08/94 04:23:35	1:32:05		-40.0	69.2	1671.2							S40D							
																			Standard Prep2 Script
03/08/94 04:28:47	1:37:17	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/08/94 04:31:53	1:40:23		-50.0	69.3	1447.6							S50D							
03/08/94 04:39:08	1:47:38		-60.0	69.6	1245.1							S60D							
																			Err:508
03/08/94 04:40:47	1:49:17	0											Msg "WRNG: Omni/2k in 1 min.."						
03/08/94 04:41:47	1:50:17	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/08/94 04:42:47	1:51:17	60											Switch to omni antennas						
03/08/94 04:43:47	1:52:17	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/08/94 04:44:17	1:52:47	30											UV & HR cameras ON						
03/08/94 04:45:32	1:54:02		-70.0	70.1	1066.2							S70D							
03/08/94 04:48:12	1:56:42	235											Select ST-A						
03/08/94 04:48:22	1:56:52	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5

Orbit 77 Timeline - Type B Orbit

03/08/94 04:48:47	1:57:17	25								Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/08/94 04:49:02	1:57:32	15								Perform NIR imaging (DHU SEQT 31)								
03/08/94 04:49:17	1:57:47	15																Slew to nadir (inertial pointing)
03/08/94 04:49:47	1:58:17	30								Laser Power ON								
Err:508																		
03/08/94 04:51:12	1:59:42			-80.0	71.8	911.5				S80D								
03/08/94 04:51:20	1:59:50									MAD	AOS							
Err:508																		
03/08/94 04:54:17	2:02:47	0																
03/08/94 04:55:17	2:03:47	60																
03/08/94 04:56:17	2:04:47	60		-89.4	157.9	781.1				South Pole								START MAPPING
03/08/94 04:56:55	2:05:24			-88.6	224.2	765.4				LDAWN								
03/08/94 05:00:54	2:09:24	277								S80A								
03/08/94 05:00:55	2:09:25			-80.0	245.0	673.1				S80A								
03/08/94 05:05:11	2:13:41	257		-70.0	246.7	586.5				S70A								
03/08/94 05:09:11	2:17:41	240								S60A								
03/08/94 05:09:12	2:17:42			-60.0	247.2	520.2				S60A								
03/08/94 05:13:00	2:21:30	229		-50.0	247.5	473.1				S50A								
03/08/94 05:15:25	2:23:55									CAN	LOS							
03/08/94 05:16:40	2:25:10	220								S40A								
03/08/94 05:16:41	2:25:10			-40.0	247.7	444.4				S40A								
03/08/94 05:19:00	2:27:30																	
03/08/94 05:20:17	2:28:47	217								S30A								
03/08/94 05:20:18	2:28:48			-30.0	247.8	433.6				S30A								
03/08/94 05:20:42	2:29:12			-28.9	247.8	433.4				Periselene								
03/08/94 05:23:54	2:32:24	217		-20.0	247.9	440.4				S20A								
03/08/94 05:27:33	2:36:03	219		-10.0	248.0	465.1				S10A								
03/08/94 05:30:17	2:38:47																	
																		Missing data
03/08/94 05:31:19	2:39:49	226								MEQA								
03/08/94 05:31:20	2:39:50			0.0	248.1	508.0				Equator - A								
03/08/94 05:31:30	2:40:00																	Data resumes
03/08/94 05:35:16	2:43:46	237								N10A								

Orbit 77 Timeline - Type B Orbit

03/08/94 05:35:17	2:43:46		10.0	248.1	570.0					N10A								
03/08/94 05:39:29	2:47:59	253	20.0	248.2	651.9					N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9							IR and UV uncompressed
03/08/94 05:40:29	2:48:59	60									Laser power OFF							
03/08/94 05:44:01	2:52:31	212								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							Resume compression
03/08/94 05:44:02	2:52:32		30.0	248.3	755.0					N30A								
03/08/94 05:49:00	2:57:30	299								N40A	Err:508							Initiate oblique viewing
03/08/94 05:49:01	2:57:31		40.0	248.4	880.6					N40A								
03/08/94 05:54:32	3:03:02	332								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11							HiRes imaging had not stopped
03/08/94 05:54:33	3:03:03		50.0	248.6	1029.8					N50A								
03/08/94 06:00:45	3:09:15	373								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12							
03/08/94 06:00:46	3:09:16		60.0	248.8	1203.3					N60A								
03/08/94 06:04:58	3:13:28	254									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19							End oblique viewing - resume nadir pointing
03/08/94 06:07:48	3:16:18	169								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20							
03/08/94 06:07:49	3:16:19		70.0	249.4	1400.7					N70A								
03/08/94 06:15:51	3:24:21	483								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21							
03/08/94 06:15:52	3:24:22		80.0	251.0	1620.1					N80A								
03/08/94 06:16:51	3:25:21	60									Load DEQ_09.UMI into SEQT 9							Restore compressed SEQT 9
Err:508																		
03/08/94 06:25:04	3:33:34		89.4	336.8	1856.0					North Pole								
PostMap Script																		
03/08/94 06:26:04	3:34:34	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table							Slew to Vega using inertial pointing
03/08/94 06:26:23	3:34:53		88.6	43.6	1888.3					LDUSK								
03/08/94 06:33:04	3:41:34	420									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/08/94 06:33:19	3:41:49	15									Perform NIR imaging (DHU SEQT 31)							
03/08/94 06:33:34	3:42:04	15									Perform UV0 imaging (DHU SEQT 29)							Radiometric imaging starts
03/08/94 06:33:40	3:42:10	6									Perform HR imaging (DHU SEQT 30)							

Orbit 78 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/08/94 07:49:53	0:00:00		28.9	66.5	2919.6							Aposelene							Downlinking SSSDR Segment 6 (orbit 77)
03/08/94 07:54:00	0:04:07												Downlink SSSDR Segment 7						Ground Command
03/08/94 08:04:33	0:14:40		20.0	66.4	2887.6							N20D							
03/08/94 08:12:00	0:22:07		15.4	66.4	2847.1							INPM							Enter penumbra
03/08/94 08:13:06	0:23:13		14.7	66.4	2839.6							INUM							Enter umbra
03/08/94 08:18:00	0:28:07												Uplink & schedule L078 scripts						Ground Command
03/08/94 08:20:33	0:30:40		10.0	66.4	2780.1							N10D							
03/08/94 08:35:35	0:45:42		0.0	66.4	2609.5							Equator - D							
03/08/94 08:49:20	0:59:27		-10.0	66.4	2394.8							S10D							
03/08/94 09:01:00	1:11:07												Downlink SSSDR data patches						Ground Command
03/08/94 09:01:38	1:11:45		-20.0	66.3	2155.8							S20D							
03/08/94 09:05:55	1:16:02		-23.8	66.4	2062.8							OUTUM							Exit umbra
03/08/94 09:06:51	1:16:58		-24.6	66.4	2041.6							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/08/94 09:07:26	1:17:33	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/08/94 09:12:30	1:22:37		-30.0	66.4	1909.9							S30D							
03/08/94 09:22:00	1:32:07		-40.0	66.4	1670.7							S40D	Update state vector (GNC53_08MAR0915)						Ground Command
																			Standard Prep2 Script
03/08/94 09:27:11	1:37:18	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/08/94 09:30:18	1:40:25		-50.0	66.6	1447.2							S50D							
03/08/94 09:31:00	1:41:07												SSDR to IDLE - downlink complete						Ground Command
03/08/94 09:37:33	1:47:40		-60.0	66.8	1244.8							S60D							
																			Err:508
03/08/94 09:39:11	1:49:18	0											Msg "WRNG: Omni/2k in 1 min.."						
03/08/94 09:40:11	1:50:18	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/08/94 09:41:11	1:51:18	60											Switch to omni antennas						
03/08/94 09:42:11	1:52:18	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/08/94 09:42:41	1:52:48	30											UV & HR cameras ON						
03/08/94 09:43:56	1:54:03		-70.0	67.3	1066.0							S70D							
03/08/94 09:44:39	1:54:46										PMK	AOS							
03/08/94 09:46:36	1:56:43	235											Select ST-A						

Orbit 78 Timeline - Type A Orbit

03/08/94 09:46:46	1:56:53	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables							Start SSSR in Segment 1
03/08/94 09:47:11	1:57:18	25								Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/08/94 09:47:26	1:57:33	15								Perform NIR imaging (DHU SEQT 31)							
03/08/94 09:47:41	1:57:48	15															Err:508
03/08/94 09:48:11	1:58:18	30								Laser Power ON							
Err:508																	
03/08/94 09:49:36	1:59:43			-80.0	68.9	911.4				S80D							
Err:508																	
03/08/94 09:52:41	2:02:48	0															
03/08/94 09:53:41	2:03:48	60															
03/08/94 09:54:41	2:04:48	60	-89.4	154.5	781.1					South Pole							START MAPPING
03/08/94 09:55:20	2:05:27		-88.6	222.4	765.3					LDAWN							
03/08/94 09:59:18	2:09:25	277								S80A							
03/08/94 09:59:19	2:09:26		-80.0	242.4	673.1					S80A							
03/08/94 10:03:35	2:13:42	257								S70A							
03/08/94 10:03:36	2:13:43		-70.0	244.0	586.5					S70A							
03/08/94 10:07:35	2:17:42	240								S60A							
03/08/94 10:07:36	2:17:43		-60.0	244.6	520.3					S60A							
03/08/94 10:11:24	2:21:31	229	-50.0	244.8	473.2					S50A							
03/08/94 10:15:04	2:25:11	220								S40A							
03/08/94 10:15:05	2:25:12		-40.0	245.0	444.6					S40A							
03/08/94 10:18:41	2:28:48	217								S30A							
03/08/94 10:18:42	2:28:49		-30.0	245.1	433.9					S30A							
03/08/94 10:19:05	2:29:12		-28.9	245.1	433.8					Periselene							
03/08/94 10:22:18	2:32:25	217	-20.0	245.2	440.8					S20A							
03/08/94 10:25:57	2:36:04	219								S10A							
03/08/94 10:25:58	2:36:05		-10.0	245.3	465.5					S10A							
03/08/94 10:29:44	2:39:51	227	0.0	245.3	508.5					Equator - A							
03/08/94 10:33:41	2:43:48	237								N10A							

Orbit 78 Timeline - Type A Orbit

03/08/94 10:33:42	2:43:49		10.0	245.4	570.5					N10A									
03/08/94 10:37:53	2:48:00	252								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								Resume compression
03/08/94 10:37:54	2:48:01		20.0	245.5	652.5					N20A									
03/08/94 10:38:53	2:49:00	60									Laser power OFF								
03/08/94 10:42:26	2:52:33	213								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/08/94 10:42:27	2:52:34		30.0	245.6	755.6					N30A									
03/08/94 10:47:25	2:57:32	299								N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4
03/08/94 10:47:26	2:57:33		40.0	245.7	881.3					N40A									
03/08/94 10:52:57	3:03:04	332								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12								HiRes imaging had not stopped
03/08/94 10:52:58	3:03:05		50.0	245.8	1030.5					N50A									
03/08/94 10:59:10	3:09:17	373								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/08/94 10:59:11	3:09:18		60.0	246.1	1204.1					N60A									
03/08/94 11:06:13	3:16:20	423								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								
03/08/94 11:06:14	3:16:21		70.0	246.6	1401.5					N70A									
03/08/94 11:14:17	3:24:24	484								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
03/08/94 11:14:18	3:24:25		80.0	248.1	1620.9					N80A									
03/08/94 11:15:17	3:25:24	60									Load DEQ_08.UMI into SEQT 8								Restore compressed SEQT 8
Err:508																			
03/08/94 11:23:30	3:33:37		89.4	334.1	1856.8					North Pole									
Standard PostMap Script																			
03/08/94 11:24:30	3:34:37	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table								Slew to Vega using inertial pointing
03/08/94 11:24:50	3:34:57		88.6	41.8	1889.3					LDUSK									
03/08/94 11:31:30	3:41:37	420									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/08/94 11:31:45	3:41:52	15									Perform NIR imaging (DHU SEQT 31)								
03/08/94 11:32:00	3:42:07	15									Perform UV0 imaging (DHU SEQT 29)								Radiometric imaging starts
03/08/94 11:32:06	3:42:13	6									Perform HR imaging (DHU SEQT 30)								
03/08/94 11:32:16	3:42:23	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth

Orbit 78 Timeline - Type A Orbit

03/08/94 11:34:03	3:44:10		80.0	61.5	2102.0						N80D								
03/08/94 11:38:15	3:48:23	360										Switch to HGA							READY FOR DATA DUMP
End PostMap Script																			
03/08/94 11:42:00	3:52:07											Switch to DHU mode @ 128 kbps							Ground Command
03/08/94 11:44:00	3:54:07											Downlink SSSDR1 commanded - failed!							Ground Command - lock lost
HKP RESET																			
Ground Command (time approx.) - software reload started																			
03/08/94 11:50:00	4:00:07																		
03/08/94 11:46:02	3:56:09		70.0	63.1	2344.1						N70D								
03/08/94 11:59:29	4:09:36		60.0	63.5	2565.8						N60D								
03/08/94 12:14:15	4:24:22		50.0	63.7	2747.6						N50D								
03/08/94 12:16:05	4:26:12										GDS	AOS							
03/08/94 12:30:05	4:40:12		40.0	63.8	2870.2							N40D							
03/08/94 12:46:31	4:56:38		30.0	63.8	2918.8							N30D							
03/08/94 12:48:17	4:58:24		28.9	63.8	2919.2							Aposelene							

Orbit 79 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/08/94 12:48:17	0:00:00		28.9	63.8	2919.2							Aposelene	Reloading software						Reloading software from ground after Orbit 78 HKP reset
03/08/94 13:03:00	0:14:43		20.0	63.7	2887.1							N20D							
03/08/94 13:10:10	0:21:53		15.6	63.7	2848.3							INPM							Enter penumbra
03/08/94 13:11:16	0:22:59		14.9	63.7	2840.9							INUM							Enter umbra
03/08/94 13:18:59	0:30:42		10.0	63.7	2779.4							N10D							
03/08/94 13:34:01	0:45:44		0.0	63.6	2608.8							Equator - D							
03/08/94 13:47:45	0:59:28		-10.0	63.6	2394.1							S10D							
03/08/94 14:00:03	1:11:46		-20.0	63.6	2155.1							S20D							
03/08/94 14:04:32	1:16:15		-24.0	63.6	2057.6							OUTUM							Exit umbra
03/08/94 14:05:28	1:17:11		-24.8	63.6	2036.6							OUTPM							Exit penumbra
03/08/94 14:08:42	1:20:25										MAD	LOS							
03/08/94 14:10:55	1:22:38		-30.0	63.6	1909.3							S30D							
03/08/94 14:20:24	1:32:07		-40.0	63.7	1670.2							S40D							
03/08/94 14:28:42	1:40:25		-50.0	63.8	1446.8							S50D							
03/08/94 14:34:35	1:46:18												Load state vector (GNC53_08MAR1400)						Ground Command
03/08/94 14:35:57	1:47:40		-60.0	64.0	1244.5							S60D							
03/08/94 14:42:20	1:54:03		-70.0	64.5	1065.9							S70D							
03/08/94 14:42:30	1:54:13												NIR camera & cryocooler ON; SA mode to AUTO						Ground Command
03/08/94 14:45:13	1:56:56												Uplink & schedule L079 scripts						Ground Command
03/08/94 14:46:00	1:57:43												Sensor door OPEN						Ground Command
03/08/94 14:48:01	1:59:44		-80.0	66.1	911.4							S80D							
03/08/94 14:51:00	2:02:43												LWIR camera & cryocooler ON; Record in SSDR Segment 5						Ground Command
03/08/94 14:53:06	2:04:49		-89.5	154.6	780.8							South Pole							
03/08/94 14:53:44	2:05:27		-88.6	220.7	765.3							LDAWN							
																			Err:508
03/08/94 14:56:31	2:08:14	0											Msg "WRNG: Omni/2k in 1 min.."; IR cameras & cryocoolers ON; UV & HR cameras ON; Open sensor door if closed						NOTE: S/C time was off by 29 sec. Script was scheduled to start at 14:57:00
03/08/94 14:57:31	2:09:14	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/08/94 14:57:43	2:09:26		-80.0	239.8	673.2							S80A							

Orbit 79 Timeline - Type B Orbit

03/08/94 14:58:31	2:10:14	60								Switch to omni antennas; SA step rate to HI; Record in SSSR Segment 5; Select ST-A; Slew s/c sensors to nadir (ACSMMode=LunarMpping)						Start SSSR in Segment 5
03/08/94 14:59:01	2:10:44	30								Laser power on						Slew to nadir
Err:508																
03/08/94 15:02:00	2:13:43		-70.0	241.4	586.7					S70A						
Err:508																
03/08/94 15:04:31	2:16:14	0														NOTE: S/C time was off by 29 sec. Script was scheduled to start at 15:05:00
03/08/94 15:04:36	2:16:19	5														Initialize filters (DHU SEQT 28)
03/08/94 15:05:30	2:17:13	54														Park opaque filter on HiRes (DHU SEQT 27); Switch to lunar mapping mode (ACSMMode=LunarMapping)
03/08/94 15:06:00	2:17:43		-60.0	241.9	520.5					S60A						Load exposure table LUNARZ55S; Start Imaging (DHU SEQT 6)
START MAPPING																
03/08/94 15:09:19	2:21:02	229								S50A						SA step rate to LO; Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5
SSDR Segment 6																
03/08/94 15:09:49	2:21:32		-50.0	242.1	473.5					S50A						
03/08/94 15:13:00	2:24:43	221								S40A						Load exposure table LUNARZ35S
03/08/94 15:13:29	2:25:12		-40.0	242.3	444.9					S40A						
03/08/94 15:16:37	2:28:20	217								S30A						Load exposure table LUNARZ25S
03/08/94 15:17:06	2:28:49		-30.0	242.4	434.2					S30A						
03/08/94 15:17:29	2:29:12		-28.9	242.4	434.1					Periselene						
03/08/94 15:20:13	2:31:56	216								S20A						Load exposure table LUNARZ15S
03/08/94 15:20:43	2:32:26		-20.0	242.5	441.2					S20A						
03/08/94 15:23:53	2:35:36	220								S10A						Load exposure table LUNARZ05S; Select DHU SEQT 6
03/08/94 15:24:22	2:36:05		-10.0	242.6	466.0					S10A						
03/08/94 15:27:39	2:39:22	226								MEQA						Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7
SSDR Segment 7																
03/08/94 15:28:09	2:39:52		0.0	242.6	509.0					Equator - A						
03/08/94 15:31:37	2:43:19	238								N10A						Load exposure table LUNARZ15N; Select DHU SEQT 8
03/08/94 15:32:06	2:43:49		10.0	242.7	571.0					N10A						
03/08/94 15:35:48	2:47:31	252								N20A						Load exposure table LUNARZ25N; Select DHU SEQT 9
03/08/94 15:36:19	2:48:02		20.0	242.7	653.0					N20A						
03/08/94 15:36:49	2:48:31	60														Laser power OFF
03/08/94 15:40:21	2:52:03	212								N30A						Load exposure table LUNARZ35N; Select DHU SEQT 10
03/08/94 15:40:52	2:52:35		30.0	242.8	756.3					N30A						

Orbit 79 Timeline - Type B Orbit

03/08/94 16:44:29	3:56:12		70.0	60.4	2344.7						N70D						
03/08/94 16:57:56	4:09:39		60.0	60.9	2566.1						N60D						
03/08/94 17:10:00	4:21:43											Downlink SDR Segment 2 (orb 78)					Ground Command
03/08/94 17:12:42	4:24:25		50.0	61.0	2747.7						N50D						
03/08/94 17:28:31	4:40:14		40.0	61.1	2870.0						N40D						
03/08/94 17:30:00	4:41:43																Lost lock - PMK problem
03/08/94 17:32:00	4:43:43																Lock regained
03/08/94 17:39:36	4:51:19									CAN	AOS						
03/08/94 17:40:00	4:51:43											Uplink & schedule L080 scripts					Ground Command
03/08/94 17:44:57	4:56:40		30.0	61.0	2918.4						N30D						
03/08/94 17:46:40	4:58:23		29.0	61.0	2918.8						Aposelene						

Orbit 80 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTON	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/08/94 17:46:40	0:00:00		29.0	61.0	2918.8							Aposelene							Downlinking SSSDR Segment 2 (orbit 78)
03/08/94 17:51:00	0:04:20												Reset s/c time						Ground Command S/C time error reduced from ~29 sec to 0
03/08/94 17:52:00	0:05:20												Downlink SSSDR Segment 3 (orb 78)						Ground Command
03/08/94 18:01:26	0:14:46		20.0	61.0	2886.6							N20D							
03/08/94 18:08:20	0:21:40		15.7	61.0	2849.3							INPM							Enter penumbra
03/08/94 18:09:26	0:22:46		15.1	61.0	2842.1							INUM							Enter umbra
03/08/94 18:17:25	0:30:45		10.0	61.0	2778.7							N10D							
03/08/94 18:31:00	0:44:20												Downlink SSSDR Segment 4 (orb 78)						Ground Command
03/08/94 18:32:26	0:45:46		0.0	60.9	2608.1							Equator - D							
03/08/94 18:46:11	0:59:31		-10.0	60.9	2393.4							S10D							
03/08/94 18:51:00	1:04:20												Downlink SSSDR data patches (orbit 78)						Ground Command
03/08/94 18:58:28	1:11:48		-20.0	60.9	2154.5							S20D							
03/08/94 19:02:43	1:16:03												ST-B door OPEN						Ground Command
03/08/94 19:03:09	1:16:29		-24.1	60.9	2052.5							OUTUM							Exit umbra
																			Standard Prep1 Script
03/08/94 19:03:59	1:17:19	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/08/94 19:04:04	1:17:24		-25.0	60.9	2031.7							OUTPM							Exit penumbra
03/08/94 19:06:01	1:19:21												Restart SCL						Ground Command
03/08/94 19:06:32	1:19:52												Select ST-B						NOTE: wiped out previously scheduled L080 scripts!
03/08/94 19:09:19	1:22:39		-30.0	60.9	1908.8							S30D							Ground Command
03/08/94 19:18:49	1:32:09		-40.0	60.9	1669.8							S40D							
03/08/94 19:20:46	1:34:06										PMK	LOS							
03/08/94 19:27:00	1:40:20												ST-A door OPEN						Ground Command
03/08/94 19:27:06	1:40:26		-50.0	61.0	1446.6							S50D							
03/08/94 19:31:00	1:44:20												Select ST-A						Ground Command
03/08/94 19:33:00	1:46:20												Reupload L080 scripts						Ground Command
03/08/94 19:34:21	1:47:41		-60.0	61.3	1244.4							S60D							Scripts were wiped out when the SCL was restarted
03/08/94 19:40:45	1:54:05		-70.0	61.7	1065.8							S70D							
03/08/94 19:41:00	1:54:20												LWIR camera & cryocooler ON						Ground Command
																			Err:508
03/08/94 19:41:45	1:55:05	0											Msg "WRNG: Omni/2k in 1 min.."						STARTED LATE DUE TO SCRIPT WIPEOUT/RELOAD: scheduled start time was 19:35:59 - executed immediately from ground

Orbit 80 Timeline - Tyne A Orbit

03/08/94 19:42:45	1:56:05	60									SSDR to IDLE; Switch to 2 kbps bypass mode					
03/08/94 19:43:45	1:57:05	60									Switch to omni antennas					
03/08/94 19:44:45	1:58:05	60									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)					Slew to Crux
03/08/94 19:45:15	1:58:35	30									UV & HR cameras ON					
03/08/94 19:46:25	1:59:45		-80.0	63.2	911.4					S80D						
03/08/94 19:41:00	1:54:20										Record in SSDR Segment 1					Ground Command
03/08/94 19:49:10	2:02:30	235									Select ST-A					
03/08/94 19:49:20	2:02:40	10									Park opaque filter on HiRes (DHU SEQT 27); Record in SSDR Segment 1; Load lunar dark exposure tables					Start SSDR in Segment 1
03/08/94 19:49:45	2:03:05	25									Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/08/94 19:50:00	2:03:20	15									Perform NIR imaging (DHU SEQT 31)					
03/08/94 19:50:15	2:03:35	15										Err:508				Slew to nadir (inertial pointing)
03/08/94 19:50:45	2:04:05	30									Laser Power ON					
																Err:508
																Err:508
03/08/94 19:50:49	2:04:09	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					STARTED LATE BECAUSE OF LATE EXECUTION OF PREP3 SCRIPT: scheduled start time was 19:49:29
03/08/94 19:51:30	2:04:50		-89.5	150.7	781.0					South Pole						
03/08/94 19:51:49	2:05:09	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)					PREVIOUS SLEW NOT COMPLETE! RW speed exceeded redline and momentum dump automatically executed - spacecraft tumbling
03/08/94 19:52:09	2:05:29		-88.6	219.0	765.3					LDAWN						
03/08/94 19:52:49	2:06:09	60								MAXS	Set SA step rate to LO					
03/08/94 19:53:00	2:06:20										Turn RWs OFF; GNC to CloseLoopSpin mode; Turn RWs ON; Set RWs to NO TORQUE; GNC to CloseLoopSpin mode; Turn RWs ON					MOMENTUM DUMP RECOVERY!
03/08/94 19:56:07	2:09:27		-80.0	237.2	673.3					S80A						Ground Command
03/08/94 19:57:27	2:10:47	278								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3					
03/08/94 20:00:24	2:13:44		-70.0	238.7	586.9					S70A						
03/08/94 20:01:00	2:14:20										Switch to lunar mapping mode (ACSMODE=LunarMapping)					Ground Command (time approx.)

Orbit 80 Timeline - Type A Orbit

03/08/94 20:01:43	2:15:03	256								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4										
03/08/94 20:02:00	2:15:20																			START LUNAR MAPPING Spacecraft stable and pointing to nadir (time approx.)	
03/08/94 20:04:24	2:17:44		-60.0	239.2	520.8					S60A											
03/08/94 20:05:44	2:19:04	241								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6										
03/08/94 20:08:13	2:21:33		-50.0	239.4	473.8					S50A											
03/08/94 20:09:32	2:22:52	228								S50A	Record in SDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5									Opaque filter did not park SSDR Segment 2	
03/08/94 20:11:54	2:25:14		-40.0	239.6	445.3					S40A											
03/08/94 20:13:13	2:26:33	221								S40A	Load exposure table LUNARZ35S										
03/08/94 20:15:31	2:28:51		-30.0	239.7	434.7					S30A											
03/08/94 20:15:53	2:29:13		-29.0	239.7	434.6					Periselene											
03/08/94 20:16:50	2:30:10	217								S30A	Load exposure table LUNARZ25S										
03/08/94 20:20:27	2:33:47	217	-20.0	239.8	441.7					S20A	Load exposure table LUNARZ15S										
03/08/94 20:22:47	2:36:07		-10.0	239.8	466.5					S10A											
03/08/94 20:24:06	2:37:26	219								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6										
03/08/94 20:26:34	2:39:54		0.0	239.9	509.6					Equator - A											
03/08/94 20:27:53	2:41:13	227								MEQA	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7										SSDR segment 3
03/08/94 20:30:31	2:43:51		10.0	239.9	571.7					N10A											
03/08/94 20:31:50	2:45:10	237								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8										
03/08/94 20:34:44	2:48:04		20.0	240.0	653.7					N20A											
03/08/94 20:36:03	2:49:23	253								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9										
03/08/94 20:37:03	2:50:23	60									Laser power OFF										
03/08/94 20:39:17	2:52:37		30.0	240.1	757.0					N30A											
03/08/94 20:40:36	2:53:56	213								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10										
03/08/94 20:44:16	2:57:36		40.0	240.2	882.7					N40A											
03/08/94 20:45:35	2:58:55	299								N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11										SSDR Segment 4
03/08/94 20:49:49	3:03:09		50.0	240.3	1032.1					N50A											
03/08/94 20:51:08	3:04:28	333								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12										HiRes imaging had not stopped
03/08/94 20:56:02	3:09:22		60.0	240.5	1205.6					N60A											
03/08/94 20:57:21	3:10:41	373								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13										
03/08/94 21:03:06	3:16:26		70.0	241.0	1403.1					N70A											

Orbit 80 Timeline - Type A Orbit

03/08/94 21:04:25	3:17:45	424								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								
03/08/94 21:11:10	3:24:30		80.0	242.4	1622.5					N80A									
03/08/94 21:12:29	3:25:49	484								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
Err:508																			
03/08/94 21:20:23	3:33:43		89.5	329.5	1858.5					North Pole									
Standard PostMap Script																			
03/08/94 21:21:22	3:34:42	0									Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table								Slew to Vega using inertial pointing
03/08/94 21:21:43	3:35:03		88.6	38.3	1891.1					LDUSK									
03/08/94 21:28:22	3:41:42	420									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/08/94 21:28:37	3:41:57	15									Perform NIR imaging (DHU SEQT 31)								
03/08/94 21:28:52	3:42:12	15									Perform UV0 imaging (DHU SEQT 29)								Radiometric imaging starts
03/08/94 21:28:58	3:42:18	6									Perform HR imaging (DHU SEQT 30)								
03/08/94 21:29:08	3:42:28	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
03/08/94 21:30:56	3:44:16		80.0	56.4	2103.4					N80D									
03/08/94 21:35:08	3:48:28	360									Switch to HGA								READY FOR DATA DUMP
End PostMap Script																			
03/08/94 21:38:00	3:51:20										Switch to DHU mode @ 128 kbps								Ground Command
03/08/94 21:42:56	3:56:16		70.0	57.8	2345.2					N70D									
03/08/94 21:43:00	3:56:20										Downlink SSSR Segment 5 (orb 79)								Ground Command - empty segment (1 block)
03/08/94 21:45:00	3:58:20										Downlink SSSR Segment 6 (orb 79)								Ground Command
03/08/94 21:55:00	4:08:20										Uplink & schedule L081 scripts								Ground Command
03/08/94 21:56:23	4:09:43		60.0	58.2	2566.5					N60D									
03/08/94 22:11:09	4:24:29		50.0	58.3	2747.8					N50D									
03/08/94 22:15:08	4:28:28									GDS	LOS								
03/08/94 22:18:00	4:31:20										Downlink SSSR Segment 7 (orb 79)								Ground Command
03/08/94 22:26:58	4:40:18		40.0	58.4	2869.8					N40D									
03/08/94 22:43:24	4:56:44		30.0	58.3	2918.0					N30D									
03/08/94 22:45:05	4:58:25		29.0	58.3	2918.4					Aposelene									

Orbit 81 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/08/94 22:45:05	0:00:00		29.0	58.3	2918.4							Aposelene							Downlinking SSSDR Segment 7 (Orbit 79)
03/08/94 22:59:00	0:13:55												Downlink SSSDR orb 79 data patches						Ground Command
03/08/94 22:59:52	0:14:47		20.0	58.3	2885.9							N20D							
03/08/94 23:01:00	0:15:55												Downlink SSSDR Segment 2 (orb 80)						Ground Command
03/08/94 23:06:31	0:21:26		15.9	58.3	2850.2							INPM							Enter penumbra
03/08/94 23:07:36	0:22:31		15.2	58.3	2843.2							INUM							Enter umbra
03/08/94 23:15:51	0:30:46		10.0	58.2	2778.0							N10D							
03/08/94 23:30:52	0:45:47		0.0	58.2	2607.3							Equator - D							
03/08/94 23:44:36	0:59:31		-10.0	58.2	2392.7							S10D							
03/08/94 23:48:00	1:02:55												Downlink SSSDR Segment 3						Ground Command
03/08/94 23:56:53	1:11:48		-20.0	58.1	2153.9							S20D							
03/09/94 00:01:45	1:16:40		-24.3	58.1	2047.6							OUTUM							Exit umbra
03/09/94 00:02:40	1:17:35		-25.2	58.1	2026.9							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/09/94 00:03:39	1:18:34	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/09/94 00:06:00	1:20:55												Uplink ST exposure table (EXPDAY5.umi)						Ground Command
03/09/94 00:07:44	1:22:39		-30.0	58.1	1908.3							S30D							
03/09/94 00:14:00	1:28:55												Downlink SSSDR Segment 4						Ground Command
03/09/94 00:17:14	1:32:09		-40.0	58.2	1669.4							S40D							
																			Standard Prep2 Script
03/09/94 00:19:24	1:34:19	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/09/94 00:25:31	1:40:26		-50.0	58.3	1446.3							S50D							
																			Err:508
03/09/94 00:26:24	1:41:19	0											Msg "WRNG: Omni/2k in 1 min.."						
03/09/94 00:27:24	1:42:19	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSSDR downlink
03/09/94 00:28:24	1:43:19	60											Switch to omni antennas						
03/09/94 00:29:24	1:44:19	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/09/94 00:29:54	1:44:49	30											UV & HR cameras ON						
03/09/94 00:32:46	1:47:41		-60.0	58.5	1244.3							S60D							
03/09/94 00:38:49	1:53:44	535											Select ST-A						

Last Update: 02/01/2021 21:22:13
By:tcs

Orbit 81
Actual Timeline

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Orbit 81 Timeline - Tyne B Orbit

03/09/94 00:38:59	1:53:54	10									Initialize filters (DHU SEQT 28); Record in SSDR Segment 5; Load lunar dark exposure tables							Start SSDR in Segment 5
03/09/94 00:39:09	1:54:04		-70.0	58.9	1065.8					S70D								
03/09/94 00:39:24	1:54:19	25									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/09/94 00:39:39	1:54:34	15									Perform NIR imaging (DHU SEQT 31)							
03/09/94 00:39:54	1:54:49	15																
03/09/94 00:40:24	1:55:19	30																Err:508
											Laser Power ON							
																		Err:508
03/09/94 00:44:49	1:59:44		-80.0	60.3	911.5					S80D								Err:508
																		Err:508
03/09/94 00:47:54	2:02:49	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S							
03/09/94 00:48:00	2:02:55										Park opaque filter on HiRes (DHU SEQT 27); Select DHU SEQT 16							Ground Command
03/09/94 00:48:54	2:03:49	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/09/94 00:49:54	2:04:49	60	-89.5	146.3	781.3					South Pole	Set SA step rate to LO							
03/09/94 00:50:33	2:05:28		-88.6	217.3	765.4					LDAWN								
03/09/94 00:54:31	2:09:26	277								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17							
03/09/94 00:54:32	2:09:27		-80.0	234.6	673.6					S80A								
03/09/94 00:58:48	2:13:43	257								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18							
03/09/94 00:58:49	2:13:44		-70.0	236.0	587.2					S70A								
03/09/94 01:02:48	2:17:43	240								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/09/94 01:02:49	2:17:44		-60.0	236.5	521.1					S60A								
03/09/94 01:06:37	2:21:32	229								S50A	Record in SSDR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5							SSDR Segment 6 Opaque filter already in place
03/09/94 01:06:38	2:21:33		-50.0	236.7	474.2					S50A								
03/09/94 01:10:18	2:25:13	221								S40A	Load exposure table LUNARZ35S							
03/09/94 01:10:19	2:25:14		-40.0	236.9	445.8					S40A								
03/09/94 01:13:55	2:28:50	217								S30A	Load exposure table LUNARZ25S							
03/09/94 01:13:56	2:28:51		-30.0	237.0	435.2					S30A								
03/09/94 01:14:17	2:29:12		-29.0	237.0	435.1					Periselene								
03/09/94 01:17:31	2:32:26	216								S20A	Load exposure table LUNARZ15S							
03/09/94 01:17:32	2:32:27		-20.0	237.0	442.2					S20A								
03/09/94 01:21:11	2:36:06	220								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/09/94 01:21:12	2:36:07		-10.0	237.1	467.1					S10A								

Orbit 81 Timeline - Tyne B Orbit

03/09/94 01:24:58	2:39:53	227												Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 7			
03/09/94 01:24:59	2:39:54		0.0	237.2	510.2									MEQA				
03/09/94 01:28:56	2:43:51	238	10.0	237.2	572.3									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/09/94 01:33:08	2:48:03	252												N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/09/94 01:33:09	2:48:04		20.0	237.3	654.4									N20A				
03/09/94 01:34:08	2:49:03	60													Laser power OFF			
03/09/94 01:37:42	2:52:37	214												N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/09/94 01:37:43	2:52:38		30.0	237.3	757.8									N30A				
03/09/94 01:42:41	2:57:36	299												N40A	Switch to inertial pointing (ORB_081RW); Load exposure table LUNARZ45N		Initiate oblique viewing	
03/09/94 01:42:42	2:57:37		40.0	237.4	883.5									N40A				
03/09/94 01:48:14	3:03:09	333	50.0	237.5	1032.9									N50A	Reset filters to resume HiRes (DHU SEQT 28); Load CEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ55N; Select DHU SEQT 11			
03/09/94 01:48:30	3:03:25														Load compressed DEQ_11.UMI into SEQT 11; Park opaque filter on HiRes (DHU SEQT 27); Select DHU SEQT 11		Ground Command To prevent uncompressed imaging and HiRes imaging due to data dumping backlog	
03/09/94 01:54:27	3:09:22	373												N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12			
03/09/94 01:54:28	3:09:23		60.0	237.7	1206.5									N60A				
03/09/94 01:58:41	3:13:36	254													Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19		End oblique viewing - resume nadir pointing	
03/09/94 02:01:31	3:16:26	170												N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20			
03/09/94 02:01:32	3:16:27		70.0	238.2	1403.9									N70A				
03/09/94 02:09:35	3:24:30	484												N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21			
03/09/94 02:09:36	3:24:31		80.0	239.5	1623.3									N80A				
03/09/94 02:10:36	3:25:31	60													Load DEQ_11.UMI into SEQT 11		Compressed SEQT 11 already loaded by ground	
																		Err:508
03/09/94 02:18:50	3:33:45		89.5	327.4	1859.4									North Pole				
																		PostMap Script
03/09/94 02:19:49	3:34:44	0													Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA67); Park filters (DHU SEQT 27); Laser power OFF; Load dark images exposure table		Slew to Vega using inertial pointing	
03/09/94 02:20:10	3:35:05		88.6	36.6	1892.0									LDUSK				

Orbit 81 Timeline - Type B Orbit

03/09/94 02:29:23	3:44:18		80.0	53.8	2104.1					N80D							
03/09/94 02:29:49	3:44:44	600									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/09/94 02:30:04	3:44:59	15									Perform NIR imaging (DHU SEQT 31)						
03/09/94 02:30:19	3:45:14	15									Perform UV0 imaging (DHU SEQT 29)						Radiometric imaging starts
03/09/94 02:30:25	3:45:20	6									Perform HR imaging (DHU SEQT 30)						
03/09/94 02:30:35	3:45:30	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/09/94 02:36:35	3:51:30	360									Switch to HGA						READY FOR DATA DUMP
																	End PostMap Script
03/09/94 02:37:00	3:51:55										Switch to DHU mode @ 128 kbps						Ground Command
03/09/94 02:39:00	3:53:55										Downlink SSSR Segment 4 (orb 80)						Ground Command
03/09/94 02:41:23	3:56:18		70.0	55.1	2345.7					N70D							
03/09/94 02:54:50	4:09:45		60.0	55.5	2566.8					N60D							
03/09/94 03:09:36	4:24:31		50.0	55.6	2747.8					N50D							
03/09/94 03:11:00	4:25:55										Uplink & schedule L082 scripts						Ground Command
03/09/94 03:17:00	4:31:55										Downlink SSSR Segment 5						Ground Command
03/09/94 03:25:25	4:40:20		40.0	55.6	2869.6					N40D							
03/09/94 03:39:00	4:53:55										Downlink SSSR Segment 6						Ground Command
03/09/94 03:41:51	4:56:46		30.0	55.6	2917.5					N30D							
03/09/94 03:43:29	4:58:24		29.0	55.6	2917.9					Aposelene							

Orbit 82 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	Hires	NIR	LWIR	Laser	Comment
03/09/94 03:43:29	0:00:00		29.0	55.6	2917.9							Aposelene							Downlinking SSSR Segment 6 (orbit 81)
03/09/94 03:58:19	0:14:50		20.0	55.6	2885.3							N20D							
03/09/94 04:04:43	0:21:14		16.1	55.6	2851.1							INPM							Enter penumbra
03/09/94 04:05:47	0:22:18		15.4	55.6	2844.2							INUM							Enter umbra
03/09/94 04:14:17	0:30:48		10.0	55.5	2777.2							N10D							
																			UVHRon Script
03/09/94 04:27:00	0:43:31	763											UV & HR cameras ON						
																			End UVHRon Script
03/09/94 04:29:18	0:45:49		0.0	55.5	2606.5							Equator - D							
																			LHG82 Script
03/09/94 04:29:25	0:45:56	0											Msg "WRNG: Omni/2k in 1 min.."						
03/09/94 04:30:25	0:46:56	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/09/94 04:31:25	0:47:56	60											Switch to omni antennas; Initialize filters (DHU SEQT 26); Record in SSSR Segment 7; Load Exposure Table LUNARGLOW						Record SSSR Segment 7
03/09/94 04:32:00	0:48:31	35											Inertial pointing w/ quaternion table (UV_82LIMB000.QTB); Image with UV (DHU SEQT 29)						Lunar Horizon Glow (LHG) Observation Starts Slew UV/Vis to limb
03/09/94 04:33:00	0:49:31	300											Load SEQ_263.UMI into SEQT 26; Stop all imaging, including ST; Load LGLOW_29.UMI into SEQT 29; Select DHU SEQT 29						Ground Command
03/09/94 04:37:00	0:53:31	300											Use QTable UV_82LIMB001.QTB						
03/09/94 04:42:00	0:58:31	300											Use QTable UV_82LIMB002.QTB						
03/09/94 04:43:01	0:59:32		-10.0	55.4	2392.0							S10D							
03/09/94 04:47:00	1:03:30	300											Use QTable UV_82LIMB003.QTB						
03/09/94 04:51:59	1:08:30	300											Use QTable UV_82LIMB004.QTB						
03/09/94 04:55:19	1:11:50		-20.0	55.4	2153.3							S20D							
03/09/94 04:56:59	1:13:30	300											Use QTable UV_82LIMB005.QTB						Constant stare at sunrise point
03/09/94 04:58:03	1:14:34	63											NIR camera & cryocooler ON; SA mode to AUTO						
03/09/94 04:58:25	1:14:56	22											Stop imaging - select ST-A; Set SA step rate to HI; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						End LHG Observation Slew HGA to Earth
03/09/94 05:00:22	1:16:53		-24.5	55.4	2042.8							OUTUM							Exit umbra
03/09/94 05:01:16	1:17:47		-25.3	55.4	2022.3							OUTPM							Exit penumbra
03/09/94 05:03:25	1:19:56	300											Switch to HGA						Ready to resume data dump
																			End LHG82 Script
03/09/94 05:06:09	1:22:40		-30.0	55.4	1907.9							S30D							
03/09/94 05:15:38	1:32:09		-40.0	55.4	1669.1							S40D							

Orbit 82 Timeline - Type A Orbit

											Standard Prep2 Script	
03/09/94 05:17:48	1:34:19	0									LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed	
											End Prep2 Script	
03/09/94 05:23:53	1:40:24						MAD	AOS				
03/09/94 05:23:56	1:40:27		-50.0	55.5	1446.2			S50D				
03/09/94 05:24:00	1:40:31										Load CEQ_262.UMI into SEQT 26; Load CEQ_29.UMI into SEQT 29	Ground Command Restore original SEQT 26 & 29
											Err:508	
03/09/94 05:25:53	1:42:24	0									Msg "WRNG: Omni/2k in 1 min.."	
03/09/94 05:26:53	1:43:24	60									SSDR to IDLE; Switch to 2 kbps bypass mode	
03/09/94 05:27:53	1:44:24	60									Switch to omni antennas	
03/09/94 05:28:53	1:45:24	60									Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMoDe=StarPointing, Index=3)	Slew to Crux
03/09/94 05:31:10	1:47:41		-60.0	55.7	1244.2			S60D				
03/09/94 05:37:13	1:53:44	500									Select ST-A	
03/09/94 05:37:23	1:53:54	10									Initialize filters (DHU SEQT 28); Record in SSDR Segment 1; Load lunar dark exposure tables	Start SSDR in Segment 1
03/09/94 05:37:33	1:54:04		-70.0	56.1	1065.9			S70D				
03/09/94 05:37:48	1:54:19	25									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/09/94 05:38:03	1:54:34	15									Perform NIR imaging (DHU SEQT 31)	
03/09/94 05:38:18	1:54:49	15								Err:508		Slew to nadir (inertial pointing)
03/09/94 05:38:48	1:55:19	30									Laser Power ON	
											Err:508	
03/09/94 05:43:14	1:59:45		-80.0	57.5	911.7			S80D				
											Err:508	
03/09/94 05:46:18	2:02:48	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S	
03/09/94 05:47:18	2:03:49	60									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)	START MAPPING
03/09/94 05:48:18	2:04:49	60						MAXS			Set SA step rate to LO	
03/09/94 05:48:19	2:04:50		-89.5	145.4	781.4			South Pole				
03/09/94 05:48:58	2:05:29		-88.6	215.6	765.6			LDAWN				
03/09/94 05:52:56	2:09:27	278						S80A			Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ75S; Select DHU SEQT 3	Opaque filter did not park
03/09/94 05:52:57	2:09:28		-80.0	232.0	673.9			S80A				
03/09/94 05:57:12	2:13:43	256						S70A			Load exposure table LUNARZ65S; Select DHU SEQT 4	

Orbit 82 Timeline - Type A Orbit

03/09/94 05:57:13	2:13:44		-70.0	233.4	587.6					S70A									
03/09/94 06:01:13	2:17:44	241								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/09/94 06:01:14	2:17:45		-60.0	233.8	521.5					S60A									
03/09/94 06:02:43	2:19:14									CAN	LOS								
03/09/94 06:05:02	2:21:33	229	-50.0	234.0	474.7					S50A	Record in SSDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5								SSDR Segment 2
03/09/94 06:08:43	2:25:14	221	-40.0	234.2	446.3					S40A	Load exposure table LUNARZ35S								
03/09/94 06:12:20	2:28:51	217								S30A	Load exposure table LUNARZ25S								
03/09/94 06:12:21	2:28:52		-30.0	234.3	435.7					S30A									
03/09/94 06:12:42	2:29:13		-29.0	234.3	435.6					Periselene									
03/09/94 06:15:56	2:32:27	216								S20A	Load exposure table LUNARZ15S								
03/09/94 06:15:57	2:32:28		-20.0	234.3	442.8					S20A									
03/09/94 06:17:15	2:33:46									MAD	MLOSM								Enter occultation
03/09/94 06:19:36	2:36:07	220								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/09/94 06:19:37	2:36:08		-10.0	234.4	467.7					S10A									
03/09/94 06:23:23	2:39:54	227								MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR segment 3
03/09/94 06:23:24	2:39:55		0.0	234.4	510.9					Equator - A									
03/09/94 06:27:21	2:43:52	238								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/09/94 06:27:22	2:43:53		10.0	234.5	573.1					N10A									
03/09/94 06:28:16	2:44:47									MAD	MAOSM								Exit occultation
03/09/94 06:31:34	2:48:05	253								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/09/94 06:31:35	2:48:06		20.0	234.5	655.2					N20A									
03/09/94 06:32:34	2:49:05	60									Laser power OFF								
03/09/94 06:36:07	2:52:38	213								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/09/94 06:36:08	2:52:39		30.0	234.6	758.6					N30A									
03/09/94 06:39:00	2:55:31										Ranging A ON								Ground Command
03/09/94 06:41:07	2:57:38	300								N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4
03/09/94 06:41:08	2:57:39		40.0	234.7	884.4					N40A									
03/09/94 06:46:40	3:03:11	333								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
03/09/94 06:46:41	3:03:12		50.0	234.8	1033.8					N50A									
03/09/94 06:52:53	3:09:24	373								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/09/94 06:52:54	3:09:25		60.0	235.0	1207.4					N60A									
03/09/94 06:59:57	3:16:28	424								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								
03/09/94 06:59:58	3:16:29		70.0	235.4	1404.8					N70A									
03/09/94 07:08:02	3:24:33	485								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								

Err:508

Orbit 82 Timeline - Type A Orbit

03/09/94 07:08:03	3:24:34		80.0	236.7	1624.1					N80A				
03/09/94 07:17:17	3:33:48		89.5	324.8	1860.2					North Pole				
Standard PostMap Script														
03/09/94 07:18:16	3:34:47	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Laser power OFF; Load dark images exposure table			Slew to Vega
03/09/94 07:18:37	3:35:08		88.6	35.0	1892.9					LDUSK				
03/09/94 07:27:50	3:44:21		80.0	51.2	2104.8					N80D				
03/09/94 07:28:16	3:44:47	600									Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
03/09/94 07:28:31	3:45:02	15									Perform NIR imaging (DHU SEQT 31)			
03/09/94 07:28:46	3:45:17	15									Perform UV0 imaging (DHU SEQT 29)			Radiometric imaging starts
03/09/94 07:28:52	3:45:23	6									Perform HR imaging (DHU SEQT 30)			
03/09/94 07:29:02	3:45:33	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)			Slew HGA to Earth
03/09/94 07:35:02	3:51:32	360									Switch to HGA			READY FOR DATA DUMP
End PostMap Script														
03/09/94 07:38:00	3:54:31										Ranging A OFF			Ground Command
03/09/94 07:39:00	3:55:31										Switch to DHU mode @ 128 kbps			Ground Command
03/09/94 07:39:50	3:56:21		70.0	52.5	2346.2					N70D				
03/09/94 07:53:00	4:09:31										Downlink SDR Segment 7 (LHG)			Ground Command
03/09/94 07:53:17	4:09:48		60.0	52.8	2567.0					N60D				
03/09/94 08:00:00	4:16:31										Uplink & schedule L083 scripts			Ground Command - time approx.
03/09/94 08:08:04	4:24:35		50.0	52.9	2747.7					N50D				
03/09/94 08:23:00	4:39:31										Downlink SDR Segment 1			Ground Command
03/09/94 08:23:53	4:40:24		40.0	52.9	2869.3					N40D				
03/09/94 08:40:17	4:56:48		30.0	52.9	2916.9					N30D				
03/09/94 08:41:53	4:58:24		29.0	52.9	2917.3					Aposelene				

Orbit 83 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/09/94 08:41:53	0:00:00		29.0	52.9	2917.3							Aposelene							Downlinking SSSDR Segment 1 (Orbit 82)
03/09/94 08:55:00	0:13:07												Downlink SSSDR Segment 2						Ground Command
03/09/94 08:56:46	0:14:53		20.0	52.9	2884.5							N20D							
03/09/94 09:02:55	0:21:02		16.2	52.8	2851.8							INPM							Enter penumbra
03/09/94 09:03:59	0:22:06		15.5	52.8	2845.0							INUM							Enter umbra
03/09/94 09:12:44	0:30:51		10.0	52.8	2776.4							N10D							
03/09/94 09:27:44	0:45:51		0.0	52.7	2605.7							Equator - D							
03/09/94 09:38:00	0:56:07												Downlink SSSDR Segment 3						Ground Command
03/09/94 09:41:27	0:59:34		-10.0	52.7	2391.3						N	S10D							
03/09/94 09:53:44	1:11:51		-20.0	52.7	2152.7						N	S20D							
03/09/94 09:58:58	1:17:05		-24.7	52.7	2038.1							OUTUM							Exit umbra
03/09/94 09:59:51	1:17:58		-25.5	52.7	2017.8							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/09/94 10:00:51	1:18:58	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/09/94 10:02:00	1:20:07												Downlink SSSDR Segment 4						Ground Command
03/09/94 10:04:34	1:22:41		-30.0	52.7	1907.4							S30D							
03/09/94 10:14:03	1:32:10		-40.0	52.7	1668.9							S40D							
																			Standard Prep2 Script
03/09/94 10:16:13	1:34:20	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/09/94 10:17:27	1:35:34										PMK	AOS							
03/09/94 10:22:20	1:40:27		-50.0	52.8	1446.1							S50D							
																			Err:508
03/09/94 10:23:13	1:41:20	0											Msg "WRNG: Omni/2k in 1 min.."						
03/09/94 10:24:13	1:42:20	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSSDR downlink
03/09/94 10:25:13	1:43:20	60											Switch to omni antennas						
03/09/94 10:26:13	1:44:20	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/09/94 10:26:43	1:44:50	30											UV & HR cameras ON						
03/09/94 10:29:35	1:47:42		-60.0	52.9	1244.3							S60D							
03/09/94 10:35:38	1:53:45	535											Select ST-A						

Orbit 83 Timeline - Tyne B Orbit

03/09/94 10:35:48	1:53:55	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables									Start SSSR in Segment 5
03/09/94 10:35:58	1:54:05		-70.0	53.3	1066.0					S70D									
03/09/94 10:36:13	1:54:20	25																	Dark Field imaging starts
03/09/94 10:36:28	1:54:35	15																	
03/09/94 10:36:43	1:54:50	15																	
03/09/94 10:37:13	1:55:20	30																	Laser Power ON
																			Err:508
03/09/94 10:41:38	1:59:45		-80.0	54.6	911.9					S80D									Err:508
																			Err:508
03/09/94 10:44:43	2:02:50	0																	
03/09/94 10:45:43	2:03:50	60																	Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S
03/09/94 10:46:43	2:04:50	60								MAXS									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)
03/09/94 10:46:44	2:04:51		-89.6	144.2	781.5					South Pole									START MAPPING
03/09/94 10:47:23	2:05:30		-88.6	213.9	765.8					LDAWN									Set SA step rate to LO
03/09/94 10:51:20	2:09:27	277								S80A									Load exposure table LUNARZ75S; Select DHU SEQT 17
03/09/94 10:51:21	2:09:28		-80.0	229.5	674.2					S80A									
03/09/94 10:55:37	2:13:44	257								S70A									Load exposure table LUNARZ65S; Select DHU SEQT 18
03/09/94 10:55:38	2:13:45		-70.0	230.7	588.0					S70A									
03/09/94 10:59:38	2:17:45	241								S60A									Load exposure table LUNARZ55S; Select DHU SEQT 6
03/09/94 10:59:39	2:17:46		-60.0	231.1	522.0					S60A									
03/09/94 11:03:26	2:21:33	228								S50A									Record in SSSR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5
03/09/94 11:03:27	2:21:34		-50.0	231.3	475.3					S50A									SSDR Segment 6
03/09/94 11:07:08	2:25:15	222								S40A									
03/09/94 11:07:09	2:25:16		-40.0	231.5	446.9					S40A									Load exposure table LUNARZ35S
03/09/94 11:10:45	2:28:52	217								S30A									Load exposure table LUNARZ25S
03/09/94 11:10:46	2:28:53		-30.0	231.6	436.3					S30A									
03/09/94 11:11:06	2:29:13		-29.1	231.6	436.3					Periselene									
03/09/94 11:13:18	2:31:25									PMK	MLOSM								
03/09/94 11:13:59	2:32:06									MAD	MLOSM								Enter occultation
03/09/94 11:14:22	2:32:29	217								S20A									Load exposure table LUNARZ15S
03/09/94 11:14:23	2:32:30		-20.0	231.6	443.5					S20A									
03/09/94 11:18:02	2:36:09	220								S10A									Load exposure table LUNARZ05S; Select DHU SEQT 6
03/09/94 11:18:03	2:36:10		-10.0	231.7	468.5					S10A									

Orbit 83 Timeline - Type B Orbit

03/09/94 11:21:49	2:39:56	227									MEQA	Record in SSSR Segment 7; Load CEQ_07U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 7 IR and UV uncompressed
03/09/94 11:21:50	2:39:57		0.0	231.7	511.7						Equator - A		
03/09/94 11:25:46	2:43:53	237									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	Resume compression
03/09/94 11:25:48	2:43:55		10.0	231.7	573.9						N10A		
03/09/94 11:29:01	2:47:08										MAD	MAOSM	Exit occultation
03/09/94 11:29:45	2:47:52										PMK	MAOSM	
03/09/94 11:30:00	2:48:07	254									N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	
03/09/94 11:30:01	2:48:08		20.0	231.8	656.0						N20A		
03/09/94 11:31:00	2:49:07	60										Laser power OFF	
03/09/94 11:34:33	2:52:40	213									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/09/94 11:34:34	2:52:41		30.0	231.8	759.4						N30A		
03/09/94 11:39:33	2:57:40	300									N40A	Err:508	Initiate oblique viewing
03/09/94 11:39:34	2:57:41		40.0	231.9	885.3						N40A		
03/09/94 11:45:06	3:03:13	333									N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11	HiRes imaging had not stopped
03/09/94 11:45:07	3:03:14		50.0	232.0	1034.7						N50A		
03/09/94 11:51:20	3:09:27	374									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	
03/09/94 11:51:21	3:09:28		60.0	232.2	1208.3						N60A		
03/09/94 11:55:34	3:13:41	254										Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing
03/09/94 11:58:24	3:16:31	170									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	
03/09/94 11:58:25	3:16:32		70.0	232.6	1405.7						N70A		
03/09/94 12:06:29	3:24:36	485									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/09/94 12:06:30	3:24:37		80.0	233.8	1624.9						N80A		
03/09/94 12:07:29	3:25:36	60										Load DEQ_07.UMI into SEQT 7	Restore compressed SEQT 7
Err:508													
03/09/94 12:15:44	3:33:51		89.6	321.7	1860.9						North Pole		
PostMap Script													
03/09/94 12:16:43	3:34:50	0										Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Laser power OFF; Load dark images exposure table	Slew to Vega
03/09/94 12:17:05	3:35:12		88.6	33.3	1893.8						LDUSK		

Orbit 83 Timeline - Type B Orbit

03/09/94 12:26:17	3:44:24		80.0	48.6	2105.4					N80D							
03/09/94 12:26:43	3:44:50	600									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/09/94 12:26:58	3:45:05	15									Perform NIR imaging (DHU SEQT 31)						
03/09/94 12:27:13	3:45:20	15									Perform UV0 imaging (DHU SEQT 29)						Radiometric imaging starts
03/09/94 12:27:19	3:45:26	6									Perform HR imaging (DHU SEQT 30)						
03/09/94 12:27:28	3:45:36	10									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/09/94 12:33:28	3:51:36	360									Switch to HGA						READY FOR DATA DUMP
End PostMap Script																	
03/09/94 12:35:00	3:53:07										Switch to DHU mode @ 128 kbps						Ground Command
03/09/94 12:37:00	3:55:07										Downlink SDR Segment 5						Ground Command
03/09/94 12:38:18	3:56:25		70.0	49.8	2346.6					N70D							
03/09/94 12:51:09	4:09:16								GDS	AOS							
03/09/94 12:51:45	4:09:52		60.0	50.1	2567.1					N60D							
03/09/94 13:04:00	4:22:07										Update state vector (GNC53_09MAR1200)						Ground Command
03/09/94 13:06:31	4:24:38		50.0	50.2	2747.7					N50D							
03/09/94 13:07:00	4:25:07										Downlink SDR Segment 6						Ground Command
03/09/94 13:22:20	4:40:27		40.0	50.2	2868.9					N40D							
03/09/94 13:38:45	4:56:52		30.0	50.2	2916.3					N30D							
03/09/94 13:40:18	4:58:25		29.1	50.2	2916.6					Aposelene							

Orbit 84 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/09/94 13:40:18	0:00:00		29.1	50.2	2916.6							Aposelene							Downlinking SSSDR Segment 6 (orbit 83)
03/09/94 13:49:00	0:08:42												Downlink SSSDR Segment 7						Ground Command
03/09/94 13:55:12	0:14:54		20.0	50.1	2883.7							N20D							
03/09/94 14:01:07	0:20:49		16.4	50.1	2852.5							INPM							Enter penumbra
03/09/94 14:02:10	0:21:52		15.7	50.1	2845.8							INUM							Enter umbra
03/09/94 14:11:10	0:30:52		10.0	50.1	2775.5							N10D							
03/09/94 14:14:00	0:33:42												Execute momentum dump (GNC1A)						MOMENTUM DUMP Ground Command
03/09/94 14:26:10	0:45:52		0.0	50.0	2604.9							Equator - D							
03/09/94 14:39:52	0:59:34		-10.0	50.0	2390.5							S10D							
03/09/94 14:52:09	1:11:51		-20.0	49.9	2152.1							S20D							
03/09/94 14:56:00	1:15:42												Downlink SSSDR data patches						Ground Command
03/09/94 14:57:34	1:17:16		-24.8	49.9	2033.6							OUTUM							Exit umbra
03/09/94 14:58:27	1:18:09		-25.7	49.9	2013.4							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/09/94 14:59:27	1:19:09	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/09/94 15:02:59	1:22:41		-30.0	49.9	1907.0							S30D							
03/09/94 15:08:51	1:28:33										MAD	LOS							
03/09/94 15:12:28	1:32:10		-40.0	49.9	1668.6							S40D							
																			Standard Prep2 Script
03/09/94 15:14:39	1:34:21	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/09/94 15:20:45	1:40:27		-50.0	50.0	1446.0							S50D							
																			Err:508
03/09/94 15:21:39	1:41:21	0											Msg "WRNG: Omni/2k in 1 min.."						
03/09/94 15:22:39	1:42:21	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/09/94 15:23:39	1:43:21	60											Switch to omni antennas						
03/09/94 15:24:39	1:44:21	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/09/94 15:25:09	1:44:51	30											UV & HR cameras ON						
03/09/94 15:28:00	1:47:42		-60.0	50.2	1244.3							S60D							
03/09/94 15:34:04	1:53:46	535											Select ST-A						
03/09/94 15:34:14	1:53:56	10											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 1; Load lunar dark exposure tables						Start SSSDR in Segment 1

Orbit 84 Timeline - Type A Orbit

03/09/94 15:34:23	1:54:05		-70.0	50.5	1066.2					S70D									
03/09/94 15:34:39	1:54:21	25									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/09/94 15:34:54	1:54:36	15									Perform NIR imaging (DHU SEQT 31)								
03/09/94 15:35:09	1:54:51	15																	Slew to nadir (inertial pointing)
03/09/94 15:35:39	1:55:21	30									Laser Power ON								
Err:508																			
03/09/94 15:40:03	1:59:45		-80.0	51.7	912.2					S80D									
Err:508																			
03/09/94 15:43:09	2:02:51	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/09/94 15:44:09	2:03:51	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)								START MAPPING
03/09/94 15:45:08	2:04:50		-89.6	137.4	782.3					South Pole									
03/09/94 15:45:09	2:04:51	60								MAXS	Set SA step rate to LO								
03/09/94 15:45:48	2:05:30		-88.6	212.2	766.2					LDAWN									
03/09/94 15:49:46	2:09:28	277	-80.0	226.9	674.7					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3								
03/09/94 15:54:03	2:13:45	257	-70.0	228.1	588.5					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4								
03/09/94 15:58:04	2:17:46	241	-60.0	228.5	522.6					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/09/94 16:01:53	2:21:35	229	-50.0	228.6	475.9					S50A	Record in SDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5								Opaque filter did not park SSDR Segment 2
03/09/94 16:05:34	2:25:16	221	-40.0	228.8	447.5					S40A	Load exposure table LUNARZ35S								
03/09/94 16:09:11	2:28:53	217	-30.0	228.8	437.0					S30A	Load exposure table LUNARZ25S								
03/09/94 16:09:31	2:29:13		-29.1	228.8	437.0					Periselene									
03/09/94 16:10:20	2:30:02									GDS	MLOSM								
03/09/94 16:10:40	2:30:22									PMK	MLOSM								Enter occultation
03/09/94 16:12:48	2:32:30	217	-20.0	228.9	444.2					S20A	Load exposure table LUNARZ15S								
03/09/94 16:16:28	2:36:10		-10.0	228.9	469.2					S10A									
03/09/94 16:16:29	2:36:11	221								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/09/94 16:20:16	2:39:58	227	0.0	229.0	512.5					Equator - A	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 3
03/09/94 16:24:14	2:43:56	238	10.0	229.0	574.7					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/09/94 16:28:27	2:48:09	253	20.0	229.1	656.9					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/09/94 16:29:27	2:49:09	60									Laser power OFF								
03/09/94 16:29:51	2:49:33									PMK	MAOSM								Exit occultation

Orbit 84 Timeline - Type A Orbit

03/09/94 16:30:11	2:49:53								GDS	MAOSM				
03/09/94 16:33:01	2:52:43	214	30.0	229.1	760.4					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/09/94 16:38:01	2:57:43	300	40.0	229.2	886.2					N40A	Record in SSSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SSDR Segment 4
03/09/94 16:43:34	3:03:16	333	50.0	229.3	1035.6					N50A	Load CEQ_12U.UMI into SEQT 12; Reset filters (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12			HiRes imaging had not stopped UV and IR uncompressed
03/09/94 16:49:48	3:09:30	374	60.0	229.4	1209.2					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13			Resume compression
03/09/94 16:56:52	3:16:34	424	70.0	229.8	1406.6					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14			
03/09/94 17:04:57	3:24:39	485	80.0	230.9	1625.7					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15			
03/09/94 17:05:57	3:25:39	60									Load DEQ_12.UMI into SEQT12			Restore compressed SEQT 12
Err:508														
03/09/94 17:14:11	3:33:53		89.6	317.4	1861.3					North Pole				
Err:508														
03/09/94 17:15:12	3:34:54	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VGA01); Laser power OFF; Load dark images exposure table			VEGA POINTING TEST Slew to Vega using inertial pointing (1st quat.)
03/09/94 17:15:33	3:35:15		88.6	31.6	1894.6					LDUSK				
03/09/94 17:24:45	3:44:27		80.0	46.0	2106.0					N80D				
03/09/94 17:25:12	3:44:54	600									Perform UV0 imaging (DHU SEQT 29)			First alignment check
03/09/94 17:25:27	3:45:09	15									Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
03/09/94 17:25:42	3:45:24	15									Perform NIR imaging (DHU SEQT 31)			
03/09/94 17:25:57	3:45:39	15									Perform HR imaging (DHU SEQT 30)			Radiometric imaging starts
03/09/94 17:26:03	3:45:45	6									Perform UV0 imaging (DHU SEQT 29)			
03/09/94 17:26:09	3:45:52	7									Select ST-A; Point s/c sensors to Vega (GNC12VGA02)			Point to Vega using inertial pointing (2nd quat.)
03/09/94 17:28:09	3:47:51	120									Perform UV0 imaging (DHU SEQT 29)			Second alignment check
03/09/94 17:28:16	3:47:58	7									Stop imaging - select ST-A			
03/09/94 17:29:16	3:48:58	60									Perform UV0 imaging (DHU SEQT 29)			

Orbit 84 Timeline - Type A Orbit

										Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)					END VEGA POINTING TEST
03/09/94 17:29:23	3:49:05	7													Slew HGA to Earth
03/09/94 17:35:23	3:55:05	360								Switch to HGA					READY FOR DATA DUMP
															Err:508
03/09/94 17:36:00	3:55:42									Switch to DHU mode @ 128 kbps					Ground Command
03/09/94 17:36:46	3:56:28		70.0	47.1	2346.9					N70D					
03/09/94 17:40:00	3:59:42														Ground Command
03/09/94 17:50:13	4:09:55		60.0	47.4	2567.2					N60D					
03/09/94 17:51:00	4:10:42														Ground Command
03/09/94 18:04:59	4:24:41		50.0	47.5	2747.4					N50D					
03/09/94 18:12:00	4:31:42														Ground Command
03/09/94 18:20:48	4:40:30		40.0	47.5	2868.4					N40D					
03/09/94 18:37:12	4:56:54		30.0	47.5	2915.6					N30D					
03/09/94 18:38:43	4:58:25		29.1	47.5	2915.9					Aposelene					

Orbit 85 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/09/94 18:38:43	0:00:00		29.1	47.5	2915.9							Aposelene							Downlinking SSSR Segment 2 (Orbit 84)
03/09/94 18:39:25	0:00:42										CAN	AOS							
03/09/94 18:53:39	0:14:56		20.0	47.4	2882.9							N20D							
03/09/94 18:54:00	0:15:17												Downlink SSSR Segment 3						Ground Command
03/09/94 18:59:20	0:20:37		16.5	47.4	2853.1							INPM							Enter penumbra
03/09/94 19:00:22	0:21:39		15.8	47.4	2846.5							INUM							Enter umbra
03/09/94 19:09:36	0:30:53		10.0	47.4	2774.7							N10D							
03/09/94 19:19:00	0:40:17												Downlink SSSR Segment 4						Ground Command
03/09/94 19:24:36	0:45:53		0.0	47.3	2604.1							Equator - D							
03/09/94 19:38:18	0:59:35		-10.0	47.2	2389.9						N	S10D							
03/09/94 19:50:34	1:11:51		-20.0	47.2	2151.6						N	S20D							
03/09/94 19:51:00	1:12:17												Downlink SSSR data patches						Ground Command
03/09/94 19:56:09	1:17:26		-25.0	47.2	2029.3							OUTUM							Exit umbra
03/09/94 19:57:02	1:18:19		-25.8	47.2	2009.3							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/09/94 19:58:02	1:19:19	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/09/94 20:01:24	1:22:41		-30.0	47.2	1906.7							S30D							
03/09/94 20:10:53	1:32:10		-40.0	47.2	1668.5							S40D							
																			Standard Prep2 Script
03/09/94 20:13:03	1:34:20	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/09/94 20:19:10	1:40:27		-50.0	47.3	1446.0							S50D							
																			Err:508
03/09/94 20:20:03	1:41:20	0											Msg "WRNG: Omni/2k in 1 min.."						
03/09/94 20:21:03	1:42:20	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSSR downlink
03/09/94 20:22:03	1:43:20	60											Switch to omni antennas						
03/09/94 20:22:58	1:44:15										PMK	LOS							
03/09/94 20:23:03	1:44:20	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/09/94 20:23:33	1:44:50	30											UV & HR cameras ON						
03/09/94 20:25:00	1:46:17												Ranging A ON						Ground Command
03/09/94 20:26:25	1:47:42		-60.0	47.4	1244.5							S60D							

Last Update: 02/01/2021 21:22:14
By:tcs

Orbit 85
Actual Timeline

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Orbit 85 Timeline - Tyne B Orbit

03/09/94 20:30:28	1:51:45	415										Select ST-A					
03/09/94 20:30:38	1:51:55	10										Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables					Start SSSR in Segment 5
03/09/94 20:31:03	1:52:20	25										Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/09/94 20:31:18	1:52:35	15										Stop imaging (DHU SEQT 0)					
03/09/94 20:32:48	1:54:05		-70.0	47.7	1066.5						S70D						
03/09/94 20:33:03	1:54:20	105										Perform LWIR imaging (DHU SEQT 25)					
03/09/94 20:33:18	1:54:35	15										Perform NIR imaging (DHU SEQT 31)					
03/09/94 20:33:33	1:54:50	15											Err:508				Slew to nadir (inertial pointing)
03/09/94 20:34:03	1:55:20	30										Laser Power ON					
																	Err:508
03/09/94 20:38:28	1:59:45		-80.0	48.8	912.6						S80D						Err:508
																	Err:508
03/09/94 20:41:33	2:02:50	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/09/94 20:42:33	2:03:50	60										Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/09/94 20:43:33	2:04:50	60	-89.6	134.1	782.8						South Pole	Set SA step rate to LO					
03/09/94 20:44:13	2:05:30		-88.6	210.6	766.6						LDAWN						
03/09/94 20:48:11	2:09:28	278	-80.0	224.3	675.2						S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/09/94 20:52:28	2:13:45	257	-70.0	225.4	589.1						S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18					
03/09/94 20:56:29	2:17:46	241	-60.0	225.8	523.2						S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/09/94 21:00:18	2:21:35	229	-50.0	226.0	476.5						S50A	Record in SSSR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5					Opaque filter did not park SSDR Segment 6
03/09/94 21:03:59	2:25:16	221	-40.0	226.1	448.2						S40A	Load exposure table LUNARZ35S					
03/09/94 21:07:37	2:28:54	218	-30.0	226.1	437.8						S30A	Load exposure table LUNARZ25S					
03/09/94 21:07:42	2:28:59									CAN	MLOSM						
03/09/94 21:07:56	2:29:13		-29.1	226.1	437.7						Periselene						
03/09/94 21:08:02	2:29:19									GDS	MLOSM						Enter occultation
03/09/94 21:11:14	2:32:31	217	-20.0	226.2	445.0						S20A	Load exposure table LUNARZ15S					
03/09/94 21:14:54	2:36:11	220	-10.0	226.2	470.1						S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/09/94 21:18:42	2:39:59	228	0.0	226.3	513.3						Equator - A	Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 7
03/09/94 21:22:40	2:43:57	238	10.0	226.3	575.6						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					

Orbit 85 Timeline - Type B Orbit

03/09/94 21:26:53	2:48:10	253	20.0	226.3	657.8					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/09/94 21:27:53	2:49:10	60									Laser power OFF						
03/09/94 21:30:01	2:51:18									GDS	MAOSM						Exit occultation
03/09/94 21:31:10	2:52:27									CAN	MAOSM						
03/09/94 21:31:27	2:52:44	214	30.0	226.4	761.3						N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					
03/09/94 21:36:27	2:57:44	300	40.0	226.4	887.1						N40A	Err:508					Initiate oblique viewing
03/09/94 21:42:01	3:03:18	334	50.0	226.5	1036.6						N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11					HiRes imaging had not stopped
03/09/94 21:48:15	3:09:32	374	60.0	226.7	1210.1						N60A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ65N; Select DHU SEQT 12					IR and UV Uncompressed
03/09/94 21:52:30	3:13:47	255										Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19					End oblique viewing - resume nadir pointing Resume compression
03/09/94 21:55:20	3:16:37	170	70.0	227.0	1407.4						N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20					
03/09/94 22:03:24	3:24:41		80.0	228.0	1626.5						N80A						
03/09/94 22:03:25	3:24:42	485									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21					
03/09/94 22:04:25	3:25:42	60										Load DEQ_12.UMI into SEQT 12					Restore compressed SEQT 12
Err:508																	
03/09/94 22:12:39	3:33:56		89.6	314.7	1862.0						North Pole						
Err:508																	
03/09/94 22:13:39	3:34:56	0										Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Laser power OFF; Load dark images exposure table					Slew to Vega
03/09/94 22:14:01	3:35:18		88.6	30.0	1895.4						LDUSK						
03/09/94 22:23:13	3:44:30		80.0	43.5	2106.5						N80D						
03/09/94 22:23:39	3:44:56	600										Perform LWIR imaging (DHU SEQT 25)					No data
03/09/94 22:23:54	3:45:11	15										Perform UV0 imaging (DHU SEQT 29)					No data
03/09/94 22:24:09	3:45:26	15										Load exposure Tables NIRTEST2_1; Perform NIR Imaging (DHU SEQT 31)					No data
03/09/94 22:24:23	3:45:41	15										Load exposure Tables NIRTEST2_2; Perform NIR Imaging (DHU SEQT 31)					No data
03/09/94 22:24:38	3:45:55	15										Load exposure Tables NIRTEST2_3; Perform NIR Imaging (DHU SEQT 31)					No data
03/09/94 22:24:53	3:46:10	15										Load exposure Tables NIRTEST2_1; Perform NIR Imaging (DHU SEQT 31)					No data

Orbit 85 Timeline - Tyne B Orbit

03/09/94 22:25:08	3:46:25	15																		Load exposure Tables NIRTEST2_4; Perform NIR Imaging (DHU SEQT 31)											No data	
03/09/94 22:25:23	3:46:40	15																		Load exposure Tables NIRTEST2_1; Perform NIR Imaging (DHU SEQT 31)											No data	
03/09/94 22:25:33	3:46:50	10																		Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)										Slew HGA to Earth		
03/09/94 22:27:00	3:48:17																			Ranging A OFF										Ground Command		
03/09/94 22:31:33	3:52:50	360																		Switch to HGA										READY FOR DATA DUMP		
Err:508																																
03/09/94 22:32:00	3:53:17																			Switch to DHU mode @ 128 kbps; Downlink SDR Segment 5										Ground Command		
03/09/94 22:35:14	3:56:31		70.0	44.5	2347.2															N70D												
03/09/94 22:47:00	4:08:17																			Uplink & schedule L086 scripts										Ground Command		
03/09/94 22:48:41	4:09:58		60.0	44.8	2567.2															N60D												
03/09/94 23:03:27	4:24:44		50.0	44.8	2747.1															N50D												
03/09/94 23:04:00	4:25:17																			Downlink SDR Segment 6										Ground Command		
03/09/94 23:14:39	4:35:56																			GDS	LOS											
03/09/94 23:19:15	4:40:32		40.0	44.8	2867.8															N40D												
03/09/94 23:35:39	4:56:56		30.0	44.8	2914.8															N30D												
03/09/94 23:37:08	4:58:25		29.1	44.8	2915.1															Aposelene												

Orbit 86 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/09/94 23:37:08	0:00:00		29.1	44.8	2915.1							Aposelene							Downlinking SSSR Segment 6 (orbit 85)
03/09/94 23:52:06	0:14:58		20.0	44.7	2882.0							N20D							
03/09/94 23:57:32	0:20:24		16.6	44.7	2853.6							INPM							Enter penumbra
03/09/94 23:58:35	0:21:27		16.0	44.7	2847.1							INUM							Enter umbra
03/10/94 00:08:02	0:30:54		10.0	44.6	2773.8							N10D							
03/10/94 00:09:00	0:31:52												Downlink SSSR Segment 7						Ground Command
03/10/94 00:23:01	0:45:53		0.0	44.6	2603.4							Equator - D							
03/10/94 00:36:43	0:59:35		-10.0	44.5	2389.3							S10D							
03/10/94 00:48:59	1:11:51		-20.0	44.5	2151.2							S20D							
03/10/94 00:54:44	1:17:36		-25.1	44.4	2025.2							OUTUM							Exit umbra
03/10/94 00:55:36	1:18:28		-26.0	44.4	2005.3							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/10/94 00:56:36	1:19:28	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/10/94 00:59:49	1:22:41		-30.0	44.4	1906.6							S30D							
03/10/94 01:00:00	1:22:52												Downlink SSSR data patches						Ground Command
03/10/94 01:09:18	1:32:10		-40.0	44.4	1668.5							S40D							
																			Standard Prep2 Script
03/10/94 01:11:28	1:34:20	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/10/94 01:14:00	1:36:52												SSDR to IDLE - downlink complete						Ground Command
03/10/94 01:17:34	1:40:26		-50.0	44.5	1446.2							S50D							
																			Err:508
03/10/94 01:18:28	1:41:20	0											Msg "WRNG: Omni/2k in 1 min.."						
03/10/94 01:19:28	1:42:20	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/10/94 01:20:28	1:43:20	60											Switch to omni antennas						
03/10/94 01:21:28	1:44:20	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/10/94 01:21:58	1:44:50	30											UV & HR cameras ON						
03/10/94 01:24:49	1:47:41		-60.0	44.6	1244.8							S60D							
03/10/94 01:28:53	1:51:45	415											Select ST-A						
03/10/94 01:29:03	1:51:55	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/10/94 01:29:28	1:52:20	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 86 Timeline - Type A Orbit

03/10/94 02:29:54	2:52:46	214	30.0	223.6	762.2						N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							
03/10/94 02:30:44	2:53:36										CAN	MAOSM							Exit occultation
03/10/94 02:34:54	2:57:46	300	40.0	223.7	888.1							N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11					SSDR Segment 4	
03/10/94 02:40:28	3:03:20	334	50.0	223.7	1037.5							N50A	Reset filters (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12					HiRes imaging had not stopped	
03/10/94 02:46:42	3:09:34	374	60.0	223.9	1211.0							N60A	Load CEQ_19U.UMI into SEQT 19; Load exposure table LUNARZ65N; Select DHU SEQT 13					Wrong SEQT executed - No uncompressed band	
03/10/94 02:53:47	3:16:39	425	70.0	224.2	1408.2							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						
03/10/94 03:01:52	3:24:44	485	80.0	225.2	1627.1							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15						
03/10/94 03:02:52	3:25:44	60											Load DEQ_19.UMI into SEQT 19					Restore compressed SEQT 19	
Err:508																			
03/10/94 03:11:07	3:33:59		89.6	313.4	1862.7							North Pole							
Standard PostMap Script																			
03/10/94 03:12:07	3:34:59	0											Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Laser power OFF; Load dark images exposure table					Slew to Vega	
03/10/94 03:12:29	3:35:21		88.6	28.4	1896.0							LDUSK							
03/10/94 03:21:41	3:44:33		80.0	40.9	2106.8							N80D							
03/10/94 03:22:07	3:44:59	600											Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts	
03/10/94 03:22:22	3:45:14	15											Perform NIR imaging (DHU SEQT 31)						
03/10/94 03:22:37	3:45:29	15											Perform UV0 imaging (DHU SEQT 29)					Radiometric imaging starts	
03/10/94 03:22:43	3:45:35	6											Perform HR imaging (DHU SEQT 30)						
03/10/94 03:22:53	3:45:45	10											Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)					Slew HGA to Earth	
03/10/94 03:27:00	3:49:52												Switch to HGA; Switch to DHU mode @ 128 kbps					Ground Command	
03/10/94 03:28:53	3:51:45	360											Switch to HGA					Redundant	
End PostMap Script																			
03/10/94 03:33:00	3:55:52												Downlink SSSR Segment 1					Ground Command	
03/10/94 03:33:42	3:56:34		70.0	41.8	2347.3							N70D							
03/10/94 03:47:08	4:10:00		60.0	42.1	2567.0							N60D							
03/10/94 04:01:54	4:24:46		50.0	42.1	2746.6							N50D							

Orbit 86 Timeline - Type A Orbit

03/10/94 04:04:00	4:26:52										Downlink SSDR Segment 2; Update state vector (GNC53_10MAR0400)							Ground Command
03/10/94 04:17:42	4:40:34		40.0	42.1	2867.1					N40D								
03/10/94 04:34:06	4:56:58		30.0	42.1	2913.9					N30D								
03/10/94 04:35:34	4:58:26		29.1	42.1	2914.2					Aposelene								

Orbit 87 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/10/94 04:35:34	0:00:00		29.1	42.1	2914.2							Aposelene							Downlinking SSSDR Segment 2 (Orbit 86)
03/10/94 04:47:00	0:11:26												Downlink SSSDR Segment 3						Ground Command
03/10/94 04:50:32	0:14:58		20.0	42.0	2881.1							N20D							
03/10/94 04:55:45	0:20:11		16.8	42.0	2854.0							INPM							Enter penumbra
03/10/94 04:56:47	0:21:13		16.1	42.0	2847.7							INUM							Enter umbra
03/10/94 05:06:28	0:30:54		10.0	41.9	2772.9							N10D							
03/10/94 05:13:00	0:37:26												Downlink SSSDR Segment 4						Ground Command
03/10/94 05:21:26	0:45:52		0.0	41.8	2602.6							Equator - D							
03/10/94 05:31:00	0:55:26												SSDR to IDLE - downlink complete						Ground Command
03/10/94 05:35:08	0:59:34		-10.0	41.8	2388.8							S10D							
03/10/94 05:47:24	1:11:50		-20.0	41.7	2150.9							S20D							
03/10/94 05:52:56	1:17:22										MAD	AOS							
03/10/94 05:53:18	1:17:44		-25.3	41.7	2021.3							OUTUM							Exit umbra
03/10/94 05:54:10	1:18:36		-26.1	41.7	2001.6							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/10/94 05:55:10	1:19:36	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/10/94 05:58:13	1:22:39		-30.0	41.7	1906.5							S30D							
03/10/94 06:07:42	1:32:08		-40.0	41.7	1668.7							S40D							
																			Standard Prep2 Script
03/10/94 06:09:53	1:34:19	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/10/94 06:15:59	1:40:25		-50.0	41.7	1446.5							S50D							
																			Err:508
03/10/94 06:16:53	1:41:19	0											Msg "WRNG: Omni/2k in 1 min.."						
03/10/94 06:17:53	1:42:19	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/10/94 06:18:53	1:43:19	60											Switch to omni antennas						
03/10/94 06:19:53	1:44:19	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/10/94 06:20:23	1:44:49	30											UV & HR cameras ON						
03/10/94 06:23:14	1:47:40		-60.0	41.9	1245.3							S60D							
03/10/94 06:27:18	1:51:44	415											Select ST-A						

Orbit 87 Timeline - Tyne B Orbit

03/10/94 06:27:28	1:51:54	10									Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables								Start SSSR in Segment 5
03/10/94 06:27:53	1:52:19	25									Perform NIR imaging (DHU SEQT 31)								Dark Field imaging starts
03/10/94 06:28:08	1:52:34	15									Stop imaging (DHU SEQT 0)								
03/10/94 06:29:37	1:54:03		-70.0	42.1	1067.5					S70D									
03/10/94 06:29:53	1:54:19	105									Perform LWIR imaging (DHU SEQT 25)								
03/10/94 06:30:08	1:54:34	15									Perform NIR imaging (DHU SEQT 31)								
03/10/94 06:30:23	1:54:49	15																Err:508	Slew to nadir (inertial pointing)
03/10/94 06:30:53	1:55:19	30									Laser Power ON								
Err:508																			
03/10/94 06:35:06	1:59:32									CAN	LOS								
03/10/94 06:35:17	1:59:43		-80.0	43.1	913.8						S80D								
Err:508																			
03/10/94 06:38:23	2:02:48	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/10/94 06:39:23	2:03:49	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)								START MAPPING
03/10/94 06:40:23	2:04:49	60	-89.7	129.8	784.0					South Pole	Set SA step rate to LO								
03/10/94 06:41:03	2:05:29		-88.6	207.3	767.8					LDAWN									
03/10/94 06:45:02	2:09:28	279	-80.0	219.2	676.6					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17								
03/10/94 06:49:19	2:13:45	257	-70.0	220.1	590.6					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18								
03/10/94 06:53:20	2:17:46	241	-60.0	220.4	524.8					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/10/94 06:57:09	2:21:35	229	-50.0	220.6	478.2					S50A	Record in SSSR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5								Opaque filter did not park SSDR Segment 6
03/10/94 07:00:51	2:25:17	222	-40.0	220.6	449.9					S40A	Load exposure table LUNARZ35S								
03/10/94 07:02:28	2:26:54									MAD	MLOSM								Enter occultation
03/10/94 07:04:28	2:28:54	217	-30.0	220.7	439.5						S30A	Load exposure table LUNARZ25S							
03/10/94 07:04:47	2:29:13		-29.1	220.7	439.5					Periselene									
03/10/94 07:08:06	2:32:32	218	-20.0	220.7	446.8						S20A	Load exposure table LUNARZ15S							
03/10/94 07:11:46	2:36:12		-10.0	220.8	471.9						S10A								
03/10/94 07:11:47	2:36:13	221									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/10/94 07:15:34	2:40:00	227	0.0	220.8	515.2					Equator - A	Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 7
03/10/94 07:19:33	2:43:59	239	10.0	220.8	577.5						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							
03/10/94 07:23:46	2:48:12		20.0	220.8	659.8						N20A								

Orbit 87 Timeline - Type B Orbit

03/10/94 07:23:47	2:48:13	254									N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9							
03/10/94 07:24:47	2:49:13	60										Laser power OFF							
03/10/94 07:28:21	2:52:47	214	30.0	220.9	763.2						N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							
03/10/94 07:30:06	2:54:32										MAD	MAOSM						Exit occultation	
03/10/94 07:33:21	2:57:47	300	40.0	220.9	889.0							N40A	Err:508					Initiate oblique viewing	
03/10/94 07:38:55	3:03:21	334	50.0	221.0	1038.4							N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11					HiRes imaging had not stopped	
03/10/94 07:45:10	3:09:36	375	60.0	221.1	1211.8							N60A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ65N; Select DHU SEQT 12					IR and UV Uncompressed	
03/10/94 07:49:25	3:13:51	255											Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19					End oblique viewing - resume nadir pointing Resume compression	
03/10/94 07:52:15	3:16:41	170	70.0	221.4	1409.0							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						
03/10/94 08:00:20	3:24:46	485	80.0	222.3	1627.7							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
03/10/94 08:01:20	3:25:46	60											Load DEQ_12.UMI into SEQT 12					Restore compressed SEQT 12	
																			Err:508
03/10/94 08:09:34	3:34:00		89.7	309.2	1863.0							North Pole							Err:508
																			Err:508
03/10/94 08:10:35	3:35:01	0											Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Laser power OFF; Load dark images exposure table					Slew to Vega	
03/10/94 08:10:58	3:35:24		88.6	26.7	1896.6							LDUSK							
03/10/94 08:20:09	3:44:35		80.0	38.3	2107.1							N80D							
03/10/94 08:20:35	3:45:01	600											Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts	
03/10/94 08:20:50	3:45:16	15											Perform NIR imaging (DHU SEQT 31)						
03/10/94 08:21:05	3:45:31	15											Perform UV0 imaging (DHU SEQT 29)					Radiometric imaging starts	
03/10/94 08:21:11	3:45:37	6											Perform HR imaging (DHU SEQT 30)						
03/10/94 08:21:21	3:45:47	10											Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)					Slew HGA to Earth	
03/10/94 08:27:21	3:51:47	360											Switch to HGA					READY FOR DATA DUMP	
																			End L087 PostMap Script

Orbit 87 Timeline - Tyne B Orbit

03/10/94 08:35:00	3:59:26										Switch to DHU mode @ 128 kbps; Downlink SSSR Segment 5							Ground Command
03/10/94 08:32:09	3:56:35		70.0	39.2	2347.3					N70D								
03/10/94 08:45:36	4:10:02		60.0	39.4	2566.7					N60D								
03/10/94 09:00:22	4:24:48		50.0	39.4	2746.1					N50D								
03/10/94 09:05:00	4:29:26										Downlink SSSR Segment 6							Ground Command
03/10/94 09:16:09	4:40:35		40.0	39.4	2866.3					N40D								
03/10/94 09:32:32	4:56:58		30.0	39.4	2913.0					N30D								
03/10/94 09:33:59	4:58:25		29.1	39.3	2913.3					Aposelene								

Orbit 88 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/10/94 09:33:59	0:00:00		29.1	39.3	2913.3							Aposelene							Downlinking SSSR Segment 6 (orbit 87)
03/10/94 09:48:58	0:14:59		20.0	39.3	2880.2							N20D							
03/10/94 09:50:00	0:16:01												Downlink SSSR Segment 7						Ground Command
03/10/94 09:53:58	0:19:59		16.9	39.2	2854.4							INPM							Enter penumbra
03/10/94 09:54:59	0:21:00		16.3	39.2	2848.1							INUM							Enter umbra
03/10/94 10:00:00	0:26:01												Uplink & schedule L088 scripts						Ground Command - time approx.
03/10/94 10:04:54	0:30:55		10.0	39.2	2772.1							N10D							
03/10/94 10:19:52	0:45:53		0.0	39.1	2601.9							Equator - D							
03/10/94 10:33:33	0:59:34		-10.0	39.0	2388.3							S10D							
03/10/94 10:45:48	1:11:49		-20.0	39.0	2150.7							S20D							
03/10/94 10:47:09	1:13:10										PMK	AOS							
03/10/94 10:51:52	1:17:53		-25.4	39.0	2017.7							OUTUM							Exit umbra
03/10/94 10:52:44	1:18:45		-26.2	39.0	1998.1							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/10/94 10:53:44	1:19:45	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/10/94 10:56:38	1:22:39		-30.0	39.0	1906.5							S30D							
03/10/94 11:06:07	1:32:08		-40.0	38.9	1668.9							S40D							
																			Standard Prep2 Script
03/10/94 11:08:18	1:34:19	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/10/94 11:13:18	1:39:19	0											Msg "WRNG: Omni/2k in 1 min.."						
03/10/94 11:14:18	1:40:19	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/10/94 11:14:24	1:40:25		-50.0	39.0	1446.9							S50D							
03/10/94 11:15:18	1:41:19	60											Switch to omni antennas						
03/10/94 11:16:18	1:42:19	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/10/94 11:16:48	1:42:49	30											UV & HR cameras ON						
03/10/94 11:21:39	1:47:40		-60.0	39.1	1245.9							S60D							
03/10/94 11:25:43	1:51:44	535											Select ST-A						
03/10/94 11:25:53	1:51:54	10											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/10/94 11:26:18	1:52:19	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 88 Timeline - Type A Orbit

03/10/94 11:26:33	1:52:34	15										Stop imaging (DHU SEQT 0)		
03/10/94 11:28:02	1:54:03		-70.0	39.3	1068.2							S70D		
03/10/94 11:28:18	1:54:19	105												
03/10/94 11:28:33	1:54:34	15										Perform LWIR imaging (DHU SEQT 25)		
												Perform NIR imaging (DHU SEQT 31)		
03/10/94 11:28:48	1:54:49	15											Err:508 Slew to nadir (inertial pointing)	
03/10/94 11:29:18	1:55:19	30										Laser Power ON		
													Err:508	
03/10/94 11:33:42	1:59:43		-80.0	40.2	914.6							S80D		
													Err:508	
03/10/94 11:36:48	2:02:48	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S	
03/10/94 11:37:48	2:03:49	60											Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)	START MAPPING
03/10/94 11:38:48	2:04:49	60	-89.7	125.7	784.9							South Pole	Set SA step rate to LO	
03/10/94 11:39:28	2:05:29		-88.6	205.7	768.5							LDAWN		
03/10/94 11:43:27	2:09:28	279	-80.0	216.6	677.4							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3	
03/10/94 11:47:44	2:13:45	257	-70.0	217.4	591.5							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4	
03/10/94 11:51:45	2:17:46	241	-60.0	217.7	525.7							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6	
03/10/94 11:55:35	2:21:36	230	-50.0	217.9	479.1							S50A	Record in SDDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5	SSDR Segment 2
03/10/94 11:59:16	2:25:17		-40.0	217.9	450.9							S40A		
03/10/94 11:59:17	2:25:18	222										S40A	Load exposure table LUNARZ35S	
03/10/94 12:00:13	2:26:14											PMK	MLOSM	
03/10/94 12:00:30	2:26:31											MAD	MLOSM	Enter occultation
03/10/94 12:02:54	2:28:55	217	-30.0	218.0	440.5							S30A	Load exposure table LUNARZ25S	
03/10/94 12:03:13	2:29:14		-29.1	218.0	440.4							Periselene		
03/10/94 12:06:32	2:32:33	218	-20.0	218.0	447.8							S20A	Load exposure table LUNARZ15S	
03/10/94 12:10:13	2:36:14	221	-10.0	218.0	472.9							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6	
03/10/94 12:14:01	2:40:02	228	0.0	218.1	516.2							Equator - A	Record in SDDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR segment 3
03/10/94 12:17:59	2:44:00	238	10.0	218.1	578.5							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	
03/10/94 12:22:13	2:48:14	254	20.0	218.1	660.8							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	
03/10/94 12:23:13	2:49:14	60											Laser power OFF	
03/10/94 12:26:48	2:52:49	215	30.0	218.1	764.2							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	

Orbit 88 Timeline - Type A Orbit

03/10/94 12:29:25	2:55:26								MAD	MAOSM								Exit occultation
03/10/94 12:29:37	2:55:38								PMK	MAOSM								
03/10/94 12:31:48	2:57:49		40.0	218.2	890.0					N40A								
03/10/94 12:31:49	2:57:50	301								N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11							SSDR Segment 4
03/10/94 12:37:22	3:03:23	333	50.0	218.2	1039.3					N50A	Reset filters (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12							HiRes imaging had not stopped
03/10/94 12:43:37	3:09:38	375	60.0	218.3	1212.6					N60A	Load CEQ_19U.UMI into SEQT 19; Load exposure table LUNARZ65N; Select DHU SEQT 19							IR and UV uncompressed
03/10/94 12:50:42	3:16:43		70.0	218.6	1409.7					N70A								
03/10/94 12:50:43	3:16:44	426								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14							Resume compression
03/10/94 12:58:48	3:24:49	485	80.0	219.4	1628.3					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15							
03/10/94 12:59:48	3:25:49	60									Load DEQ_19.UMI into SEQT19							Restore compressed SEQT 19
Err:508																		
03/10/94 13:08:03	3:34:04		89.7	308.2	1863.6					North Pole								
Standard PostMap Script																		
03/10/94 13:09:03	3:35:04	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Laser power OFF; Load dark images exposure table							Slew to Vega
03/10/94 13:09:26	3:35:27		88.6	25.1	1897.1					LDUSK								
03/10/94 13:18:37	3:44:38		80.0	35.7	2107.3					N80D								
03/10/94 13:19:03	3:45:04	600									Perform UV0 imaging (DHU SEQT 29)							Radiometric imaging
03/10/94 13:19:18	3:45:19	15									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/10/94 13:19:33	3:45:34	15									Perform NIR imaging (DHU SEQT 31)							
03/10/94 13:19:48	3:45:49	15									Perform HR imaging (DHU SEQT 30)							
03/10/94 13:19:54	3:45:55	7									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)							Slew HGA to Earth
03/10/94 13:23:27	3:49:28								GDS	AOS								
03/10/94 13:25:54	3:51:55	360									Switch to HGA							READY FOR DATA DUMP
End PostMap Script																		
03/10/94 13:27:00	3:53:01										Switch to DHU mode @ 128 kbps; Downlink SSDR Segment 1							Ground Command
03/10/94 13:30:37	3:56:38		70.0	36.5	2347.2					N70D								

Orbit 88 Timeline - Type A Orbit

03/10/94 13:44:04	4:10:05		60.0	36.7	2566.3						N60D						
03/10/94 13:58:49	4:24:50		50.0	36.7	2745.4						N50D						
03/10/94 14:01:00	4:27:01											Downlink SDR Segment 2					Ground Command
03/10/94 14:14:36	4:40:37		40.0	36.7	2865.4						N40D						
03/10/94 14:30:59	4:57:00		30.0	36.6	2912.0						N30D						
03/10/94 14:32:25	4:58:26		29.1	36.6	2912.3						Aposelene						

Orbit 89 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/10/94 14:32:25	0:00:00		29.1	36.6	2912.3							Aposelene							Downlinking SSSDR Segment 2 (Orbit 88)
03/10/94 14:45:00	0:12:35												Downlink SSSDR Segment 3						Ground Command
03/10/94 14:47:24	0:14:59		20.0	36.6	2879.2							N20D							
03/10/94 14:52:10	0:19:45		17.0	36.5	2854.7							INPM							Enter penumbra
03/10/94 14:53:11	0:20:46		16.4	36.5	2848.6							INUM							Enter umbra
03/10/94 15:03:19	0:30:54		10.0	36.5	2771.2							N10D							
03/10/94 15:10:00	0:37:35												Downlink SSSDR Segment 4						Ground Command
03/10/94 15:18:17	0:45:52		0.0	36.4	2601.3							Equator - D							
03/10/94 15:31:58	0:59:33		-10.0	36.3	2387.9							S10D							
03/10/94 15:36:00	1:03:35												SSDR to IDLE - downlink complete						Ground Command
03/10/94 15:44:13	1:11:48		-20.0	36.2	2150.6							S20D							
03/10/94 15:50:26	1:18:01		-25.6	36.2	2014.3							OUTUM							Exit umbra
03/10/94 15:51:17	1:18:52		-26.4	36.2	1994.8							OUTPM							Exit penumbra
03/10/94 15:52:00	1:19:35												Uplink CEQ_27.UMI and load into SEQT 27						Ground Command - attempt to fix problem that SEQT 27 not parking opaque filter on HR
																			Standard Prep1 Script
03/10/94 15:52:17	1:19:52	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/10/94 15:55:02	1:22:37		-30.0	36.2	1906.7							S30D							
03/10/94 16:04:31	1:32:06		-40.0	36.2	1669.3							S40D							
																			Standard Prep2 Script
03/10/94 16:06:43	1:34:18	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/10/94 16:08:49	1:36:24										MAD	LOS							
																			Err:508
03/10/94 16:11:43	1:39:18	0											Msg "WRNG: Omni/2k in 1 min.."						
03/10/94 16:12:43	1:40:18	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/10/94 16:12:48	1:40:23		-50.0	36.2	1447.5							S50D							
03/10/94 16:13:43	1:41:18	60											Switch to omni antennas						
03/10/94 16:14:43	1:42:18	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/10/94 16:15:13	1:42:48	30											UV & HR cameras ON						

Orbit 89 Timeline - Type B Orbit

03/10/94 16:20:03	1:47:38		-60.0	36.3	1246.5				S60D									SCRIPT ERROR - elapsed time should've been 545 sec.
03/10/94 16:24:08	1:51:43	535								Select ST-A								
03/10/94 16:24:18	1:51:53	10								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables								Start SSSR in Segment 5
03/10/94 16:24:43	1:52:18	25								Perform NIR imaging (DHU SEQT 31)								Dark Field imaging starts
03/10/94 16:24:58	1:52:33	15								Stop imaging (DHU SEQT 0)								
03/10/94 16:26:26	1:54:01		-70.0	36.5	1069.0				S70D									
03/10/94 16:26:43	1:54:18	105								Perform LWIR imaging (DHU SEQT 25)								
03/10/94 16:26:58	1:54:33	15								Perform NIR imaging (DHU SEQT 31)								
03/10/94 16:27:13	1:54:48	15																Slew to nadir (inertial pointing)
03/10/94 16:27:43	1:55:18	30								Laser Power ON								
																		Err:508
03/10/94 16:32:07	1:59:42		-80.0	37.3	915.4				S80D									Err:508
																		Err:508
03/10/94 16:35:13	2:02:48	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/10/94 16:36:13	2:03:48	60								Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 16)								START MAPPING
03/10/94 16:37:13	2:04:48	60	-89.7	123.3	785.8				South Pole	Set SA step rate to LO								
03/10/94 16:37:54	2:05:29		-88.6	204.0	769.4				LDAWN									
03/10/94 16:41:52	2:09:27	279	-80.0	214.0	678.4				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17								
03/10/94 16:46:09	2:13:44	257	-70.0	214.8	592.4				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18								
03/10/94 16:50:10	2:17:45	241	-60.0	215.0	526.7				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/10/94 16:53:59	2:21:34	229							S50A	Record in SSSR Segment 6; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5								Opaque filter did not park SSSR Segment 6
03/10/94 16:54:00	2:21:35		-50.0	215.2	480.1				S50A									
03/10/94 16:57:41	2:25:16	222							S40A	Load exposure table LUNARZ35S								
03/10/94 16:57:42	2:25:17		-40.0	215.2	451.9				S40A									
03/10/94 16:58:10	2:25:45								GDS	MLOSM								
03/10/94 16:58:20	2:25:55								PMK	MLOSM								Enter occultation
03/10/94 17:01:18	2:28:53	217								S30A	Load exposure table LUNARZ25S							
03/10/94 17:01:21	2:28:56		-30.0	215.3	441.5					S30A								
03/10/94 17:01:39	2:29:14		-29.1	215.3	441.5				Periselene									
03/10/94 17:04:56	2:32:31	218	-20.0	215.3	448.8					S20A	Load exposure table LUNARZ15S							

Orbit 89 Timeline - Type B Orbit

03/10/94 17:08:37	2:36:12	221	-10.0	215.3	473.9					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/10/94 17:12:24	2:39:59	227	0.0	215.3	517.2					Equator - A	Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7						SDDR Segment 7	
03/10/94 17:16:23	2:43:58	239	10.0	215.4	579.5					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							
03/10/94 17:20:37	2:48:12	254	20.0	215.4	661.8					N20A	Load CEQ_9U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9						IR and UV Uncompressed	
03/10/94 17:21:37	2:49:12	60									Laser power OFF							
03/10/94 17:25:11	2:52:46	214	30.0	215.4	765.2					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						Resume compression	
03/10/94 17:28:50	2:56:25									PMK	MAOSM							Exit occultation
03/10/94 17:28:56	2:56:31									GDS	MAOSM							
03/10/94 17:30:11	2:57:46	300	40.0	215.4	890.9					N40A	Switch to inertial pointing (ORB_089RW); Load exposure table LUNARZ45N						Initiate oblique viewing	
03/10/94 17:35:44	3:03:19	334	50.0	215.5	1040.2					N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11						HiRes imaging had not stopped	
03/10/94 17:41:59	3:09:34	375	60.0	215.6	1213.4					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12							
03/10/94 17:46:14	3:13:49	255									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19						End oblique viewing - resume nadir pointing	
03/10/94 17:49:04	3:16:39	170	70.0	215.8	1410.4					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20							
03/10/94 17:57:09	3:24:44	485	80.0	216.5	1628.8					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21							
03/10/94 17:58:09	3:25:44	60									Load DEQ_09.UMI into SEQT 09						Restore compressed SEQT 9	
Err:508																		
03/10/94 18:06:31	3:34:06		89.7	305.1	1863.9					North Pole								
Standard PostMap Script																		
03/10/94 18:07:31	3:35:06	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Laser power OFF; Load dark images exposure table						Slew to Vega	
03/10/94 18:07:54	3:35:29		88.6	23.3	1897.5					LDUSK								
03/10/94 18:17:05	3:44:40		80.0	33.1	2107.4					N80D								
03/10/94 18:17:31	3:45:06	600									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts	
03/10/94 18:17:46	3:45:21	15									Perform NIR imaging (DHU SEQT 31)							
03/10/94 18:18:01	3:45:36	15									Perform UV0 imaging (DHU SEQT 29)						Radiometric imaging starts	

Orbit 89 Timeline - Type B Orbit

03/10/94 18:18:07	3:45:42	6								Perform HR imaging (DHU SEQT 30)				
03/10/94 18:18:17	3:45:52	10								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)				Slew HGA to Earth
03/10/94 18:24:17	3:51:52	360								Switch to HGA				READY FOR DATA DUMP
														End PostMap Script
03/10/94 18:27:00	3:54:35									Switch to DHU mode @ 128 kbps				Ground Command - time approx.
03/10/94 18:29:06	3:56:41		70.0	33.9	2347.0					N70D				
03/10/94 18:30:00	3:57:35									Downlink SSSDR Segment 5				Ground Command
03/10/94 18:42:32	4:10:07		60.0	34.0	2565.8					N60D				
03/10/94 18:50:00	4:17:35									Uplink & schedule L090 scripts				Ground Command
03/10/94 18:56:00	4:23:35									Downlink SSSDR Segment 6				Ground Command
03/10/94 18:57:17	4:24:52		50.0	34.0	2744.6					N50D				
03/10/94 19:13:03	4:40:38		40.0	34.0	2864.4					N40D				
03/10/94 19:27:00	4:54:35									Cancel script L090_Prep3				Ground Command - error in script
03/10/94 19:29:25	4:57:00		30.0	33.9	2910.9					N30D				
03/10/94 19:30:51	4:58:26		29.1	33.9	2911.2					Aposelene				

Orbit 90 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/10/94 19:30:51	0:00:00		29.1	33.9	2911.2							Aposelene							Downlinking SDDR Segment 6 (orbit 89)
03/10/94 19:34:23	0:03:32										CAN	AOS							
03/10/94 19:39:00	0:08:09												Downlink SDDR Segment 7						Ground Command
03/10/94 19:44:00	0:13:09												Uplink & schedule script L090_Prep3						Ground Command - corrected quatr.
03/10/94 19:45:50	0:14:59		20.0	33.8	2878.1							N20D							
03/10/94 19:50:23	0:19:32		17.2	33.8	2854.9							INPM							Enter penumbra
03/10/94 19:51:24	0:20:33		16.6	33.8	2848.9							INUM							Enter umbra
03/10/94 20:01:44	0:30:53		10.0	33.7	2770.3							N10D							
03/10/94 20:16:41	0:45:50		0.0	33.6	2600.7							Equator - D							
03/10/94 20:30:22	0:59:31		-10.0	33.6	2387.6							S10D							
03/10/94 20:41:00	1:10:09												SSDR to IDLE - downlink complete						Ground Command
03/10/94 20:42:37	1:11:46		-20.0	33.5	2150.6							S20D							
03/10/94 20:48:59	1:18:08		-25.7	33.5	2011.1							OUTUM							Exit umbra
03/10/94 20:49:49	1:18:58		-26.5	33.5	1991.8							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/10/94 20:50:49	1:19:58	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/10/94 20:53:27	1:22:36		-30.0	33.5	1906.9							S30D							
03/10/94 21:02:55	1:32:04		-40.0	33.5	1669.7							S40D							
																			Standard Prep2 Script
03/10/94 21:05:08	1:34:17	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/10/94 21:10:08	1:39:17	0											Msg "WRNG: Omni/2k in 1 min.."						
03/10/94 21:11:08	1:40:17	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/10/94 21:11:12	1:40:21		-50.0	33.5	1448.1							S50D							
03/10/94 21:12:08	1:41:17	60											Switch to omni antennas						
03/10/94 21:13:08	1:42:17	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/10/94 21:13:38	1:42:47	30											UV & HR cameras ON						
03/10/94 21:18:28	1:47:37		-60.0	33.5	1247.3							S60D							
03/10/94 21:22:33	1:51:42	535											Select ST-A						SCRIPT ERROR - elapsed time should've been 545 sec.
03/10/94 21:22:43	1:51:52	10											Initialize filters (DHU SEQT 28); Record in SDDR Segment 1; Load lunar dark exposure tables						Start SDDR in Segment 1

Orbit 90 Timeline - Type A Orbit

03/10/94 21:23:08	1:52:17	25								Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/10/94 21:23:23	1:52:32	15								Stop imaging (DHU SEQT 0)						
03/10/94 21:23:33	1:52:42							PMK	LOS							
03/10/94 21:24:51	1:54:00		-70.0	33.8	1069.9				S70D							
03/10/94 21:25:08	1:54:17	105								Perform LWIR imaging (DHU SEQT 25)						
03/10/94 21:25:23	1:54:32	15								Perform NIR imaging (DHU SEQT 31)						
03/10/94 21:25:38	1:54:47	15									Err:508					Slew to nadir (inertial pointing)
03/10/94 21:26:08	1:55:17	30								Laser Power ON						
																Err:508
03/10/94 21:30:32	1:59:41		-80.0	34.5	916.4				S80D							Err:508
																Err:508
03/10/94 21:33:38	2:02:47	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/10/94 21:34:38	2:03:47	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)						START MAPPING
03/10/94 21:35:38	2:04:47	60	-89.7	119.8	786.8				South Pole	Set SA step rate to LO						
03/10/94 21:36:19	2:05:28		-88.6	202.2	770.3				LDAWN							
03/10/94 21:40:17	2:09:26	279	-80.0	211.4	679.4				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3						
03/10/94 21:44:35	2:13:44	258	-70.0	212.1	593.5				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4						
03/10/94 21:48:37	2:17:46	242	-60.0	212.4	527.8				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/10/94 21:52:26	2:21:35	229	-50.0	212.5	481.2				S50A	Record in SDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ45S; Select DHU SEQT 5						Opaque filter did not park SSDR Segment 2
03/10/94 21:54:00	2:23:09									Park opaque filter on HiRes (DHU SEQT 27)						Ground Command
03/10/94 21:54:04	2:23:13															Imaging stops for filter wheel change
03/10/94 21:54:30	2:23:39									Resume imaging - select DHU SEQT 5						Ground Command
03/10/94 21:56:08	2:25:17		-40.0	212.5	453.0				S40A							
03/10/94 21:56:09	2:25:18	223							S40A	Load exposure table LUNARZ35S						
03/10/94 21:56:19	2:25:28								CAN	MLOSM						
03/10/94 21:56:22	2:25:31								GDS	MLOSM						Enter occultation
03/10/94 21:59:12	2:28:21															Data missing
03/10/94 21:59:27	2:28:36															Data resumes
03/10/94 21:59:47	2:28:56	218	-30.0	212.6	442.6				S30A	Load exposure table LUNARZ25S						
03/10/94 22:00:06	2:29:15		-29.1	212.6	442.6				Periselene							
03/10/94 22:03:25	2:32:34	218	-20.0	212.6	449.9				S20A	Load exposure table LUNARZ15S						
03/10/94 22:07:06	2:36:15	221	-10.0	212.6	475.0				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						

Orbit 90 Timeline - Type A Orbit

03/10/94 22:10:54	2:40:03	228	0.0	212.6	518.3										Equator - A	Record in SDDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR segment 3	
03/10/94 22:14:53	2:44:02	239	10.0	212.6	580.6										N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/10/94 22:19:08	2:48:17	255	20.0	212.6	662.8										N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					
03/10/94 22:20:08	2:49:17	60															Laser power OFF				
03/10/94 22:23:42	2:52:51		30.0	212.6	766.2										N30A						
03/10/94 22:23:43	2:52:52	215													N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					
03/10/94 22:28:07	2:57:16													GDS	MAOSM						Exit occultation
03/10/94 22:28:44	2:57:53	301	40.0	212.7	891.9										N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11				SSDR Segment 4	
03/10/94 22:28:48	2:57:57													CAN	MAOSM						
03/10/94 22:34:18	3:03:27	334	50.0	212.7	1041.1										N50A	Load CEQ_12U.UMI into SEQT 12; Reset filters (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 12				Filters did not reset UV and IR uncompressed	
03/10/94 22:40:33	3:09:42	375	60.0	212.8	1214.2										N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13				Resume compression	
03/10/94 22:47:38	3:16:47		70.0	213.0	1411.0										N70A						
03/10/94 22:47:39	3:16:48	426													N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14					
03/10/94 22:55:44	3:24:53	485	80.0	213.7	1629.3										N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15					
03/10/94 22:56:44	3:25:53	60															Load DEQ_12.UMI into SEQT12				Restore compressed SEQT 12
Err:508																					
03/10/94 23:04:59	3:34:08		89.7	301.2	1864.0										North Pole						
Standard PostMap Script																					
03/10/94 23:05:59	3:35:08	0															Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Laser power OFF; Load dark images exposure table				Slew to Vega
03/10/94 23:06:23	3:35:32		88.6	21.5	1897.8										LDUSK						
03/10/94 23:15:34	3:44:43		80.0	30.5	2107.4										N80D						
03/10/94 23:15:59	3:45:08	600															Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/10/94 23:16:14	3:45:23	15															Perform NIR imaging (DHU SEQT 31)				
03/10/94 23:16:28	3:45:37	15															Perform UV0 imaging (DHU SEQT 29)				Radiometric imaging starts
03/10/94 23:16:35	3:45:44	6															Perform HR imaging (DHU SEQT 30)				

Orbit 90 Timeline - Type A Orbit

03/10/94 23:16:45	3:45:54	10								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/10/94 23:22:50	3:51:59	360								Switch to HGA						READY FOR DATA DUMP
End PostMap Script																
03/10/94 23:25:00	3:54:09									Switch to DHU mode @ 128 kbps						Ground Command
03/10/94 23:27:00	3:56:09									Downlink SDR Segment 1						Ground Command
03/10/94 23:27:34	3:56:43				70.0	31.2	2346.7			N70D						
03/10/94 23:41:00	4:10:09				60.0	31.3	2565.2			N60D						
03/10/94 23:55:44	4:24:53				50.0	31.3	2743.8			N50D						
03/11/94 00:08:00	4:37:09															Downlink SDR Segment 2
03/11/94 00:08:11	4:37:20															Ground Command
03/11/94 00:08:11	4:37:20								GDS	LOS						
03/11/94 00:11:30	4:40:39				40.0	31.3	2863.4			N40D						
03/11/94 00:27:51	4:57:00				30.0	31.2	2909.8			N30D						
03/11/94 00:29:18	4:58:27				29.1	31.2	2910.1			Aposelene						

Orbit 91 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/11/94 00:29:18	0:00:00		29.1	31.2	2910.1							Aposelene							Downlinking SSSDR Segment 2 (Orbit 90)
03/11/94 00:44:15	0:14:57		20.0	31.1	2877.1							N20D							
03/11/94 00:48:36	0:19:18		17.3	31.1	2855.1							INPM							Enter penumbra
03/11/94 00:49:00	0:19:42												Downlink SSSDR Segment 3						Ground Command
03/11/94 00:49:36	0:20:18		16.7	31.1	2849.2							INUM							Enter umbra
03/11/94 01:00:00	0:30:42												Uplink & schedule L091 scripts						Ground Command - time approx.
03/11/94 01:00:09	0:30:51		10.0	31.0	2769.5							N10D							
03/11/94 01:08:00	0:38:42												Ranging A ON						Ground Command
03/11/94 01:14:00	0:44:42												Downlink SSSDR Segment 4						Ground Command
03/11/94 01:15:06	0:45:48		0.0	30.9	2600.1							Equator - D							
03/11/94 01:28:46	0:59:28		-10.0	30.8	2387.3							S10D							
03/11/94 01:41:02	1:11:44		-20.0	30.8	2150.6							S20D							
03/11/94 01:47:32	1:18:14		-25.9	30.7	2008.1							OUTUM							Exit umbra
03/11/94 01:48:22	1:19:04		-26.6	30.7	1988.9							OUTPM							Exit penumbra
03/11/94 01:49:00	1:19:42												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
03/11/94 01:49:19	1:20:01	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/11/94 01:51:51	1:22:33		-30.0	30.7	1907.2							S30D							
03/11/94 02:01:20	1:32:02		-40.0	30.7	1670.3							S40D							
																			Standard Prep2 Script
03/11/94 02:03:31	1:34:13	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/11/94 02:04:00	1:34:42												Ranging A OFF						Ground Command
																			Err:508
03/11/94 02:08:31	1:39:13	0											Msg "WRNG: Omni/2k in 1 min.."						
03/11/94 02:09:31	1:40:13	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/11/94 02:09:37	1:40:19		-50.0	30.7	1448.9							S50D							
03/11/94 02:10:31	1:41:13	60											Switch to omni antennas						
03/11/94 02:11:31	1:42:13	60											Deselect ST; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/11/94 02:12:01	1:42:43	30											UV & HR cameras ON						
03/11/94 02:16:52	1:47:34		-60.0	30.8	1248.2							S60D							

Orbit 91 Timeline - Tyne B Orbit

03/11/94 02:21:06	1:51:48	545									Initialize filters (DHU SEQT 28); Record in SDR Segment 5; Load lunar dark exposure tables							Start SDR in Segment 5
03/11/94 02:21:31	1:52:13	25									Perform NIR imaging (DHU SEQT 31)							Dark Field imaging starts
03/11/94 02:21:46	1:52:28	15									Stop imaging - select ST-A							
03/11/94 02:23:16	1:53:58		-70.0	31.0	1070.8					S70D								
03/11/94 02:23:31	1:54:13	105									Perform LWIR imaging (DHU SEQT 25)							
03/11/94 02:23:46	1:54:28	15									Perform NIR imaging (DHU SEQT 31)							
03/11/94 02:24:01	1:54:43	15															Err:508	Slew to nadir (inertial pointing)
03/11/94 02:24:31	1:55:13	30									Laser Power ON							
																		Err:508
03/11/94 02:28:57	1:59:39		-80.0	31.6	917.5					S80D								Err:508
																		Err:508
03/11/94 02:32:01	2:02:43	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ855							
03/11/94 02:33:01	2:03:43	60									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/11/94 02:34:01	2:04:43	60								MAXS	Set SA step rate to LO							
03/11/94 02:34:04	2:04:46		-89.8	123.1	787.6					South Pole								
03/11/94 02:34:44	2:05:26		-88.6	200.3	771.4					LDAWN								
03/11/94 02:38:41	2:09:23	280								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17							
03/11/94 02:38:43	2:09:25		-80.0	208.8	680.5					S80A								
03/11/94 02:42:58	2:13:40	257								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18							
03/11/94 02:43:01	2:13:43		-70.0	209.5	594.6					S70A								
03/11/94 02:47:00	2:17:42	242								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/11/94 02:47:02	2:17:44		-60.0	209.7	528.9					S60A								
03/11/94 02:50:50	2:21:32	230								S50A	Record in SDR Segment 6; Park opaque filter on HiRes (DHU SEQT 27)							SSDR Segment 6 Opaque filter did not park
03/11/94 02:50:55	2:21:37	5									Load exposure table LUNARZ45S; Select DHU SEQT 5							
03/11/94 02:50:52	2:21:34		-50.0	209.8	482.4					S50A								
03/11/94 02:54:32	2:25:14	217								S40A	Load exposure table LUNARZ35S							
03/11/94 02:54:34	2:25:16									CAN	MLOSM							Enter occultation
03/11/94 02:54:35	2:25:17		-40.0	209.8	454.1					S40A								
03/11/94 02:58:11	2:28:53	219								S30A	Load exposure table LUNARZ25S							
03/11/94 02:58:13	2:28:55		-30.0	209.8	443.8					S30A								
03/11/94 02:58:32	2:29:14		-29.1	209.8	443.7					Periselene								
03/11/94 03:01:49	2:32:31	218								S20A	Load exposure table LUNARZ15S							
03/11/94 03:01:51	2:32:33		-20.0	209.9	451.1					S20A								

Orbit 91 Timeline - Type B Orbit

03/11/94 03:05:30	2:36:12	221								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/11/94 03:05:33	2:36:15		-10.0	209.9	476.2					S10A									
03/11/94 03:09:19	2:40:01	229								MEQA	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 7
03/11/94 03:09:21	2:40:03		0.0	209.9	519.5					Equator - A									
03/11/94 03:13:18	2:44:00	239								N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8								UV and IR uncompressed
03/11/94 03:13:20	2:44:02		10.0	209.9	581.7					N10A									
03/11/94 03:17:33	2:48:15	255								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								Resume compression
03/11/94 03:17:35	2:48:17		20.0	209.9	663.9					N20A									
03/11/94 03:18:33	2:49:15	60									Laser power OFF								
03/11/94 03:22:08	2:52:50	215								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/11/94 03:22:10	2:52:52		30.0	209.9	767.2					N30A									
03/11/94 03:27:09	2:57:51	301								N40A	Switch to inertial pointing (ORB_091RW); Load exposure table LUNARZ45N								Initiate oblique viewing
03/11/94 03:27:11	2:57:53		40.0	209.9	892.9					N40A									
03/11/94 03:27:51	2:58:33								CAN	MAOSM									Exit occultation
03/11/94 03:32:43	3:03:25	334								N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11								HiRes imaging had not stopped
03/11/94 03:32:46	3:03:28		50.0	210.0	1042.0					N50A									
03/11/94 03:38:59	3:09:41	376								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12								
03/11/94 03:39:01	3:09:43		60.0	210.0	1215.0					N60A									
03/11/94 03:43:14	3:13:56	255									Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19								End oblique viewing - resume nadir pointing
03/11/94 03:46:04	3:16:46	170								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								
03/11/94 03:46:07	3:16:49		70.0	210.2	1411.7					N70A									
03/11/94 03:54:10	3:24:52	486								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
03/11/94 03:54:12	3:24:54		80.0	210.8	1629.7					N80A									
03/11/94 03:55:10	3:25:52	60									Load DEQ_08.UMI into SEQT 08								Restore compressed SEQT 8
																			Err:508
03/11/94 04:03:28	3:34:10		89.8	300.7	1864.5					North Pole									Err:508
03/11/94 04:04:25	3:35:07	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Laser power OFF; Load dark images exposure table								Slew to Vega

Orbit 91 Timeline - Type B Orbit

03/11/94 04:04:51	3:35:33		88.6	19.6	1898.1					LDUSK							
03/11/94 04:14:02	3:44:44		80.0	27.9	2107.3					N80D							
03/11/94 04:13:59	3:44:41	574									Enable centroiding (GNC79UV10N)						TEST OF STAR TRACKING MODE
03/11/94 04:14:25	3:45:07	26									Lock onto Vega (ACSMODE=StarTracking): GNC1E_UV1; Perform UV0 imaging (DHU SEQT 29)						
03/11/94 04:14:40	3:45:22	15									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/11/94 04:14:55	3:45:37	15									Perform NIR imaging (DHU SEQT 31)						
03/11/94 04:15:10	3:45:52	15									Perform HR imaging (DHU SEQT 30)						Radiometric imaging
03/11/94 04:15:16	3:45:58	6									Disable centroiding (GNC79UV10F)						END STAR TRACKING TEST
03/11/94 04:15:17	3:45:59	1									Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/11/94 04:21:16	3:51:58	360									Switch to HGA						READY FOR DATA DUMP
Err:508																	
03/11/94 04:22:00	3:52:42										Switch to DHU mode @ 128 kbps; Downlink SDR Segment 5						Ground Command
03/11/94 04:26:02	3:56:44		70.0	28.5	2346.3					N70D							
03/11/94 04:39:27	4:10:09		60.0	28.6	2564.5					N60D							
03/11/94 04:54:12	4:24:54		50.0	28.6	2742.8					N50D							
03/11/94 04:55:00	4:25:42										Downlink SDR Segment 6						Ground Command
03/11/94 05:09:57	4:40:39		40.0	28.6	2862.3					N40D							
03/11/94 05:26:17	4:56:59		30.0	28.5	2908.6					N30D							
03/11/94 05:27:44	4:58:26		29.1	28.5	2908.9					Aposelene							

Orbit 92 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/11/94 05:27:44	0:00:00		29.1	28.5	2908.9							Aposelene							Downlinking SDDR Segment 6 (orbit 91)
03/11/94 05:42:41	0:14:57		20.0	28.4	2876.0							N20D							
03/11/94 05:46:49	0:19:05		17.4	28.4	2855.2							INPM							Enter penumbra
03/11/94 05:47:49	0:20:05		16.8	28.4	2849.4							INUM							Enter umbra
03/11/94 05:58:34	0:30:50		10.0	28.3	2768.6							N10D							
03/11/94 06:13:31	0:45:47		0.0	28.2	2599.5							Equator - D							
03/11/94 06:20:02	0:52:18										MAD	AOS							
03/11/94 06:25:00	0:57:16												Uplink & schedule L092 scripts						Ground Command
03/11/94 06:27:11	0:59:27		-10.0	28.1	2387.1							S10D							
03/11/94 06:39:26	1:11:42		-20.0	28.0	2150.7							S20D							
03/11/94 06:46:04	1:18:20		-26.0	28.0	2005.2							OUTUM							Exit umbra
03/11/94 06:46:54	1:19:10		-26.8	28.0	1986.2							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/11/94 06:47:51	1:20:07	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/11/94 06:50:15	1:22:31		-30.0	28.0	1907.6							S30D							
03/11/94 06:59:44	1:32:00		-40.0	28.0	1670.9							S40D							
03/11/94 07:01:30	1:33:46										CAN	LOS							
																			Standard Prep2 Script
03/11/94 07:01:56	1:34:12	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/11/94 07:06:56	1:39:12	0											Msg "WRNG: Omni/2k in 1 min.."						
03/11/94 07:07:56	1:40:12	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/11/94 07:08:01	1:40:17		-50.0	28.0	1449.7							S50D							
03/11/94 07:08:56	1:41:12	60											Switch to omni antennas						
03/11/94 07:09:56	1:42:12	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/11/94 07:10:26	1:42:42	30											UV & HR cameras ON						
03/11/94 07:15:17	1:47:33		-60.0	28.0	1249.1							S60D							
03/11/94 07:19:31	1:51:47	545											Initialize filters (DHU SEQT 28); Record in SDDR Segment 1; Load lunar dark exposure tables						Start SDDR in Segment 1
03/11/94 07:19:56	1:52:12	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/11/94 07:20:11	1:52:27	15											Stop imaging - select ST-A						

Orbit 92 Timeline - Type A Orbit

03/11/94 07:21:41	1:53:57		-70.0	28.2	1071.9					S70D									
03/11/94 07:21:56	1:54:12	105									Perform LWIR imaging (DHU SEQT 25)								
03/11/94 07:22:11	1:54:27	15									Perform NIR imaging (DHU SEQT 31)								
03/11/94 07:22:26	1:54:42	15																	Err:508
03/11/94 07:22:56	1:55:12	30									Laser Power ON								Slew to nadir (inertial pointing)
																			Err:508
03/11/94 07:27:22	1:59:38		-80.0	28.8	918.6					S80D									Err:508
																			Err:508
03/11/94 07:30:26	2:02:42	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/11/94 07:31:26	2:03:42	60									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)								START MAPPING
03/11/94 07:32:26	2:04:42	60								MAXS	Set SA step rate to LO								
03/11/94 07:32:29	2:04:45		-89.8	118.5	788.8					South Pole									
03/11/94 07:33:10	2:05:26		-88.6	198.4	772.5					LDAWN									
03/11/94 07:37:06	2:09:22	280								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3								
03/11/94 07:37:08	2:09:24		-80.0	206.2	681.7					S80A									
03/11/94 07:41:24	2:13:40	258								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4								
03/11/94 07:41:26	2:13:42		-70.0	206.8	595.8					S70A									
03/11/94 07:45:26	2:17:42	242								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/11/94 07:45:28	2:17:44		-60.0	207.0	530.1					S60A									
03/11/94 07:49:16	2:21:32	230								S50A	Record in SDR Segment 2; Park opaque filter on HiRes (DHU SEQT 27)								SSDR Segment 2 Opaque filter did not park
03/11/94 07:49:18	2:21:34		-50.0	207.1	483.6					S50A									
03/11/94 07:49:21	2:21:37	5								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 5								
03/11/94 07:52:03	2:24:19									MAD	MLOSM								Enter occultation
03/11/94 07:52:59	2:25:15	218								S40A	Load exposure table LUNARZ35S								
03/11/94 07:53:01	2:25:17		-40.0	207.1	455.3					S40A									
03/11/94 07:56:37	2:28:53	218								S30A	Load exposure table LUNARZ25S								
03/11/94 07:56:40	2:28:56		-30.0	207.1	445.0					S30A									
03/11/94 07:56:59	2:29:15		-29.1	207.1	444.9					Periselene									
03/11/94 08:00:16	2:32:32	219								S20A	Load exposure table LUNARZ15S								
03/11/94 08:00:18	2:32:34		-20.0	207.1	452.3					S20A									
03/11/94 08:03:57	2:36:13	221								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/11/94 08:04:00	2:36:16		-10.0	207.1	477.3					S10A									
03/11/94 08:07:46	2:40:02	229								MEQA	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 3
03/11/94 08:07:48	2:40:04		0.0	207.1	520.6					Equator - A									

Orbit 92 Timeline - Type A Orbit

03/11/94 08:11:45	2:44:01	239									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/11/94 08:11:48	2:44:04		10.0	207.2	582.8						N10A						
03/11/94 08:16:00	2:48:16	255									N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					
03/11/94 08:16:03	2:48:19		20.0	207.2	665.0						N20A						
03/11/94 08:17:00	2:49:16	60										Laser power OFF					
03/11/94 08:20:35	2:52:51	215									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					
03/11/94 08:20:38	2:52:54		30.0	207.2	768.3						N30A						
03/11/94 08:25:37	2:57:53	302									N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11					SSDR Segment 4
03/11/94 08:25:39	2:57:55		40.0	207.2	893.9						N40A						
03/11/94 08:26:23	2:58:39									MAD	MAOSM						Exit occultation
03/11/94 08:31:11	3:03:27	334									N50A	Load CEQ_12U.UMI into SEQT 12; Reset filters (DHUSEL28); Load exposure table LUNARZ55N; DHUSEL12					Filters did not reset UV and IR uncompressed
03/11/94 08:31:14	3:03:30		50.0	207.2	1042.9						N50A						
03/11/94 08:37:27	3:09:43	376									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13					Resume compression
03/11/94 08:37:30	3:09:46		60.0	207.3	1215.8						N60A						
03/11/94 08:44:33	3:16:49	426									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14					
03/11/94 08:44:35	3:16:51		70.0	207.4	1412.3						N70A						
03/11/94 08:52:38	3:24:54	485									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15					
03/11/94 08:52:41	3:24:57		80.0	208.0	1630.1						N80A						
03/11/94 08:53:38	3:25:54	60										Load DEQ_12.UMI into SEQT12					Restore compressed SEQT 12
Err:508																	
03/11/94 09:01:56	3:34:12		89.8	295.7	1864.4						North Pole						
Err:508																	
03/11/94 09:02:53	3:35:09	0										Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMMode=StarPointing, Index=0); Laser power OFF; Load dark images exposure table					Slew to Vega
03/11/94 09:03:20	3:35:36		88.6	17.7	1898.3						LDUSK						
03/11/94 09:12:31	3:44:47		80.0	25.3	2107.2						N80D						
03/11/94 09:12:28	3:44:44	575										Enable centroiding (GNC79UV10N)					TEST OF STAR TRACKING MODE
03/11/94 09:12:53	3:45:09	25										Lock onto Vega (ACSMMode=StarTracking): GNC1E_UV1; Perform UV0 imaging (DHU SEQT 29)					
03/11/94 09:13:08	3:45:24	15										Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts

Orbit 92 Timeline - Type A Orbit

03/11/94 09:13:23	3:45:39	15													Perform NIR imaging (DHU SEQT 31)				
03/11/94 09:13:37	3:45:53	15													Perform HR imaging (DHU SEQT 30)				Radiometric imaging
03/11/94 09:13:44	3:46:00	6													Disable centroiding (GNC79UV1OF)				END STAR TRACKING TEST
03/11/94 09:13:44	3:46:00	1													Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)				Slew HGA to Earth
03/11/94 09:19:44	3:52:00	360													Switch to HGA				READY FOR DATA DUMP
Err:508																			
03/11/94 09:20:00	3:52:16														Switch to DHU mode @ 128 kbps				Ground Command
03/11/94 09:24:30	3:56:46		70.0	25.8	2345.9									N70D					
03/11/94 09:27:00	3:59:16														Downlink SDR Segment 7 patches (orbit 91)				Ground Command
03/11/94 09:37:55	4:10:11		60.0	25.9	2563.8									N60D					
03/11/94 09:52:39	4:24:55		50.0	25.9	2741.8									N50D					
03/11/94 10:02:00	4:34:16														Downlink SDR Segment 1				Ground Command
03/11/94 10:08:24	4:40:40		40.0	25.9	2861.1									N40D					
03/11/94 10:24:44	4:57:00		30.0	25.8	2907.4									N30D					
03/11/94 10:26:11	4:58:27		29.1	25.8	2907.7									Aposelene					

Orbit 93 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/11/94 10:26:11	0:00:00		29.1	25.8	2907.7							Aposelene							Downlinking SSSDR Segment 1 (Orbit 92)
03/11/94 10:35:00	0:08:49												Downlink SSSDR Segment 2						Ground Command
03/11/94 10:41:06	0:14:55		20.0	25.7	2874.9							N20D							
03/11/94 10:45:03	0:18:52		17.6	25.6	2855.3							INPM							Enter penumbra
03/11/94 10:46:02	0:19:51		16.9	25.6	2849.6							INUM							Enter umbra
03/11/94 10:57:00	0:30:49		10.0	25.6	2767.7							N10D							
03/11/94 11:11:55	0:45:44		0.0	25.5	2598.9							Equator - D							
03/11/94 11:15:09	0:48:58										PMK	AOS							
03/11/94 11:20:00	0:53:49												Downlink SSSDR Segment 3						Ground Command
03/11/94 11:25:35	0:59:24		-10.0	25.4	2386.8							S10D							
03/11/94 11:37:50	1:11:39		-20.0	25.3	2150.8							S20D							
03/11/94 11:44:36	1:18:25		-26.1	25.3	2002.5							OUTUM							Exit umbra
03/11/94 11:45:25	1:19:14		-26.9	25.3	1983.7							OUTPM							Exit penumbra
03/11/94 11:46:00	1:19:49												Downlink SSSDR Segment 4; Uplink delta-V burn scripts						Ground Command
																			Standard Prep1 Script
03/11/94 11:46:25	1:20:14	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/11/94 11:48:39	1:22:28		-30.0	25.2	1908.0							S30D							
03/11/94 11:58:08	1:31:57		-40.0	25.2	1671.6							S40D							
																			Standard Prep2 Script
03/11/94 12:00:23	1:34:12	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/11/94 12:05:23	1:39:12	0											Msg "WRNG: Omni/2k in 1 min.."						
03/11/94 12:06:23	1:40:12	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/11/94 12:06:26	1:40:15		-50.0	25.2	1450.5							S50D							
03/11/94 12:07:23	1:41:12	60											Switch to omni antennas						
03/11/94 12:08:23	1:42:12	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/11/94 12:08:53	1:42:42	30											UV & HR cameras ON						
03/11/94 12:13:41	1:47:30		-60.0	25.3	1250.1							S60D							
03/11/94 12:17:58	1:51:47	545											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 5; Load lunar dark exposure tables						Start SSSDR in Segment 5

Orbit 93 Timeline - Tyne B Orbit

03/11/94 12:18:23	1:52:12	25								Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/11/94 12:18:38	1:52:27	15								Stop imaging - select ST-A					
03/11/94 12:20:06	1:53:55		-70.0	25.4	1073.0				S70D						
03/11/94 12:20:23	1:54:12	105								Perform LWIR imaging (DHU SEQT 25)					
03/11/94 12:20:38	1:54:27	15								Perform NIR imaging (DHU SEQT 31)					
03/11/94 12:20:53	1:54:42	15									Err:508				Slew to nadir (inertial pointing)
03/11/94 12:21:23	1:55:12	30								Laser Power ON					
															Err:508
03/11/94 12:25:47	1:59:36		-80.0	26.0	919.8				S80D						Err:508
03/11/94 12:28:53	2:02:42	0								Initialize filters (DHU SEQT 28)					
03/11/94 12:28:58	2:02:47	5								Park opaque filter on HiRes (DHUSEL27); Load exposure table LUNARZ855					
03/11/94 12:29:53	2:03:42	55								Switch to lunar mapping mode (ACSMMode=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/11/94 12:30:53	2:04:42	60							MAXS	Set SA step rate to LO					
03/11/94 12:30:54	2:04:43		-89.8	113.0	790.2				South Pole						
03/11/94 12:31:35	2:05:24		-88.6	196.4	773.7				LDAWN						
03/11/94 12:35:33	2:09:22	280							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/11/94 12:35:34	2:09:23		-80.0	203.5	682.9				S80A						
03/11/94 12:39:51	2:13:40	258							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18					
03/11/94 12:39:52	2:13:41		-70.0	204.1	597.1				S70A						
03/11/94 12:43:54	2:17:43	243	-60.0	204.3	531.4				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/11/94 12:47:44	2:21:33	230							S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 6
03/11/94 12:47:45	2:21:34		-50.0	204.3	484.8				S50A						
03/11/94 12:50:10	2:23:59								PMK	MLOSM					
03/11/94 12:50:21	2:24:10								MAD	MLOSM					Enter occultation
03/11/94 12:51:27	2:25:16	223							S40A	Load exposure table LUNARZ35S					
03/11/94 12:51:27	2:25:16		-40.0	204.4	456.6				S40A						
03/11/94 12:55:06	2:28:55	219	-30.0	204.4	446.2				S30A	Load exposure table LUNARZ25S					
03/11/94 12:55:26	2:29:15		-29.1	204.4	446.1				Periselene						
03/11/94 12:58:44	2:32:33	218							S20A	Load exposure table LUNARZ15S					
03/11/94 12:58:45	2:32:34		-20.0	204.4	453.5				S20A						
03/11/94 13:02:26	2:36:15	222							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/11/94 13:02:27	2:36:16		-10.0	204.4	478.5				S10A						

Orbit 93 Timeline - Type B Orbit

03/11/94 13:06:15	2:40:04	229									MEQA	Record in SSDR Segment 7; Load CEQ_7U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 7 UV and IR uncompressed
03/11/94 13:06:16	2:40:05		0.0	204.4	521.8						Equator - A		
03/11/94 13:10:15	2:44:04	240	10.0	204.4	584.0						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	Resume compression
03/11/94 13:14:30	2:48:19	255	20.0	204.4	666.1						N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	
03/11/94 13:15:30	2:49:19	60										Laser power OFF	
03/11/94 13:19:05	2:52:54	215									N30A	Load exposure table LUNARZ35N Select DHU SEQT 10	
03/11/94 13:19:06	2:52:55		30.0	204.4	769.3						N30A		
03/11/94 13:24:07	2:57:56	302	40.0	204.4	894.9						N40A	Switch to inertial pointing (ORB_093RW); Load exposure table LUNARZ45N	Initiate oblique viewing
03/11/94 13:25:20	2:59:09									MAD	MAOSM		Exit occultation
03/11/94 13:25:21	2:59:10									PMK	MAOSM		
03/11/94 13:29:41	3:03:30	334									N50A	Reset filters to resume HiRes (DHU SEQT 28); Load exposure table LUNARZ55N; Select DHU SEQT 11	Filters did not reset
03/11/94 13:29:42	3:03:31		50.0	204.4	1043.8						N50A		
03/11/94 13:35:57	3:09:46	376									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	
03/11/94 13:35:58	3:09:47		60.0	204.5	1216.6						N60A		
03/11/94 13:40:12	3:14:01	256										Load DEQ_07.UMI into SEQT 7	Restore compressed SEQT 7
													Err:508
													Err:508
03/11/94 13:41:12	3:15:01	0										Park filters (DHU SEQT 27)	
03/11/94 13:41:22	3:15:11	10										Set SA step rate to HI; Select ST-A; Slew s/c to burn attitude (GNC12B93RW); UV & HR cameras OFF; IR cameras & cryocoolers OFF; Laser power OFF; Close sensor door	
03/11/94 13:43:04	3:16:53		70.0	204.6	1412.9						N70A		
03/11/94 13:51:09	3:24:58		80.0	205.2	1630.5						N80A		
03/11/94 13:52:00	3:25:49											Set downlink rate to 8kbps; Set collection rate to 1000	Ground Command
03/11/94 14:00:25	3:34:14		89.8	294.5	1864.7						North Pole		
03/11/94 14:01:49	3:35:38		88.6	15.6	1898.5						LDUSK		
03/11/94 14:02:10	3:35:59									GDS	AOS		
03/11/94 14:07:00	3:40:49											Ranging A ON	Ground Command
03/11/94 14:10:59	3:44:48		80.0	22.7	2107.1						N80D		
03/11/94 14:22:58	3:56:47		70.0	23.2	2345.4						N70D		

Orbit 94 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/11/94 15:27:19	0:00:00		28.0	23.0	2951.8							Aposelene							Downlinking SSSDR Segment 5 (orbit 93)
03/11/94 15:32:00	0:04:41												Downlink SSSDR Segment 6						Ground Command
03/11/94 15:40:42	0:13:23		20.0	22.9	2924.9							N20D							
03/11/94 15:45:03	0:17:44		17.4	22.9	2904.7							INPM							Enter penumbra
03/11/94 15:46:04	0:18:45		16.8	22.9	2899.1							INUM							Enter umbra
03/11/94 15:57:03	0:29:44		10.0	22.8	2819.2							N10D							
03/11/94 16:03:00	0:35:40												Downlink SSSDR Segment 7						Ground Command
03/11/94 16:12:24	0:45:05		0.0	22.7	2646.5							Equator - D							
03/11/94 16:26:25	0:59:06		-10.0	22.6	2426.4							S10D							
03/11/94 16:38:57	1:11:38		-20.0	22.5	2180.1							S20D							
03/11/94 16:45:42	1:18:23		-26.0	22.5	2028.5							OUTUM							Exit umbra
03/11/94 16:46:33	1:19:14		-26.7	22.5	2008.7							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/11/94 16:47:36	1:20:17	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/11/94 16:49:58	1:22:39		-30.0	22.5	1926.3							S30D							
03/11/94 16:59:35	1:32:16		-40.0	22.4	1679.2							S40D							
																			Standard Prep2 Script
03/11/94 17:01:51	1:34:32	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/11/94 17:06:51	1:39:32	0											Msg "WRNG: Omni/2k in 1 min.."						
03/11/94 17:07:51	1:40:32	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/11/94 17:07:56	1:40:37		-50.0	22.4	1448.6							S50D							
03/11/94 17:08:51	1:41:32	60											Switch to omni antennas						
03/11/94 17:09:51	1:42:32	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/11/94 17:10:21	1:43:02	30											UV & HR cameras ON						
03/11/94 17:13:29	1:46:10										MAD	LOS							
03/11/94 17:15:12	1:47:53		-60.0	22.5	1239.9							S60D							
03/11/94 17:17:00	1:49:40												Ranging B OFF; Ranging A ON						Ground Command
03/11/94 17:19:26	1:52:07	545											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 1; Load lunar dark exposure tables						Start SSSDR in Segment 1

Orbit 94 Timeline - Type A Orbit

03/11/94 17:19:51	1:52:32	25									Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/11/94 17:20:06	1:52:47	15									Stop imaging - select ST-A						
03/11/94 17:21:35	1:54:16		-70.0	22.6	1055.8					S70D							
03/11/94 17:21:51	1:54:32	105									Perform LWIR imaging (DHU SEQT 25)						
03/11/94 17:22:06	1:54:47	15									Perform NIR imaging (DHU SEQT 31)						
03/11/94 17:22:21	1:55:02	15										Err:508					Slew to nadir (inertial pointing)
03/11/94 17:22:51	1:55:32	30									Laser Power ON						
																	Err:508
03/11/94 17:27:13	1:59:53		-80.0	23.1	896.9					S80D							
																	Err:508
03/11/94 17:30:21	2:03:01	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						NOTE: Pre-burn state vector being used on s/c. Position off by 150 km!
03/11/94 17:31:21	2:04:02	60									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)						START MAPPING
03/11/94 17:32:16	2:04:57		-89.8	111.1	762.5					South Pole							
03/11/94 17:32:21	2:05:02	60								MAXS	Set SA step rate to LO						
03/11/94 17:32:56	2:05:37		-88.6	194.7	745.4					LDAWN							
03/11/94 17:36:51	2:09:32		-80.0	200.9	651.4					S80A							
03/11/94 17:36:56	2:09:37	275								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3						
03/11/94 17:41:03	2:13:44		-70.0	201.4	562.2					S70A							
03/11/94 17:41:08	2:13:49	252								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4						
03/11/94 17:44:59	2:17:40		-60.0	201.6	493.7					S60A							
03/11/94 17:45:04	2:17:45	236								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/11/94 17:48:43	2:21:24		-50.0	201.6	444.7					S50A							
03/11/94 17:48:48	2:21:29	224								S50A	Record in SSSR Segment 2; Park opaque filter on HiRes (DHU SEQT 27)						SSDR Segment 2
03/11/94 17:48:58	2:21:39	10									Load exposure table LUNARZ45S; Select DHU SEQT 5						
03/11/94 17:50:20	2:23:01								GDS	MLOSM							
03/11/94 17:50:26	2:23:06								PMK	MLOSM							Enter occultation
03/11/94 17:50:41	2:23:22	103								S40A	Load exposure table LUNARZ35S						Delay wrong in orig. timeline - should be 235 sec.
03/11/94 17:52:18	2:24:59		-40.0	201.7	414.2					S40A							
03/11/94 17:54:13	2:26:54	212								S30A	Load exposure table LUNARZ25S						
03/11/94 17:55:50	2:28:31		-30.0	201.7	401.7					S30A							
03/11/94 17:56:33	2:29:14		-28.0	201.7	401.4					Periselene							
03/11/94 17:57:43	2:30:24	210								S20A	Load exposure table LUNARZ15S						
03/11/94 17:59:21	2:32:02		-20.0	201.7	407.0					S20A							

Orbit 94 Timeline - Type A Orbit

03/11/94 18:01:17	2:33:57	214								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/11/94 18:02:54	2:35:35		-10.0	201.7	430.1					S10A								
03/11/94 18:04:57	2:37:38	220								MEQA	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7							SSDR Segment 3
03/11/94 18:06:34	2:39:14		0.0	201.7	471.5					Equator - A								
03/11/94 18:08:47	2:41:28	230								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							
03/11/94 18:10:25	2:43:06		10.0	201.7	532.0					N10A								
03/11/94 18:12:52	2:45:33	245								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9							
03/11/94 18:13:52	2:46:33	60									Laser power OFF							
03/11/94 18:14:30	2:47:10		20.0	201.7	612.5					N20A								
03/11/94 18:17:17	2:49:57	205								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							
03/11/94 18:18:55	2:51:36		30.0	201.7	714.4					N30A								
03/11/94 18:22:07	2:54:48	290								N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11							SSDR Segment 4
03/11/94 18:23:45	2:56:26		40.0	201.7	839.1					N40A								
03/11/94 18:25:20	2:58:01	193								N50A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ55N; Select DHU SEQT 12							IR and UV uncompressed (nearly 4 minutes early)
03/11/94 18:25:50	2:58:31									PMK	MAOSM							Exit occultation
03/11/94 18:25:51	2:58:32									GDS	MAOSM							
03/11/94 18:27:00	2:59:41										Ranging A OFF							Ground Command
03/11/94 18:29:08	3:01:49		50.0	201.7	987.9					N50A								
03/11/94 18:31:23	3:04:04	363								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13							Resume compression
03/11/94 18:35:11	3:07:52		60.0	201.7	1161.7					N60A								
03/11/94 18:38:16	3:10:57	413								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14							
03/11/94 18:42:05	3:14:46		70.0	201.8	1360.4					N70A								
03/11/94 18:46:09	3:18:50	473								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15							
03/11/94 18:47:09	3:19:50	60									Load DEQ_12.UMI into SEQT12							Restore compressed SEQT 12
																		Err:508
03/11/94 18:49:58	3:22:39		80.0	202.3	1582.5					N80A								
03/11/94 18:59:02	3:31:43		89.8	289.2	1823.6					North Pole								
																		Err:508
03/11/94 19:00:05	3:32:46	0									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table							Slew to Vega (inertial pointing)
03/11/94 19:00:25	3:33:06		88.6	13.9	1858.8					LDUSK								
03/11/94 19:09:28	3:42:09		80.0	20.1	2076.2					N80D								

Orbit 94 Timeline - Type A Orbit

03/11/94 19:10:05	3:42:46	600								Perform UV0 imaging (DHU SEQT 29)						Radiometric imaging starts
03/11/94 19:10:20	3:43:01	15								Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/11/94 19:10:35	3:43:16	15								Perform NIR imaging (DHU SEQT 31)						
03/11/94 19:10:50	3:43:30	15								Perform HR imaging (DHU SEQT 30)						
03/11/94 19:10:56	3:43:37	7								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)						Slew HGA to Earth
03/11/94 19:16:56	3:49:37	360								Switch to HGA						READY FOR DATA DUMP
Err:508																
03/11/94 19:17:00	3:49:41									Switch to DHU mode @ 128 kbps						Ground Command
03/11/94 19:18:00	3:50:41									Downlink SSSR Segment 1						Ground Command
03/11/94 19:21:22	3:54:03		70.0	20.5	2327.5					N70D						
03/11/94 19:30:00	4:02:41															Error reduced from 150km to 10m
03/11/94 19:34:48	4:07:29		60.0	20.6	2560.7					N60D						
03/11/94 19:49:00	4:21:41															Downlink SSSR Segment 2
03/11/94 19:49:38	4:22:19		50.0	20.5	2755.1					N50D						Ground Command
03/11/94 19:55:00	4:27:41															Uplink & schedule L095 scripts
03/11/94 20:05:37	4:38:17		40.0	20.4	2889.9					N40D						Ground Command
03/11/94 20:17:00	4:49:40															Downlink SSSR Segment 3
03/11/94 20:22:17	4:54:58		30.0	20.3	2948.7					N30D						Ground Command
03/11/94 20:25:43	4:58:24		28.0	20.3	2950.5					Aposelene						

Orbit 95 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/11/94 20:25:43	0:00:00		28.0	20.3	2950.5							Aposelene							Downlinking SSSR Segment 3 (Orbit 94)
03/11/94 20:28:53	0:03:10										CAN	AOS							
03/11/94 20:37:00	0:11:17												Downlink SSSR Segment 4						Ground Command
03/11/94 20:39:05	0:13:22		20.0	20.2	2923.8							N20D							
03/11/94 20:43:13	0:17:30		17.5	20.2	2904.7							INPM							Enter penumbra
03/11/94 20:44:13	0:18:30		16.9	20.2	2899.2							INUM							Enter umbra
03/11/94 20:55:25	0:29:42		10.0	20.1	2818.4							N10D							
03/11/94 21:02:00	0:36:17												SSDR to IDLE - downlink complete						Ground Command
03/11/94 21:10:45	0:45:02		0.0	20.0	2646.0							Equator - D							
03/11/94 21:24:47	0:59:04		-10.0	19.9	2426.3							S10D							
03/11/94 21:35:00	1:09:17												Ranging B ON						Ground Command
03/11/94 21:37:18	1:11:35		-20.0	19.8	2180.3							S20D							
03/11/94 21:44:11	1:18:28		-26.1	19.8	2026.0							OUTUM							Exit umbra
03/11/94 21:45:01	1:19:18		-26.9	19.8	2006.3							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/11/94 21:46:07	1:20:24	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/11/94 21:48:19	1:22:36		-30.0	19.7	1926.8							S30D							
03/11/94 21:57:56	1:32:13		-40.0	19.7	1680.0							S40D							
																			Standard Prep2 Script
03/11/94 22:00:16	1:34:33	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/11/94 22:05:16	1:39:33	0											Msg "WRNG: Omni/2k in 1 min.."						
03/11/94 22:06:16	1:40:33	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/11/94 22:06:17	1:40:34		-50.0	19.7	1449.6							S50D							
03/11/94 22:07:16	1:41:33	60											Switch to omni antennas						
03/11/94 22:08:16	1:42:33	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/11/94 22:08:46	1:43:03	30											UV & HR cameras ON						
03/11/94 22:13:34	1:47:51		-60.0	19.7	1241.1							S60D							
03/11/94 22:17:51	1:52:08	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5

Orbit 95 Timeline - Tyne B Orbit

03/11/94 22:18:16	1:52:33	25									Perform NIR imaging (DHU SEQT 31)							Dark Field imaging starts
03/11/94 22:18:31	1:52:48	15									Stop imaging - select ST-A							
03/11/94 22:19:57	1:54:14		-70.0	19.8	1057.1					S70D								
03/11/94 22:20:16	1:54:33	105									Perform LWIR imaging (DHU SEQT 25)							
03/11/94 22:20:31	1:54:48	15									Perform NIR imaging (DHU SEQT 31)							
03/11/94 22:20:46	1:55:03	15																Err:508
03/11/94 22:21:16	1:55:33	30									Laser Power ON							
																		Err:508
03/11/94 22:22:25	1:56:42								PMK	LOS								
03/11/94 22:25:36	1:59:53		-80.0	20.3	898.2					S80D								
																		Err:508
03/11/94 22:28:46	2:03:03	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S							
03/11/94 22:29:46	2:04:03	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/11/94 22:30:38	2:04:55		-89.8	105.4	763.9					South Pole								
03/11/94 22:30:46	2:05:03	60								MAXS	Set SA step rate to LO							
03/11/94 22:31:19	2:05:36		-88.6	192.5	746.8					LDAWN								
03/11/94 22:35:13	2:09:30		-80.0	198.3	652.7					S80A								
03/11/94 22:35:21	2:09:38	275								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17							
03/11/94 22:39:26	2:13:43		-70.0	198.7	563.6					S70A								
03/11/94 22:39:34	2:13:51	253								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18							
03/11/94 22:43:22	2:17:39		-60.0	198.8	495.1					S60A								
03/11/94 22:43:30	2:17:47	236								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/11/94 22:47:06	2:21:23		-50.0	198.9	446.0					S50A								
03/11/94 22:47:14	2:21:31	224								S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5							HiRes imaging stopped by gain setting in exposure table
03/11/94 22:48:41	2:22:58								GDS	MLOSM								
03/11/94 22:48:45	2:23:02								CAN	MLOSM								Enter occultation
03/11/94 22:50:42	2:24:59		-40.0	198.9	415.5					S40A								
03/11/94 22:50:50	2:25:07	216								S40A	Load exposure table LUNARZ35S							
03/11/94 22:54:14	2:28:31		-30.0	198.9	403.0					S30A								
03/11/94 22:54:22	2:28:39	212								S30A	Load exposure table LUNARZ25S							
03/11/94 22:54:57	2:29:14		-28.0	198.9	402.7					Periselene								
03/11/94 22:57:45	2:32:02		-20.0	198.9	408.3					S20A								
03/11/94 22:57:53	2:32:10	211								S20A	Load exposure table LUNARZ15S							
03/11/94 23:01:19	2:35:36		-10.0	198.9	431.4					S10A								
03/11/94 23:01:26	2:35:43	213								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							

Orbit 95 Timeline - Type B Orbit

03/11/94 23:04:59	2:39:16		0.0	198.9	472.8						Equator - A									
03/11/94 23:05:06	2:39:23	220									MEQA	Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 7
03/11/94 23:08:50	2:43:07		10.0	198.9	533.2						N10A									
03/11/94 23:08:57	2:43:14	231									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/11/94 23:12:55	2:47:12		20.0	198.9	613.7						N20A									
03/11/94 23:13:02	2:47:19	245									N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9								UV and IR uncompressed
03/11/94 23:14:02	2:48:19	60										Laser power OFF								
03/11/94 23:17:20	2:51:37		30.0	198.9	715.5						N30A									
03/11/94 23:17:27	2:51:44	205									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								Resume compression
03/11/94 23:22:11	2:56:28		40.0	198.9	840.1						N40A									
03/11/94 23:22:17	2:56:34	290									N40A	Switch to inertial pointing (ORB_095RW); Load exposure table LUNARZ45N								Initiate oblique viewing
03/11/94 23:24:38	2:58:55									GDS	MAOSM									Exit occultation
03/11/94 23:25:03	2:59:20									CAN	MAOSM									
03/11/94 23:27:34	3:01:51		50.0	198.9	988.8						N50A									
03/11/94 23:27:40	3:01:57	323									N50A	Reset filters (DHUSEL28); Load exposure table LUNARZ55N; Select DHU SEQT 11								HiRes gain not reset in exposure table
03/11/94 23:33:37	3:07:54		60.0	199.0	1162.4						N60A									
03/11/94 23:33:44	3:08:01	364									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12								
03/11/94 23:37:51	3:12:08	248										Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19								End oblique viewing - resume nadir pointing
03/11/94 23:40:31	3:14:48		70.0	199.1	1361.0						N70A									
03/11/94 23:40:37	3:14:54	165									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								
03/11/94 23:48:24	3:22:41		80.0	199.5	1582.9						N80A									
03/11/94 23:48:30	3:22:47	473									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
03/11/94 23:49:30	3:23:47	60										Load DEQ_09.UMI into SEQT 9								Restore compressed SEQT 9
																				Err:508
03/11/94 23:57:28	3:31:45		89.8	286.3	1823.7						North Pole									Err:508
03/11/94 23:58:34	3:32:51	0										Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (ACSMODE=StarPointing, Index=0); Laser power OFF; Load dark images exposure table								Slew to Vega
03/11/94 23:58:51	3:33:08		88.6	11.7	1858.9						LDUSK									
03/12/94 00:07:54	3:42:11		80.0	17.4	2076.0						N80D									

Orbit 95 Timeline - Type B Orbit

03/12/94 00:08:08	3:42:25	574								Enable centroiding (GNC79UV10N)					TEST OF STAR TRACKING MODE
03/12/94 00:08:34	3:42:51	26								Lock onto Vega (ACSMODE=StarTracking): GNC1E_UV1; Perform UV0 imaging (DHU SEQT 29)					
03/12/94 00:08:49	3:43:06	15								Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/12/94 00:09:04	3:43:20	15								Perform NIR imaging (DHU SEQT 31)					
03/12/94 00:09:18	3:43:35	15								Perform HR imaging (DHU SEQT 30)					Radiometric imaging
03/12/94 00:09:25	3:43:42	6								Disable centroiding (GNC79UV10F)					END STAR TRACKING TEST
03/12/94 00:09:25	3:43:42	1								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)					Slew HGA to Earth
03/12/94 00:15:25	3:49:42	360								Switch to HGA					READY FOR DATA DUMP
															Err:508
03/12/94 00:17:00	3:51:17									Switch to DHU mode @ 128 kbps					Ground Command
03/12/94 00:19:48	3:54:05		70.0	17.8	2327.0				N70D						
03/12/94 00:24:00	3:58:17									Downlink SSSR Segment 5					Ground Command
03/12/94 00:33:13	4:07:30		60.0	17.9	2559.8				N60D						
03/12/94 00:48:00	4:22:17									Downlink SSSR Segment 6					Ground Command
03/12/94 00:48:03	4:22:20		50.0	17.8	2753.9				N50D						
03/12/94 01:04:01	4:38:18		40.0	17.7	2888.6				N40D						
03/12/94 01:10:00	4:44:17							GDS	LOS						
03/12/94 01:20:41	4:54:58		30.0	17.6	2947.4				N30D						
03/12/94 01:24:08	4:58:25		27.9	17.6	2949.2				Aposelene						

Orbit 96 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/12/94 01:24:08	0:00:00		27.9	17.6	2949.2							Aposelene							Downlinking SSSDR Segment 6 (orbit 95)
03/12/94 01:26:00	0:01:52		20.0	17.5	2922.6								Downlink SSSDR Segment 7						Ground Command
03/12/94 01:29:00	0:04:52		20.0	17.5	2922.6								Uplink & schedule L096 scripts						Ground Command
03/12/94 01:37:28	0:13:20		20.0	17.5	2922.6							N20D							
03/12/94 01:41:23	0:17:15		17.6	17.5	2904.6							INPM							Enter penumbra
03/12/94 01:42:23	0:18:15		17.0	17.5	2899.3							INUM							Enter umbra
03/12/94 01:53:46	0:29:38		10.0	17.4	2817.5							N10D							
03/12/94 02:09:07	0:44:59		0.0	17.3	2645.5							Equator - D							
03/12/94 02:22:00	0:57:52												SSDR to IDLE - downlink complete; Update state vector (GNC53_12MAR0200)						Ground Command
03/12/94 02:23:08	0:59:00		-10.0	17.2	2426.2							S10D							
03/12/94 02:35:39	1:11:31		-20.0	17.1	2180.7							S20D							
03/12/94 02:42:40	1:18:32		-26.2	17.0	2023.6							OUTUM							Exit umbra
03/12/94 02:43:30	1:19:22		-27.0	17.0	2004.0							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/12/94 02:44:38	1:20:30	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/12/94 02:46:41	1:22:33		-30.0	17.0	1927.5							S30D							
03/12/94 02:56:17	1:32:09		-40.0	17.0	1680.9							S40D							
																			Standard Prep2 Script
03/12/94 02:58:42	1:34:34	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/12/94 03:03:42	1:39:34	0											Msg "WRNG: Omni/2k in 1 min.."						
03/12/94 03:04:39	1:40:31		-50.0	16.9	1450.7							S50D							
03/12/94 03:04:42	1:40:34	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/12/94 03:05:42	1:41:34	60											Switch to omni antennas						
03/12/94 03:06:00	1:41:52		20.0	17.5	2922.6								Ranging B OFF						Ground Command
03/12/94 03:06:42	1:42:34	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMode=StarPointing, Index=3)						Slew to Crux
03/12/94 03:07:12	1:43:04	30											UV & HR cameras ON						
03/12/94 03:11:56	1:47:48		-60.0	16.9	1242.3							S60D							
03/12/94 03:16:17	1:52:09	545											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 1; Load lunar dark exposure tables						Start SSSDR in Segment 1

Orbit 96 Timeline - Type A Orbit

03/12/94 03:16:42	1:52:34	25										Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/12/94 03:16:57	1:52:49	15										Stop imaging - select ST-A						
03/12/94 03:18:19	1:54:11		-70.0	17.0	1058.4						S70D							
03/12/94 03:18:42	1:54:34	105										Perform LWIR imaging (DHU SEQT 25)						
03/12/94 03:18:57	1:54:49	15										Perform NIR imaging (DHU SEQT 31)						
03/12/94 03:19:12	1:55:04	15											Err:508					Slew to nadir (inertial pointing)
03/12/94 03:19:42	1:55:34	30										Laser Power ON						
																		Err:508
03/12/94 03:23:58	1:59:50		-80.0	17.4	899.5						S80D							Err:508
																		Err:508
03/12/94 03:27:12	2:03:04	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/12/94 03:28:12	2:04:04	60										Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)						START MAPPING
03/12/94 03:29:01	2:04:53		-89.8	108.5	765.1						South Pole							
03/12/94 03:29:12	2:05:04	60									MAXS	Set SA step rate to LO						
03/12/94 03:29:42	2:05:34		-88.6	190.4	748.1						LDAWN							
03/12/94 03:33:36	2:09:28		-80.0	195.6	654.1						S80A							
03/12/94 03:33:47	2:09:39	275									S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3						
03/12/94 03:37:49	2:13:41		-70.0	196.0	565.0						S70A							
03/12/94 03:38:00	2:13:52	253									S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4						
03/12/94 03:41:46	2:17:38		-60.0	196.1	496.5						S60A							
03/12/94 03:41:56	2:17:48	236									S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/12/94 03:45:30	2:21:22		-50.0	196.2	447.4						S50A							
03/12/94 03:45:41	2:21:33	225									S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5						SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/12/94 03:47:07	2:22:59									CAN	MLOSM							Enter occultation
03/12/94 03:49:06	2:24:58		-40.0	196.2	416.9						S40A							
03/12/94 03:49:17	2:25:09	216									S40A	Load exposure table LUNARZ35S						
03/12/94 03:52:38	2:28:30		-30.0	196.2	404.3						S30A							
03/12/94 03:52:49	2:28:41	212									S30A	Load exposure table LUNARZ25S						
03/12/94 03:53:21	2:29:13		-28.0	196.2	404.0						Periselene							
03/12/94 03:56:09	2:32:01		-20.0	196.2	409.6						S20A							
03/12/94 03:56:20	2:32:12	211									S20A	Load exposure table LUNARZ15S						
03/12/94 03:59:43	2:35:35		-10.0	196.2	432.6						S10A							
03/12/94 03:59:54	2:35:46	214									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						
03/12/94 04:03:24	2:39:16		0.0	196.2	474.0						Equator - A							

Orbit 96 Timeline - Type A Orbit

03/12/94 04:03:34	2:39:26	220									MEQA	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 3
03/12/94 04:07:14	2:43:06		10.0	196.2	534.3						N10A							
03/12/94 04:07:25	2:43:17	231									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/12/94 04:11:20	2:47:12		20.0	196.2	614.8						N20A							
03/12/94 04:11:30	2:47:22	245									N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9						IR and UV uncompressed
03/12/94 04:12:30	2:48:22	60										Laser power OFF						
03/12/94 04:15:45	2:51:37		30.0	196.2	716.6						N30A							
03/12/94 04:15:55	2:51:47	205									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						Resume compression
03/12/94 04:20:36	2:56:28		40.0	196.2	841.1						N40A							
03/12/94 04:20:46	2:56:38	291									N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11						SSDR Segment 4
03/12/94 04:23:46	2:59:38									CAN	MAOSM							Exit occultation
03/12/94 04:25:59	3:01:51		50.0	196.2	989.7						N50A							
03/12/94 04:26:09	3:02:01	323									N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12						
03/12/94 04:32:03	3:07:55		60.0	196.2	1163.2						N60A							
03/12/94 04:32:12	3:08:04	363									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13						
03/12/94 04:38:56	3:14:48		70.0	196.3	1361.6						N70A							
03/12/94 04:39:06	3:14:58	414									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						HiRes imaging resumes by gain setting change in exposure table
03/12/94 04:46:50	3:22:42		80.0	196.7	1583.2						N80A							
03/12/94 04:46:59	3:22:51	473									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15						
03/12/94 04:47:59	3:23:51	60										Load DEQ_09.UMI into SEQT 9						Restore compressed SEQT 9
																		Err:508
03/12/94 04:55:54	3:31:46		89.8	283.6	1823.8						North Pole							Err:508
03/12/94 04:57:03	3:32:55	0										Park filters (DHU SEQT 27)						
03/12/94 04:57:08	3:33:00	5										Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table						Slew to Vega (inertial pointing)
03/12/94 04:57:17	3:33:09		88.6	9.6	1859.0						LDUSK							
03/12/94 05:06:20	3:42:12		80.0	14.8	2075.7						N80D							
03/12/94 05:07:03	3:42:55	595										Perform UV0 imaging (DHU SEQT 29)						Radiometric imaging starts
03/12/94 05:07:18	3:43:10	15										Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/12/94 05:07:33	3:43:25	15										Perform NIR imaging (DHU SEQT 31)						

Orbit 96 Timeline - Type A Orbit

03/12/94 05:07:48	3:43:40	15								Perform HR imaging (DHU SEQT 30)				
03/12/94 05:07:54	3:43:46	7								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)				Slew HGA to Earth
03/12/94 05:13:54	3:49:46	360								Switch to HGA				READY FOR DATA DUMP
														Err:508
03/12/94 05:16:00	3:51:52									Switch to DHU mode @ 128 kbps				Ground Command
03/12/94 05:18:00	3:53:52									Downlink SSSR Segment 1				Ground Command
03/12/94 05:18:14	3:54:06		70.0	15.1	2326.4				N70D					
03/12/94 05:31:38	4:07:30		60.0	15.1	2558.9				N60D					
03/12/94 05:46:27	4:22:19		50.0	15.1	2752.8				N50D					
03/12/94 05:50:00	4:25:52									Downlink SSSR Segment 2				Ground Command
03/12/94 06:02:25	4:38:17		40.0	15.0	2887.3				N40D					
03/12/94 06:15:00	4:50:52									Uplink & schedule L097 scripts				Ground Command
03/12/94 06:19:04	4:54:56		30.0	14.9	2946.1				N30D					
03/12/94 06:22:32	4:58:24		27.9	14.9	2947.9				Aposelene					

Orbit 97 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/12/94 06:22:32	0:00:00		27.9	14.9	2947.9							Aposelene							Downlinking SSSDR Segment 2 (Orbit 96)
03/12/94 06:24:00	0:01:28												Downlink SSSDR Segment 3; IR cameras & cryocoolers OFF						Ground Command Reason for commanding off IR is unknown, since they were turned off in L096 Post Script
03/12/94 06:35:50	0:13:18		20.0	14.8	2921.4							N20D							
03/12/94 06:39:34	0:17:02		17.8	14.7	2904.5							INPM							Enter penumbra
03/12/94 06:40:33	0:18:01		17.1	14.7	2899.3							INUM							Enter umbra
03/12/94 06:46:21	0:23:49										MAD	AOS							
03/12/94 06:52:08	0:29:36		10.0	14.6	2816.6							N10D							
03/12/94 07:05:00	0:42:28												SSDR to IDLE (downlink stopped)						Ground Command
03/12/94 07:07:28	0:44:56		0.0	14.5	2645.0							Equator - D							
03/12/94 07:17:00	0:54:28												SSDR downlink resumed						Ground Command
03/12/94 07:21:29	0:58:57		-10.0	14.4	2426.2							S10D							
03/12/94 07:34:00	1:11:28		-20.0	14.3	2181.0							S20D							
03/12/94 07:36:27	1:13:55										CAN	LOS							
03/12/94 07:41:08	1:18:36		-26.3	14.3	2021.3							OUTUM							Exit umbra
03/12/94 07:41:58	1:19:26		-27.1	14.3	2001.9							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/12/94 07:43:09	1:20:37	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/12/94 07:44:00	1:21:28												Downlink SSSDR Segment 4						Ground Command
03/12/94 07:45:02	1:22:30		-30.0	14.3	1928.1							S30D							
03/12/94 07:54:39	1:32:07		-40.0	14.2	1681.8							S40D							
																			Standard Prep2 Script
03/12/94 07:57:08	1:34:36	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/12/94 08:00:00	1:37:28												SSDR to IDLE - downlink complete						Ground Command
																			Err:508
03/12/94 08:02:08	1:39:36	0											Msg "WRNG: Omni/2k in 1 min.."						
03/12/94 08:03:00	1:40:28		-50.0	14.2	1451.8							S50D							
03/12/94 08:03:08	1:40:36	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/12/94 08:04:08	1:41:36	60											Switch to omni antennas						

Orbit 97 Timeline - Tyne B Orbit

03/12/94 08:05:08	1:42:36	60															Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux			
03/12/94 08:05:38	1:43:06	30															UV & HR cameras ON									
03/12/94 08:10:18	1:47:46		-60.0	14.2	1243.5												S60D									
03/12/94 08:14:43	1:52:11	545																Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5		
03/12/94 08:15:08	1:52:36	25																Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts		
03/12/94 08:15:23	1:52:51	15																Stop imaging - select ST-A								
03/12/94 08:16:41	1:54:09		-70.0	14.3	1059.7													S70D								
03/12/94 08:17:08	1:54:36	105																Perform LWIR imaging (DHU SEQT 25)								
03/12/94 08:17:23	1:54:51	15																Perform NIR imaging (DHU SEQT 31)								
03/12/94 08:17:38	1:55:06	15																	Err:508						Slew to nadir (inertial pointing)	
03/12/94 08:18:08	1:55:36	30																Laser Power ON								
																									Err:508	
03/12/94 08:22:20	1:59:48		-80.0	14.7	900.9													S80D							Err:508	
																									Err:508	
03/12/94 08:25:38	2:03:06	0																Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/12/94 08:26:38	2:04:06	60																Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING	
03/12/94 08:27:24	2:04:52		-89.9	105.1	766.6													South Pole								
03/12/94 08:27:38	2:05:06	60																MAXS	Set SA step rate to LO							
03/12/94 08:28:04	2:05:32		-88.6	188.0	749.5													LDAWN								
03/12/94 08:31:59	2:09:27		-80.0	192.9	655.5													S80A								
03/12/94 08:32:13	2:09:41	275																S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17							
03/12/94 08:36:13	2:13:41		-70.0	193.3	566.4													S70A								
03/12/94 08:36:26	2:13:54	253																S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18							
03/12/94 08:40:09	2:17:37		-60.0	193.4	497.9													S60A								
03/12/94 08:40:23	2:17:51	237																S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/12/94 08:43:54	2:21:22		-50.0	193.5	448.7													S50A								
03/12/94 08:44:07	2:21:35	224																S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5						HiRes imaging stopped by gain setting in exposure table	
03/12/94 08:44:52	2:22:20																	MAD	MLOSM						Enter occultation	
03/12/94 08:47:30	2:24:58		-40.0	193.5	418.2													S40A								
03/12/94 08:47:44	2:25:12	217																S40A	Load exposure table LUNARZ35S							
03/12/94 08:51:02	2:28:30		-30.0	193.5	405.7													S30A								

Orbit 97 Timeline - Tyne B Orbit

03/12/94 08:51:16	2:28:44	212								S30A	Load exposure table LUNARZ25S								
03/12/94 08:51:46	2:29:14		-27.9	193.5	405.3					Periselene									
03/12/94 08:54:34	2:32:02		-20.0	193.5	410.9					S20A									
03/12/94 08:54:47	2:32:15	211								S20A	Load exposure table LUNARZ15S								
03/12/94 08:58:08	2:35:36		-10.0	193.5	433.9					S10A									
03/12/94 08:58:21	2:35:49	214								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/12/94 09:01:49	2:39:17		0.0	193.5	475.2					Equator - A									
03/12/94 09:02:02	2:39:30	221								MEQA	Record in SSDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 7
03/12/94 09:05:40	2:43:08		10.0	193.5	535.5					N10A									
03/12/94 09:05:53	2:43:21	231								N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8								IR and UV uncompressed
03/12/94 09:09:45	2:47:13		20.0	193.5	615.9					N20A									
03/12/94 09:09:58	2:47:26	245								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								Resume compression
03/12/94 09:10:58	2:48:26	60									Laser power OFF								
03/12/94 09:14:11	2:51:39		30.0	193.4	717.7					N30A									
03/12/94 09:14:24	2:51:52	206								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/12/94 09:19:02	2:56:30		40.0	193.4	842.1					N40A									
03/12/94 09:19:14	2:56:42	290								N40A	Switch to inertial pointing (ORB_097RW); Load exposure table LUNARZ45N								Initiate oblique viewing
03/12/94 09:21:49	2:59:17								MAD	MAOSM									Exit occultation
03/12/94 09:24:25	3:01:53		50.0	193.4	990.5					N50A									
03/12/94 09:24:38	3:02:06	324								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11								
03/12/94 09:27:00	3:04:28										Ranging A ON								Ground Command
03/12/94 09:30:29	3:07:57		60.0	193.5	1163.9					N60A									
03/12/94 09:30:41	3:08:09	363								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12								
03/12/94 09:34:49	3:12:17	248									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19								End oblique viewing - resume nadir pointing
03/12/94 09:37:23	3:14:51		70.0	193.5	1362.1					N70A									
03/12/94 09:37:35	3:15:03	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								HiRes imaging resumes by gain setting change in exposure table
03/12/94 09:45:16	3:22:44		80.0	193.9	1583.6					N80A									
03/12/94 09:45:28	3:22:56	473								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
03/12/94 09:46:28	3:23:56	60									Load DEQ_08.UMI into SEQT 8								Restore compressed SEQT 8
																			Err:508
03/12/94 09:54:20	3:31:48		89.9	280.1	1823.8					North Pole									
																			Standard Post Script

Orbit 97 Timeline - Type B Orbit

03/12/94 09:55:32	3:33:00	0																	Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table										Slew to Vega (inertial pointing)											
03/12/94 09:55:44	3:33:12		88.6	7.2	1859.0														LDUSK																					
03/12/94 10:04:46	3:42:14		80.0	12.1	2075.5														N80D																					
03/12/94 10:05:32	3:43:00	600																		Perform UVO Imaging (DHU SEQT 29)																		No data because duration was 15 tics instead of 15 seconds		
03/12/94 10:05:32	3:43:00	0																		Perform LWIR imaging (DHU SEQT 25)																			Dark Field imaging starts	
03/12/94 10:05:47	3:43:15	15																		Perform NIR imaging (Select DHU SEQT 31)																				
03/12/94 10:06:02	3:43:30	15																		Perform HiRes Imaging (DHU SEQT 30)																			Radiometric imaging	
03/12/94 10:06:09	3:43:37	7																		Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)																		Slew HGA to Earth		
03/12/94 10:12:09	3:49:37	360																		Switch to HGA																		READY FOR DATA DUMP		
End Post Script																																								
03/12/94 10:15:00	3:52:28																			Switch to DHU mode @ 128 kbps																		Ground Command		
03/12/94 10:16:39	3:54:07		70.0	12.4	2325.8															N70D																				
03/12/94 10:17:00	3:54:28																			Downlink SSSR Segment 5																			Ground Command	
03/12/94 10:21:00	3:58:28																			Ranging A OFF																			Ground Command	
03/12/94 10:30:03	4:07:31		60.0	12.4	2558.0															N60D																				
03/12/94 10:42:00	4:19:28																			Downlink SSSR Segment 6																			Ground Command	
03/12/94 10:44:52	4:22:20		50.0	12.4	2751.6															N50D																				
03/12/94 11:00:49	4:38:17		40.0	12.3	2886.0															N40D																				
03/12/94 11:15:00	4:52:28																			Downlink SSSR Segment 7																			Ground Command	
03/12/94 11:17:27	4:54:55		30.0	12.2	2944.8															N30D																				
03/12/94 11:20:57	4:58:25		27.9	12.1	2946.6															Aposelene																				

Orbit 98 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/12/94 11:20:57	0:00:00		27.9	12.1	2946.6							Aposelene							Downlinking SSSR Segment 7 (orbit 97)
03/12/94 11:34:13	0:13:16		20.0	12.0	2920.3							N20D							
03/12/94 11:37:44	0:16:47		17.9	12.0	2904.4							INPM							Enter penumbra
03/12/94 11:38:44	0:17:47		17.3	12.0	2899.3							INUM							Enter umbra
03/12/94 11:42:33	0:21:36										PMK	AOS							
03/12/94 11:50:30	0:29:33		10.0	11.9	2815.8							N10D							
03/12/94 12:05:50	0:44:53		0.0	11.8	2644.6							Equator - D							
03/12/94 12:19:50	0:58:53		-10.0	11.7	2426.1							S10D							
03/12/94 12:32:22	1:11:25		-20.0	11.6	2181.3							S20D							
03/12/94 12:35:00	1:14:03												SSDR to IDLE - downlink complete						Ground Command (time approximate)
03/12/94 12:39:36	1:18:39		-26.4	11.5	2019.2							OUTUM							Exit umbra
03/12/94 12:40:25	1:19:28		-27.2	11.5	1999.9							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/12/94 12:41:40	1:20:43	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/12/94 12:43:23	1:22:26		-30.0	11.5	1928.8							S30D							
03/12/94 12:53:00	1:32:03		-40.0	11.5	1682.8							S40D							
																			Standard Prep2 Script
03/12/94 12:55:33	1:34:36	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/12/94 13:00:33	1:39:36	0											Msg "WRNG: Omni/2k in 1 min.."						
03/12/94 13:01:22	1:40:25		-50.0	11.5	1452.9							S50D							
03/12/94 13:01:33	1:40:36	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/12/94 13:02:33	1:41:36	60											Switch to omni antennas						
03/12/94 13:03:33	1:42:36	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/12/94 13:04:03	1:43:06	30											UV & HR cameras ON						
03/12/94 13:08:39	1:47:42		-60.0	11.5	1244.8							S60D							
03/12/94 13:13:08	1:52:11	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/12/94 13:13:33	1:52:36	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/12/94 13:13:48	1:52:51	15											Stop imaging - select ST-A						
03/12/94 13:15:03	1:54:06		-70.0	11.6	1061.1							S70D							

Orbit 98 Timeline - Type A Orbit

03/12/94 13:15:33	1:54:36	105									Perform LWIR imaging (DHU SEQT 25)			
03/12/94 13:15:48	1:54:51	15									Perform NIR imaging (DHU SEQT 31)			
03/12/94 13:16:03	1:55:06	15										Err:508		Slew to nadir (inertial pointing)
03/12/94 13:16:33	1:55:36	30									Laser Power ON			
Err:508														
03/12/94 13:20:43	1:59:46		-80.0	11.9	902.4						S80D			
Err:508														
03/12/94 13:24:03	2:03:06	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/12/94 13:25:03	2:04:06	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)			START MAPPING
03/12/94 13:25:47	2:04:50		-89.9	102.4	768.0						South Pole			
03/12/94 13:26:03	2:05:06	60									MAXS			Set SA step rate to LO
03/12/94 13:26:27	2:05:30		-88.6	185.3	751.0						LDAWN			
03/12/94 13:30:22	2:09:25		-80.0	190.2	657.0						S80A			
03/12/94 13:30:39	2:09:42	276									S80A			Load exposure table LUNARZ75S; Select DHU SEQT 3
03/12/94 13:34:36	2:13:39		-70.0	190.6	567.9						S70A			
03/12/94 13:34:52	2:13:55	253									S70A			Load exposure table LUNARZ65S; Select DHU SEQT 4
03/12/94 13:38:33	2:17:36		-60.0	190.7	499.3						S60A			
03/12/94 13:38:49	2:17:52	237									S60A			Load exposure table LUNARZ55S; Select DHU SEQT 6
03/12/94 13:42:17	2:21:20		-50.0	190.7	450.2						S50A			
03/12/94 13:42:34	2:21:37	225									S50A			Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5
03/12/94 13:43:08	2:22:11										PMK			MLOSM
03/12/94 13:43:16	2:22:19										MAD			MLOSM
03/12/94 13:45:54	2:24:57		-40.0	190.8	419.6						S40A			Enter occultation
03/12/94 13:46:11	2:25:14	217									S40A			Load exposure table LUNARZ35S
03/12/94 13:49:26	2:28:29		-30.0	190.8	407.0						S30A			
03/12/94 13:49:43	2:28:46	212									S30A			Load exposure table LUNARZ25S
03/12/94 13:50:11	2:29:14		-27.9	190.8	406.7						Periselene			
03/12/94 13:52:58	2:32:01		-20.0	190.8	412.2						S20A			
03/12/94 13:53:15	2:32:18	212									S20A			Load exposure table LUNARZ15S
03/12/94 13:56:33	2:35:36		-10.0	190.8	435.2						S10A			
03/12/94 13:56:49	2:35:52	214									S10A			Load exposure table LUNARZ05S; Select DHU SEQT 6
03/12/94 14:00:13	2:39:16		0.0	190.7	476.5						Equator - A			
03/12/94 14:00:30	2:39:33	221									MEQA			Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7
03/12/94 14:04:05	2:43:08		10.0	190.7	536.8						N10A			SSSR Segment 3

Orbit 98 Timeline - Type A Orbit

03/12/94 14:04:21	2:43:24	231								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/12/94 14:08:11	2:47:14		20.0	190.7	617.1					N20A							
03/12/94 14:08:27	2:47:30	246								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/12/94 14:09:27	2:48:30	60									Laser power OFF						
03/12/94 14:12:36	2:51:39		30.0	190.7	718.8					N30A							
03/12/94 14:12:52	2:51:55	205								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
03/12/94 14:17:27	2:56:30		40.0	190.7	843.1					N40A							
03/12/94 14:17:43	2:56:46	291								N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11						SDDR Segment 4
03/12/94 14:20:23	2:59:26								PMK	MAOSM							Exit occultation
03/12/94 14:20:28	2:59:31								MAD	MAOSM							
03/12/94 14:22:51	3:01:54		50.0	190.7	991.5					N50A							
03/12/94 14:23:06	3:02:09	323								N50A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ55N; Select DHU SEQT 12						IR and UV uncompressed
03/12/94 14:25:24	3:04:27								GDS	AOS							
03/12/94 14:28:55	3:07:58		60.0	190.7	1164.7					N60A							
03/12/94 14:29:10	3:08:13	364								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13						Resume compression
03/12/94 14:35:49	3:14:52		70.0	190.8	1362.7					N70A							
03/12/94 14:36:04	3:15:07	414								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						HiRes imaging resumes by gain setting change in exposure table
03/12/94 14:43:42	3:22:45		80.0	191.2	1583.9					N80A							
03/12/94 14:43:57	3:23:00	473								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15						
03/12/94 14:44:57	3:24:00	60									Load DEQ_12.UMI into SEQT 12						Restore compressed SEQT 12
Err:508																	
03/12/94 14:52:47	3:31:50		89.9	282.3	1824.1					North Pole							
Standard Post Script																	
03/12/94 14:54:01	3:33:04	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table						Slew to Vega (inertial pointing)
03/12/94 14:54:10	3:33:13		88.6	4.4	1859.0					LDUSK							
03/12/94 15:03:12	3:42:15		80.0	9.4	2075.2					N80D							
03/12/94 15:04:01	3:43:04	600									Perform UVO Imaging (DHU SEQT 29)						No data because duration was 15 tics instead of 15 seconds
03/12/94 15:04:01	3:43:04	0									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/12/94 15:04:16	3:43:19	15									Perform NIR imaging (Select DHU SEQT 31)						
03/12/94 15:04:31	3:43:34	15									Perform HiRes Imaging (DHU SEQT 30)						Radiometric imaging

Orbit 98 Timeline - Type A Orbit

03/12/94 15:04:38	3:43:41	7								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/12/94 15:10:38	3:49:41	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/12/94 15:11:00	3:50:03									Switch to DHU mode @ 128 kbps						Ground Command
03/12/94 15:13:00	3:52:03									Downlink SDR Segment 1						Ground Command
03/12/94 15:15:05	3:54:08		70.0	9.7	2325.2					N70D						
03/12/94 15:28:29	4:07:32		60.0	9.7	2557.0					N60D						
03/12/94 15:29:00	4:08:03															Ground Command Due to no matches with ST-A (Moon blockage)
03/12/94 15:34:00	4:13:03															Uplink & schedule L099 scripts
03/12/94 15:43:17	4:22:20		50.0	9.6	2750.3					N50D						Ground Command
03/12/94 15:46:00	4:25:03															Downlink SDR Segment 2
03/12/94 15:59:13	4:38:16		40.0	9.5	2884.6					N40D						Ground Command
03/12/94 16:02:00	4:41:03															Update state vector (GNC53_12MAR1600)
03/12/94 16:15:50	4:54:53		30.0	9.4	2943.4					N30D						Ground Command
03/12/94 16:18:00	4:57:03															Downlink SDR Segment 3
03/12/94 16:19:21	4:58:24		27.9	9.4	2945.2					Aposelene						Ground Command

Orbit 99 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/12/94 16:19:21	0:00:00		27.9	9.4	2945.2							Aposelene							Downlinking SSSDR Segment 3 (Orbit 98)
03/12/94 16:32:35	0:13:14		20.0	9.3	2919.0							N20D							
03/12/94 16:35:55	0:16:34		18.0	9.3	2904.2							INPM							Enter penumbra
03/12/94 16:36:54	0:17:33		17.4	9.3	2899.2							INUM							Enter umbra
03/12/94 16:37:00	0:17:39												Downlink SSSDR Segment 4						Ground Command
03/12/94 16:48:52	0:29:31		10.0	9.2	2814.9							N10D							
03/12/94 17:04:11	0:44:50		0.0	9.1	2644.1							Equator - D							
03/12/94 17:18:11	0:58:50		-10.0	9.0	2426.0							S10D							
03/12/94 17:30:43	1:11:22		-20.0	8.9	2181.7							S20D							
03/12/94 17:38:04	1:18:43		-26.5	8.8	2017.3							OUTUM							Exit umbra
03/12/94 17:38:53	1:19:32		-27.3	8.8	1998.1							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/12/94 17:40:10	1:20:49	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/12/94 17:41:44	1:22:23		-30.0	8.8	1929.5							S30D							
03/12/94 17:51:21	1:32:00		-40.0	8.7	1683.7							S40D							
																			Standard Prep2 Script
03/12/94 17:53:59	1:34:38	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/12/94 17:58:59	1:39:38	0											Msg "WRNG: Omni/2k in 1 min.."						
03/12/94 17:59:44	1:40:23		-50.0	8.7	1454.1							S50D							
03/12/94 17:59:59	1:40:38	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/12/94 18:00:59	1:41:38	60											Switch to omni antennas						
03/12/94 18:01:59	1:42:38	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/12/94 18:02:29	1:43:08	30											UV & HR cameras ON						
03/12/94 18:07:01	1:47:39		-60.0	8.7	1246.1							S60D							
03/12/94 18:09:29	1:50:07										MAD	LOS							
03/12/94 18:11:34	1:52:13	545											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 5; Load lunar dark exposure tables						Start SSSDR in Segment 5
03/12/94 18:11:59	1:52:38	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/12/94 18:12:14	1:52:53	15											Stop imaging - select ST-A						

Orbit 99 Timeline - Type B Orbit

03/12/94 18:13:25	1:54:04		-70.0	8.8	1062.5				S70D				
03/12/94 18:13:59	1:54:38	105								Perform LWIR imaging (DHU SEQT 25)			
03/12/94 18:14:14	1:54:53	15								Perform NIR imaging (DHU SEQT 31)			
03/12/94 18:14:29	1:55:08	15									Err:508		Slew to nadir (inertial pointing)
03/12/94 18:14:59	1:55:38	30								Laser Power ON			
Err:508													
03/12/94 18:19:05	1:59:44		-80.0	9.2	903.8				S80D				
Err:508													
03/12/94 18:22:29	2:03:08	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/12/94 18:23:29	2:04:08	60								Switch to lunar mapping mode (ACSMode=LunarMapping); Start imaging (DHU SEQT 16)			START MAPPING
03/12/94 18:24:09	2:04:48		-89.9	92.2	769.7				South Pole				
03/12/94 18:24:29	2:05:08	60							MAXS	Set SA step rate to LO			
03/12/94 18:24:50	2:05:29		-88.6	182.7	752.5				LDAWN				
03/12/94 18:28:45	2:09:24		-80.0	187.5	658.4				S80A				
03/12/94 18:29:05	2:09:44	276							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17			
03/12/94 18:32:59	2:13:38		-70.0	187.9	569.3				S70A				
03/12/94 18:33:19	2:13:58	254							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18			
03/12/94 18:36:56	2:17:35		-60.0	188.0	500.7				S60A				
03/12/94 18:37:16	2:17:55	237							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/12/94 18:40:41	2:21:20		-50.0	188.0	451.6				S50A				
03/12/94 18:41:01	2:21:40	225							S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5			HiRes imaging stopped by gain setting in exposure table
03/12/94 18:41:30	2:22:09							GDS	MLOSM				
03/12/94 18:41:34	2:22:13							PMK	MLOSM				Enter occultation
03/12/94 18:44:18	2:24:57		-40.0	188.0	421.0				S40A				
03/12/94 18:44:38	2:25:17	217							S40A	Load exposure table LUNARZ35S			
03/12/94 18:47:51	2:28:29		-30.0	188.0	408.4				S30A				
03/12/94 18:48:10	2:28:49	212							S30A	Load exposure table LUNARZ25S			
03/12/94 18:48:35	2:29:14		-27.9	188.0	408.0				Periselene				
03/12/94 18:51:23	2:32:02		-20.0	188.0	413.5				S20A				
03/12/94 18:51:42	2:32:21	212							S20A	Load exposure table LUNARZ15S			
03/12/94 18:54:57	2:35:36		-10.0	188.0	436.5				S10A				
03/12/94 18:55:17	2:35:56	215							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/12/94 18:58:38	2:39:17		0.0	188.0	477.7				Equator - A				
03/12/94 18:58:58	2:39:37	221							MEQA	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 7

Orbit 99 Timeline - Type B Orbit

03/12/94 19:02:30	2:43:09		10.0	188.0	538.0					N10A									
03/12/94 19:02:49	2:43:27	231								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/12/94 19:06:36	2:47:15		20.0	188.0	618.2					N20A									
03/12/94 19:06:55	2:47:34	246								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/12/94 19:07:55	2:48:34	60									Laser power OFF								
03/12/94 19:11:02	2:51:41		30.0	188.0	719.8					N30A									
03/12/94 19:11:21	2:52:00	206								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/12/94 19:15:53	2:56:32		40.0	188.0	844.1					N40A									
03/12/94 19:16:12	2:56:51	291								N40A	Switch to inertial pointing (ORB_099RW); Load exposure table LUNARZ45N								Initiate oblique viewing
03/12/94 19:18:56	2:59:35								GDS	MAOSM									Exit occultation
03/12/94 19:18:59	2:59:38								PMK	MAOSM									
03/12/94 19:21:17	3:01:55		50.0	188.0	992.3					N50A									
03/12/94 19:21:35	3:02:14	323								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11								
03/12/94 19:27:21	3:08:00		60.0	188.0	1165.4					N60A									
03/12/94 19:27:39	3:08:17	364								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12								
03/12/94 19:31:47	3:12:26	248									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19								End oblique viewing - resume nadir pointing
03/12/94 19:34:15	3:14:54		70.0	188.1	1363.2					N70A									
03/12/94 19:34:33	3:15:11	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								Resume HiRes imaging
03/12/94 19:42:09	3:22:48		80.0	188.4	1584.2					N80A									
03/12/94 19:42:26	3:23:05	473								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
Err:508																			
03/12/94 19:51:13	3:31:52		89.9	278.1	1824.1					North Pole									
Standard Post Script																			
03/12/94 19:52:30	3:33:09	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)
03/12/94 19:52:36	3:33:15		88.6	1.8	1858.9					LDUSK									
03/12/94 20:01:38	3:42:17		80.0	6.6	2074.9					N80D									
03/12/94 20:02:30	3:43:09	600									Perform UVO Imaging (DHU SEQT 29)								No data because duration was 15 tics instead of 15 seconds
03/12/94 20:02:30	3:43:09	0									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/12/94 20:02:45	3:43:24	15									Perform NIR imaging (Select DHU SEQT 31)								
03/12/94 20:03:00	3:43:39	15									Perform HiRes Imaging (DHU SEQT 30)								Radiometric imaging

Orbit 99 Timeline - Tyne B Orbit

03/12/94 20:03:07	3:43:46	7								Stop imaging - select ST-A; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/12/94 20:09:07	3:49:46	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/12/94 20:09:30	3:50:09									Switch to DHU mode @ 128 kbps						Ground Command
03/12/94 20:10:00	3:50:39									Downlink SSSR Segment 5						Ground Command
03/12/94 20:13:31	3:54:10		70.0	6.9	2324.6					N70D						
03/12/94 20:26:00	4:06:39															
03/12/94 20:26:00	4:06:39															
03/12/94 20:26:54	4:07:32		60.0	7.0	2556.1					N60D						
03/12/94 20:32:00	4:12:39															
03/12/94 20:32:00	4:12:39															
03/12/94 20:35:00	4:15:39															
03/12/94 20:41:42	4:22:21		50.0	6.9	2749.1					N50D						
03/12/94 20:57:37	4:38:16		40.0	6.8	2883.2					N40D						
03/12/94 21:07:00	4:47:39															
03/12/94 21:07:00	4:47:39															
03/12/94 21:14:14	4:54:52		30.0	6.7	2942.0					N30D						
03/12/94 21:17:46	4:58:25		27.9	6.7	2943.9					Aposelene						

Orbit 100 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/12/94 21:17:45	0:00:00		27.9	6.7	2943.9							Aposelene							Downlinking SDR Segment 7 (orbit 99)
03/12/94 21:28:26	0:10:40										CAN	AOS							
03/12/94 21:30:57	0:13:12		20.0	6.6	2917.9							N20D							
03/12/94 21:34:05	0:16:20		18.1	6.5	2904.0							INPM							Enter penumbra
03/12/94 21:35:04	0:17:19		17.5	6.5	2899.1							INUM							Enter umbra
03/12/94 21:47:13	0:29:28		10.0	6.4	2814.0							N10D							
03/12/94 21:48:00	0:30:14												SSDR to IDLE - downlink complete						Ground Command
03/12/94 22:02:33	0:44:47		0.0	6.3	2643.6							Equator - D							
03/12/94 22:16:32	0:58:47		-10.0	6.2	2426.0							S10D							
03/12/94 22:29:03	1:11:18		-20.0	6.1	2182.0							S20D							
03/12/94 22:36:30	1:18:45		-26.6	6.1	2015.3							OUTUM							Exit umbra
03/12/94 22:37:19	1:19:33		-27.4	6.1	1996.2							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/12/94 22:38:41	1:20:55	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/12/94 22:40:05	1:22:19		-30.0	6.1	1930.1							S30D							
03/12/94 22:49:42	1:31:57		-40.0	6.0	1684.7							S40D							
																			Standard Prep2 Script
03/12/94 22:52:24	1:34:38	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/12/94 22:57:24	1:39:38	0											Msg "WRNG: Omni/2k in 1 min.."						
03/12/94 22:58:04	1:40:19		-50.0	6.0	1455.2							S50D							
03/12/94 22:58:24	1:40:38	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/12/94 22:59:24	1:41:38	60											Switch to omni antennas						
03/12/94 23:00:24	1:42:38	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/12/94 23:00:54	1:43:08	30											UV & HR cameras ON						
03/12/94 23:05:22	1:47:37		-60.0	6.0	1247.4							S60D							
03/12/94 23:09:59	1:52:13	545											Initialize filters (DHU SEQT 28); Record in SDR Segment 1; Load lunar dark exposure tables						Start SDR in Segment 1
03/12/94 23:10:24	1:52:38	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/12/94 23:10:39	1:52:53	15											Stop imaging - select ST-A						
03/12/94 23:11:47	1:54:01		-70.0	6.1	1063.8							S70D							

Orbit 100 Timeline - Type A Orbit

03/12/94 23:12:24	1:54:38	105								Perform LWIR imaging (DHU SEQT 25)					
03/12/94 23:12:39	1:54:53	15								Perform NIR imaging (DHU SEQT 31)					
03/12/94 23:12:54	1:55:08	15									Err:508				Slew to nadir (inertial pointing)
03/12/94 23:13:24	1:55:38	30								Laser Power ON					
Err:508															
03/12/94 23:17:27	1:59:42			-80.0	6.4	905.1				S80D					
03/12/94 23:19:59	2:02:13								PMK	LOS					
Err:508															
03/12/94 23:20:54	2:03:08	0													
										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/12/94 23:21:54	2:04:08	60								Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)					START MAPPING
03/12/94 23:22:31	2:04:45			-89.9	91.1	771.0				South Pole					
03/12/94 23:22:54	2:05:08	60								MAXS	Set SA step rate to LO				
03/12/94 23:23:12	2:05:27			-88.6	180.0	753.9				LDAWN					
03/12/94 23:27:07	2:09:22			-80.0	184.8	659.8				S80A					
03/12/94 23:27:31	2:09:45	277								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3				
03/12/94 23:28:00	2:10:14										Ranging A ON				Ground Command
03/12/94 23:31:22	2:13:37			-70.0	185.1	570.7				S70A					
03/12/94 23:31:45	2:13:59	254								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4				
03/12/94 23:35:19	2:17:34			-60.0	185.2	502.1				S60A					
03/12/94 23:35:42	2:17:56	237								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/12/94 23:39:04	2:21:19			-50.0	185.3	452.9				S50A					
03/12/94 23:39:28	2:21:42	226								S50A	Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/12/94 23:39:56	2:22:10								GDS	MLOSM					
03/12/94 23:40:05	2:22:19								CAN	MLOSM					Enter occultation
03/12/94 23:42:41	2:24:56			-40.0	185.3	422.3				S40A					
03/12/94 23:43:05	2:25:19	217								S40A	Load exposure table LUNARZ35S				
03/12/94 23:46:14	2:28:28			-30.0	185.3	409.7				S30A					
03/12/94 23:46:37	2:28:51	212								S30A	Load exposure table LUNARZ25S				
03/12/94 23:46:59	2:29:14			-27.9	185.3	409.3				Periselene					
03/12/94 23:49:47	2:32:01			-20.0	185.3	414.8				S20A					
03/12/94 23:50:10	2:32:24	213								S20A	Load exposure table LUNARZ15S				
03/12/94 23:53:21	2:35:36			-10.0	185.3	437.7				S10A					
03/12/94 23:53:44	2:35:58	214								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/12/94 23:57:02	2:39:16			0.0	185.3	478.9				Equator - A					

Orbit 100 Timeline - Type A Orbit

03/12/94 23:57:25	2:39:39	221								MEQA	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 3
03/13/94 00:00:54	2:43:08		10.0	185.3	539.1					N10A		
03/13/94 00:01:17	2:43:31	232								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	
03/13/94 00:05:01	2:47:15		20.0	185.3	619.4					N20A		
03/13/94 00:05:23	2:47:37	246								N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9	IR and UV uncompressed
03/13/94 00:06:23	2:48:37	60									Laser power OFF	
03/13/94 00:09:27	2:51:41		30.0	185.2	720.9					N30A		
03/13/94 00:09:49	2:52:03	206								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	Resume compression
03/13/94 00:14:18	2:56:33		40.0	185.2	845.1					N40A		
03/13/94 00:14:40	2:56:54	291								N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4
03/13/94 00:17:30	2:59:44								GDS	MAOSM		Exit occultation
03/13/94 00:17:46	3:00:00								CAN	MAOSM		
03/13/94 00:19:42	3:01:57		50.0	185.2	993.2					N50A		
03/13/94 00:20:04	3:02:18	324								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	
03/13/94 00:23:00	3:05:14										ST-B door OPEN	Ground Command
03/13/94 00:25:47	3:08:01		60.0	185.3	1166.1					N60A		
03/13/94 00:26:08	3:08:22	364								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13	
03/13/94 00:32:40	3:14:55		70.0	185.3	1363.8					N70A		
03/13/94 00:33:02	3:15:16	414								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
03/13/94 00:40:00	3:22:14										ST-A door CLOSE	Ground Command
03/13/94 00:40:34	3:22:48		80.0	185.7	1584.5					N80A		
03/13/94 00:40:56	3:23:10	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
03/13/94 00:41:56	3:24:10	60									Load DEQ_09.UMI into SEQT 9	Restore compressed SEQT 9
												Err:508
03/13/94 00:49:38	3:31:53		89.9	273.2	1824.0					North Pole		
												Standard Post Script
03/13/94 00:51:00	3:33:14	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table	This orbit switched over to ST-B use in post-map because of obstruction of ST- A?? Slew to Vega (inertial pointing)
03/13/94 00:51:01	3:33:16		88.6	359.2	1858.9					LDUSK		
03/13/94 01:00:03	3:42:18		80.0	3.9	2074.7					N80D		
03/13/94 01:01:00	3:43:14	600									Perform UVO Imaging (DHU SEQT 29)	No data because duration was 15 tics instead of 15 seconds

Orbit 100 Timeline - Type A Orbit

03/13/94 01:01:00	3:43:14	0								Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/13/94 01:01:15	3:43:29	15								Perform NIR imaging (Select DHU SEQT 31)						
03/13/94 01:01:30	3:43:44	15								Perform HiRes Imaging (DHU SEQT 30)						Radiometric imaging
03/13/94 01:01:38	3:43:52	7								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/13/94 01:07:38	3:49:52	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/13/94 01:11:56	3:54:10		70.0	4.2	2324.0					N70D						
03/13/94 01:24:00	4:06:14										Select ST-B; Switch to DHU mode @ 128 kbps					Ground Command
03/13/94 01:25:19	4:07:34		60.0	4.2	2555.1					N60D						
03/13/94 01:27:00	4:09:14										Downlink SDR Segment 1					Ground Command
03/13/94 01:30:00	4:12:14										Ranging A OFF					Ground Command - time approx.
03/13/94 01:39:00	4:21:14										Uplink & schedule L101 scripts					Ground Command
03/13/94 01:40:06	4:22:21		50.0	4.2	2748.0					N50D						
03/13/94 01:54:23	4:36:37								GDS	LOS						
03/13/94 01:56:00	4:38:15		40.0	4.1	2881.9					N40D						
03/13/94 02:12:36	4:54:51		30.0	4.0	2940.7					N30D						
03/13/94 02:16:10	4:58:25		27.9	3.9	2942.6					Aposelene						

Orbit 101 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/13/94 02:16:10	0:00:00		27.9	3.9	2942.6							Aposelene							Downlinking SDR Segment 1 (Orbit 100)
03/13/94 02:29:20	0:13:09		20.0	3.8	2916.7							N20D							
03/13/94 02:32:17	0:16:06		18.2	3.8	2903.8							INPM							Enter penumbra
03/13/94 02:33:15	0:17:04		17.6	3.8	2899.0							INUM							Enter umbra
03/13/94 02:42:00	0:25:49												Downlink SDR Segment 2						Ground Command
03/13/94 02:45:36	0:29:25		10.0	3.7	2813.2							N10D							
03/13/94 03:00:54	0:44:43		0.0	3.6	2643.1							Equator - D							
03/13/94 03:14:53	0:58:43		-10.0	3.5	2425.9							S10D							
03/13/94 03:16:00	0:59:49												Downlink SDR Segment 3						Ground Command
03/13/94 03:27:24	1:11:14		-20.0	3.4	2182.3							S20D							
03/13/94 03:34:58	1:18:47		-26.7	3.4	2013.4							OUTUM							Exit umbra
03/13/94 03:35:47	1:19:37		-27.5	3.3	1994.4							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/13/94 03:37:11	1:21:00	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/13/94 03:38:26	1:22:15		-30.0	3.3	1930.8							S30D							
03/13/94 03:48:05	1:31:54		-40.0	3.3	1685.6							S40D							
																			Standard Prep2 Script
03/13/94 03:50:51	1:34:40	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/13/94 03:53:00	1:36:49												SSDR to IDLE - stop downlink						Ground Command
																			Err:508
03/13/94 03:55:51	1:39:40	0											Msg "WRNG: Omni/2k in 1 min.."						
03/13/94 03:56:26	1:40:15		-50.0	3.3	1456.3							S50D							
03/13/94 03:56:51	1:40:40	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/13/94 03:57:51	1:41:40	60											Switch to omni antennas						
03/13/94 03:58:51	1:42:40	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)					Slew to Crux	
03/13/94 03:59:21	1:43:10	30											UV & HR cameras ON						
03/13/94 04:00:00	1:43:49												Ranging A ON						Ground Command
03/13/94 04:03:45	1:47:35		-60.0	3.3	1248.6							S60D							
03/13/94 04:08:26	1:52:15	545											Initialize filters (DHU SEQT 28); Record in SDR Segment 5; Load lunar dark exposure tables						Start SDR in Segment 5

Orbit 101 Timeline - Type B Orbit

03/13/94 04:08:51	1:52:40	25										Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/13/94 04:09:06	1:52:55	15										Stop imaging - select ST-A						
03/13/94 04:10:09	1:53:59		-70.0	3.3	1065.1					S70D								
03/13/94 04:10:51	1:54:40	105										Perform LWIR imaging (DHU SEQT 25)						
03/13/94 04:11:06	1:54:55	15										Perform NIR imaging (DHU SEQT 31)						
03/13/94 04:11:21	1:55:10	15											Err:508					Slew to nadir (inertial pointing)
03/13/94 04:11:51	1:55:40	30										Laser Power ON						
																		Err:508
03/13/94 04:14:00	1:57:49											Select ST-B						Ground Command No matches with ST-A
03/13/94 04:15:50	1:59:40		-80.0	3.7	906.5					S80D								
																		Err:508
03/13/94 04:19:21	2:03:10	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/13/94 04:20:21	2:04:10	60										Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)						START MAPPING
03/13/94 04:20:54	2:04:44		-89.9	91.9	772.3					South Pole								
03/13/94 04:21:21	2:05:10	60								MAXS		Set SA step rate to LO						
03/13/94 04:21:35	2:05:24		-88.6	177.3	755.3					LDAWN								
03/13/94 04:25:31	2:09:21		-80.0	182.0	661.2					S80A								
03/13/94 04:25:57	2:09:46	276								S80A		Load exposure table LUNARZ75S; Select DHU SEQT 17						
03/13/94 04:29:45	2:13:35		-70.0	182.4	572.1					S70A								
03/13/94 04:30:11	2:14:00	254								S70A		Load exposure table LUNARZ65S; Select DHU SEQT 18						
03/13/94 04:33:44	2:17:33		-60.0	182.5	503.5					S60A								
03/13/94 04:34:09	2:17:58	238								S60A		Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/13/94 04:37:28	2:21:18		-50.0	182.5	454.3					S50A								
03/13/94 04:37:54	2:21:43	225								S50A		Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5						SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/13/94 04:38:33	2:22:22									CAN	MLOS							Enter occultation
03/13/94 04:41:05	2:24:55		-40.0	182.6	423.6					S40A								
03/13/94 04:41:32	2:25:21	218								S40A		Load exposure table LUNARZ35S						
03/13/94 04:44:39	2:28:28		-30.0	182.6	411.0					S30A								
03/13/94 04:45:05	2:28:54	213								S30A		Load exposure table LUNARZ25S						
03/13/94 04:45:24	2:29:14		-27.9	182.6	410.6					Periselene								
03/13/94 04:48:11	2:32:00		-20.0	182.6	416.1					S20A								
03/13/94 04:48:37	2:32:26	212								S20A		Load exposure table LUNARZ15S						
03/13/94 04:51:46	2:35:36		-10.0	182.6	439.0					S10A								
03/13/94 04:52:12	2:36:01	215								S10A		Load exposure table LUNARZ05S; Select DHU SEQT 6						

Orbit 101 Timeline - Type B Orbit

03/13/94 04:55:28	2:39:18		0.0	182.5	480.1						Equator - A		
03/13/94 04:55:53	2:39:42	221									MEQA	Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7	SDDR Segment 7
03/13/94 04:59:19	2:43:08		10.0	182.5	540.3						N10A		
03/13/94 04:59:45	2:43:34	232									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	
03/13/94 05:03:26	2:47:16		20.0	182.5	620.5						N20A		
03/13/94 05:03:52	2:47:41	247									N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	
03/13/94 05:04:52	2:48:41	60										Laser power OFF	
03/13/94 05:07:52	2:51:41		30.0	182.5	721.9						N30A		
03/13/94 05:08:18	2:52:07	206									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/13/94 05:12:45	2:56:34		40.0	182.5	846.1						N40A		
03/13/94 05:13:09	2:56:58	291									N40A	Switch to inertial pointing (ORB_101RW); Load exposure table LUNARZ45N	Initiate oblique viewing
03/13/94 05:16:18	3:00:07									CAN	MAOSM		Exit occultation
03/13/94 05:18:09	3:01:58		50.0	182.5	994.1						N50A		
03/13/94 05:18:33	3:02:22	324									N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11	
03/13/94 05:24:13	3:08:03		60.0	182.5	1166.8						N60A		
03/13/94 05:24:37	3:08:26	364									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	
03/13/94 05:28:45	3:12:34	248										Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing
03/13/94 05:31:08	3:14:57		70.0	182.6	1364.3						N70A		
03/13/94 05:31:31	3:15:20	166									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	Resume HiRes imaging
03/13/94 05:39:00	3:22:50		80.0	182.9	1584.9						N80A		
03/13/94 05:39:25	3:23:14	474									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
Err:508													
03/13/94 05:43:00	3:26:49											Ranging A OFF	Ground Command
03/13/94 05:48:05	3:31:55		89.9	275.6	1824.4						North Pole		
03/13/94 05:49:27	3:33:16		88.6	356.4	1858.9						LDUSK		
Standard Post Script													
03/13/94 05:49:29	3:33:18	0										Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table	Slew to Vega (inertial pointing)
03/13/94 05:58:29	3:42:19		80.0	1.2	2074.4						N80D		
03/13/94 06:08:29	3:52:19	600										Perform UVO Imaging (DHU SEQT 29)	No data because duration was 15 tics instead of 15 seconds

Orbit 101 Timeline - Tyne B Orbit

03/13/94 06:08:29	3:52:19	0									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/13/94 06:08:44	3:52:34	15									Perform NIR imaging (Select DHU SEQT 31)						
03/13/94 06:08:59	3:52:49	15									Perform HiRes Imaging (DHU SEQT 30)						Radiometric imaging
03/13/94 06:09:06	3:52:56	7									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/13/94 06:10:00	3:53:49										Switch to DHU mode @ 128 kbps						Ground Command
03/13/94 06:10:22	3:54:12		70.0	1.5	2323.4					N70D							
03/13/94 06:15:06	3:58:56	360									Switch to HGA						READY FOR DATA DUMP
																	End Post Script
03/13/94 06:18:00	4:01:49										Downlink SSSDR Segment 4						Ground Command
03/13/94 06:23:44	4:07:34		60.0	1.5	2554.3					N60D							
03/13/94 06:29:00	4:12:49										Uplink & schedule L102 scripts						Ground Command
03/13/94 06:38:00	4:21:49										Downlink SSSDR Segment 5						Ground Command
03/13/94 06:38:31	4:22:21		50.0	1.4	2746.8					N50D							
03/13/94 06:54:25	4:38:15		40.0	1.3	2880.6					N40D							
03/13/94 06:55:00	4:38:49										Select ST-B						Ground Command
03/13/94 07:04:00	4:47:49										Downlink SSSDR Segment 6						Ground Command
03/13/94 07:11:00	4:54:50		30.0	1.2	2939.4					N30D							
03/13/94 07:13:04	4:56:53									MAD	AOS						
03/13/94 07:14:34	4:58:23		27.9	1.2	2941.3						Aposelene						

Orbit 102 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/13/94 07:14:34	0:00:00		27.9	1.2	2941.3							Aposelene							Downlinking SDR Segment 6 (orbit 101)
03/13/94 07:27:42	0:13:08		20.0	1.1	2915.6							N20D							
03/13/94 07:30:29	0:15:55		18.3	1.1	2903.6							INPM							Enter penumbra
03/13/94 07:31:27	0:16:53		17.7	1.1	2898.8							INUM							Enter umbra
03/13/94 07:42:00	0:27:25												Downlink SDR Segment 7						Ground Command
03/13/94 07:43:58	0:29:24		10.0	1.0	2812.3							N10D							
03/13/94 07:59:15	0:44:41		0.0	0.9	2642.7							Equator - D							
03/13/94 08:05:23	0:50:48										CAN	LOS							
03/13/94 08:13:16	0:58:41		-10.0	0.8	2425.9							S10D							
03/13/94 08:23:00	1:08:25												Downlink SDR data patches						Ground Command
03/13/94 08:25:46	1:11:12		-20.0	0.7	2182.6							S20D							
03/13/94 08:27:00	1:12:25												SSDR to IDLE - downlink complete						Ground Command
03/13/94 08:33:27	1:18:52		-26.8	0.6	2011.5							OUTUM							Exit umbra
03/13/94 08:34:14	1:19:40		-27.6	0.6	1992.7							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/13/94 08:35:41	1:21:06	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/13/94 08:36:48	1:22:14		-30.0	0.6	1931.4							S30D							
03/13/94 08:46:26	1:31:51		-40.0	0.5	1686.4							S40D							
																			Standard Prep2 Script
03/13/94 08:49:17	1:34:42	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/13/94 08:54:17	1:39:42	0											Msg "WRNG: Omni/2k in 1 min.."						
03/13/94 08:54:48	1:40:14		-50.0	0.5	1457.3							S50D							
03/13/94 08:55:17	1:40:42	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/13/94 08:56:17	1:41:42	60											Switch to omni antennas						
03/13/94 08:57:17	1:42:42	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/13/94 08:57:47	1:43:12	30											UV & HR cameras ON						
03/13/94 09:02:07	1:47:33		-60.0	0.5	1249.8							S60D							
03/13/94 09:06:52	1:52:17	545											Initialize filters (DHU SEQT 28); Record in SDR Segment 1; Load lunar dark exposure tables						Start SDR in Segment 1
03/13/94 09:07:17	1:52:42	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 102 Timeline - Type A Orbit

03/13/94 09:57:45	2:43:11		10.0	179.8	541.5						N10A								
03/13/94 09:58:13	2:43:38	232									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							
03/13/94 10:01:51	2:47:17		20.0	179.8	621.6						N20A								
03/13/94 10:02:20	2:47:45	247									N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9							
03/13/94 10:03:20	2:48:45	60										Laser power OFF							
03/13/94 10:06:18	2:51:44		30.0	179.8	723.0						N30A								
03/13/94 10:06:46	2:52:11	206									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							
03/13/94 10:11:10	2:56:36		40.0	179.8	847.0						N40A								
03/13/94 10:11:38	2:57:03	292									N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11						SDDR Segment 4	
03/13/94 10:14:02	2:59:27									MAD	MAOSM								Exit occultation
03/13/94 10:16:34	3:02:00		50.0	179.8	994.9						N50A								
03/13/94 10:17:02	3:02:27	324									N50A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ55N; Select DHU SEQT 12						IR and UV uncompressed	
03/13/94 10:19:30	3:04:55	148										Slew to moon limb (ORB102_ETAN/GNC12ETN01); Select DHU SEQT 24						Slew to Moon limb (inertial pointing) CEQ_24CJRU loaded in SEQT 24 Color HiRes uncomp. images, also STA and STB images	
03/13/94 10:20:30	3:05:55	60										Load exposure table LUNARZ85N; Select DHU SEQT 12						HiRes monochrome	
03/13/94 10:22:30	3:07:55	120										Select DHU SEQT 24; Slew to Earth center (ORB102_EARTH/GNC12CEN01)						Color HiRes uncomp. images; Also STA and STB images	
03/13/94 10:22:40	3:08:05		60.0	179.8	1167.6						N60A								
03/13/94 10:22:45	3:08:10	15										Load Earth-view exposure table EARTHVW							START EARTH IMAGING
03/13/94 10:25:30	3:10:55	165										Slew to nadir (ACSMODE=LunarMapping); Load exposure table LUNARZ65N; Select DHU SEQT 19						End Earth imaging, return to nadir Stop HR imaging by gain setting Resume compression	
03/13/94 10:27:30	3:12:55	120										Select DHU SEQT 13							
03/13/94 10:29:33	3:14:59		70.0	179.9	1364.9						N70A								
03/13/94 10:30:00	3:15:25	150									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						Resume HiRes imaging	
03/13/94 10:37:27	3:22:53		80.0	180.2	1585.2						N80A								
03/13/94 10:37:54	3:23:19	474									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15							
03/13/94 10:38:54	3:24:19	60										Load DEQ_12.UMI into SEQT 12						Restore compressed SEQT 12	
Err:508																			
03/13/94 10:46:31	3:31:57		89.9	270.6	1824.3						North Pole								
03/13/94 10:47:53	3:33:19		88.6	353.6	1858.9						LDUSK								
Standard Post Script																			

Orbit 102 Timeline - Type A Orbit

03/13/94 10:47:58	3:33:23	0										Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table		Slew to Vega (inertial pointing)
03/13/94 10:56:56	3:42:21		80.0	358.4	2074.2							N80D		
03/13/94 10:57:58	3:43:23	600										Perform UVO Imaging (DHU SEQT 29)		No data because duration was 15 tics instead of 15 seconds
03/13/94 10:57:58	3:43:23	0										Perform LWIR imaging (DHU SEQT 25)		Dark Field imaging starts
03/13/94 10:58:13	3:43:38	15										Perform NIR imaging (Select DHU SEQT 31)		
03/13/94 10:58:27	3:43:53	15										Perform HiRes Imaging (DHU SEQT 30)		Radiometric imaging
03/13/94 10:58:34	3:44:00	7										Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)		Slew HGA to Earth
03/13/94 11:04:34	3:50:00	360										Switch to HGA		READY FOR DATA DUMP
														End Post Script
03/13/94 11:06:00	3:51:25											Switch to DHU mode @ 128 kbps		Ground Command
03/13/94 11:08:00	3:53:25											Downlink SDR Segment 1		Ground Command
03/13/94 11:08:48	3:54:14		70.0	358.7	2322.9							N70D		
03/13/94 11:16:00	4:01:25											Uplink & schedule L103 scripts		Ground Command
03/13/94 11:22:10	4:07:36		60.0	358.8	2553.4							N60D		
03/13/94 11:36:56	4:22:22		50.0	358.7	2745.7							N50D		
03/13/94 11:42:00	4:27:25											Downlink SDR Segment 2		Ground Command
03/13/94 11:52:49	4:38:15		40.0	358.6	2879.3							N40D		
03/13/94 12:09:23	4:54:49		30.0	358.5	2938.1							N30D		
03/13/94 12:10:29												PMK	AOS	
03/13/94 12:12:59	4:58:25		27.9	358.5	2940.1							Aposelene		

Orbit 103 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/13/94 12:12:59	0:00:00		27.9	358.5	2940.1							Aposelene							Downlinking SDR Segment 2 (Orbit 102)
03/13/94 12:15:00	0:02:00												Downlink SDR Segment 3						Ground Command
03/13/94 12:17:00	0:04:00												Update state vector (GNC53_13MAR1200)						Ground Command
03/13/94 12:26:00	0:13:00												Open ST-A door; Select ST-A						Ground Command To see if ST-A will get matches
03/13/94 12:26:06	0:13:06		20.0	358.4	2914.5							N20D							
03/13/94 12:28:41	0:15:42		18.4	358.3	2903.3							INPM							Enter penumbra
03/13/94 12:29:39	0:16:40		17.8	358.3	2898.7							INUM							Enter umbra
03/13/94 12:34:00	0:21:00												Downlink SDR Segment 4						Ground Command
03/13/94 12:42:20	0:29:21		10.0	358.2	2811.5							N10D							
03/13/94 12:57:37	0:44:38		0.0	358.1	2642.2							Equator - D							
03/13/94 13:11:37	0:58:38		-10.0	358.0	2425.8							S10D							
03/13/94 13:24:09	1:11:09		-20.0	357.9	2182.9							S20D							
03/13/94 13:31:53	1:18:54		-26.9	357.9	2009.8							OUTUM							Exit umbra
03/13/94 13:32:42	1:19:42		-27.6	357.9	1991.0							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/13/94 13:34:12	1:21:12	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/13/94 13:35:09	1:22:10		-30.0	357.9	1932.0							S30D							
03/13/94 13:44:47	1:31:48		-40.0	357.8	1687.3							S40D							
																			Standard Prep2 Script
03/13/94 13:47:43	1:34:43	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/13/94 13:52:43	1:39:43	0											Msg "WRNG: Omni/2k in 1 min.."						
03/13/94 13:53:10	1:40:11		-50.0	357.8	1458.4							S50D							
03/13/94 13:53:43	1:40:43	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/13/94 13:54:43	1:41:43	60											Switch to omni antennas						
03/13/94 13:55:43	1:42:43	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/13/94 13:56:13	1:43:13	30											UV & HR cameras ON						
03/13/94 14:00:29	1:47:30		-60.0	357.8	1250.9							S60D							

Orbit 103 Timeline - Type B Orbit

03/13/94 14:05:18	1:52:18	545								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables							Start SSSR in Segment 5
03/13/94 14:05:43	1:52:43	25								Perform NIR imaging (DHU SEQT 31)							Dark Field imaging starts
03/13/94 14:05:58	1:52:58	15								Stop imaging - select ST-B							
03/13/94 14:06:54	1:53:55		-70.0	357.9	1067.6					S70D							
03/13/94 14:07:43	1:54:43	105								Perform LWIR imaging (DHU SEQT 25)							
03/13/94 14:07:58	1:54:58	15								Perform NIR imaging (DHU SEQT 31)							
03/13/94 14:08:13	1:55:13	15														Err:508	Slew to nadir (inertial pointing)
03/13/94 14:08:43	1:55:43	30								Laser Power ON							
																	Err:508
03/13/94 14:12:35	1:59:36		-80.0	358.3	909.1					S80D							Err:508
																	Err:508
03/13/94 14:16:12	2:03:13	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S							
03/13/94 14:17:13	2:04:13	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/13/94 14:17:40	2:04:41		-89.8	84.8	775.0					South Pole							
03/13/94 14:18:13	2:05:13	60								MAXS							
03/13/94 14:18:21	2:05:22		-88.6	171.2	758.0					LDAWN							
03/13/94 14:22:17	2:09:18		-80.0	176.5	663.9					S80A							
03/13/94 14:22:49	2:09:49	276								S80A							
03/13/94 14:26:32	2:13:33		-70.0	176.9	574.8					S70A							
03/13/94 14:27:04	2:14:04	255								S70A							
03/13/94 14:30:30	2:17:31		-60.0	177.0	506.1					S60A							
03/13/94 14:31:02	2:18:02	238								S60A							
03/13/94 14:34:17	2:21:17		-50.0	177.1	456.9					S50A							
03/13/94 14:34:48	2:21:48	226								S50A							
03/13/94 14:34:53	2:21:53									PMK							
03/13/94 14:34:58	2:21:58									MAD							
03/13/94 14:37:54	2:24:55		-40.0	177.1	426.2					S40A							Enter occultation
03/13/94 14:38:26	2:25:26	218								S40A							
03/13/94 14:41:27	2:28:28		-30.0	177.1	413.5					S30A							
03/13/94 14:41:59	2:28:59	213								S30A							
03/13/94 14:42:13	2:29:14		-27.9	177.1	413.1					Periselene							
03/13/94 14:45:00	2:32:01		-20.0	177.1	418.6					S20A							
03/13/94 14:45:32	2:32:32	213								S20A							
03/13/94 14:48:36	2:35:37		-10.0	177.1	441.4					S10A							

Orbit 103 Timeline - Type B Orbit

03/13/94 14:49:08	2:36:08	216								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/13/94 14:52:18	2:39:19		0.0	177.1	482.5					Equator - A				
03/13/94 14:52:49	2:39:49	221								MEQA	Load CEQ_07U.UMI into SEQT7; Load exposure table LUNARZ05N; Select DHU SEQT 7			UV and IR uncompressed
03/13/94 14:56:10	2:43:11		10.0	177.1	542.6					N10A				
03/13/94 14:56:41	2:43:41	232								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			Resume compression
03/13/94 15:00:17	2:47:18		20.0	177.1	622.7					N20A				
03/13/94 15:00:48	2:47:48	247								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/13/94 15:01:48	2:48:48	60									Laser power OFF			
03/13/94 15:04:43	2:51:44		30.0	177.0	724.0					N30A				
03/13/94 15:05:15	2:52:15	207								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/13/94 15:09:36	2:56:37		40.0	177.0	848.0					N40A				
03/13/94 15:10:07	2:57:07	292								N40A	Switch to inertial pointing (ORB_103RW); Load exposure table LUNARZ45N			Initiate oblique viewing
03/13/94 15:12:16	2:59:16								GDS	MAOSM				Exit occultation
03/13/94 15:12:19	2:59:19								PMK	MAOSM				
03/13/94 15:12:29	2:59:29								MAD	MAOSM				
03/13/94 15:15:00	3:02:01		50.0	177.0	995.8					N50A				
03/13/94 15:15:31	3:02:31	324								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11			
03/13/94 15:21:05	3:08:06		60.0	177.1	1168.3					N60A				
03/13/94 15:21:36	3:08:36	365								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12			
03/13/94 15:25:44	3:12:44	248									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19			End oblique viewing - resume nadir pointing
03/13/94 15:27:59	3:15:00		70.0	177.2	1365.5					N70A				
03/13/94 15:28:30	3:15:30	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20			
03/13/94 15:35:53	3:22:54		80.0	177.5	1585.6					N80A				
03/13/94 15:36:23	3:23:23	473								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21			
03/13/94 15:37:23	3:24:23	60									Load DEQ_07.UMI into SEQT 7			Restore compressed SEQT 7
Err:508														
03/13/94 15:44:57	3:31:58		89.8	265.8	1824.3					North Pole				
03/13/94 15:46:19	3:33:20		88.6	350.3	1858.8					LDUSK				
Standard Post Script														
03/13/94 15:46:27	3:33:27	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table			Slew to Vega (inertial pointing)

Orbit 103 Timeline - Type B Orbit

03/13/94 15:55:21	3:42:22		80.0	355.6	2074.0					N80D								
03/13/94 15:56:27	3:43:27	600									Perform UVO Imaging (DHU SEQT 29)							No data because duration was 15 tics instead of 15 seconds
03/13/94 15:56:27	3:43:27	0									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/13/94 15:56:42	3:43:42	15									Perform NIR imaging (Select DHU SEQT 31)							
03/13/94 15:56:57	3:43:57	15									Perform HiRes Imaging (DHU SEQT 30)							Radiometric imaging
03/13/94 15:57:04	3:44:04	7									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
03/13/94 16:03:00	3:50:00										Switch to DHU mode @ 128 kbps							Ground Command
03/13/94 16:03:04	3:50:04	360									Switch to HGA							READY FOR DATA DUMP
																		End Post Script
03/13/94 16:04:00	3:51:00										Resume downlink SDR Segment 4							Ground Command
03/13/94 16:07:13	3:54:14		70.0	356.0	2322.3					N70D								
03/13/94 16:13:00	4:00:00										Downlink SDR Segment 5							Ground Command
03/13/94 16:20:35	4:07:36		60.0	356.0	2552.5					N60D								
03/13/94 16:31:00	4:18:00										Downlink SDR Segment 6							Ground Command
03/13/94 16:35:21	4:22:22		50.0	355.9	2744.6					N50D								
03/13/94 16:51:13	4:38:14		40.0	355.9	2878.1					N40D								
03/13/94 17:07:48	4:54:48		30.0	355.7	2936.9					N30D								
03/13/94 17:11:00	4:58:00										Uplink & schedule L104 scripts							Ground Command
03/13/94 17:11:24	4:58:25		27.8	355.7	2938.8					Aposelene								

Orbit 104 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/13/94 17:11:24	0:00:00		27.8	355.7	2938.8							Aposelene							Downlinking SSSR Segment 6 (orbit 103)
LHG104 Script																			
03/13/94 17:21:22	0:09:58	0											Msg "WRNG: Omni/2k in 1 min.."; Open either ST door if closed; SSDR to IDLE						Stop data dump
03/13/94 17:22:22	0:10:58	60											Switch to 2 kbps bypass mode						
03/13/94 17:23:22	0:11:58	60											Switch to omni antennas						
03/13/94 17:24:23	0:12:58	60											Slew ST-B to Moon (GNC12M104); Record in SSSR Segment 7						Slew ST-B to Moon (inertial pointing) SSDR Segment 7
03/13/94 17:24:28	0:13:04		20.0	355.6	2913.3							N20D							
03/13/94 17:26:53	0:15:28		18.5	355.6	2903.1							INPM							Enter penumbra
03/13/94 17:27:00	0:15:35												Select ST-A						Ground Command
03/13/94 17:27:51	0:16:26		18.0	355.6	2898.5							INUM							Enter umbra
03/13/94 17:30:00	0:18:35												Begin imaging with ST-B (DHUSEL23)						Ground Command Script error left this command out, also wrong table
03/13/94 17:30:35	0:19:10	372											Inertial pointing w/ quaternion table (STK_104MOON003.QTB)						Start pointing using quaternion tables
03/13/94 17:31:00	0:19:35												Stop imaging - select ST-B; Upload SEQ_ZOOK.UMI into SEQT 23; Select DHU SEQT 23						Ground Command START LHG SUNSET IMAGING: Uncompressed star tracker 'B' image every 10 seconds
03/13/94 17:40:35	0:29:10	600											Use QTable STK_104MOON004.QTB						IMAGES OVEREXPOSED!
03/13/94 17:40:43	0:29:18		10.0	355.5	2810.6							N10D							
03/13/94 17:50:35	0:39:10	600											Use QTable STK_104MOON005.QTB						
03/13/94 17:53:00	0:41:35												SSDR to IDLE						Ground Command
03/13/94 17:53:35	0:42:10	180											Stop imaging - select ST-B; SA step rate to HI; Slew HGA to Earth (GNC13EARTH)						END LHG IMAGING
End LHG104 Script																			
03/13/94 17:55:59	0:44:35		0.0	355.4	2641.7							Equator - D							
03/13/94 17:57:00	0:45:35												Switch to HGA; Switch to DHU mode @ 128 kbps						Ground Command
03/13/94 18:02:00	0:50:35												Resume downlinking SSSR Segment 6						Ground Command
03/13/94 18:09:58	0:58:34		-10.0	355.3	2425.6							S10D							
03/13/94 18:22:30	1:11:05		-20.0	355.2	2183.1							S20D							
03/13/94 18:30:21	1:18:57		-27.0	355.2	2008.0							OUTUM							Exit umbra
03/13/94 18:31:08	1:19:44		-27.7	355.2	1989.4							OUTPM							Exit penumbra
Standard Prep1 Script																			
03/13/94 18:32:42	1:21:17	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
End Prep1 Script																			

Orbit 104 Timeline - Type A Orbit

03/13/94 18:33:31	1:22:07		-30.0	355.1	1932.5				S30D										
03/13/94 18:43:09	1:31:45		-40.0	355.1	1688.1				S40D										
Standard Prep2 Script																			
03/13/94 18:46:09	1:34:44	0								LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed									
End Prep2 Script																			
03/13/94 18:47:00	1:35:35									Downlink SSSDR 7									Ground Command
Err:508																			
03/13/94 18:51:09	1:39:44	0								Msg "WRNG: Omni/2k in 1 min.."									
03/13/94 18:51:32	1:40:08		-50.0	355.1	1459.3				S50D										
03/13/94 18:52:09	1:40:44	60								SSDR to IDLE; Switch to 2 kbps bypass mode									Stop SSSDR data dump
03/13/94 18:53:09	1:41:44	60								Switch to omni antennas									
03/13/94 18:54:09	1:42:44	60								Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)									Using ST-A again
03/13/94 18:54:39	1:43:14	30								UV & HR cameras ON									
03/13/94 18:58:51	1:47:27		-60.0	355.1	1252.0				S60D										
03/13/94 19:03:44	1:52:19	545								Initialize filters (DHU SEQT 28); Record in SSSDR Segment 1; Load lunar dark exposure tables									Start SSSDR in Segment 1
03/13/94 19:04:09	1:52:44	25								Perform NIR imaging (DHU SEQT 31)									Dark Field imaging starts
03/13/94 19:04:24	1:52:59	15								Stop imaging - select ST-A									
03/13/94 19:05:17	1:53:53		-70.0	355.2	1068.8				S70D										
03/13/94 19:06:09	1:54:44	105								Perform LWIR imaging (DHU SEQT 25)									
03/13/94 19:06:24	1:54:59	15								Perform NIR imaging (DHU SEQT 31)									
03/13/94 19:06:29	1:55:04								MAD	LOS									
03/13/94 19:06:39	1:55:14	15																	Err:508
03/13/94 19:07:09	1:55:44	30								Laser Power ON									Slew to nadir (inertial pointing)
Err:508																			
03/13/94 19:10:58	1:59:33		-80.0	355.6	910.4				S80D										
Err:508																			
03/13/94 19:14:39	2:03:14	0								Initialize filters (DHU SEQT 28)									
03/13/94 19:14:44	2:03:19	5								Park opaque filter on HiRes (DHU SEQT 27); Load exposure table LUNARZ85S									HiRes imaging off because of LHG observation time
03/13/94 19:15:39	2:04:14	55								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)									START MAPPING
03/13/94 19:16:03	2:04:39		-89.8	81.7	776.3				South Pole										
03/13/94 19:16:39	2:05:14	60							MAXS	Set SA step rate to LO									
03/13/94 19:16:44	2:05:20		-88.6	168.2	759.4				LDAWN										

Orbit 104 Timeline - Type A Orbit

03/13/94 19:20:41	2:09:16		-80.0	173.7	665.2					S80A			
03/13/94 19:21:16	2:09:51	277								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3		
03/13/94 19:24:56	2:13:32		-70.0	174.1	576.1					S70A			
03/13/94 19:25:31	2:14:06	255								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4		
03/13/94 19:28:54	2:17:29		-60.0	174.3	507.4					S60A			
03/13/94 19:29:29	2:18:04	238								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6		
03/13/94 19:32:40	2:21:16		-50.0	174.3	458.2					S50A			
03/13/94 19:33:15	2:21:50	226								S50A	Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5	SSDR Segment 2	
03/13/94 19:33:22	2:21:57							GDS		MLOSM			
03/13/94 19:33:24	2:21:59							PMK		MLOSM		Enter occultation	
03/13/94 19:36:18	2:24:54		-40.0	174.3	427.5					S40A			
03/13/94 19:36:53	2:25:28	218								S40A	Load exposure table LUNARZ35S		
03/13/94 19:39:52	2:28:28		-30.0	174.3	414.8					S30A			
03/13/94 19:40:27	2:29:02	214								S30A	Load exposure table LUNARZ25S		
03/13/94 19:40:38	2:29:14		-27.8	174.3	414.3					Periselene			
03/13/94 19:43:26	2:32:01		-20.0	174.3	419.8					S20A			
03/13/94 19:44:00	2:32:35	213								S20A	Load exposure table LUNARZ15S		
03/13/94 19:47:01	2:35:37		-10.0	174.3	442.6					S10A			
03/13/94 19:47:35	2:36:10	215								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6		
03/13/94 19:50:43	2:39:19		0.0	174.3	483.7					Equator - A			
03/13/94 19:51:17	2:39:52	222								MEQA	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 3	
03/13/94 19:54:35	2:43:11		10.0	174.3	543.7					N10A			
03/13/94 19:55:10	2:43:45	233								N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8	IR and UV uncompressed	
03/13/94 19:58:42	2:47:18		20.0	174.3	623.8					N20A			
03/13/94 19:59:17	2:47:52	247								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	Resume compression	
03/13/94 20:00:17	2:48:52	60									Laser power OFF		
03/13/94 20:03:09	2:51:45		30.0	174.3	725.0					N30A			
03/13/94 20:03:43	2:52:18	206								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10		
03/13/94 20:08:01	2:56:37		40.0	174.3	848.9					N40A			
03/13/94 20:08:35	2:57:10	292								N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4	
03/13/94 20:10:39	2:59:14							GDS		MAOSM		Exit occultation	
03/13/94 20:10:44	2:59:19							PMK		MAOSM			
03/13/94 20:13:26	3:02:02		50.0	174.3	996.6					N50A			
03/13/94 20:14:00	3:02:35	325								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12		

Orbit 104 Timeline - Type A Orbit

03/13/94 20:19:31	3:08:07		60.0	174.4	1169.0					N60A								
03/13/94 20:20:05	3:08:40	365								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13							
03/13/94 20:26:25	3:15:01		70.0	174.4	1366.0					N70A								
03/13/94 20:26:59	3:15:34	414								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14							
03/13/94 20:34:19	3:22:55		80.0	174.8	1585.9					N80A								
03/13/94 20:34:52	3:23:27	473								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15							
03/13/94 20:35:52	3:24:27	60									Load DEQ_08.UMI into SEQT 8							Restore compressed SEQT 8
Err:508																		
Standard Post Script																		
03/13/94 20:36:52	3:25:27	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table							Timeline error: this script should start AFTER North Pole
03/13/94 20:43:23	3:31:59		89.8	261.6	1824.2					North Pole								
03/13/94 20:44:46	3:33:22		88.6	347.3	1858.8					LDUSK								
03/13/94 20:46:57	3:35:32	600									Perform UVO Imaging (DHU SEQT 29)							No data because duration was 15 tics instead of 15 seconds
03/13/94 20:46:57	3:35:32	0									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/13/94 20:47:12	3:35:47	15									Perform NIR imaging (Select DHU SEQT 31)							
03/13/94 20:47:27	3:36:02	15									Perform HiRes Imaging (DHU SEQT 30)							Radiometric imaging
03/13/94 20:47:34	3:36:09	7									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
03/13/94 20:53:34	3:42:09		80.0	352.9	2073.7					N80D								
03/13/94 20:53:48	3:42:24	360									Switch to HGA							READY FOR DATA DUMP
End Post Script																		
03/13/94 20:56:00	3:44:35										Switch to DHU mode @ 128 kbps							Ground Command
03/13/94 20:59:00	3:47:35										Resume downlinking SSSR Segment 7							Ground Command Not all data dumped due to overexposure of images
03/13/94 21:05:00	3:53:35										Downlink SSSR Segment 1							Ground Command
03/13/94 21:05:39	3:54:14		70.0	353.2	2321.8					N70D								
03/13/94 21:19:01	4:07:36		60.0	353.3	2551.7					N60D								
03/13/94 21:26:00	4:14:35										Uplink ST exposure table (EXPDAY5.UMI)							Ground Command
03/13/94 21:33:45	4:22:21		50.0	353.2	2743.5					N50D								
03/13/94 21:44:00	4:32:35										Downlink SSSR Segment 2							Ground Command
03/13/94 21:49:38	4:38:14		40.0	353.1	2876.8					N40D								
03/13/94 22:06:11	4:54:47		30.0	353.0	2935.6					N30D								

Orbit 104 Timeline - Type A Orbit

03/13/94 22:09:49	4:58:25	27.8	353.0	2937.6					Aposelene										
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Orbit 105 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/13/94 22:09:49	0:00:00		27.8	353.0	2937.6							Aposelene							Downlinking SDR Segment 2 (Orbit 104)
03/13/94 22:16:00	0:06:10												Downlink SDR Segment 3						Ground Command
03/13/94 22:22:52	0:13:02		20.0	352.9	2912.2							N20D							
03/13/94 22:25:07	0:15:17		18.6	352.9	2902.8							INPM							Enter penumbra
03/13/94 22:26:03	0:16:14		18.1	352.9	2898.3							INUM							Enter umbra
03/13/94 22:28:44	0:18:54										CAN	AOS							
03/13/94 22:39:05	0:29:16		10.0	352.8	2809.8							N10D							
03/13/94 22:54:22	0:44:32		0.0	352.7	2641.2							Equator - D							
03/13/94 22:58:00	0:48:10												Downlink SDR Segment 4						Ground Command
03/13/94 23:08:20	0:58:31		-10.0	352.6	2425.5							S10D							
03/13/94 23:16:00	1:06:10												Uplink & schedule L105 scripts						Ground Command
03/13/94 23:20:51	1:11:02		-20.0	352.5	2183.4							S20D							
03/13/94 23:28:49	1:18:59		-27.1	352.4	2006.3							OUTUM							Exit umbra
03/13/94 23:29:35	1:19:45		-27.8	352.4	1987.7							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/13/94 23:31:12	1:21:22	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/13/94 23:31:53	1:22:04		-30.0	352.4	1933.1							S30D							
03/13/94 23:41:31	1:31:42		-40.0	352.4	1688.8							S40D							
																			Standard Prep2 Script
03/13/94 23:44:34	1:34:44	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/13/94 23:49:34	1:39:44	0											Msg "WRNG: Omni/2k in 1 min.."						
03/13/94 23:49:54	1:40:04		-50.0	352.3	1460.3							S50D							
03/13/94 23:50:34	1:40:44	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/13/94 23:51:34	1:41:44	60											Switch to omni antennas						
03/13/94 23:52:34	1:42:44	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/13/94 23:53:04	1:43:14	30											UV & HR cameras ON						
03/13/94 23:57:14	1:47:25		-60.0	352.4	1253.1							S60D							
03/14/94 00:02:09	1:52:19	545											Initialize filters (DHU SEQT 28); Record in SDR Segment 5; Load lunar dark exposure tables						Start SDR in Segment 5

Orbit 105 Timeline - Tyne B Orbit

03/14/94 00:02:34	1:52:44	25									Perform NIR imaging (DHU SEQT 31)				Dark Field imaging starts
03/14/94 00:02:49	1:52:59	15									Stop imaging - select ST-A				
03/14/94 00:03:40	1:53:50		-70.0	352.5	1070.0					S70D					
03/14/94 00:04:34	1:54:44	105									Perform LWIR imaging (DHU SEQT 25)				
03/14/94 00:04:49	1:54:59	15									Perform NIR imaging (DHU SEQT 31)				
03/14/94 00:05:04	1:55:14	15										Err:508			Slew to nadir (inertial pointing)
03/14/94 00:05:34	1:55:44	30									Laser Power ON				
															Err:508
03/14/94 00:09:21	1:59:32		-80.0	352.9	911.6					S80D					Err:508
															Err:508
03/14/94 00:13:04	2:03:14	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/14/94 00:14:04	2:04:14	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)				START MAPPING
03/14/94 00:14:26	2:04:37		-89.8	78.8	777.6					South Pole					
03/14/94 00:15:04	2:05:14	60								MAXS	Set SA step rate to LO				
03/14/94 00:15:06	2:05:16		-88.6	165.1	760.6					LDAWN					
03/14/94 00:16:32	2:06:42									PMK	LOS				
03/14/94 00:19:04	2:09:15		-80.0	170.9	666.5						S80A				
03/14/94 00:19:42	2:09:52	278									S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17			
03/14/94 00:23:20	2:13:30		-70.0	171.4	577.3						S70A				
03/14/94 00:23:57	2:14:07	255									S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18			
03/14/94 00:27:19	2:17:29		-60.0	171.5	508.7						S60A				
03/14/94 00:27:56	2:18:06	239									S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/14/94 00:31:04	2:21:15		-50.0	171.6	459.4						S50A				
03/14/94 00:31:42	2:21:52	226									S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/14/94 00:31:53	2:22:03									GDS	MLOSM				
03/14/94 00:32:07	2:22:17									CAN	MLOSM				Enter occultation
03/14/94 00:34:43	2:24:53		-40.0	171.6	428.7						S40A				
03/14/94 00:35:20	2:25:30	218									S40A	Load exposure table LUNARZ35S			
03/14/94 00:38:16	2:28:27		-30.0	171.6	416.0						S30A				
03/14/94 00:38:54	2:29:04	214									S30A	Load exposure table LUNARZ25S			
03/14/94 00:39:03	2:29:14		-27.8	171.6	415.5						Periselene				
03/14/94 00:41:49	2:32:00		-20.0	171.6	420.9						S20A				
03/14/94 00:42:27	2:32:37	213									S20A	Load exposure table LUNARZ15S			
03/14/94 00:45:25	2:35:36		-10.0	171.6	443.8						S10A				
03/14/94 00:46:03	2:36:13	216									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			

Orbit 105 Timeline - Type B Orbit

03/14/94 00:49:08	2:39:19		0.0	171.6	484.8								Equator - A					
03/14/94 00:49:45	2:39:55	222											MEQA	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 7
03/14/94 00:53:00	2:43:11		10.0	171.6	544.8								N10A					
03/14/94 00:53:38	2:43:48	233											N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8				UV and IR uncompressed
03/14/94 00:57:09	2:47:19		20.0	171.6	624.8								N20A					
03/14/94 00:57:45	2:47:55	247											N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				Resume compression
03/14/94 00:58:45	2:48:55	60												Laser power OFF				
03/14/94 01:01:35	2:51:46		30.0	171.6	726.0								N30A					
03/14/94 01:02:12	2:52:22	207											N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				
03/14/94 01:06:27	2:56:38		40.0	171.6	849.8								N40A					
03/14/94 01:07:04	2:57:14	292											N40A	Switch to inertial pointing (ORB_105RW); Load exposure table LUNARZ45N				Initiate oblique viewing
03/14/94 01:09:00	2:59:10											GDS	MAOSM					Exit occultation
03/14/94 01:09:07	2:59:17											CAN	MAOSM					
03/14/94 01:11:52	3:02:02		50.0	171.6	997.4								N50A					
03/14/94 01:12:29	3:02:39	325											N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11				
03/14/94 01:17:57	3:08:08		60.0	171.6	1169.7								N60A					
03/14/94 01:18:34	3:08:44	365											N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12				
03/14/94 01:22:41	3:12:51	247												Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19				End oblique viewing - resume nadir pointing
03/14/94 01:24:51	3:15:01		70.0	171.7	1366.5								N70A					
03/14/94 01:25:27	3:15:37	166											N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20				Resume HiRes imaging
03/14/94 01:32:46	3:22:56		80.0	172.1	1586.2								N80A					
03/14/94 01:33:21	3:23:31	474											N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21				
03/14/94 01:34:21	3:24:31	60												Load DEQ_08.UMI into SEQT 8				Restore compressed SEQT 8
Err:508																		
03/14/94 01:41:50	3:32:01		89.8	264.0	1824.7								North Pole					
03/14/94 01:43:11	3:33:22		88.6	344.3	1858.7								LDUSK					
Standard Post Script																		
03/14/94 01:43:25	3:33:35	0												Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table				Slew to Vega (inertial pointing)
03/14/94 01:52:14	3:42:24		80.0	350.1	2073.5								N80D					

Orbit 105 Timeline - Type B Orbit

03/14/94 01:53:30	3:43:40	600								Perform UVO Imaging (DHU SEQT 29)	No data because duration was 15 tics instead of 15 seconds
03/14/94 01:53:30	3:43:40	0								Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/14/94 01:53:45	3:43:55	15								Perform NIR imaging (Select DHU SEQT 31)	
03/14/94 01:54:00	3:44:10	15								Perform HiRes Imaging (DHU SEQT 30)	Radiometric imaging
03/14/94 01:54:07	3:44:17	7								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/14/94 02:00:07	3:50:17	360								Switch to HGA	READY FOR DATA DUMP
											End Post Script
03/14/94 02:00:30	3:50:40									Switch to DHU mode @ 128 kbps	Ground Command
03/14/94 02:04:05	3:54:16		70.0	350.5	2321.2				N70D		
03/14/94 02:05:00	3:55:10									Downlink SDR Segment 5	Ground Command
03/14/94 02:14:00	4:04:10									Ranging B ON	Ground Command
03/14/94 02:17:26	4:07:36		60.0	350.5	2550.9				N60D		
03/14/94 02:32:10	4:22:21		50.0	350.5	2742.4				N50D		
03/14/94 02:42:00	4:32:10									Downlink SDR Segment 6	Ground Command
03/14/94 02:48:02	4:38:12		40.0	350.4	2875.6				N40D		
03/14/94 02:50:30	4:40:40							GDS	LOS		
03/14/94 03:04:34	4:54:45		30.0	350.3	2934.4				N30D		
03/14/94 03:08:13	4:58:23		27.8	350.2	2936.4				Aposelene		

Orbit 106 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/14/94 03:08:13	0:00:00		27.8	350.2	2936.4							Aposelene							Downlinking SSSR Segment 6 (orbit 105)
03/14/94 03:15:00	0:06:46												Downlink SSSR 7						Ground Command
03/14/94 03:21:14	0:13:01		20.0	350.2	2911.2							N20D							
03/14/94 03:23:20	0:15:06		18.7	350.1	2902.5							INPM							Enter penumbra
03/14/94 03:24:16	0:16:03		18.2	350.1	2898.1							INUM							Enter umbra
03/14/94 03:37:27	0:29:14		10.0	350.0	2809.0							N10D							
03/14/94 03:52:43	0:44:30		0.0	349.9	2640.7							Equator - D							
03/14/94 04:02:00	0:53:46												Uplink & schedule L106 scripts						Ground Command
03/14/94 04:06:42	0:58:29		-10.0	349.8	2425.4							S10D							
03/14/94 04:19:13	1:11:00		-20.0	349.7	2183.6							S20D							
03/14/94 04:20:00	1:11:46												SSDR to IDLE - downlink complete						Ground Command
03/14/94 04:27:15	1:19:02		-27.2	349.7	2004.6							OUTUM							Exit umbra
03/14/94 04:28:02	1:19:49		-27.9	349.7	1986.2							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/14/94 04:29:41	1:21:27	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/14/94 04:30:14	1:22:01		-30.0	349.7	1933.6							S30D							
03/14/94 04:39:54	1:31:40		-40.0	349.6	1689.6							S40D							
																			Standard Prep2 Script
03/14/94 04:43:00	1:34:46	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/14/94 04:48:00	1:39:46	0											Msg "WRNG: Omni/2k in 1 min.."						
03/14/94 04:48:16	1:40:03		-50.0	349.6	1461.2							S50D							
03/14/94 04:49:00	1:40:46	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/14/94 04:50:00	1:41:46	60											Switch to omni antennas						
03/14/94 04:51:00	1:42:46	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/14/94 04:51:30	1:43:16	30											UV & HR cameras ON						
03/14/94 04:53:00	1:44:46												Ranging B OFF						Ground Command
03/14/94 04:55:36	1:47:23		-60.0	349.7	1254.2							S60D							
03/14/94 05:00:35	1:52:21	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/14/94 05:01:00	1:52:46	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 106 Timeline - Type A Orbit

03/14/94 05:01:15	1:53:01	15															Stop imaging - select ST-A				
03/14/94 05:02:02	1:53:49		-70.0	349.8	1071.1					S70D											
03/14/94 05:03:00	1:54:46	105															Perform LWIR imaging (DHU SEQT 25)				
03/14/94 05:03:15	1:55:01	15															Perform NIR imaging (DHU SEQT 31)				
03/14/94 05:03:30	1:55:16	15																Err:508			Slew to nadir (inertial pointing)
03/14/94 05:04:00	1:55:46	30															Laser Power ON				
Err:508																					
03/14/94 05:07:44	1:59:30		-80.0	350.2	912.8					S80D											
Err:508																					
03/14/94 05:11:29	2:03:16	0															Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/14/94 05:12:30	2:04:16	60															Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 9)				START MAPPING
03/14/94 05:12:49	2:04:36		-89.8	76.1	778.8					South Pole											
03/14/94 05:13:30	2:05:16	60								MAXS							Set SA step rate to LO				
03/14/94 05:13:29	2:05:16		-88.6	162.0	761.9					LDAWN											
03/14/94 05:17:27	2:09:14		-80.0	168.2	667.7					S80A											
03/14/94 05:18:08	2:09:54	278								S80A							Load exposure table LUNARZ75S; Select DHU SEQT 3				
03/14/94 05:21:43	2:13:30		-70.0	168.6	578.5					S70A											
03/14/94 05:22:24	2:14:10	256								S70A							Load exposure table LUNARZ65S; Select DHU SEQT 4				
03/14/94 05:25:41	2:17:28		-60.0	168.8	509.9					S60A											
03/14/94 05:26:22	2:18:08	238								S60A							Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/14/94 05:29:28	2:21:15		-50.0	168.8	460.6					S50A											
03/14/94 05:30:09	2:21:55	227								S50A							Record in SSDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/14/94 05:30:41	2:22:27								CAN	MLOSM											Enter occultation
03/14/94 05:33:06	2:24:53		-40.0	168.9	429.9					S40A											
03/14/94 05:33:47	2:25:33	218								S40A							Load exposure table LUNARZ35S				
03/14/94 05:36:41	2:28:28		-30.0	168.9	417.1					S30A											
03/14/94 05:37:21	2:29:07	214								S30A							Load exposure table LUNARZ25S				
03/14/94 05:37:27	2:29:14		-27.8	168.9	416.7					Periselene											
03/14/94 05:40:14	2:32:01		-20.0	168.9	422.1					S20A											
03/14/94 05:40:55	2:32:41	214								S20A							Load exposure table LUNARZ15S				
03/14/94 05:43:50	2:35:37		-10.0	168.9	444.9					S10A											
03/14/94 05:44:31	2:36:17	216								S10A							Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/14/94 05:47:33	2:39:20		0.0	168.9	485.9					Equator - A											
03/14/94 05:48:13	2:39:59	222								MEQA							Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3

Orbit 106 Timeline - Type A Orbit

03/14/94 05:51:25	2:43:12		10.0	168.9	545.8					N10A									
03/14/94 05:52:06	2:43:52	233								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/14/94 05:55:34	2:47:20		20.0	168.9	625.8					N20A									
03/14/94 05:56:13	2:47:59	247								N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9								IR and UV uncompressed
03/14/94 05:57:13	2:48:59	60									Laser power OFF								
03/14/94 06:00:00	2:51:47		30.0	168.9	727.0					N30A									
03/14/94 06:00:40	2:52:26	207								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								Resume compression
03/14/94 06:04:53	2:56:40		40.0	168.9	850.7					N40A									
03/14/94 06:05:33	2:57:19	293								N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4
03/14/94 06:07:28	2:59:14								CAN	MAOSM									Exit occultation
03/14/94 06:10:18	3:02:05		50.0	168.9	998.2					N50A									
03/14/94 06:10:57	3:02:43	324								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
03/14/94 06:16:23	3:08:10		60.0	168.9	1170.3					N60A									
03/14/94 06:17:02	3:08:48	365								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/14/94 06:23:17	3:15:04		70.0	169.0	1367.0					N70A									
03/14/94 06:23:57	3:15:43	415								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								Resume HiRes imaging
03/14/94 06:31:12	3:22:59		80.0	169.5	1586.5					N80A									
03/14/94 06:31:51	3:23:37	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
03/14/94 06:32:51	3:24:37	60									Load DEQ_09.UMI into SEQT 9								Restore compressed SEQT 9
Err:508																			
03/14/94 06:40:16	3:32:03		89.8	261.0	1824.7					North Pole									
03/14/94 06:41:37	3:33:24		88.6	341.2	1858.7					LDUSK									
Standard Post Script																			
03/14/94 06:41:54	3:33:40	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)
03/14/94 06:50:39	3:42:26		80.0	347.3	2073.3					N80D									
03/14/94 06:51:59	3:43:45	600									Perform UVO Imaging (DHU SEQT 29)								No data because duration was 15 tics instead of 15 seconds
03/14/94 06:52:59	3:44:45	0									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/14/94 06:52:14	3:44:00	15									Perform NIR imaging (Select DHU SEQT 31)								
03/14/94 06:52:39	3:44:25	15									Perform HiRes Imaging (DHU SEQT 30)								Radiometric imaging

Orbit 106 Timeline - Type A Orbit

03/14/94 06:52:46	3:44:32	7								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
03/14/94 06:58:46	3:50:32	360								Switch to HGA								READY FOR DATA DUMP
End Post Script																		
03/14/94 07:01:00	3:52:46									Switch to DHU mode @ 128 kbps								Ground Command
03/14/94 07:02:31	3:54:18		70.0	347.7	2320.7					N70D								
03/14/94 07:04:00	3:55:46																	Downlink SDR Segment 1
03/14/94 07:15:51	4:07:38		60.0	347.8	2550.1					N60D								Ground Command
03/14/94 07:30:35	4:22:22		50.0	347.7	2741.4					N50D								
03/14/94 07:35:00	4:26:46																	Downlink SDR Segment 2
03/14/94 07:41:01	4:32:47																	Ground Command
03/14/94 07:41:01	4:32:47									MAD	AOS							
03/14/94 07:42:00	4:33:46																	Uplink & schedule L107 scripts
03/14/94 07:45:00	4:36:46																	Ground Command
03/14/94 07:46:26	4:38:13		40.0	347.6	2874.5					N40D								Switch from CAN to MAD
03/14/94 08:02:58	4:54:44		30.0	347.5	2933.3					N30D								
03/14/94 08:06:38	4:58:25		27.8	347.5	2935.3					Aposelene								

Orbit 107 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/14/94 08:06:38	0:00:00		27.8	347.5	2935.3							Aposelene							SSDR idle for GS changeover
03/14/94 08:11:00	0:04:21												Resume downlinking SSDR Segment 2						Ground Command
03/14/94 08:19:38	0:12:59		20.0	347.4	2910.2							N20D							
03/14/94 08:21:32	0:14:54		18.8	347.4	2902.2							INPM							Enter penumbra
03/14/94 08:22:29	0:15:51		18.3	347.4	2897.9							INUM							Enter umbra
03/14/94 08:35:50	0:29:12		10.0	347.3	2808.2							N10D							
03/14/94 08:36:00	0:29:21												Downlink SSDR Segment 3						Ground Command
03/14/94 08:33:20	0:26:41										CAN	LOS							
03/14/94 08:51:05	0:44:27		0.0	347.2	2640.3							Equator - D							
03/14/94 09:05:05	0:58:26		-10.0	347.1	2425.3							S10D							
03/14/94 09:06:00	0:59:21												Downlink SSDR Segment 4						Ground Command
03/14/94 09:17:34	1:10:56		-20.0	347.0	2183.8							S20D							
03/14/94 09:22:00	1:15:21												SSDR to IDLE - downlink complete						Ground Command
03/14/94 09:25:43	1:19:04		-27.2	347.0	2003.0							OUTUM							Exit umbra
03/14/94 09:26:29	1:19:51		-28.0	347.0	1984.7							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/14/94 09:28:11	1:21:32	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/14/94 09:28:36	1:21:58		-30.0	347.0	1934.1							S30D							
03/14/94 09:38:15	1:31:37		-40.0	346.9	1690.3							S40D							
																			Standard Prep2 Script
03/14/94 09:41:26	1:34:47	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/14/94 09:46:26	1:39:47	0											Msg "WRNG: Omni/2k in 1 min.."						
03/14/94 09:46:38	1:40:00		-50.0	346.9	1462.2							S50D							
03/14/94 09:47:26	1:40:47	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/14/94 09:48:26	1:41:47	60											Switch to omni antennas						
03/14/94 09:49:26	1:42:47	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/14/94 09:49:56	1:43:17	30											UV & HR cameras ON						
03/14/94 09:53:58	1:47:20		-60.0	346.9	1255.2							S60D							

Orbit 107 Timeline - Type B Orbit

03/14/94 09:59:01	1:52:22	545									Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables							Start SSSR in Segment 5
03/14/94 09:59:26	1:52:47	25									Perform NIR imaging (DHU SEQT 31)							Dark Field imaging starts
03/14/94 09:59:41	1:53:02	15									Stop imaging - select ST-A							
03/14/94 10:00:24	1:53:46		-70.0	347.1	1072.2						S70D							
03/14/94 10:01:26	1:54:47	105									Perform LWIR imaging (DHU SEQT 25)							
03/14/94 10:01:41	1:55:02	15									Perform NIR imaging (DHU SEQT 31)							
03/14/94 10:01:56	1:55:17	15															Err:508	Slew to nadir (inertial pointing)
03/14/94 10:02:26	1:55:47	30									Laser Power ON							
																		Err:508
03/14/94 10:06:06	1:59:28		-80.0	347.6	913.9						S80D							Err:508
																		Err:508
03/14/94 10:09:56	2:03:17	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S							
03/14/94 10:10:56	2:04:17	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/14/94 10:11:12	2:04:34		-89.8	73.8	780.0						South Pole							
03/14/94 10:11:52	2:05:14		-88.6	158.9	763.1						LDAWN							
03/14/94 10:11:56	2:05:17	60									MAXS	Set SA step rate to LO						
03/14/94 10:15:50	2:09:12		-80.0	165.4	668.9						S80A							
03/14/94 10:16:34	2:09:55	278									S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17						
03/14/94 10:20:06	2:13:28		-70.0	165.9	579.7						S70A							
03/14/94 10:20:50	2:14:11	256									S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18						
03/14/94 10:24:05	2:17:27		-60.0	166.0	511.1						S60A							
03/14/94 10:24:49	2:18:10	239									S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/14/94 10:27:52	2:21:13		-50.0	166.1	461.8						S50A							
03/14/94 10:28:36	2:21:57	227									S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5						SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/14/94 10:28:45	2:22:06								MAD		MLOSM							Enter occultation
03/14/94 10:31:30	2:24:52		-40.0	166.1	431.0						S40A							
03/14/94 10:32:14	2:25:35	218									S40A	Load exposure table LUNARZ35S						
03/14/94 10:35:05	2:28:27		-30.0	166.1	418.3						S30A							
03/14/94 10:35:48	2:29:09	214									S30A	Load exposure table LUNARZ25S						
03/14/94 10:35:52	2:29:14		-27.8	166.1	417.8						Periselene							
03/14/94 10:38:38	2:32:00		-20.0	166.1	423.2						S20A							
03/14/94 10:39:22	2:32:43	214									S20A	Load exposure table LUNARZ15S						
03/14/94 10:42:15	2:35:37		-10.0	166.1	446.0						S10A							
03/14/94 10:42:58	2:36:19	216									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						

Orbit 107 Timeline - Type B Orbit

03/14/94 10:45:57	2:39:19		0.0	166.1	486.9					Equator - A			
03/14/94 10:46:41	2:40:02	223								MEQA	Record in SSDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7		SSDR Segment 7
03/14/94 10:49:50	2:43:12		10.0	166.1	546.9					N10A			
03/14/94 10:50:34	2:43:55	233								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8		
03/14/94 10:53:59	2:47:20		20.0	166.1	626.8					N20A			
03/14/94 10:54:41	2:48:02	247								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9		
03/14/94 10:55:41	2:49:02	60									Laser power OFF		
03/14/94 10:58:25	2:51:47		30.0	166.1	727.9					N30A			
03/14/94 10:59:08	2:52:29	207								N30A	Load CEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10		UV and IR uncompressed
03/14/94 11:03:18	2:56:40		40.0	166.1	851.5					N40A			
03/14/94 11:04:01	2:57:22	293								N40A	Switch to inertial pointing (ORB_107RW); Load exposure table LUNARZ45N		Initiate oblique viewing Resume compression
03/14/94 11:04:53	2:58:14								MAD	MAOSM			Exit occultation
03/14/94 11:08:43	3:02:05		50.0	166.1	998.9					N50A			
03/14/94 11:09:26	3:02:47	325								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11		
03/14/94 11:14:49	3:08:11		60.0	166.2	1171.0					N60A			
03/14/94 11:15:31	3:08:52	365								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12		
03/14/94 11:19:39	3:13:00	248									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19		End oblique viewing - resume nadir pointing
03/14/94 11:21:43	3:15:05		70.0	166.3	1367.5					N70A			
03/14/94 11:22:25	3:15:46	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20		Resume HiRes imaging
03/14/94 11:29:37	3:22:59		80.0	166.8	1586.7					N80A			
03/14/94 11:30:19	3:23:40	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21		
03/14/94 11:31:19	3:24:40	60									Load DEQ_10.UMI into SEQT 10		Restore compressed SEQT 10
													Err:508
03/14/94 11:38:41	3:32:03		89.8	253.6	1824.3					North Pole			
03/14/94 11:40:04	3:33:25		88.6	338.1	1858.6					LDUSK			
													Standard Post Script
03/14/94 11:40:23	3:33:44	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table		Slew to Vega (inertial pointing)
03/14/94 11:49:05	3:42:27		80.0	344.5	2073.0					N80D			
03/14/94 11:50:28	3:43:49	600									Perform UVO Imaging (DHU SEQT 29)		No data because duration was 15 tics instead of 15 seconds

Orbit 107 Timeline - Tyne B Orbit

03/14/94 11:50:28	3:43:49	0									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/14/94 11:50:43	3:44:04	15									Perform NIR imaging (Select DHU SEQT 31)						
03/14/94 11:50:58	3:44:19	15									Perform HiRes Imaging (DHU SEQT 30)						Radiometric imaging
03/14/94 11:51:05	3:44:26	7									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/14/94 11:57:05	3:50:26	360									Switch to HGA						READY FOR DATA DUMP
End Post Script																	
03/14/94 11:59:00	3:52:21										Switch to DHU mode @ 128 kbps						Ground Command
03/14/94 12:00:56	3:54:18		70.0	344.9	2320.2						N70D						
03/14/94 12:01:00	3:54:21										Downlink SSSR Segment 5						Ground Command
03/14/94 12:08:00	4:01:21										Update state vector (GNC53_14MAR1200)						Ground Command
03/14/94 12:29:00	4:22:22		50.0	345.0	2740.3						N50D						
03/14/94 12:35:00	4:28:21										Downlink SSSR Segment 6						Ground Command
03/14/94 12:39:44	4:33:05									PMK	AOS						
03/14/94 12:44:50	4:38:12		40.0	344.9	2873.3						N40D						
03/14/94 13:01:21	4:54:43		30.0	344.8	2932.1						N30D						
03/14/94 13:05:03	4:58:25		27.8	344.8	2934.2						Aposelene						

Orbit 108 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/14/94 13:05:03	0:00:00		27.8	344.8	2934.2							Aposelene							Downlinking SSSR Segment 6 (orbit 107)
03/14/94 13:08:00	0:02:56												Downlink SSSR Segment 7						Ground Command
03/14/94 13:11:00	0:05:56												Uplink & schedule L108 scripts						Ground Command
03/14/94 13:18:00	0:12:57		20.0	344.7	2909.2							N20D							
03/14/94 13:19:45	0:14:42		18.9	344.7	2902.0							INPM							Enter penumbra
03/14/94 13:20:41	0:15:38		18.4	344.7	2897.7							INUM							Enter umbra
03/14/94 13:34:12	0:29:09		10.0	344.6	2807.5							N10D							
03/14/94 13:49:27	0:44:24		0.0	344.5	2639.9							Equator - D							
03/14/94 14:03:25	0:58:21		-10.0	344.4	2425.3							S10D							
03/14/94 14:10:00	1:04:56												SSDR to IDLE - downlink complete						Ground Command
03/14/94 14:15:56	1:10:53		-20.0	344.3	2184.2							S20D							
03/14/94 14:24:08	1:19:05		-27.3	344.3	2001.7							OUTUM							Exit umbra
03/14/94 14:24:55	1:19:52		-28.0	344.2	1983.5							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/14/94 14:26:40	1:21:36	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/14/94 14:26:58	1:21:55		-30.0	344.2	1934.7							S30D							
03/14/94 14:29:00	1:23:56												Select ST-A						Ground Command No matches with ST-B
03/14/94 14:36:36	1:31:33		-40.0	344.2	1691.2							S40D							
																			Standard Prep2 Script
03/14/94 14:39:52	1:34:48	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/14/94 14:44:52	1:39:48	0											Msg "WRNG: Omni/2k in 1 min.."						
03/14/94 14:45:00	1:39:57		-50.0	344.2	1463.1							S50D							
03/14/94 14:45:52	1:40:48	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/14/94 14:46:52	1:41:48	60											Switch to omni antennas						
03/14/94 14:47:52	1:42:48	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/14/94 14:48:22	1:43:18	30											UV & HR cameras ON						
03/14/94 14:52:21	1:47:17		-60.0	344.2	1256.3							S60D							
03/14/94 14:57:27	1:52:23	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/14/94 14:57:52	1:52:48	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 108 Timeline - Type A Orbit

03/14/94 14:58:07	1:53:03	15									Stop imaging - select ST-A				
03/14/94 14:58:46	1:53:42		-70.0	344.4	1073.4					S70D					
03/14/94 14:59:52	1:54:48	105									Perform LWIR imaging (DHU SEQT 25)				
03/14/94 15:00:07	1:55:03	15									Perform NIR imaging (DHU SEQT 31)				
03/14/94 15:00:22	1:55:18	15										Err:508			Slew to nadir (inertial pointing)
03/14/94 15:00:52	1:55:48	30									Laser Power ON				
															Err:508
03/14/94 15:04:30	1:59:26		-80.0	345.0	915.1					S80D					
															Err:508
03/14/94 15:08:52	2:03:48	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/14/94 15:09:35	2:04:32		-89.8	73.0	781.1					South Pole					
03/14/94 15:09:52	2:04:48	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 9)				START MAPPING
03/14/94 15:10:15	2:05:12		-88.6	155.1	764.4					LDAWN					
03/14/94 15:10:52	2:05:48	60								MAXS	Set SA step rate to LO				
03/14/94 15:14:13	2:09:10		-80.0	162.5	670.1					S80A					
03/14/94 15:15:30	2:10:26	278								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3				
03/14/94 15:18:29	2:13:26		-70.0	163.1	580.9					S70A					
03/14/94 15:19:46	2:14:42	256								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4				
03/14/94 15:22:28	2:17:25		-60.0	163.2	512.2					S60A					
03/14/94 15:23:45	2:18:41	239								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/14/94 15:26:15	2:21:12		-50.0	163.3	462.9					S50A					
03/14/94 15:27:32	2:22:28	227								S50A	Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/14/94 15:27:18	2:22:14								PMK	MLOSM					
03/14/94 15:27:20	2:22:16								MAD	MLOSM					Enter occultation
03/14/94 15:29:54	2:24:51		-40.0	163.4	432.2					S40A					
03/14/94 15:31:11	2:26:07	219								S40A	Load exposure table LUNARZ35S				
03/14/94 15:33:29	2:28:25		-30.0	163.4	419.4					S30A					
03/14/94 15:34:16	2:29:13		-27.8	163.4	418.9					Periselene					
03/14/94 15:34:46	2:29:42	215								S30A	Load exposure table LUNARZ25S				
03/14/94 15:37:03	2:32:00		-20.0	163.4	424.3					S20A					
03/14/94 15:38:19	2:33:15	213								S20A	Load exposure table LUNARZ15S				
03/14/94 15:40:39	2:35:36		-10.0	163.4	447.0					S10A					
03/14/94 15:41:56	2:36:52	217								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/14/94 15:44:22	2:39:19		0.0	163.4	487.9					Equator - A					

Orbit 108 Timeline - Type A Orbit

03/14/94 15:45:38	2:40:34	222								MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3
03/14/94 15:48:15	2:43:12		10.0	163.4	547.8					N10A					
03/14/94 15:49:31	2:44:27	233								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8				
03/14/94 15:52:23	2:47:20		20.0	163.4	627.7					N20A					
03/14/94 15:53:39	2:48:35	248								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				
03/14/94 15:54:39	2:49:35	60									Laser power OFF				
03/14/94 15:56:50	2:51:47		30.0	163.4	728.7					N30A					
03/14/94 15:58:06	2:53:02	207								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				
03/14/94 16:01:43	2:56:40		40.0	163.4	852.3					N40A					
03/14/94 16:02:47	2:57:43								GDS	MAOSM					Exit occultation
03/14/94 16:02:53	2:57:49								PMK	MAOSM					
03/14/94 16:02:59	2:57:55	293								N40A	Record in SSDR Segment 4; Load CEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45N; Select DHU SEQT 11				SSDR Segment 4 IR and UV uncompressed
03/14/94 16:03:07	2:58:03								MAD	MAOSM					
03/14/94 16:07:09	3:02:06		50.0	163.4	999.6					N50A					
03/14/94 16:08:24	3:03:20	325								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12				Resume compression
03/14/94 16:13:14	3:08:11		60.0	163.5	1171.5					N60A					
03/14/94 16:14:30	3:09:26	366								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13				
03/14/94 16:20:10	3:15:06		70.0	163.6	1367.8					N70A					
03/14/94 16:21:24	3:16:20	414								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14				Resume HiRes imaging
03/14/94 16:28:03	3:23:00		80.0	164.2	1586.9					N80A					
03/14/94 16:29:18	3:24:14	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15				
03/14/94 16:30:18	3:25:14	60									Load DEQ_11.UMI into SEQT 11				Restore compressed SEQT 11
Err:508															
03/14/94 16:37:07	3:32:04		89.8	253.5	1824.5					North Pole					
03/14/94 16:38:29	3:33:25		88.6	334.3	1858.3					LDUSK					
Standard Post Script															
03/14/94 16:38:52	3:33:48	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table				Slew to Vega (inertial pointing)
03/14/94 16:47:30	3:42:27		80.0	341.6	2072.6					N80D					

Orbit 108 Timeline - Type A Orbit

03/14/94 16:48:57	3:43:53	600								Perform UVO Imaging (DHU SEQT 29)	No data because duration was 15 tics instead of 15 seconds
03/14/94 16:48:57	3:43:53	0								Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/14/94 16:49:12	3:44:08	15								Perform NIR imaging (Select DHU SEQT 31)	
03/14/94 16:49:27	3:44:23	15								Perform HiRes Imaging (DHU SEQT 30)	Radiometric imaging
03/14/94 16:49:34	3:44:30	7								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/14/94 16:55:34	3:50:30	360								Switch to HGA	READY FOR DATA DUMP
End Post Script											
03/14/94 16:56:00	3:50:56									Switch to DHU mode @ 128 kbps	Ground Command
03/14/94 16:58:00	3:52:56									Downlink SSSR Segment 1	Ground Command
03/14/94 16:59:21	3:54:18		70.0	342.1	2319.5				N70D		
03/14/94 17:01:00	3:55:56									Uplink & schedule L109 scripts	Ground Command
03/14/94 17:31:00	4:25:56									Downlink SSSR Segment 2	Ground Command
03/14/94 17:12:41	4:07:38		60.0	342.2	2548.3				N60D		
03/14/94 17:27:24	4:22:21		50.0	342.2	2739.3				N50D		
03/14/94 17:43:14	4:38:11		40.0	342.1	2872.1				N40D		
03/14/94 17:59:44	4:54:40		30.0	342.0	2931.0				N30D		
03/14/94 18:03:00	4:57:56									Downlink SSSR Segment 3	Ground Command
03/14/94 18:03:28	4:58:24		27.8	342.0	2933.1				Aposelene		

Orbit 109 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/14/94 18:03:28	0:00:00		27.8	342.0	2933.1							Aposelene							Downlinking SSSR Segment 3 (orbit 108)
03/14/94 18:16:22	0:12:54		20.0	341.9	2908.2							N20D							
03/14/94 18:17:58	0:14:30		19.0	341.9	2901.7							INPM							Enter penumbra
03/14/94 18:18:54	0:15:26		18.5	341.9	2897.5							INUM							Enter umbra
03/14/94 18:23:00	0:19:32												Upload SEQ_ZOOK.UMI into SEQT 23; SSDR to IDLE; Switch to 2 kbps bypass mode; Switch to omni antennas						LHG OBSERVATION TEST Ground Command
03/14/94 18:32:00	0:28:32												Slew ST-B to Moon (MAR14RW1840/GNC12M1840)						Ground Command Slew to Moon's limb (inertial pointing)
03/14/94 18:32:34	0:29:06		10.0	341.8	2806.8							N10D							
03/14/94 18:34:00	0:30:32												Record in SSSR Segment 1						Ground Command
03/14/94 18:35:00	0:31:32												Begin LHG imaging with ST-B (DHU SEQT 23)						Ground Command
03/14/94 18:36:00	0:32:32												Stop LHG imaging (DHU SEQT 2); Load exposure table STBGLOW; Begin LHG imaging with ST-B (DHU SEQT 23)						Ground Command
03/14/94 18:37:00	0:33:32												Stop LHG imaging (DHU SEQT 2); Load exposure table STBGLOW100; Begin LHG imaging with ST-B (DHU SEQT 23); Stop LHG imaging (DHU SEQT 2)						Ground Command
03/14/94 18:39:00	0:35:32												Slew to second attitude (MAR14RW1830/GNC12M1830); Begin LHG imaging with ST-B; (DHU SEQT 23); Stop LHG imaging (DHU SEQT 2)						Ground Command
03/14/94 18:43:00	0:39:32												Load exposure table STBGLOW; Begin LHG imaging with ST-B (DHU SEQT 23)						Ground Command
03/14/94 18:44:00	0:40:32												Stop LHG imaging (DHU SEQT 2); Load exposure table EXPDAY5; Begin LHG imaging with ST-B (DHU SEQT 23); Stop LHG imaging (DHU SEQT 2)						Ground Command
03/14/94 18:46:00	0:42:32												Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						END LHG OBSERVATION TEST Ground Command
03/14/94 18:49:00	0:45:32												Switch to HGA						Ground Command
03/14/94 18:50:00	0:46:32												Switch to DHU mode @ 128 kbps						Ground Command
03/14/94 18:47:50	0:44:22		0.0	341.7	2639.6							Equator - D							
03/14/94 18:53:00	0:49:32												Downlink SSSR Segment 4						Ground Command
03/14/94 19:01:47	0:58:19		-10.0	341.6	2425.3							S10D							

Orbit 109 Timeline - Type B Orbit

03/14/94 19:13:00	1:09:32										Select ST-A				Ground Command
03/14/94 19:14:17	1:10:49		-20.0	341.6	2184.4						S20D				
03/14/94 19:16:00	1:12:32											Downlink SSSR Segment 1 (LHG)			Ground Command
03/14/94 19:19:00	1:15:32											SSDR to IDLE - downlink complete			Ground Command
03/14/94 19:22:35	1:19:08		-27.4	341.5	2000.3						OUTUM				Exit umbra
03/14/94 19:23:21	1:19:53		-28.1	341.5	1982.2						OUTPM				Exit penumbra
															Standard Prep1 Script
03/14/94 19:25:09	1:21:41	0										NIR camera & cryocooler ON; Solar Arrays mode to AUTO			
															End Prep1 Script
03/14/94 19:25:19	1:21:51		-30.0	341.5	1935.3						S30D				
03/14/94 19:34:58	1:31:30		-40.0	341.5	1691.9						S40D				
															Standard Prep2 Script
03/14/94 19:38:18	1:34:50	0										LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed			
															End Prep2 Script
															Err:508
03/14/94 19:43:18	1:39:50	0										Msg "WRNG: Omni/2k in 1 min.."			
03/14/94 19:43:22	1:39:54		-50.0	341.5	1464.0						S50D				
03/14/94 19:44:18	1:40:50	60										SSDR to IDLE; Switch to 2 kbps bypass mode			
03/14/94 19:45:18	1:41:50	60										Switch to omni antennas			
03/14/94 19:46:18	1:42:50	60										Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)		Slew to Crux	
03/14/94 19:46:48	1:43:20	30										UV & HR cameras ON			
03/14/94 19:50:42	1:47:14		-60.0	341.5	1257.3						S60D				
03/14/94 19:55:53	1:52:25	545										Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables		Start SSSR in Segment 5	
03/14/94 19:56:18	1:52:50	25										Perform NIR imaging (DHU SEQT 31)		Dark Field imaging starts	
03/14/94 19:56:33	1:53:05	15										Stop imaging - select ST-A			
03/14/94 19:57:09	1:53:41		-70.0	341.7	1074.5						S70D				
03/14/94 19:58:18	1:54:50	105										Perform LWIR imaging (DHU SEQT 25)			
03/14/94 19:58:33	1:55:05	15										Perform NIR imaging (DHU SEQT 31)			
03/14/94 19:58:48	1:55:20	15											Err:508	Slew to nadir (inertial pointing)	
03/14/94 19:59:18	1:55:50	30										Laser Power ON			
															Err:508
03/14/94 20:02:51	1:59:23		-80.0	342.3	916.2						S80D				
03/14/94 20:03:50	2:00:22										MAD	LOS			
															Err:508

Orbit 109 Timeline - Type B Orbit

03/14/94 20:06:47	2:03:20	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/14/94 20:07:48	2:04:20	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)						START MAPPING
03/14/94 20:07:58	2:04:30		-89.8	71.7	782.2						South Pole						
03/14/94 20:08:38	2:05:10		-88.6	151.8	765.6						LDAWN						
03/14/94 20:08:48	2:05:20	60									MAXS	Set SA step rate to LO					
03/14/94 20:12:36	2:09:09		-80.0	159.7	671.3						S80A						
03/14/94 20:13:26	2:09:58	278									S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/14/94 20:16:52	2:13:24		-70.0	160.3	582.1						S70A						
03/14/94 20:17:00	2:13:32											Select DHU SEQT 4					Ground Command Reason for command unknown - command was unsuccessful
03/14/94 20:17:42	2:14:14	256									S70A	Load exposure table LUNARZ65S; Select DHU SEQT 18					
03/14/94 20:20:52	2:17:24		-60.0	160.5	513.4						S60A						
03/14/94 20:21:42	2:18:14	240									S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/14/94 20:24:39	2:21:11		-50.0	160.6	464.1						S50A						
03/14/94 20:25:29	2:22:01	227									S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/14/94 20:25:55	2:22:27									GDS	MLOSM						
03/14/94 20:25:55	2:22:27									PMK	MLOSM						Enter occultation
03/14/94 20:28:18	2:24:50		-40.0	160.6	433.3						S40A						
03/14/94 20:29:08	2:25:40	219									S40A	Load exposure table LUNARZ35S					
03/14/94 20:31:53	2:28:25		-30.0	160.6	420.4						S30A						
03/14/94 20:32:41	2:29:13		-27.8	160.6	420.0						Periselene						
03/14/94 20:32:43	2:29:15	215									S30A	Load exposure table LUNARZ25S					
03/14/94 20:35:27	2:31:59		-20.0	160.7	425.3						S20A						
03/14/94 20:36:16	2:32:48	213									S20A	Load exposure table LUNARZ15S					
03/14/94 20:39:04	2:35:36		-10.0	160.7	448.0						S10A						
03/14/94 20:39:53	2:36:25	217									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/14/94 20:42:47	2:39:19		0.0	160.7	488.9						Equator - A						
03/14/94 20:43:36	2:40:08	223									MEQA	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 7
03/14/94 20:46:40	2:43:12		10.0	160.7	548.7						N10A						
03/14/94 20:47:29	2:44:01	233									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/14/94 20:50:48	2:47:20		20.0	160.7	628.5						N20A						
03/14/94 20:51:36	2:48:08	247									N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					
03/14/94 20:52:36	2:49:08	60										Laser power OFF					
03/14/94 20:55:16	2:51:48		30.0	160.7	729.5						N30A						
03/14/94 20:56:03	2:52:35	207									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					

Orbit 109 Timeline - Type B Orbit

03/14/94 21:00:09	2:56:41		40.0	160.7	853.0					N40A									
03/14/94 21:00:56	2:57:28	293								N40A	Switch to inertial pointing (ORB_109RW); Load exposure table LUNARZ45N								Initiate oblique viewing
03/14/94 21:00:57	2:57:29									GDS MAOSM									Exit occultation
03/14/94 21:01:05	2:57:37									PMK MAOSM									
03/14/94 21:05:34	3:02:06		50.0	160.7	1000.2					N50A									
03/14/94 21:06:22	3:02:54	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11								
03/14/94 21:11:40	3:08:12		60.0	160.8	1172.0					N60A									
03/14/94 21:12:27	3:08:59	365								N60A	Replace SEQT 12 with CEQ_12U; Load exposure table LUNARZ65N; Select DHU SEQT 12								UV and IR uncompressed
03/14/94 21:16:35	3:13:07	248									Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19								End oblique viewing - resume nadir pointing Resume compression
03/14/94 21:18:34	3:15:06		70.0	160.9	1368.1					N70A									
03/14/94 21:19:21	3:15:53	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								Resume HiRes imaging
03/14/94 21:26:29	3:23:01		80.0	161.5	1587.1					N80A									
03/14/94 21:27:15	3:23:47	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
03/14/94 21:28:15	3:24:47	60									Load DEQ_12.UMI into SEQT 12								Restore compressed SEQT 12
Err:508																			
03/14/94 21:35:33	3:32:05		89.8	248.6	1824.2					North Pole									
03/14/94 21:36:54	3:33:26		88.6	331.1	1858.1					LDUSK									
Standard Post Script																			
03/14/94 21:37:20	3:33:52	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)
03/14/94 21:45:56	3:42:28		80.0	338.8	2072.3					N80D									
03/14/94 21:47:25	3:43:57	600									Perform UVO Imaging (DHU SEQT 29)								No data because duration was 15 tics instead of 15 seconds
03/14/94 21:47:25	3:43:57	0									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/14/94 21:47:40	3:44:12	15									Perform NIR imaging (Select DHU SEQT 31)								
03/14/94 21:47:55	3:44:27	15									Perform HiRes Imaging (DHU SEQT 30)								Radiometric imaging
03/14/94 21:48:02	3:44:34	7									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)								Slew HGA to Earth
03/14/94 21:54:02	3:50:34	360									Switch to HGA								READY FOR DATA DUMP
End Post Script																			
03/14/94 21:55:00	3:51:32										Switch to DHU mode @ 128 kbps								Ground Command

Orbit 109 Timeline - Type B Orbit

03/14/94 21:57:46	3:54:18		70.0	339.4	2318.9						N70D								
03/14/94 21:59:00	3:55:32											Downlink SSSDR Segment 5							Ground Command
03/14/94 22:06:00	4:02:32											Uplink & schedule L110 scripts							Ground Command
03/14/94 22:11:06	4:07:38		60.0	339.5	2547.5						N60D								
03/14/94 22:25:48	4:22:21		50.0	339.5	2738.2						N50D								
03/14/94 22:41:38	4:38:10		40.0	339.4	2871.0						N40D								
03/14/94 22:45:00	4:41:32											Downlink SSSDR Segment 5; Cancel LHG script							Ground Command
03/14/94 22:51:00	4:47:32											Uplink & schedule LHG script							Ground Command
03/14/94 22:58:07	4:54:39		30.0	339.3	2929.9						N30D								
03/14/94 23:01:51	4:58:23		27.8	339.3	2932.0						Aposelene								

Orbit 110 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HIRes	NIR	LWIR	Laser	Comment
03/14/94 23:01:51	0:00:00		27.8	339.3	2932.0							Aposelene							Downlinking SSDR Segment 5 (orbit 109)
03/14/94 23:11:00	0:09:08												Downlink SSDR Segment 6						Ground Command
03/14/94 23:14:45	0:12:53		20.0	339.2	2907.3							N20D							
03/14/94 23:16:11	0:14:20		19.1	339.2	2901.5							INPM							Enter penumbra
03/14/94 23:17:07	0:15:15		18.6	339.2	2897.3							INUM							Enter umbra
03/14/94 23:19:00	0:17:08												Downlink SSDR data patches						Ground Command
03/14/94 23:25:17	0:23:25										CAN	AOS							
03/14/94 23:30:00	0:28:08												Select ST-A						Ground Command
03/14/94 23:30:56	0:29:04		10.0	339.1	2806.2							N10D							
03/14/94 23:31:00	0:29:08												Uplink STBGLOW70.UMI; Select ST-B; Select ST-A						Ground Command
																			LHG Script
03/14/94 23:42:30	0:40:38	0											Msg "WRNG: Omni/2k in 1 min.."; Open either ST door if closed						
03/14/94 23:43:30	0:41:38	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSDR playback
03/14/94 23:44:30	0:42:38	60											Switch to omni antennas						
03/14/94 23:45:00	0:43:08												Cancel LM Post script						Ground Command
03/14/94 23:45:30	0:43:38	60											Slew ST-B to Moon (GNC12M110); Record in SSDR Segment 7						Record in SSDR Segment 7
03/14/94 23:46:10	0:44:18		0.0	339.0	2639.2							Equator - D							
03/14/94 23:50:30	0:48:38	300											Begin imaging with ST-B (DHU SEQT 23); Inertial pointing w/quaternion table (STK_110MOON003.QTB)						Lunar Horizon Glow (LHG) Observation Starts SEQ_ZOOK loaded into SEQT 23
03/15/94 00:00:30	0:58:38	600											Use Qtable STK_110MOON004.QTB						
03/15/94 00:00:08	0:58:16		-10.0	338.9	2425.3							S10D							
03/15/94 00:10:00	1:08:08												Uplink baseline scripts (BASELINE.UMI); Uplink & schedule revised LM Post script						Ground Command
03/15/94 00:10:30	1:08:38	600											Use Qtable STK_110MOON005.QTB						
03/15/94 00:12:40	1:10:48		-20.0	338.8	2184.8							S20D							
03/15/94 00:13:30	1:11:38	180											Stop imaging - select ST-B; Set SA step rate to HI; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						End LHG Observation Slew HGA to Earth
																			End LHG Script
03/15/94 00:17:00	1:15:08												Switch to HGA; Switch to DHU mode @ 128 kbps						Ground Command
03/15/94 00:20:00	1:18:08												Downlink SSDR Segment 6 patches						Ground Command
03/15/94 00:21:01	1:19:09		-27.5	338.8	1999.0							OUTUM							Exit umbra

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03/15/94 00:21:47	1:19:55		-28.2	338.8	1981.0					OUTPM					Exit penumbra
03/15/94 00:22:00	1:20:08														Uplink ST exposure table (EXPDAY5)
															Ground Command
															Standard Prep1 Script
03/15/94 00:23:38	1:21:46	0													NIR camera & cryocooler ON; Solar Arrays mode to AUTO
															End Prep1 Script
03/15/94 00:23:41	1:21:50		-30.0	338.8	1935.8					S30D					
03/15/94 00:25:00	1:23:08														Ground Command
03/15/94 00:27:00	1:25:08														Fix for slew time problem
03/15/94 00:33:20	1:31:29		-40.0	338.8	1692.7					S40D					Ground Command
															Standard Prep2 Script
03/15/94 00:36:43	1:34:51	0													LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed
															End Prep2 Script
															Err:508
03/15/94 00:41:43	1:39:51	0													Msg "WRNG: Omni/2k in 1 min.."
03/15/94 00:41:44	1:39:52		-50.0	338.8	1465.0					S50D					
03/15/94 00:42:43	1:40:51	60													SSDR to IDLE; Switch to 2 kbps bypass mode
03/15/94 00:43:43	1:41:51	60													Data downlink stopped
03/15/94 00:44:43	1:42:51	60													Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)
03/15/94 00:45:13	1:43:21	30													Slew to Crux
03/15/94 00:49:04	1:47:12		-60.0	338.8	1258.3					S60D					UV & HR cameras ON
03/15/94 00:54:18	1:52:26	545													Initialize filters (DHU SEQT 28); Record in SSDR Segment 1; Load lunar dark exposure tables
03/15/94 00:54:43	1:52:51	25													Start SSDR in Segment 1
03/15/94 00:54:58	1:53:06	15													Perform NIR imaging (DHU SEQT 31)
03/15/94 00:55:31	1:53:40		-70.0	339.0	1075.5					S70D					Dark Field imaging starts
03/15/94 00:56:43	1:54:51	105													Stop imaging - select ST-A
03/15/94 00:56:58	1:55:06	15													Perform LWIR imaging (DHU SEQT 25)
03/15/94 00:57:13	1:55:21	15													Perform NIR imaging (DHU SEQT 31)
03/15/94 00:57:43	1:55:51	30													Err:508
															Slew to nadir (inertial pointing)
															Err:508
03/15/94 01:01:14	1:59:23		-80.0	339.6	917.3					S80D					Err:508
															Err:508
03/15/94 01:05:12	2:03:21	0													Initialize filters (DHU SEQT 28); Load exposure table LUNARZ855

Orbit 110 Timeline - Type A Orbit

03/15/94 01:06:13	2:04:21	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)								START MAPPING
03/15/94 01:06:21	2:04:29		-89.8	70.9	783.2						South Pole								
03/15/94 01:07:00	2:05:08		-88.6	148.5	766.8						LDAWN								
03/15/94 01:07:13	2:05:21	60									MAXS	Set SA step rate to LO							
03/15/94 01:10:59	2:09:07		-80.0	156.9	672.4						S80A								
03/15/94 01:11:52	2:10:00	279									S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3							
03/15/94 01:12:22	2:10:30									PMK	LOS								
03/15/94 01:15:16	2:13:24		-70.0	157.5	583.2						S70A								
03/15/94 01:16:08	2:14:16	256									S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4							
03/15/94 01:19:16	2:17:24		-60.0	157.7	514.5						S60A								
03/15/94 01:20:08	2:18:16	240									S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/15/94 01:23:03	2:21:11		-50.0	157.8	465.1						S50A								
03/15/94 01:23:55	2:22:03	227									S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5							SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/15/94 01:24:31	2:22:39									GDS	MLOSM								
03/15/94 01:24:52	2:23:00									CAN	MLOSM								Enter occultation
03/15/94 01:26:42	2:24:51		-40.0	157.9	434.3						S40A								
03/15/94 01:27:35	2:25:43	220									S40A	Load exposure table LUNARZ35S							
03/15/94 01:30:17	2:28:26		-30.0	157.9	421.5						S30A								
03/15/94 01:31:05	2:29:13		-27.7	157.9	421.0						Periselene								
03/15/94 01:31:09	2:29:17	214									S30A	Load exposure table LUNARZ25S							
03/15/94 01:33:51	2:31:59		-20.0	157.9	426.3						S20A								
03/15/94 01:34:43	2:32:51	214									S20A	Load exposure table LUNARZ15S							
03/15/94 01:37:28	2:35:36		-10.0	157.9	449.0						S10A								
03/15/94 01:38:20	2:36:28	217									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/15/94 01:41:11	2:39:19		0.0	157.9	489.8						Equator - A								
03/15/94 01:42:03	2:40:11	223									MEQA	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7							SSDR Segment 3
03/15/94 01:45:04	2:43:12		10.0	157.9	549.6						N10A								
03/15/94 01:45:57	2:44:05	234									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							
03/15/94 01:49:13	2:47:21		20.0	157.9	629.4						N20A								
03/15/94 01:50:05	2:48:13	248									N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9							IR and UV uncompressed
03/15/94 01:51:05	2:49:13	60										Laser power OFF							
03/15/94 01:53:40	2:51:48		30.0	158.0	730.3						N30A								
03/15/94 01:54:32	2:52:40	207									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							Resume compression
03/15/94 01:58:34	2:56:42		40.0	158.0	853.7						N40A								
03/15/94 01:59:02	2:57:10									CAN	MAOSM								Exit occultation

Orbit 110 Timeline - Type A Orbit

03/15/94 01:59:03	2:57:11								GDS	MAOSM									
03/15/94 01:59:25	2:57:33	293								N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4
03/15/94 02:03:59	3:02:08		50.0	158.0	1000.8					N50A									
03/15/94 02:04:51	3:02:59	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
03/15/94 02:10:05	3:08:14		60.0	158.1	1172.4					N60A									
03/15/94 02:10:56	3:09:04	365								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/15/94 02:17:00	3:15:08		70.0	158.3	1368.4					N70A									
03/15/94 02:17:51	3:15:59	415								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								Resume HiRes imaging
03/15/94 02:24:54	3:23:02		80.0	158.9	1587.2					N80A									
03/15/94 02:25:45	3:23:53	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
03/15/94 02:26:45	3:24:53	60									Load DEQ_09.UMI into SEQT 9								Restore compressed SEQT 9
Err:508																			
03/15/94 02:33:58	3:32:06		89.8	249.5	1824.4					North Pole									
03/15/94 02:35:19	3:33:27		88.6	327.7	1857.8					LDUSK									
Standard Post Script																			
03/15/94 02:35:48	3:33:56	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)
03/15/94 02:44:21	3:42:30		80.0	336.0	2071.9					N80D									
03/15/94 02:45:53	3:44:01	600									Perform UVO Imaging (DHU SEQT 29)								No data because duration was 15 tics instead of 15 seconds
03/15/94 02:45:53	3:44:01	0									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/15/94 02:46:08	3:44:16	15									Perform NIR imaging (Select DHU SEQT 31)								
03/15/94 02:46:23	3:44:31	15									Perform HiRes Imaging (DHU SEQT 30)								Radiometric imaging
03/15/94 02:46:30	3:44:38	7									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
03/15/94 02:52:30	3:50:38	360									Switch to HGA								READY FOR DATA DUMP
End Post Script																			
03/15/94 02:56:00	3:54:08										Switch to DHU mode @ 128 kbps								Ground Command
03/15/94 02:56:11	3:54:20		70.0	336.6	2318.3					N70D									
03/15/94 03:02:00	4:00:08										Downlink SDR Segment 1								Ground Command
03/15/94 03:08:00	4:06:08										Uplink & schedule L111 scripts								Ground Command
03/15/94 03:09:31	4:07:39		60.0	336.7	2546.6					N60D									

Orbit 110 Timeline - Type A Orbit

03/15/94 03:17:00	4:15:08									Software reset (uncommanded)						Comm lock lost because of reset
03/15/94 03:17:00	4:15:08									Start software reload						Ground Command
03/15/94 03:24:12	4:22:21		50.0	336.7	2737.2					N50D						
03/15/94 03:40:00	4:38:08		40.0	336.7	2869.9					N40D						
03/15/94 03:42:03	4:40:11								GDS	LOS						
03/15/94 03:56:30	4:54:38		30.0	336.6	2928.9					N30D						
03/15/94 04:00:16	4:58:25		27.7	336.5	2931.0					Aposelene						

Orbit 112 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/15/94 08:58:40	0:00:00		27.7	333.8	2930.0							Aposelene							Reloading software after reset NOTE: Orbit 111 mapping was not done because of a series of software resets & recoveries.
03/15/94 09:03:28	0:04:47												Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)						Ground Command
03/15/94 09:05:54	0:07:13										CAN	LOS							
03/15/94 09:08:20	0:09:39												Switch to HGA						Ground Command
03/15/94 09:11:29	0:12:49		20.0	333.7	2905.6							N20D							
03/15/94 09:12:38	0:13:58		19.3	333.7	2901.0							INPM							Enter penumbra
03/15/94 09:13:34	0:14:53		18.7	333.7	2897.0							INUM							Enter umbra
03/15/94 09:27:39	0:28:58		10.0	333.6	2805.0							N10D							
03/15/94 09:33:06	0:34:25												Downlink SSDR Segment 3 patches						Ground Command
03/15/94 09:42:27	0:43:46												Downlink SSDR Segment 4 (orb 110)						Ground Command
03/15/94 09:42:53	0:44:12		0.0	333.5	2638.7							Equator - D							
03/15/94 09:45:04	0:46:23												Uplink & schedule L112 scripts						Ground Command
03/15/94 09:56:51	0:58:11		-10.0	333.5	2425.5							S10D							
03/15/94 10:09:22	1:10:41		-20.0	333.4	2185.5							S20D							
03/15/94 10:15:16	1:16:35												Downlink SSDR Segment 5						Ground Command
03/15/94 10:17:52	1:19:12		-27.6	333.4	1996.7							OUTUM							Exit umbra
03/15/94 10:18:38	1:19:57		-28.3	333.3	1978.8							OUTPM							Exit penumbra
03/15/94 10:19:39	1:20:58												Downlink SSDR data patches						Ground Command
03/15/94 10:20:24	1:21:44		-30.0	333.3	1937.1							S30D							
																			Standard Prep1 Script
03/15/94 10:20:35	1:21:54	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						NOTE: S/C times off by 2 sec, but not reflected here
																			End Prep1 Script
03/15/94 10:30:04	1:31:23		-40.0	333.3	1694.3							S40D							
																			Standard Prep2 Script
03/15/94 10:33:34	1:34:53	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/15/94 10:38:27	1:39:47		-50.0	333.3	1466.8							S50D							
																			Err:508
03/15/94 10:38:34	1:39:53	0											Msg "WRNG: Omni/2k in 1 min.."						
03/15/94 10:39:34	1:40:53	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data downlink stopped
03/15/94 10:40:34	1:41:53	60											Switch to omni antennas						
03/15/94 10:41:34	1:42:53	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux

Orbit 112 Timeline - Type A Orbit

03/15/94 10:42:04	1:43:23	30									UV & HR cameras ON				
03/15/94 10:45:49	1:47:08		-60.0	333.4	1260.3						S60D				
03/15/94 10:51:09	1:52:28	545									Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables				Start SSSR in Segment 1
03/15/94 10:51:34	1:52:53	25									Perform NIR imaging (DHU SEQT 31)				Dark Field imaging starts
03/15/94 10:51:49	1:53:08	15									Stop imaging - select ST-A				
03/15/94 10:52:15	1:53:34		-70.0	333.6	1077.7						S70D				
03/15/94 10:53:34	1:54:53	105									Perform LWIR imaging (DHU SEQT 25)				
03/15/94 10:53:49	1:55:08	15									Perform NIR imaging (DHU SEQT 31)				
03/15/94 10:54:04	1:55:23	15										Err:508			Slew to nadir (inertial pointing)
03/15/94 10:54:34	1:55:53	30									Laser Power ON				
															Err:508
03/15/94 10:57:59	1:59:19		-80.0	334.4	919.5						S80D				Err:508
															Err:508
03/15/94 11:02:04	2:03:23	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				NOTE: S/C times off by 2 sec, but not reflected here. Script commands shown are at s/c time.
03/15/94 11:03:04	2:04:23	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)				START MAPPING
03/15/94 11:03:06	2:04:25		-89.7	63.5	785.5						South Pole				
03/15/94 11:03:46	2:05:06		-88.6	141.6	769.1						LDAWN				
03/15/94 11:04:04	2:05:23	60									MAXS				Set SA step rate to LO
03/15/94 11:07:45	2:09:04		-80.0	151.2	674.6						S80A				
03/15/94 11:08:43	2:10:02	279									S80A				Load exposure table LUNARZ75S; Select DHU SEQT 3
03/15/94 11:12:02	2:13:21		-70.0	152.0	585.3						S70A				
03/15/94 11:13:00	2:14:19	257									S70A				Load exposure table LUNARZ65S; Select DHU SEQT 4
03/15/94 11:16:02	2:17:21		-60.0	152.2	516.6						S60A				
03/15/94 11:17:00	2:18:19	240									S60A				Load exposure table LUNARZ55S; Select DHU SEQT 6
03/15/94 11:19:49	2:21:08		-50.0	152.3	467.2						S50A				
03/15/94 11:20:48	2:22:07	228									S50A				SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/15/94 11:21:48	2:23:07										MAD				MLOSM
03/15/94 11:23:29	2:24:48		-40.0	152.4	436.3						S40A				Enter occultation
03/15/94 11:24:27	2:25:46	219									S40A				Load exposure table LUNARZ35S
03/15/94 11:27:05	2:28:24		-30.0	152.4	423.4						S30A				
03/15/94 11:27:53	2:29:13		-27.7	152.4	422.9						Periselene				
03/15/94 11:28:03	2:29:22	216									S30A				Load exposure table LUNARZ25S
03/15/94 11:30:39	2:31:59		-20.0	152.4	428.2						S20A				

Orbit 112 Timeline - Type A Orbit

03/15/94 11:31:37	2:32:56	214								S20A	Load exposure table LUNARZ15S						
03/15/94 11:34:17	2:35:36		-10.0	152.5	450.8					S10A							
03/15/94 11:35:14	2:36:33	217								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						
03/15/94 11:37:59	2:39:19		0.0	152.5	491.5					Equator - A							
03/15/94 11:38:57	2:40:16	223								MEQA	Record in SDDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 3
03/15/94 11:41:53	2:43:12		10.0	152.5	551.2					N10A							
03/15/94 11:42:51	2:44:10	234								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/15/94 11:46:03	2:47:22		20.0	152.5	630.9					N20A							
03/15/94 11:46:59	2:48:18	248								N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9						UV and IR Uncompressed
03/15/94 11:47:59	2:49:18	60									Laser power OFF						
03/15/94 11:50:30	2:51:49		30.0	152.5	731.7					N30A							
03/15/94 11:51:27	2:52:46	208								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						Resume compression
03/15/94 11:54:10	2:55:29								MAD	MAOSM							Exit occultation
03/15/94 11:55:23	2:56:42		40.0	152.5	854.9					N40A							
03/15/94 11:56:21	2:57:40	294								N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11						SSDR Segment 4
03/15/94 12:00:50	3:02:09		50.0	152.6	1001.8					N50A							
03/15/94 12:01:46	3:03:05	325								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12						
03/15/94 12:06:55	3:08:15		60.0	152.7	1173.2					N60A							
03/15/94 12:07:52	3:09:11	366								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13						
03/15/94 12:13:50	3:15:09		70.0	152.9	1368.9					N70A							
03/15/94 12:14:46	3:16:05	414								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						Resume HiRes imaging
03/15/94 12:21:44	3:23:03		80.0	153.6	1587.2					N80A							
03/15/94 12:22:40	3:23:59	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15						
03/15/94 12:23:40	3:24:59	60									Load DEQ_09.UMI into SEQT 9						Restore compressed SEQT 9
												Err:508					
03/15/94 12:30:47	3:32:06		89.7	241.3	1823.8					North Pole							
03/15/94 12:32:07	3:33:27		88.6	320.8	1857.2					LDUSK							
												Standard Post Script					
03/15/94 12:32:44	3:34:03	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table						Slew to Vega (inertial pointing)
03/15/94 12:41:10	3:42:30		80.0	330.4	2071.1					N80D							

Orbit 112 Timeline - Type A Orbit

03/15/94 12:42:49	3:44:08	600																		Perform UVO Imaging (DHU SEQT 29)	No data because duration was 15 tics instead of 15 seconds																				
03/15/94 12:43:04	3:44:23	0																		Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts																				
03/15/94 12:43:04	3:44:23	15																		Perform NIR imaging (Select DHU SEQT 31)																					
03/15/94 12:43:19	3:44:38	15																		Perform HiRes Imaging (DHU SEQT 30)	Radiometric imaging																				
03/15/94 12:43:26	3:44:45	7																		Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth																				
03/15/94 12:49:26	3:50:45	360																		Switch to HGA	READY FOR DATA DUMP																				
																																									End Post Script
03/15/94 12:53:00	3:54:20		70.0	331.0	2317.0															N70D																					
03/15/94 12:57:00	3:58:19																			Switch to DHU mode @ 128 kbps	Ground Command																				
03/15/94 12:58:00	3:59:19																			Downlink SSSR Segment 1	Ground Command																				
03/15/94 13:06:19	4:07:39		60.0	331.2	2545.1															N60D																					
03/15/94 13:08:00	4:09:19																			Update state vector (GNC53_15MAR1300)	Ground Command																				
03/15/94 13:11:09	4:12:28																			PMK	AOS																				
03/15/94 13:21:00	4:22:19		50.0	331.2	2735.3															N50D																					
03/15/94 13:31:00	4:32:19																			Downlink SSSR Segment 2	Ground Command																				
03/15/94 13:36:47	4:38:07		40.0	331.2	2867.9															N40D																					
03/15/94 13:38:00	4:39:19																			Uplink & schedule L113 scripts	Ground Command																				
03/15/94 13:53:16	4:54:35		30.0	331.1	2927.0															N30D																					
03/15/94 13:57:05	4:58:25		27.7	331.1	2929.1															Aposelene																					

Orbit 113 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/15/94 13:57:05	0:00:00		27.7	331.1	2929.1							Aposelene							Downlinking SDDR Segment 2 (orbit 112)
03/15/94 14:09:52	0:12:46		20.0	331.0	2904.8							N20D							
03/15/94 14:10:00	0:12:54												Downlink SDDR Segment 3						Ground Command
03/15/94 14:10:53	0:13:47		19.4	331.0	2900.8							INPM							Enter penumbra
03/15/94 14:11:48	0:14:43		18.8	331.0	2896.9							INUM							Enter umbra
03/15/94 14:26:02	0:28:57		10.0	330.9	2804.4							N10D							
03/15/94 14:41:15	0:44:10		0.0	330.8	2638.4							Equator - D							
03/15/94 14:44:00	0:46:54												Downlink SDDR Segment 4						Ground Command
03/15/94 14:55:13	0:58:08		-10.0	330.7	2425.4							S10D							
03/15/94 15:07:43	1:10:37		-20.0	330.7	2185.7							S20D							
03/15/94 15:16:20	1:19:14		-27.7	330.6	1995.4							OUTUM							Exit umbra
03/15/94 15:17:04	1:19:59		-28.4	330.6	1977.6							OUTPM							Exit penumbra
03/15/94 15:18:46	1:21:40		-30.0	330.6	1937.5							S30D							
																			Standard Prep1 Script
03/15/94 15:19:03	1:21:57	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						NOTE: S/C times off by 2 sec, but not reflected here
																			End Prep1 Script
03/15/94 15:28:25	1:31:19		-40.0	330.6	1694.9							S40D							
																			Standard Prep2 Script
03/15/94 15:32:00	1:34:54	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/15/94 15:36:50	1:39:44		-50.0	330.6	1467.6							S50D							
																			Err:508
03/15/94 15:37:00	1:39:54	0											Msg "WRNG: Omni/2k in 1 min.."						
03/15/94 15:38:00	1:40:54	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/15/94 15:39:00	1:41:54	60											Switch to omni antennas						
03/15/94 15:40:00	1:42:54	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/15/94 15:40:30	1:43:24	30											UV & HR cameras ON						
03/15/94 15:44:11	1:47:06		-60.0	330.7	1261.2							S60D							
03/15/94 15:49:35	1:52:29	545											Initialize filters (DHU SEQT 28); Record in SDDR Segment 5; Load lunar dark exposure tables						Start SDDR in Segment 5
03/15/94 15:50:00	1:52:54	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/15/94 15:50:15	1:53:09	15											Stop imaging - select ST-A						

Orbit 113 Timeline - Type B Orbit

03/15/94 15:50:38	1:53:33		-70.0	330.9	1078.6				S70D				
03/15/94 15:52:00	1:54:54	105								Perform LWIR imaging (DHU SEQT 25)			
03/15/94 15:52:15	1:55:09	15								Perform NIR imaging (DHU SEQT 31)			
03/15/94 15:52:30	1:55:24	15									Err:508		Slew to nadir (inertial pointing)
03/15/94 15:53:00	1:55:54	30								Laser Power ON			
Err:508													
03/15/94 15:56:22	1:59:16		-80.0	331.7	920.4				S80D				
Err:508													
03/15/94 16:00:30	2:03:24	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			NOTE: S/C times off by 2 sec, but not reflected here. Script commands shown are at s/c time.
03/15/94 16:01:29	2:04:24		-89.7	60.0	786.5				South Pole				
03/15/94 16:01:30	2:04:24	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)			START MAPPING
03/15/94 16:02:10	2:05:04		-88.6	138.6	770.1				LDAWN				
03/15/94 16:02:30	2:05:24	60							MAXS	Set SA step rate to LO			
03/15/94 16:06:09	2:09:03		-80.0	148.5	675.6				S80A				
03/15/94 16:07:09	2:10:03	279							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17			
03/15/94 16:10:25	2:13:20		-70.0	149.2	586.3				S70A				
03/15/94 16:11:26	2:14:20	257							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/15/94 16:11:52	2:14:46							GDS	AOS				
03/15/94 16:14:25	2:17:20		-60.0	149.5	517.5				S60A				
03/15/94 16:15:26	2:18:20	240							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/15/94 16:18:14	2:21:08		-50.0	149.6	468.1				S50A				
03/15/94 16:19:14	2:22:08	228							S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/15/94 16:20:32	2:23:26							MAD	MLOSM				
03/15/94 16:20:32	2:23:26							GDS	MLOSM				
03/15/94 16:20:33	2:23:27							PMK	MLOSM				Enter occultation
03/15/94 16:21:54	2:24:48		-40.0	149.6	437.3				S40A				
03/15/94 16:22:54	2:25:48	220							S40A	Load exposure table LUNARZ35S			
03/15/94 16:25:28	2:28:23		-30.0	149.7	424.3				S30A				
03/15/94 16:26:18	2:29:13		-27.7	149.7	423.8				Periselene				
03/15/94 16:26:29	2:29:23	215							S30A	Load exposure table LUNARZ25S			
03/15/94 16:29:03	2:31:58		-20.0	149.7	429.1				S20A				
03/15/94 16:30:04	2:32:58	215							S20A	Load exposure table LUNARZ15S			
03/15/94 16:32:40	2:35:35		-10.0	149.7	451.6				S10A				
03/15/94 16:33:41	2:36:35	217							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/15/94 16:36:24	2:39:19		0.0	149.7	492.4				Equator - A				

Orbit 113 Timeline - Type B Orbit

03/15/94 16:37:24	2:40:18	223								MEQA	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 7	
03/15/94 16:40:18	2:43:13		10.0	149.8	552.1					N10A			
03/15/94 16:41:18	2:44:12	234								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8		
03/15/94 16:44:28	2:47:22		20.0	149.8	631.7					N20A			
03/15/94 16:45:27	2:48:21	249								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9		
03/15/94 16:46:27	2:49:21	60									Laser power OFF		
03/15/94 16:48:55	2:51:50		30.0	149.8	732.4					N30A			
03/15/94 16:49:55	2:52:49	208								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10		
03/15/94 16:51:40	2:54:34								GDS	MAOSM		Exit occultation	
03/15/94 16:51:48	2:54:42								PMK	MAOSM			
03/15/94 16:52:09	2:55:03								MAD	MAOSM			
03/15/94 16:53:48	2:56:42		40.0	149.8	855.6					N40A			
03/15/94 16:54:48	2:57:42	293								N40A	Load CEQ_10U.UMI into SEQT 10; Switch to inertial pointing (ORB_113RW); Load exposure table LUNARZ45N Select DHU SEQT 10	Initiate oblique viewing IR and UV uncompressed	
03/15/94 16:59:15	3:02:09		50.0	149.9	1002.4					N50A			
03/15/94 17:00:00	3:02:54										Reset s/c clock - remove 2 sec error	Ground Command	
03/15/94 17:00:14	3:03:08	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11	Resume compression	
03/15/94 17:05:20	3:08:15		60.0	150.0	1173.7					N60A			
03/15/94 17:06:19	3:09:13	365								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12		
03/15/94 17:10:28	3:13:22	249									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing	
03/15/94 17:12:15	3:15:10		70.0	150.2	1369.3					N70A			
03/15/94 17:13:14	3:16:08	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	Resume HiRes imaging	
03/15/94 17:20:09	3:23:03		80.0	150.9	1587.5					N80A			
03/15/94 17:21:08	3:24:02	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21		
03/15/94 17:22:08	3:25:02	60									Load DEQ_10.UMI into SEQT 10	Restore compressed SEQT 10	
													Err:508
03/15/94 17:29:13	3:32:07		89.7	240.6	1824.0					North Pole			
03/15/94 17:30:33	3:33:27		88.6	317.8	1857.1					LDUSK			
													Standard Post Script
03/15/94 17:31:11	3:34:05	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table	Slew to Vega (inertial pointing)	

Orbit 113 Timeline - Type B Orbit

03/15/94 17:39:35	3:42:30		80.0	327.6	2070.9					N80D								
03/15/94 17:41:16	3:44:10	600									Perform UVO Imaging (DHU SEQT 29)							No data because duration was 15 tics instead of 15 seconds
03/15/94 17:41:16	3:44:10	0									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/15/94 17:41:31	3:44:25	15									Perform NIR imaging (Select DHU SEQT 31)							
03/15/94 17:41:46	3:44:40	15									Perform HiRes Imaging (DHU SEQT 30)							Radiometric imaging
03/15/94 17:41:53	3:44:47	7									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
03/15/94 17:47:53	3:50:47	360									Switch to HGA							READY FOR DATA DUMP
																		End Post Script
03/15/94 17:48:00	3:50:54										Switch to DHU mode @ 128 kbps							Ground Command
03/15/94 17:49:00	3:51:54										Downlink SDR Segment 5							Ground Command
03/15/94 17:51:25	3:54:20		70.0	328.3	2316.5					N70D								
03/15/94 18:03:00	4:05:54										Uplink & schedule L114 scripts							Ground Command
03/15/94 18:04:43	4:07:38		60.0	328.5	2544.3					N60D								
03/15/94 18:19:23	4:22:18		50.0	328.5	2734.4					N50D								
03/15/94 18:21:00	4:23:54										Downlink SDR Segment 6							Ground Command
03/15/94 18:35:10	4:38:04		40.0	328.4	2866.9					N40D								
03/15/94 18:51:38	4:54:32		30.0	328.3	2926.0					N30D								
03/15/94 18:55:29	4:58:23		27.7	328.3	2928.2					Aposelene								

Orbit 114 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/15/94 18:55:29	0:00:00		27.7	328.3	2928.2							Aposelene							Downlinking SSSDR Segment 6 (orbit 113)
03/15/94 19:56:00	1:00:30												Downlink SSSDR Segment 7						Ground Command
03/15/94 19:08:14	0:12:45		20.0	328.3	2904.1							N20D							
03/15/94 19:09:07	0:13:38		19.5	328.3	2900.6							INPM							Enter penumbra
03/15/94 19:10:02	0:14:33		18.9	328.2	2896.8							INUM							Enter umbra
03/15/94 19:24:23	0:28:54		10.0	328.2	2804.0							N10D							
03/15/94 19:39:37	0:44:08		0.0	328.1	2638.2							Equator - D							
03/15/94 19:48:00	0:52:30												Downlink SSSDR data patches						Ground Command
03/15/94 19:53:34	0:58:05		-10.0	328.0	2425.6							S10D							
03/15/94 20:06:05	1:10:36		-20.0	327.9	2186.1							S20D							
03/15/94 20:13:00	1:17:30												Select ST-A						Ground Command ST-B blocked by Moon
03/15/94 20:14:44	1:19:14		-27.7	327.9	1994.4							OUTUM							Exit umbra
03/15/94 20:15:29	1:20:00		-28.4	327.9	1976.7							OUTPM							Exit penumbra
03/15/94 20:17:07	1:21:37		-30.0	327.9	1938.1							S30D							
Standard Prep1 Script																			
03/15/94 20:17:31	1:22:01	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
End Prep1 Script																			
03/15/94 20:26:46	1:31:16		-40.0	327.9	1695.7							S40D							
Standard Prep2 Script																			
03/15/94 20:30:25	1:34:55	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
End Prep2 Script																			
03/15/94 20:35:12	1:39:43		-50.0	327.9	1468.4							S50D							
Err:508																			
03/15/94 20:35:25	1:39:55	0											Msg "WRNG: Omni/2k in 1 min.."						
03/15/94 20:36:25	1:40:55	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/15/94 20:37:25	1:41:55	60											Switch to omni antennas						
03/15/94 20:38:25	1:42:55	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/15/94 20:38:55	1:43:25	30											UV & HR cameras ON						
03/15/94 20:42:33	1:47:04		-60.0	328.0	1262.1							S60D							
03/15/94 20:48:00	1:52:30	545											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 1; Load lunar dark exposure tables						Start SSSDR in Segment 1
03/15/94 20:48:25	1:52:55	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/15/94 20:48:40	1:53:10	15											Stop imaging - select ST-A						

Orbit 114 Timeline - Type A Orbit

03/15/94 20:49:00	1:53:30		-70.0	328.2	1079.6				S70D										
03/15/94 20:50:25	1:54:55	105																	Perform LWIR imaging (DHU SEQT 25)
03/15/94 20:50:40	1:55:10	15																	Perform NIR imaging (DHU SEQT 31)
03/15/94 20:50:55	1:55:25	15																	Err:508
03/15/94 20:51:25	1:55:55	30																	Laser Power ON
																			Err:508
03/15/94 20:54:44	1:59:15		-80.0	329.1	921.4				S80D										Err:508
																			Err:508
03/15/94 20:58:28	2:02:58	0																	Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S
03/15/94 20:59:28	2:03:58	60																	Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 9)
03/15/94 20:59:52	2:04:22		-89.7	60.0	787.3				South Pole										START MAPPING
03/15/94 21:03:00	2:07:30								MAD	LOS									
03/15/94 21:00:28	2:04:58	60								MAXS									Set SA step rate to LO
03/15/94 21:00:31	2:05:01		-88.6	135.0	771.1					LDAWN									
03/15/94 21:04:31	2:09:02		-80.0	145.6	676.6					S80A									
03/15/94 21:05:07	2:09:37	279								S80A									Load exposure table LUNARZ75S; Select DHU SEQT 3
03/15/94 21:08:48	2:13:18		-70.0	146.4	587.3					S70A									
03/15/94 21:09:25	2:13:55	258								S70A									Load exposure table LUNARZ65S; Select DHU SEQT 4
03/15/94 21:12:49	2:17:20		-60.0	146.7	518.5					S60A									
03/15/94 21:13:25	2:17:55	240								S60A									Load exposure table LUNARZ55S; Select DHU SEQT 6
03/15/94 21:16:37	2:21:08		-50.0	146.8	469.1					S50A									
03/15/94 21:17:13	2:21:43	228								S50A									Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5
03/15/94 21:20:17	2:24:48		-40.0	146.9	438.1					S40A									SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/15/94 21:19:19	2:23:49									PMK	MLOSM								
03/15/94 21:19:22	2:23:52									GDS	MLOSM								Enter occultation
03/15/94 21:20:53	2:25:23	220								S40A									Load exposure table LUNARZ35S
03/15/94 21:23:52	2:28:23		-30.0	146.9	425.2					S30A									
03/15/94 21:24:28	2:28:58	215								S30A									Load exposure table LUNARZ25S
03/15/94 21:24:42	2:29:13		-27.7	147.0	424.7					Periselene									
03/15/94 21:27:27	2:31:57		-20.0	147.0	429.9					S20A									
03/15/94 21:28:03	2:32:33	215								S20A									Load exposure table LUNARZ15S
03/15/94 21:31:04	2:35:35		-10.0	147.0	452.4					S10A									
03/15/94 21:31:40	2:36:10	217								S10A									Load exposure table LUNARZ05S; Select DHU SEQT 6
03/15/94 21:34:48	2:39:19		0.0	147.0	493.1					Equator - A									

Orbit 114 Timeline - Type A Orbit

03/15/94 21:35:24	2:39:54	224									MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 3
03/15/94 21:38:42	2:43:12		10.0	147.0	552.8						N10A						
03/15/94 21:39:18	2:43:48	234									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/15/94 21:42:51	2:47:22		20.0	147.0	632.3						N20A						
03/15/94 21:43:27	2:47:57	249									N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9					IR and UV uncompressed
03/15/94 21:44:27	2:48:57	60										Laser power OFF					
03/15/94 21:47:19	2:51:49		30.0	147.1	733.0						N30A						
03/15/94 21:47:55	2:52:25	208									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					Resume compression
03/15/94 21:49:31	2:54:01									GDS	MAOSM						Exit occultation
03/15/94 21:49:43	2:54:13									PMK	MAOSM						
03/15/94 21:52:13	2:56:44		40.0	147.1	856.1						N40A						
03/15/94 21:52:48	2:57:18	293									N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11					SSDR Segment 4
03/15/94 21:57:40	3:02:10		50.0	147.2	1002.8						N50A						
03/15/94 21:58:14	3:02:44	326									N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12					
03/15/94 22:03:45	3:08:16		60.0	147.3	1174.0						N60A						
03/15/94 22:04:19	3:08:49	365									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13					
03/15/94 22:10:40	3:15:11		70.0	147.5	1369.4						N70A						
03/15/94 22:11:14	3:15:44	415									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14					Resume HiRes imaging
03/15/94 22:18:34	3:23:05		80.0	148.3	1587.5						N80A						
03/15/94 22:19:08	3:23:38	474									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15					
03/15/94 22:20:08	3:24:38	60										Load DEQ_09.UMI into SEQT 9					Restore compressed SEQT 9
Err:508																	
03/15/94 22:27:37	3:32:07		89.7	236.0	1823.6						North Pole						
03/15/94 22:28:57	3:33:28		88.6	314.1	1856.7						LDUSK						
Standard Post Script																	
03/15/94 22:29:38	3:34:08	0										Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table					Slew to Vega (inertial pointing)
03/15/94 22:38:00	3:42:31		80.0	324.7	2070.4						N80D						
03/15/94 22:39:43	3:44:13	600										Perform UVO Imaging (DHU SEQT 29)					No data because duration was 15 tics instead of 15 seconds
03/15/94 22:39:43	3:44:13	0										Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts

Orbit 114 Timeline - Type A Orbit

03/15/94 22:39:58	3:44:28	15								Perform NIR imaging (Select DHU SEQT 31)								
03/15/94 22:40:12	3:44:43	15								Perform HiRes Imaging (DHU SEQT 30)								Radiometric imaging
03/15/94 22:40:20	3:44:50	7								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
03/15/94 22:46:20	3:50:50	360								Switch to HGA								READY FOR DATA DUMP
End Post Script																		
03/15/94 22:48:00	3:52:30									Switch to DHU mode @ 128 kbps; Downlink SDR Segment 1								Ground Command
03/15/94 22:49:49	3:54:20		70.0	325.5	2315.9					N70D								
03/15/94 22:55:00	3:59:30									Uplink & schedule L115 scripts; Load CEQ_29.UMI into SEQT 29								Ground Command
03/15/94 23:03:07	4:07:38		60.0	325.7	2543.5					N60D								
03/15/94 23:17:47	4:22:18		50.0	325.7	2733.4					N50D								
03/15/94 23:25:00	4:29:30									Downlink SDR Segment 2								Ground Command
03/15/94 23:33:33	4:38:04		40.0	325.7	2866.0					N40D								
03/15/94 23:50:00	4:54:31		30.0	325.6	2925.1					N30D								
03/15/94 23:53:53	4:58:23		27.7	325.6	2927.4					Aposelene								

Orbit 115 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/15/94 23:53:53	0:00:00		27.7	325.6	2927.4							Aposelene							Downlinking SSSR Segment 2 (orbit 114)
03/15/94 23:59:00	0:05:06												Downlink SSSR Segment 3						Ground Command
03/16/94 00:06:35	0:12:42		20.0	325.5	2903.4							N20D							
03/16/94 00:07:21	0:13:28		19.5	325.5	2900.5							INPM							Enter penumbra
03/16/94 00:08:15	0:14:22		19.0	325.5	2896.7							INUM							Enter umbra
03/16/94 00:22:45	0:28:52		10.0	325.4	2803.5							N10D							
03/16/94 00:27:49	0:33:55										CAN	AOS							
03/16/94 00:32:00	0:38:06												Downlink SSSR Segment 4						Ground Command
03/16/94 00:37:58	0:44:05		0.0	325.3	2638.1							Equator - D							
03/16/94 00:51:55	0:58:02		-10.0	325.3	2425.7							S10D							
03/16/94 01:00:00	1:06:06												Select ST-A						Ground Command ST-B blocked by Moon
03/16/94 01:04:26	1:10:33		-20.0	325.2	2186.5							S20D							
03/16/94 01:13:09	1:19:16		-27.8	325.2	1993.5							OUTUM							Exit umbra
03/16/94 01:13:54	1:20:01		-28.5	325.2	1975.9							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/16/94 01:14:54	1:21:00	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/16/94 01:15:29	1:21:35		-30.0	325.2	1938.7							S30D							
03/16/94 01:25:09	1:31:15		-40.0	325.2	1696.4							S40D							
																			Standard Prep2 Script
03/16/94 01:27:44	1:33:50	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/16/94 01:32:44	1:38:50	0											Msg "WRNG: Omni/2k in 1 min.."						
03/16/94 01:33:33	1:39:40		-50.0	325.2	1469.3							S50D							
03/16/94 01:33:44	1:39:50	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/16/94 01:34:44	1:40:50	60											Switch to omni antennas						
03/16/94 01:35:44	1:41:50	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/16/94 01:36:14	1:42:20	30											UV & HR cameras ON						
03/16/94 01:40:55	1:47:01		-60.0	325.3	1263.0							S60D							
03/16/94 01:45:19	1:51:25	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5

Orbit 115 Timeline - Type B Orbit

03/16/94 01:45:44	1:51:50	25								Perform NIR imaging (DHU SEQT 31)				Dark Field imaging starts
03/16/94 01:45:59	1:52:05	15								Stop imaging - select ST-A				
03/16/94 01:47:22	1:53:29		-70.0	325.6	1080.5				S70D					
03/16/94 01:47:44	1:53:50	105								Perform LWIR imaging (DHU SEQT 25)				
03/16/94 01:47:59	1:54:05	15								Perform NIR imaging (DHU SEQT 31)				
03/16/94 01:48:14	1:54:20	15									Err:508			Slew to nadir (inertial pointing)
03/16/94 01:48:44	1:54:50	30								Laser Power ON				
														Err:508
03/16/94 01:53:06	1:59:13		-80.0	326.5	922.4				S80D					Err:508
														Err:508
03/16/94 01:56:14	2:02:20	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/16/94 01:57:14	2:03:20	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)				START MAPPING
03/16/94 01:58:14	2:04:20	60							MAXS	Set SA step rate to LO				
03/16/94 01:58:14	2:04:21		-89.7	54.0	788.5				South Pole					
03/16/94 01:58:53	2:05:00		-88.6	131.3	772.1				LDAWN					
03/16/94 02:02:53	2:08:59	279							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17				
03/16/94 02:02:55	2:09:01		-80.0	142.8	677.5				S80A					
03/16/94 02:07:11	2:13:17	258							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4				
03/16/94 02:07:11	2:13:18		-70.0	143.6	588.2				S70A					
03/16/94 02:07:38	2:13:44							PMK	LOS					
03/16/94 02:11:11	2:17:17	240							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/16/94 02:11:12	2:17:19		-60.0	143.9	519.4				S60A					
03/16/94 02:15:00	2:21:06	229							S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/16/94 02:15:00	2:21:07		-50.0	144.1	469.9				S50A					
03/16/94 02:18:07	2:24:13							GDS	MLOSM					
03/16/94 02:18:40	2:24:46	220							S40A	Load exposure table LUNARZ35S				
03/16/94 02:18:41	2:24:47							CAN	MLOSM					Enter occultation
03/16/94 02:18:40	2:24:47		-40.0	144.1	439.0				S40A					
03/16/94 02:22:16	2:28:22	216							S30A	Load exposure table LUNARZ25S				
03/16/94 02:22:16	2:28:23		-30.0	144.2	426.0				S30A					
03/16/94 02:23:06	2:29:13		-27.7	144.2	425.5				Periselene					
03/16/94 02:25:50	2:31:56	214							S20A	Load exposure table LUNARZ15S				
03/16/94 02:25:50	2:31:57		-20.0	144.2	430.7				S20A					
03/16/94 02:29:28	2:35:34	218							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/16/94 02:29:28	2:35:35		-10.0	144.3	453.2				S10A					

Orbit 115 Timeline - Type B Orbit

03/16/94 02:33:12	2:39:18	224									MEQA	Record in SSDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 7
03/16/94 02:33:12	2:39:19		0.0	144.3	493.9						Equator - A						
03/16/94 02:37:06	2:43:12	234									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/16/94 02:37:07	2:43:13		10.0	144.3	553.4						N10A						
03/16/94 02:41:15	2:47:21	249									N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9					IR and UV uncompressed
03/16/94 02:41:15	2:47:22		20.0	144.3	632.9						N20A						
03/16/94 02:42:15	2:48:21	60										Laser power OFF					
03/16/94 02:45:43	2:51:49	208									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					Resume compression
03/16/94 02:45:43	2:51:50		30.0	144.4	733.6						N30A						
03/16/94 02:47:04	2:53:10									CAN	MAOSM						Exit occultation
03/16/94 02:47:18	2:53:24									GDS	MAOSM						
03/16/94 02:50:37	2:56:43	294									N40A	Switch to inertial pointing (ORB_115RW); Load exposure table LUNARZ45N Select DHU SEQT 10					Initiate oblique viewing
03/16/94 02:50:37	2:56:44		40.0	144.4	856.6						N40A						
03/16/94 02:56:03	3:02:09	326									N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11					
03/16/94 02:56:03	3:02:10		50.0	144.5	1003.2						N50A						
03/16/94 03:02:09	3:08:15	366									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12					
03/16/94 03:02:09	3:08:16		60.0	144.6	1174.3						N60A						
03/16/94 03:06:18	3:12:24	249										Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19					End oblique viewing - resume nadir pointing
03/16/94 03:09:04	3:15:10	166									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20					Resume HiRes imaging
03/16/94 03:09:04	3:15:11		70.0	144.8	1369.6						N70A						
03/16/94 03:16:58	3:23:04	474									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21					
03/16/94 03:16:58	3:23:05		80.0	145.7	1587.5						N80A						
03/16/94 03:17:58	3:24:04	60										Load DEQ_09.UMI into SEQT 9					Restore compressed SEQT 9
Err:508																	
03/16/94 03:26:02	3:32:08		89.7	232.3	1823.3						North Pole						Standard Post Script
03/16/94 03:27:01	3:33:07	0										Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table					Slew to Vega (inertial pointing)
03/16/94 03:27:21	3:33:28		88.6	310.4	1856.4						LDUSK						
03/16/94 03:36:24	3:42:31		80.0	321.9	2070.0						N80D						

Orbit 115 Timeline - Type B Orbit

03/16/94 03:37:06	3:43:12	600								Perform UVO Imaging (DHU SEQT 29)	No data because duration was 15 tics instead of 15 seconds
03/16/94 03:37:06	3:43:12	0								Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/16/94 03:37:21	3:43:27	15								Perform NIR imaging (Select DHU SEQT 31)	
03/16/94 03:37:36	3:43:42	15								Perform HiRes Imaging (DHU SEQT 30)	Radiometric imaging
03/16/94 03:37:43	3:43:49	7								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/16/94 03:43:43	3:49:49	360								Switch to HGA	READY FOR DATA DUMP
											End Post Script
03/16/94 03:45:00	3:51:06									Switch to DHU mode @ 128 kbps	Ground Command
03/16/94 03:46:00	3:52:06									Downlink SSSR Segment 5	Ground Command
03/16/94 03:48:13	3:54:20		70.0	322.7	2315.3				N70D		
03/16/94 04:01:30	4:07:37		60.0	322.9	2542.7				N60D		
03/16/94 04:16:00	4:22:06									Downlink SSSR Segment 6	Ground Command
03/16/94 04:16:10	4:22:17		50.0	323.0	2732.6				N50D		
03/16/94 04:31:56	4:38:03		40.0	322.9	2865.1				N40D		
03/16/94 04:34:15	4:40:21							GDS	LOS		
03/16/94 04:44:00	4:50:06									Uplink & schedule L116 scripts	Ground Command
03/16/94 04:48:22	4:54:29		30.0	322.9	2924.3				N30D		
03/16/94 04:52:17	4:58:24		27.6	322.8	2926.6				Aposelene		

Orbit 116 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/16/94 04:52:17	0:00:00		27.6	322.8	2926.6							Aposelene							Downlinking SSSR Segment 6 (orbit 115)
03/16/94 05:00:00	0:07:42												Downlink SSSR Segment 7						Ground Command
03/16/94 05:04:57	0:12:40		20.0	322.8	2902.7							N20D							
03/16/94 05:05:35	0:13:17		19.6	322.8	2900.3							INPM							Enter penumbra
03/16/94 05:06:29	0:14:11		19.1	322.8	2896.6							INUM							Enter umbra
03/16/94 05:21:06	0:28:48		10.0	322.7	2803.1							N10D							
03/16/94 05:36:00	0:43:42												SSDR to IDLE						Ground Command - noisy tlm DSN checking circuits
03/16/94 05:36:19	0:44:02		0.0	322.6	2637.9							Equator - D							
03/16/94 05:50:17	0:57:59		-10.0	322.5	2425.8							S10D							
03/16/94 06:02:47	1:10:29		-20.0	322.5	2186.9							S20D							
03/16/94 06:09:00	1:16:42												Downlink SSSR data patches						Ground Command
03/16/94 06:11:34	1:19:16		-27.8	322.5	1992.6							OUTUM							Exit umbra
03/16/94 06:12:19	1:20:02		-28.6	322.5	1975.0							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/16/94 06:13:19	1:21:01	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/16/94 06:13:50	1:21:32		-30.0	322.5	1939.3							S30D							
03/16/94 06:23:29	1:31:11		-40.0	322.5	1697.1							S40D							
																			Standard Prep2 Script
03/16/94 06:26:06	1:33:48	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/16/94 06:31:06	1:38:48	0											Msg "WRNG: Omni/2k in 1 min.."						
03/16/94 06:31:55	1:39:37		-50.0	322.5	1470.1							S50D							
03/16/94 06:32:06	1:39:48	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data downlink
03/16/94 06:33:06	1:40:48	60											Switch to omni antennas						
03/16/94 06:34:06	1:41:48	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/16/94 06:34:36	1:42:18	30											UV & HR cameras ON						
03/16/94 06:39:17	1:46:59		-60.0	322.6	1263.9							S60D							
03/16/94 06:43:41	1:51:23	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/16/94 06:44:06	1:51:48	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/16/94 06:44:21	1:52:03	15											Stop imaging - select ST-A						

Last Update: 02/01/2021 21:22:21
By:tcs

Orbit 116
Actual Timeline

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Orbit 116 Timeline - Type A Orbit

03/16/94 06:45:45	1:53:28		-70.0	322.9	1081.4				S70D				
03/16/94 06:46:06	1:53:48	105								Perform LWIR imaging (DHU SEQT 25)			
03/16/94 06:46:21	1:54:03	15								Perform NIR imaging (DHU SEQT 31)			
03/16/94 06:46:36	1:54:18	15									Err:508		Slew to nadir (inertial pointing)
03/16/94 06:47:06	1:54:48	30								Laser Power ON			
Err:508													
03/16/94 06:51:29	1:59:11		-80.0	323.9	923.3				S80D				
Err:508													
03/16/94 06:54:35	2:02:18	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/16/94 06:55:36	2:03:18	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)			START MAPPING
03/16/94 06:56:36	2:04:18	60							MAXS	Set SA step rate to LO			
03/16/94 06:56:38	2:04:20		-89.7	54.6	789.2				South Pole				
03/16/94 06:57:17	2:04:59		-88.6	127.6	773.1				LDAWN				
03/16/94 07:01:16	2:08:58	280							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3			
03/16/94 07:01:16	2:08:58		-80.0	139.9	678.4				S80A				
03/16/94 07:05:33	2:13:15	257							S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/16/94 07:05:34	2:13:16		-70.0	140.9	589.1				S70A				
03/16/94 07:09:34	2:17:16	241							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/16/94 07:09:34	2:17:16		-60.0	141.2	520.2				S60A				
03/16/94 07:13:23	2:21:05	229							S50A	Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/16/94 07:13:23	2:21:05		-50.0	141.3	470.8				S50A				
03/16/94 07:17:03	2:24:45	220							S40A	Load exposure table LUNARZ35S			
03/16/94 07:17:03	2:24:45		-40.0	141.4	439.8				S40A				
03/16/94 07:17:32	2:25:14							CAN	MLOSM				Enter occultation
03/16/94 07:20:39	2:28:21	216							S30A	Load exposure table LUNARZ25S			
03/16/94 07:20:39	2:28:22		-30.0	141.5	426.8				S30A				
03/16/94 07:21:31	2:29:13		-27.6	141.5	426.3				Periselene				
03/16/94 07:24:14	2:31:56	215							S20A	Load exposure table LUNARZ15S			
03/16/94 07:24:14	2:31:56		-20.0	141.5	431.4				S20A				
03/16/94 07:27:51	2:35:33	217							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/16/94 07:27:52	2:35:34		-10.0	141.5	453.9				S10A				
03/16/94 07:31:35	2:39:17	224							MEQA	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
03/16/94 07:31:36	2:39:18		0.0	141.6	494.5				Equator - A				
03/16/94 07:35:30	2:43:12	235							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			

Orbit 116 Timeline - Type A Orbit

03/16/94 07:35:30	2:43:12		10.0	141.6	554.1					N10A								
03/16/94 07:39:39	2:47:21	249								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9							
03/16/94 07:39:39	2:47:21		20.0	141.6	633.5					N20A								
03/16/94 07:40:39	2:48:21	60									Laser power OFF							
03/16/94 07:44:07	2:51:49	208								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							
03/16/94 07:44:07	2:51:50		30.0	141.6	734.1					N30A								
03/16/94 07:44:49	2:52:31									CAN	MAOSM							Exit occultation
03/16/94 07:49:01	2:56:43	294									Record in SSSR Segment 4; Load CEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45N; Select DHU SEQT 11							SSDR Segment 4
03/16/94 07:49:01	2:56:43		40.0	141.7	857.1					N40A								IR and UV uncompressed
03/16/94 07:54:27	3:02:09	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12							Resume compression
03/16/94 07:54:27	3:02:09		50.0	141.8	1003.6					N50A								
03/16/94 08:00:33	3:08:15	366								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13							
03/16/94 08:00:33	3:08:15		60.0	141.9	1174.6					N60A								
03/16/94 08:07:28	3:15:10	415								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14							Resume HiRes imaging
03/16/94 08:07:29	3:15:11		70.0	142.2	1369.7					N70A								
03/16/94 08:15:22	3:23:04	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15							
03/16/94 08:15:23	3:23:05		80.0	143.1	1587.5					N80A								
03/16/94 08:16:22	3:24:04	60									Load DEQ_11.UMI into SEQT 11							Restore compressed SEQT 11
Err:508																		
03/16/94 08:24:27	3:32:09		89.7	232.0	1823.4					North Pole								
Standard Post Script																		
03/16/94 08:25:25	3:33:07	0									Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table							Slew to Vega (inertial pointing)
03/16/94 08:25:45	3:33:27		88.6	306.6	1856.1					LDUSK								
03/16/94 08:34:48	3:42:30		80.0	319.0	2069.6					N80D								
03/16/94 08:35:30	3:43:12	600									Perform UVO Imaging (DHU SEQT 29)							No data because duration was 15 tics instead of 15 seconds
03/16/94 08:35:30	3:43:12	0									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/16/94 08:35:45	3:43:27	15									Perform NIR imaging (Select DHU SEQT 31)							
03/16/94 08:36:00	3:43:42	15									Perform HiRes Imaging (DHU SEQT 30)							Radiometric imaging

Orbit 116 Timeline - Type A Orbit

03/16/94 08:36:07	3:43:49	7								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/16/94 08:42:07	3:49:49	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/16/94 08:46:37	3:54:19		70.0	319.9	2314.8					N70D						
03/16/94 08:47:28	3:55:10								MAD	AOS						
03/16/94 08:53:00	4:00:42										Switch to DHU mode @ 128 kbps; Downlink SDR Segment 6 patches					Ground Command
03/16/94 08:59:54	4:07:36		60.0	320.1	2542.0					N60D						
03/16/94 09:02:00	4:09:42										Uplink & schedule L117 scripts					Ground Command
03/16/94 09:07:00	4:14:42										Downlink SDR Segment 7 patches					Ground Command
03/16/94 09:14:33	4:22:15		50.0	320.2	2731.7					N50D						
03/16/94 09:30:18	4:38:00		40.0	320.2	2864.2					N40D						
03/16/94 09:36:00	4:43:42										Downlink SDR Segment 1 (orb 116)					Ground Command
03/16/94 09:39:26	4:47:08								CAN	LOS						
03/16/94 09:46:45	4:54:27		30.0	320.1	2923.5					N30D						
03/16/94 09:50:40	4:58:22		27.6	320.1	2925.8					Aposelene						

Orbit 117 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/16/94 09:50:40	0:00:00		27.6	320.1	2925.8							Aposelene							Downlinking SDR Segment 1 (orbit 116)
03/16/94 10:03:19	0:12:38		20.0	320.0	2902.1							N20D							
03/16/94 10:03:49	0:13:09		19.7	320.0	2900.2							INPM							Enter penumbra
03/16/94 10:04:44	0:14:03		19.1	320.0	2896.5							INUM							Enter umbra
03/16/94 10:11:00	0:20:19												Downlink SDR Segment 2						Ground Command
03/16/94 10:19:28	0:28:48		10.0	320.0	2802.7							N10D							
03/16/94 10:34:41	0:44:00		0.0	319.9	2637.8							Equator - D							
03/16/94 10:48:38	0:57:57		-10.0	319.8	2425.9							S10D							
03/16/94 10:49:00	0:58:19												Select ST-B						Ground Command - no matches
03/16/94 10:51:00	1:00:19												Select ST-A						Ground Command
03/16/94 10:55:00	1:04:19												Downlink SDR Segment 3						Ground Command
03/16/94 11:01:08	1:10:28		-20.0	319.8	2187.2							S20D							
03/16/94 11:09:59	1:19:18		-27.9	319.8	1991.7							OUTUM							Exit umbra
03/16/94 11:10:44	1:20:04		-28.6	319.8	1974.2							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/16/94 11:11:43	1:21:02	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/16/94 11:12:11	1:21:31		-30.0	319.8	1939.7							S30D							
03/16/94 11:19:00	1:28:19												Downlink SDR Segment 4						Ground Command
03/16/94 11:21:51	1:31:11		-40.0	319.8	1697.7							S40D							
																			Standard Prep2 Script
03/16/94 11:24:28	1:33:47	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/16/94 11:29:28	1:38:47	0											Msg "WRNG: Omni/2k in 1 min.."						
03/16/94 11:30:18	1:39:37		-50.0	319.8	1470.8							S50D							
03/16/94 11:30:28	1:39:47	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/16/94 11:31:28	1:40:47	60											Switch to omni antennas						
03/16/94 11:32:28	1:41:47	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/16/94 11:32:58	1:42:17	30											UV & HR cameras ON						
03/16/94 11:37:38	1:46:57		-60.0	319.9	1264.7							S60D							
03/16/94 11:42:03	1:51:22	545											Initialize filters (DHU SEQT 28); Record in SDR Segment 5; Load lunar dark exposure tables						Start SDR in Segment 5

Orbit 117 Timeline - Tyne B Orbit

03/16/94 11:42:28	1:51:47	25									Perform NIR imaging (DHU SEQT 31)							Dark Field imaging starts
03/16/94 11:42:43	1:52:02	15									Stop imaging - select ST-A							
03/16/94 11:44:07	1:53:26		-70.0	320.3	1082.2					S70D								
03/16/94 11:44:28	1:53:47	105									Perform LWIR imaging (DHU SEQT 25)							
03/16/94 11:44:43	1:54:02	15									Perform NIR imaging (DHU SEQT 31)							
03/16/94 11:44:58	1:54:17	15																Err:508
03/16/94 11:45:28	1:54:47	30									Laser Power ON							
																		Err:508
03/16/94 11:49:51	1:59:10		-80.0	321.3	924.1					S80D								Err:508
																		Err:508
03/16/94 11:52:57	2:02:17	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S							
03/16/94 11:53:58	2:03:17	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/16/94 11:54:58	2:04:17	60								MAXS	Set SA step rate to LO							
03/16/94 11:54:59	2:04:18		-89.6	50.0	790.1					South Pole								
03/16/94 11:55:38	2:04:57		-88.6	123.8	774.0					LDAWN								
03/16/94 11:59:38	2:08:57	280								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17							
03/16/94 11:59:39	2:08:59		-80.0	137.0	679.2					S80A								
03/16/94 12:03:56	2:13:15	258								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4							
03/16/94 12:03:56	2:13:16		-70.0	138.1	589.9					S70A								
03/16/94 12:07:57	2:17:16	241								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/16/94 12:07:57	2:17:17		-60.0	138.4	521.0					S60A								
03/16/94 12:11:45	2:21:04	228								S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5							SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/16/94 12:11:46	2:21:05		-50.0	138.6	471.5					S50A								
03/16/94 12:15:26	2:24:45	221								S40A	Load exposure table LUNARZ35S							
03/16/94 12:15:26	2:24:45		-40.0	138.6	440.5					S40A								
03/16/94 12:16:11	2:25:30									MAD	MLOSM							Enter occultation
03/16/94 12:19:02	2:28:21	216								S30A	Load exposure table LUNARZ25S							
03/16/94 12:19:02	2:28:22		-30.0	138.7	427.5					S30A								
03/16/94 12:19:53	2:29:13		-27.6	138.7	427.0					Periselene								
03/16/94 12:22:37	2:31:56	215								S20A	Load exposure table LUNARZ15S							
03/16/94 12:22:37	2:31:56		-20.0	138.8	432.1					S20A								
03/16/94 12:26:15	2:35:34	218								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/16/94 12:26:15	2:35:35		-10.0	138.8	454.6					S10A								

Orbit 117 Timeline - Type B Orbit

03/16/94 12:29:59	2:39:18	224																		Record in SSDR Segment 7; Load CEQ_07U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 7							
03/16/94 12:29:59	2:39:19		0.0	138.8	495.2															MEQA	IR and UV uncompressed							
Equator - A																												
03/16/94 12:33:53	2:43:12	234																		N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	Resume compression						
03/16/94 12:33:54	2:43:14		10.0	138.9	554.7															N10A								
03/16/94 12:38:02	2:47:21	249																			N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/16/94 12:38:03	2:47:22		20.0	138.9	634.1																N20A							
03/16/94 12:39:02	2:48:21	60																				Laser power OFF						
03/16/94 12:41:13	2:50:32																				MAD	MAOSM	Exit occultation					
03/16/94 12:42:31	2:51:50	209																				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					
03/16/94 12:42:31	2:51:51		30.0	138.9	734.6																	N30A						
03/16/94 12:47:25	2:56:44	294																				N40A	Switch to inertial pointing (ORB_117RW); Load exposure table LUNARZ45N Select DHU SEQT 10	Initiate oblique viewing				
03/16/94 12:47:25	2:56:45		40.0	139.0	857.5																	N40A						
03/16/94 12:52:51	3:02:10	326																					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11				
03/16/94 12:52:51	3:02:11		50.0	139.1	1004.0																		N50A					
03/16/94 12:58:57	3:08:16	366																					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12				
03/16/94 12:58:57	3:08:16		60.0	139.2	1174.8																		N60A					
03/16/94 13:03:06	3:12:25	249																							Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing		
03/16/94 13:05:52	3:15:11	166																						N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	Resume HiRes imaging		
03/16/94 13:05:53	3:15:12		70.0	139.5	1370.0																			N70A				
03/16/94 13:13:46	3:23:05	474																							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21		
03/16/94 13:13:48	3:23:07		80.0	140.5	1587.6																				N80A			
03/16/94 13:14:46	3:24:05	60																								Load DEQ_07.UMI into SEQT 7	Restore compressed SEQT 7	
Err:508																												
03/16/94 13:22:50	3:32:10		89.6	228.6	1823.3																							
North Pole																												
Standard Post Script																												
03/16/94 13:23:49	3:33:08	0																								Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table	Slew to Vega (inertial pointing)	
03/16/94 13:24:09	3:33:28		88.6	303.0	1855.9																					LDUSK		
03/16/94 13:33:13	3:42:32		80.0	316.2	2069.4																					N80D		

Orbit 117 Timeline - Tyne B Orbit

03/16/94 13:33:54	3:43:13	600																		Perform UVO Imaging (DHU SEQT 29)	No data because duration was 15 tics instead of 15 seconds	
03/16/94 13:33:54	3:43:13	0																		Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts	
03/16/94 13:34:09	3:43:28	15																		Perform NIR imaging (Select DHU SEQT 31)		
03/16/94 13:34:24	3:43:43	15																		Perform HiRes Imaging (DHU SEQT 30)	Radiometric imaging	
03/16/94 13:34:31	3:43:50	7																		Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth	
03/16/94 13:40:31	3:49:50	360																		Switch to HGA	READY FOR DATA DUMP	
																					End Post Script	
03/16/94 13:42:00	3:51:19																			Switch to DHU mode @ 128 kbps	Ground Command	
03/16/94 13:43:00	3:52:19																			Downlink SSSR Segment 4 (orb 116)	Ground Command	
03/16/94 13:45:36	3:54:55																			PMK	AOS	
03/16/94 13:45:01	3:54:21		70.0	317.1	2314.3																N70D	
03/16/94 13:59:00	4:08:19																				Downlink SSSR Segment 5	Ground Command
03/16/94 13:58:17	4:07:36		60.0	317.4	2541.4																N60D	
03/16/94 14:12:56	4:22:15		50.0	317.4	2731.0																N50D	
03/16/94 14:13:00	4:22:19																				Update state vector (GNC53_16MAR1400)	Ground Command
03/16/94 14:24:00	4:33:19																				Uplink & schedule L118 scripts	Ground Command
03/16/94 14:28:00	4:37:19																				Downlink SSSR Segment 6	Ground Command
03/16/94 14:28:41	4:38:00		40.0	317.4	2863.4																N40D	
03/16/94 14:45:07	4:54:27		30.0	317.4	2922.8																N30D	
03/16/94 14:49:04	4:58:23		27.6	317.4	2925.1																Aposelene	

Orbit 118 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/16/94 14:49:04	0:00:00		27.6	317.4	2925.1							Aposelene							Downlinking SDDR Segment 6 (orbit 117)
03/16/94 15:01:41	0:12:37		20.0	317.3	2901.5							N20D							
03/16/94 15:02:04	0:13:00		19.8	317.3	2900.0							INPM							Enter penumbra
03/16/94 15:02:58	0:13:54		19.2	317.3	2896.4							INUM							Enter umbra
03/16/94 15:03:00	0:13:55												Downlink SDDR Segment 7						Ground Command
03/16/94 15:17:49	0:28:45		10.0	317.2	2802.2							N10D							
03/16/94 15:33:02	0:43:57		0.0	317.2	2637.5							Equator - D							
03/16/94 15:46:59	0:57:54		-10.0	317.1	2425.9							S10D							
03/16/94 15:59:30	1:10:26		-20.0	317.1	2187.4							S20D							
03/16/94 16:08:24	1:19:20		-28.0	317.0	1990.6							OUTUM							Exit umbra
03/16/94 16:09:09	1:20:05		-28.7	317.0	1973.2							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/16/94 16:10:07	1:21:02	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/16/94 16:10:33	1:21:29		-30.0	317.0	1940.1							S30D							
03/16/94 16:20:12	1:31:08		-40.0	317.1	1698.2							S40D							
																			Standard Prep2 Script
03/16/94 16:22:50	1:33:45	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/16/94 16:27:50	1:38:45	0											Msg "WRNG: Omni/2k in 1 min.."						
03/16/94 16:28:39	1:39:34		-50.0	317.1	1471.4							S50D							
03/16/94 16:28:50	1:39:45	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data downlink
03/16/94 16:29:50	1:40:45	60											Switch to omni antennas						
03/16/94 16:30:50	1:41:45	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/16/94 16:31:20	1:42:15	30											UV & HR cameras ON						
03/16/94 16:36:00	1:46:56		-60.0	317.3	1265.3							S60D							
03/16/94 16:40:25	1:51:20	545											Initialize filters (DHU SEQT 28); Record in SDDR Segment 1; Load lunar dark exposure tables						Start SDDR in Segment 1
03/16/94 16:40:50	1:51:45	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/16/94 16:41:05	1:52:00	15											Stop imaging - select ST-A						
03/16/94 16:42:29	1:53:25		-70.0	317.6	1082.9							S70D							
03/16/94 16:42:50	1:53:45	105											Perform LWIR imaging (DHU SEQT 25)						

Orbit 118 Timeline - Type A Orbit

03/16/94 16:43:05	1:54:00	15								Perform NIR imaging (DHU SEQT 31)			
03/16/94 16:43:20	1:54:15	15									Err:508		Slew to nadir (inertial pointing)
03/16/94 16:43:50	1:54:45	30								Laser Power ON			
													Err:508
03/16/94 16:48:13	1:59:09		-80.0	318.7	924.8					S80D			
													Err:508
03/16/94 16:51:19	2:02:15	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/16/94 16:52:20	2:03:15	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)			START MAPPING
03/16/94 16:53:20	2:04:15	60								MAXS			Set SA step rate to LO
03/16/94 16:53:21	2:04:17		-89.6	45.5	791.0					South Pole			
03/16/94 16:54:00	2:04:56		-88.6	120.1	774.8					LDAWN			
03/16/94 16:54:14	2:05:09								GDS	AOS			
03/16/94 16:58:00	2:08:55	280								S80A	Load CEQ_03U.UMI into SEQT 3; Load exposure table LUNARZ75S; Select DHU SEQT 3		IR and UV Uncompressed
03/16/94 16:58:02	2:08:57		-80.0	134.2	680.0					S80A			
03/16/94 17:02:18	2:13:13	258								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4		Resume compression
03/16/94 17:02:20	2:13:15		-70.0	135.3	590.6					S70A			
03/16/94 17:06:19	2:17:14	241								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6		
03/16/94 17:06:20	2:17:16		-60.0	135.6	521.8					S60A			
03/16/94 17:10:08	2:21:03	229								S50A	Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5		SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/16/94 17:10:09	2:21:05		-50.0	135.8	472.3					S50A			
03/16/94 17:13:48	2:24:43	220								S40A	Load exposure table LUNARZ35S		
03/16/94 17:13:49	2:24:45		-40.0	135.9	441.2					S40A			
03/16/94 17:15:11	2:26:06								MAD	MLOSM			
03/16/94 17:15:22	2:26:17									PMK	MLOSM		
03/16/94 17:15:23	2:26:18								GDS	MLOSM			Enter occultation
03/16/94 17:17:24	2:28:19	216								S30A	Load exposure table LUNARZ25S		
03/16/94 17:17:25	2:28:21		-30.0	136.0	428.2					S30A			
03/16/94 17:18:17	2:29:12		-27.6	136.0	427.7					Periselene			
03/16/94 17:21:00	2:31:55	216								S20A	Load exposure table LUNARZ15S		
03/16/94 17:21:00	2:31:56		-20.0	136.0	432.8					S20A			
03/16/94 17:24:38	2:35:33	218								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6		
03/16/94 17:24:38	2:35:33		-10.0	136.1	455.2					S10A			
03/16/94 17:28:22	2:39:17	224								MEQA	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7		SSDR Segment 3
03/16/94 17:28:23	2:39:19		0.0	136.1	495.8					Equator- A			

Orbit 118 Timeline - Type A Orbit

03/16/94 17:32:16	2:43:11	234								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/16/94 17:32:17	2:43:13		10.0	136.1	555.3					N10A							
03/16/94 17:36:25	2:47:20	249								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/16/94 17:36:26	2:47:22		20.0	136.2	634.7					N20A							
03/16/94 17:37:25	2:48:20	60									Laser power OFF						
03/16/94 17:38:00	2:48:55									GDS	MAOSM						Exit occultation
03/16/94 17:38:11	2:49:06									PMK	MAOSM						
03/16/94 17:38:44	2:49:39									MAD	MAOSM						
03/16/94 17:40:54	2:51:49	209									N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					
03/16/94 17:40:55	2:51:51		30.0	136.2	735.2						N30A						
03/16/94 17:45:48	2:56:43	294									N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11					SDDR Segment 4
03/16/94 17:45:49	2:56:45		40.0	136.3	858.0						N40A						
03/16/94 17:51:14	3:02:09	326									N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12					
03/16/94 17:51:15	3:02:11		50.0	136.4	1004.5						N50A						
03/16/94 17:57:20	3:08:15	366									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13					
03/16/94 17:57:22	3:08:17		60.0	136.5	1175.2						N60A						
03/16/94 18:04:16	3:15:11	416									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14					Resume HiRes imaging
03/16/94 18:04:17	3:15:13		70.0	136.9	1370.2						N70A						
03/16/94 18:12:10	3:23:05	474									N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15					
03/16/94 18:12:11	3:23:07		80.0	137.9	1587.7						N80A						
03/16/94 18:13:10	3:24:05	60										Load DEQ_03.UMI into SEQT 3					Restore compressed SEQT 3
Err:508																	
03/16/94 18:21:14	3:32:10		89.6	226.1	1823.3						North Pole						
Standard Post Script																	
03/16/94 18:22:13	3:33:08	0										Park filters (DHU SEQT 27); Set SA step rate to HI; Select ST-B; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table					Slew to Vega (inertial pointing)
03/16/94 18:22:32	3:33:28		88.6	299.1	1855.7						LDUSK						
03/16/94 18:31:36	3:42:32		80.0	313.3	2069.1						N80D						
03/16/94 18:32:18	3:43:13	600										Perform UVO Imaging (DHU SEQT 29)					No data because duration was 15 tics instead of 15 seconds
03/16/94 18:32:18	3:43:13	0										Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/16/94 18:32:33	3:43:28	15										Perform NIR imaging (Select DHU SEQT 31)					
03/16/94 18:32:48	3:43:43	15										Perform HiRes Imaging (DHU SEQT 30)					Radiometric imaging

Orbit 118 Timeline - Type A Orbit

03/16/94 18:32:55	3:43:50	7								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/16/94 18:38:55	3:49:50	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/16/94 18:39:00	3:49:55									Switch to DHU mode @ 128 kbps						Ground Command
03/16/94 18:43:00	3:53:55									Downlink SSSDR Segment 1						Ground Command
03/16/94 18:43:24	3:54:20		70.0	314.3	2313.9					N70D						
03/16/94 18:52:00	4:02:55									Uplink & schedule L119 scripts						Ground Command
03/16/94 18:56:42	4:07:37		60.0	314.6	2540.9					N60D						
03/16/94 19:11:19	4:22:15		50.0	314.7	2730.4					N50D						
03/16/94 19:27:04	4:38:00		40.0	314.7	2862.7					N40D						
03/16/94 19:29:00	4:39:55									Downlink SSSDR Segment 2						Ground Command
03/16/94 19:43:30	4:54:26		30.0	314.6	2922.1					N30D						
03/16/94 19:47:27	4:58:23		27.6	314.6	2924.5					Aposelene						

Orbit 119 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/16/94 19:47:27	0:00:00		27.6	314.6	2924.5							Aposelene							Downlinking SDDR Segment 2 (orbit 118)
03/16/94 19:59:00	0:11:32												Cancel PostMap script						Ground Command
03/16/94 20:00:03	0:12:36		20.0	314.6	2900.9							N20D							
03/16/94 20:00:19	0:12:52		19.8	314.6	2899.9							INPM							Enter penumbra
03/16/94 20:01:13	0:13:46		19.3	314.6	2896.3							INUM							Enter umbra
03/16/94 20:03:00	0:15:32												Downlink SDDR Segment 3						Ground Command
03/16/94 20:04:00	0:16:32												Uplink baseline scripts (BASELINE.UMI); Uplink & schedule new PostMap script						Ground Command
03/16/94 20:16:11	0:28:44		10.0	314.5	2801.8							N10D							
03/16/94 20:23:00	0:35:32												Downlink SDDR Segment 4						Ground Command
03/16/94 20:31:24	0:43:56		0.0	314.4	2637.3							Equator - D							
03/16/94 20:41:00	0:53:32												SDDR to IDLE - download complete						Ground Command
03/16/94 20:45:21	0:57:53		-10.0	314.4	2425.9							S10D							
03/16/94 20:57:51	1:10:24		-20.0	314.3	2187.5							S20D							
03/16/94 21:06:49	1:19:21		-28.0	314.3	1989.6							OUTUM							Exit umbra
03/16/94 21:07:33	1:20:06		-28.7	314.3	1972.2							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/16/94 21:08:32	1:21:04	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/16/94 21:08:54	1:21:27		-30.0	314.3	1940.4							S30D							
03/16/94 21:18:34	1:31:06		-40.0	314.3	1698.7							S40D							
03/16/94 21:20:00	1:32:32												Select ST-A						Ground Command ST-B blocked by Moon
																			Standard Prep2 Script
03/16/94 21:21:12	1:33:44	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/16/94 21:26:12	1:38:44	0											Msg "WRNG: Omni/2k in 1 min.."						
03/16/94 21:27:00	1:39:32		-50.0	314.4	1471.9							S50D							
03/16/94 21:27:12	1:39:44	60											SDDR to IDLE; Switch to 2 kbps bypass mode						
03/16/94 21:28:12	1:40:44	60											Switch to omni antennas						
03/16/94 21:29:12	1:41:44	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux

Orbit 119 Timeline - Type B Orbit

03/16/94 21:29:42	1:42:14	30										UV & HR cameras ON				
03/16/94 21:34:22	1:46:55		-60.0	314.6	1265.9							S60D				
03/16/94 21:38:47	1:51:19	545										Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables				Start SSSR in Segment 5
03/16/94 21:39:12	1:51:44	25										Perform NIR imaging (DHU SEQT 31)				Dark Field imaging starts
03/16/94 21:39:27	1:51:59	15										Stop imaging - select ST-A				
03/16/94 21:40:51	1:53:24		-70.0	314.9	1083.5							S70D				
03/16/94 21:41:12	1:53:44	105										Perform LWIR imaging (DHU SEQT 25)				
03/16/94 21:41:27	1:53:59	15										Perform NIR imaging (DHU SEQT 31)				
03/16/94 21:41:42	1:54:14	15											Err:508			Slew to nadir (inertial pointing)
03/16/94 21:42:12	1:54:44	30										Laser Power ON				
																Err:508
03/16/94 21:46:35	1:59:08		-80.0	316.1	925.5							S80D				Err:508
																Err:508
03/16/94 21:49:42	2:02:14	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/16/94 21:50:42	2:03:14	60										Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)				START MAPPING
03/16/94 21:51:42	2:04:14	60										MAXS				Set SA step rate to LO
03/16/94 21:51:43	2:04:16		-89.6	41.9	791.8							South Pole				
03/16/94 21:52:22	2:04:55		-88.6	116.3	775.5							LDAWN				
03/16/94 21:56:22	2:08:54											MAD				LOS
03/16/94 21:56:22	2:08:54	280										S80A				Load exposure table LUNARZ75S; Select DHU SEQT 17
03/16/94 21:56:23	2:08:55		-80.0	131.3	680.7							S80A				
03/16/94 22:00:40	2:13:12	258										S70A				Load exposure table LUNARZ65S; Select DHU SEQT 4
03/16/94 22:00:41	2:13:13		-70.0	132.5	591.3							S70A				
03/16/94 22:04:41	2:17:13	241										S60A				Load exposure table LUNARZ55S; Select DHU SEQT 6
03/16/94 22:04:44	2:17:16		-60.0	132.8	522.4							S60A				
03/16/94 22:08:30	2:21:02	229										S50A				Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5
03/16/94 22:08:32	2:21:04		-50.0	133.0	472.9							S50A				SSSR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/16/94 22:12:11	2:24:43	221										S40A				Load exposure table LUNARZ35S
03/16/94 22:12:12	2:24:44		-40.0	133.2	441.9							S40A				
03/16/94 22:14:30	2:27:02											PMK				MLOSM
03/16/94 22:14:41	2:27:13											GDS				MLOSM
03/16/94 22:15:47	2:28:19	216										S30A				Load exposure table LUNARZ25S
03/16/94 22:15:48	2:28:20		-30.0	133.2	428.8							S30A				
03/16/94 22:16:40	2:29:13		-27.6	133.2	428.3							Periselene				

Orbit 119 Timeline - Type B Orbit

03/16/94 22:19:22	2:31:54	215								S20A	Load exposure table LUNARZ15S						
03/16/94 22:19:24	2:31:56		-20.0	133.3	433.4					S20A							
03/16/94 22:23:00	2:35:32	218								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						
03/16/94 22:23:02	2:35:35		-10.0	133.3	455.8					S10A							
03/16/94 22:26:45	2:39:17	225								MEQA	Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 7
03/16/94 22:26:47	2:39:19		0.0	133.4	496.4					Equator - A							
03/16/94 22:30:39	2:43:11	234								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/16/94 22:30:41	2:43:14		10.0	133.4	555.9					N10A							
03/16/94 22:34:49	2:47:21	250								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/16/94 22:34:50	2:47:22		20.0	133.4	635.2					N20A							
03/16/94 22:35:13	2:47:45								GDS	MAOSM							Exit occultation
03/16/94 22:35:34	2:48:06								PMK	MAOSM							
03/16/94 22:35:49	2:48:21	60									Laser power OFF						
03/16/94 22:39:17	2:51:49	208								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
03/16/94 22:39:19	2:51:51		30.0	133.5	735.7					N30A							
03/16/94 22:44:12	2:56:44	295								N40A	Switch to inertial pointing (ORB_119RW); Load exposure table LUNARZ45N Select DHU SEQT 10						Initiate oblique viewing
03/16/94 22:44:13	2:56:45		40.0	133.6	858.5					N40A							
03/16/94 22:49:38	3:02:10	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11						
03/16/94 22:49:39	3:02:12		50.0	133.7	1004.9					N50A							
03/16/94 22:55:44	3:08:16	366								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12						
03/16/94 22:55:45	3:08:18		60.0	133.8	1175.6					N60A							
03/16/94 22:59:53	3:12:25	249									Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19						End oblique viewing - resume nadir pointing
03/16/94 23:02:39	3:15:11	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						Resume HiRes imaging
03/16/94 23:02:40	3:15:12		70.0	134.2	1370.5					N70A							
03/16/94 23:10:33	3:23:05	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
Err:508																	
03/16/94 23:10:35	3:23:07		80.0	135.4	1587.9					N80A							
03/16/94 23:19:38	3:32:10		89.6	222.1	1823.1					North Pole							
Standard Post Script																	
03/16/94 23:20:36	3:33:08	0									Park filters (DHU SEQT 27)						

Orbit 119 Timeline - Type B Orbit

03/16/94 23:20:46	3:33:18	10														Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)	
03/16/94 23:20:56	3:33:28		88.6	295.2	1855.6											LDUSK									
03/16/94 23:29:59	3:42:31		80.0	310.4	2069.0											N80D									
03/16/94 23:30:41	3:43:13	595															Perform UVO Imaging (DHU SEQT 29)							NOTE: Time problem of previous orbits corrected!	
03/16/94 23:30:56	3:43:28	15															Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts	
03/16/94 23:31:10	3:43:43	15															Perform NIR imaging (Select DHU SEQT 31)								
03/16/94 23:31:25	3:43:58	15															Perform HiRes Imaging (DHU SEQT 30)							Radiometric imaging	
03/16/94 23:31:43	3:44:16	18															Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth	
03/16/94 23:37:43	3:50:16	360															Switch to HGA							READY FOR DATA DUMP	
End Post Script																									
03/16/94 23:39:00	3:51:32																Switch to DHU mode @ 128 kbps							Ground Command	
03/16/94 23:41:00	3:53:32																Downlink SDR Segment 5							Ground Command	
03/16/94 23:41:48	3:54:20		70.0	311.5	2313.6												N70D								
03/16/94 23:55:04	4:07:36		60.0	311.8	2540.4												N60D								
03/17/94 00:01:00	4:13:32																	Uplink & schedule L120 scripts							Ground Command
03/17/94 00:09:42	4:22:14		50.0	311.9	2729.8												N50D								
03/17/94 00:10:00	4:22:32																	Downlink SDR Segment 6							Ground Command
03/17/94 00:25:27	4:37:59		40.0	311.9	2862.1												N40D								
03/17/94 00:41:52	4:54:24		30.0	311.9	2921.5												N30D								
03/17/94 00:44:00	4:56:32																	Downlink SDR Segment 7							Ground Command
03/17/94 00:45:50	4:58:22		27.6	311.9	2923.9												Aposelene								

Orbit 120 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/17/94 00:45:51	0:00:00		27.6	311.9	2923.9							Aposelene							Downlinking SSSR Segment 7 (orbit 119)
03/17/94 00:58:26	0:12:35		20.0	311.8	2900.3							N20D							
03/17/94 00:58:36	0:12:45		19.9	311.8	2899.8							INPM							Enter penumbra
03/17/94 00:59:30	0:13:39		19.4	311.8	2896.3							INUM							Enter umbra
03/17/94 01:14:34	0:28:43		10.0	311.8	2801.4							N10D							
03/17/94 01:15:00	0:29:09												Update state vector (GNC53_17MAR0000)						Ground Command
03/17/94 01:24:43	0:38:52										CAN	AOS							
03/17/94 01:29:47	0:43:56		0.0	311.7	2637.1							Equator - D							
03/17/94 01:43:43	0:57:52		-10.0	311.7	2425.8							S10D							
03/17/94 01:52:00	1:06:09												Select ST-A						Ground Command
03/17/94 01:56:14	1:10:23		-20.0	311.6	2187.6							S20D							ST-B blocked by Moon
03/17/94 02:05:15	1:19:24		-28.1	311.6	1988.5							OUTUM							Exit umbra
03/17/94 02:05:59	1:20:08		-28.8	311.6	1971.2							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/17/94 02:06:56	1:21:05	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/17/94 02:07:17	1:21:26		-30.0	311.6	1940.7							S30D							
03/17/94 02:16:57	1:31:06		-40.0	311.6	1699.0							S40D							
																			Standard Prep2 Script
03/17/94 02:19:34	1:33:43	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/17/94 02:24:34	1:38:43	0											Msg "WRNG: Omni/2k in 1 min.."						
03/17/94 02:25:23	1:39:32		-50.0	311.7	1472.3							S50D							
03/17/94 02:25:34	1:39:43	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data downlink
03/17/94 02:26:34	1:40:43	60											Switch to omni antennas						
03/17/94 02:27:34	1:41:43	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/17/94 02:28:04	1:42:13	30											UV & HR cameras ON						
03/17/94 02:32:45	1:46:54		-60.0	311.9	1266.4							S60D							
03/17/94 02:37:09	1:51:18	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/17/94 02:37:34	1:51:43	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 120 Timeline - Type A Orbit

03/17/94 03:21:23	2:35:32	218								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/17/94 03:21:26	2:35:35		-10.0	130.6	456.4					S10A					
03/17/94 03:25:08	2:39:17	225								MEQA	Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3
03/17/94 03:25:10	2:39:19		0.0	130.6	497.0					Equator- A					
03/17/94 03:29:02	2:43:11	234								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8				
03/17/94 03:29:05	2:43:14		10.0	130.7	556.4					N10A					
03/17/94 03:31:30	2:45:39									CAN	MAOSM				Exit occultation
03/17/94 03:32:21	2:46:30									GDS	MAOSM				
03/17/94 03:33:12	2:47:21	250								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				
03/17/94 03:33:14	2:47:23		20.0	130.7	635.8					N20A					
03/17/94 03:34:12	2:48:21	60									Laser power OFF				
03/17/94 03:37:41	2:51:50	209								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				
03/17/94 03:37:43	2:51:52		30.0	130.8	736.2					N30A					
03/17/94 03:42:35	2:56:44	294								N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11				SSDR Segment 4
03/17/94 03:42:37	2:56:46		40.0	130.9	859.0					N40A					
03/17/94 03:48:01	3:02:10	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12				
03/17/94 03:48:04	3:02:13		50.0	131.0	1005.3					N50A					
03/17/94 03:54:07	3:08:16	366								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13				
03/17/94 03:54:10	3:08:19		60.0	131.2	1176.0					N60A					
03/17/94 04:01:03	3:15:12	416								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14				Resume HiRes imaging
03/17/94 04:01:05	3:15:14		70.0	131.6	1370.8					N70A					
03/17/94 04:08:57	3:23:06	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15				
03/17/94 04:09:00	3:23:09		80.0	132.8	1588.2					N80A					
03/17/94 04:09:57	3:24:06	60									Load DEQ_03.UMI into SEQT 3				Restore compressed SEQT 3
Err:508															
03/17/94 04:18:02	3:32:11		89.5	219.3	1823.2					North Pole					
Standard Post Script															
03/17/94 04:19:00	3:33:09	0									Park filters (DHU SEQT 27)				
03/17/94 04:19:10	3:33:19	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table				Slew to Vega (inertial pointing)
03/17/94 04:19:20	3:33:29		88.6	291.2	1855.6					LDUSK					
03/17/94 04:28:24	3:42:33		80.0	307.5	2068.9					N80D					
03/17/94 04:29:05	3:43:14	595									Perform UVO Imaging (DHU SEQT 29)				Radiometric imaging

Orbit 120 Timeline - Type A Orbit

03/17/94 04:29:20	3:43:29	15								Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/17/94 04:29:35	3:43:44	15								Perform NIR imaging (Select DHU SEQT 31)						
03/17/94 04:29:50	3:43:59	15								Perform HiRes Imaging (DHU SEQT 30)						Radiometric imaging
03/17/94 04:30:07	3:44:16	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/17/94 04:36:07	3:50:16	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/17/94 04:37:00	3:51:09									Switch to DHU mode @ 128 kbps; Ranging A OFF						Ground Command
03/17/94 04:40:12	3:54:21		70.0	308.7	2313.5				N70D							
03/17/94 04:42:00	3:56:09									Downlink SDR Segment 1						Ground Command
03/17/94 04:53:29	4:07:38		60.0	309.0	2540.1				N60D							
03/17/94 05:08:07	4:22:16		50.0	309.2	2729.4				N50D							
03/17/94 05:20:21	4:34:30							GDS	LOS							
03/17/94 05:23:51	4:38:00		40.0	309.2	2861.6				N40D							
03/17/94 05:31:00	4:45:09									Downlink SDR Segment 2						Ground Command
03/17/94 05:40:16	4:54:25		30.0	309.1	2921.0				N30D							
03/17/94 05:44:14	4:58:23		27.6	309.1	2923.3				Aposelene							

Orbit 121 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/17/94 05:44:14	0:00:00		27.6	309.1	2923.3							Aposelene							Downlinking SSSR Segment 2 (orbit 120)
03/17/94 05:56:46	0:12:32											N20D							
03/17/94 05:56:49	0:12:35		20.0	309.1	2899.8							N20D							
03/17/94 05:56:52	0:12:38		20.0	309.1	2899.7							INPM							Enter penumbra
03/17/94 05:57:45	0:13:31		19.4	309.1	2896.2							INUM							Enter umbra
03/17/94 06:12:56	0:28:42		10.0	309.0	2801.0							N10D							
03/17/94 06:19:00	0:34:46												Downlink SSSR Segment 3						Ground Command
03/17/94 06:28:09	0:43:55		0.0	309.0	2636.8							MEQD							
03/17/94 06:42:05	0:57:51		-10.0	308.9	2425.6							S10D							
03/17/94 06:54:36	1:10:22		-20.0	308.9	2187.6							S20D							
03/17/94 07:02:00	1:17:46												Downlink SSSR Segment 4						Ground Command
03/17/94 07:03:40	1:19:26		-28.1	308.9	1987.3							OUTUM							Exit umbra
03/17/94 07:04:24	1:20:10		-28.8	308.9	1970.0							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/17/94 07:05:21	1:21:07	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/17/94 07:05:38	1:21:24		-30.0	308.9	1940.8							S30D							
03/17/94 07:15:18	1:31:04		-40.0	308.9	1699.2							S40D							
																			Standard Prep2 Script
03/17/94 07:17:56	1:33:42	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/17/94 07:22:56	1:38:42	0											Msg "WRNG: Omni/2k in 1 min.."						
03/17/94 07:23:45	1:39:31		-50.0	309.0	1472.6							S50D							
03/17/94 07:23:56	1:39:42	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/17/94 07:24:56	1:40:42	60											Switch to omni antennas						
03/17/94 07:25:56	1:41:42	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/17/94 07:26:26	1:42:12	30											UV & HR cameras ON						
03/17/94 07:31:07	1:46:53		-60.0	309.2	1266.8							S60D							
03/17/94 07:35:31	1:51:17	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5
03/17/94 07:35:56	1:51:42	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/17/94 07:36:11	1:51:57	15											Stop imaging - select ST-A						

Orbit 121 Timeline - Type B Orbit

03/17/94 07:37:35	1:53:21		-70.0	309.6	1084.4					S70D									
03/17/94 07:37:56	1:53:42	105									Perform LWIR imaging (DHU SEQT 25)								
03/17/94 07:38:11	1:53:57	15									Perform NIR imaging (DHU SEQT 31)								
03/17/94 07:38:26	1:54:12	15																	Err:508
03/17/94 07:38:56	1:54:42	30									Laser Power ON								
																			Err:508
03/17/94 07:43:20	1:59:06		-80.0	311.0	926.4					S80D									Err:508
																			Err:508
03/17/94 07:46:26	2:02:12	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/17/94 07:47:26	2:03:12	60									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 16)								START MAPPING
03/17/94 07:48:26	2:04:12	60								MAXS	Set SA step rate to LO								
03/17/94 07:48:29	2:04:15		-89.5	39.6	792.5					South Pole									
03/17/94 07:49:07	2:04:53		-88.6	108.4	776.7					LDAWN									
03/17/94 07:53:06	2:08:52	280								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17								
03/17/94 07:53:09	2:08:55		-80.0	125.5	681.8					S80A									
03/17/94 07:57:24	2:13:10	258								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4								
03/17/94 07:57:27	2:13:13		-70.0	126.8	592.4					S70A									
03/17/94 08:01:26	2:17:12	242								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/17/94 08:01:28	2:17:14		-60.0	127.3	523.5					S60A									
03/17/94 08:05:15	2:21:01	229								S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5								SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/17/94 08:05:17	2:21:03		-50.0	127.5	474.0					S50A									
03/17/94 08:08:56	2:24:42	221								S40A	Load exposure table LUNARZ35S								
03/17/94 08:08:58	2:24:44		-40.0	127.6	443.0					S40A									
03/17/94 08:12:32	2:28:18	216								S30A	Load exposure table LUNARZ25S								
03/17/94 08:12:35	2:28:21		-30.0	127.7	429.9					S30A									
03/17/94 08:13:26	2:29:12		-27.6	127.8	429.4					Periselene									
03/17/94 08:14:39	2:30:25									CAN	MLOSM								Enter occultation
03/17/94 08:16:08	2:31:54	216								S20A	Load exposure table LUNARZ15S								
03/17/94 08:16:10	2:31:56		-20.0	127.8	434.5					S20A									
03/17/94 08:19:46	2:35:32	218								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/17/94 08:19:48	2:35:34		-10.0	127.9	456.9					S10A									
03/17/94 08:23:30	2:39:16	224								MEQA	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 7
03/17/94 08:23:33	2:39:19		0.0	127.9	497.5					Equator - A									
03/17/94 08:27:25	2:43:11	235								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								

Orbit 121 Timeline - Type B Orbit

03/17/94 08:27:28	2:43:14		10.0	128.0	556.9					N10A										
03/17/94 08:28:17	2:44:03									CAN MAOSM									Exit occultation	
03/17/94 08:31:35	2:47:21	250								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9									
03/17/94 08:31:37	2:47:23		20.0	128.0	636.3					N20A										
03/17/94 08:32:35	2:48:21	60									Laser power OFF									
03/17/94 08:36:04	2:51:50	209								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10									
03/17/94 08:36:06	2:51:52		30.0	128.1	736.7					N30A										
03/17/94 08:40:58	2:56:44	294								N40A	Load CEQ_10U.UMI into SEQT 10; Switch to inertial pointing (ORB_121RW); Load exposure table LUNARZ45N Select DHU SEQT 10								Initiate oblique viewing IR and UV uncompressed	
03/17/94 08:41:01	2:56:47		40.0	128.2	859.5					N40A										
03/17/94 08:46:24	3:02:10	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11								Resume compression	
03/17/94 08:46:27	3:02:13		50.0	128.3	1005.8					N50A										
03/17/94 08:52:31	3:08:17	367								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12									
03/17/94 08:52:33	3:08:19		60.0	128.5	1176.4					N60A										
03/17/94 08:56:40	3:12:26	249									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19								End oblique viewing - resume nadir pointing	
03/17/94 08:59:26	3:15:12	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								Resume HiRes imaging	
03/17/94 08:59:29	3:15:15		70.0	128.9	1371.2					N70A										
03/17/94 09:07:20	3:23:06	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21									
03/17/94 09:07:23	3:23:09		80.0	130.3	1588.5					N80A										
03/17/94 09:08:20	3:24:06	60									Load DEQ_10.UMI into SEQT 10								Restore compressed SEQT 10	
Err:508																				
03/17/94 09:16:26	3:32:12		89.5	217.2	1823.5					North Pole										
Standard Post Script																				
03/17/94 09:17:23	3:33:09	0									Park filters (DHU SEQT 27)									
03/17/94 09:17:33	3:33:19	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)	
03/17/94 09:17:44	3:33:30		88.6	287.3	1855.6					LDUSK										
03/17/94 09:26:48	3:42:34		80.0	304.6	2069.0					N80D										
03/17/94 09:27:28	3:43:14	595									Perform UVO Imaging (DHU SEQT 29)									
03/17/94 09:27:43	3:43:28	15									Perform LWIR imaging (DHU SEQT 25)									Dark Field imaging starts
03/17/94 09:27:57	3:43:43	15									Perform NIR imaging (Select DHU SEQT 31)									

Orbit 121 Timeline - Type B Orbit

03/17/94 09:28:12	3:43:58	15								Perform HiRes Imaging (DHU SEQT 30)										Radiometric imaging
03/17/94 09:28:30	3:44:16	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)										Slew HGA to Earth
03/17/94 09:31:14	3:47:00								MAD	AOS										
03/17/94 09:34:30	3:50:16	360									Switch to HGA									
End Post Script																				
03/17/94 09:35:00	3:50:46										Switch to DHU mode @ 128 kbps									Ground Command
03/17/94 09:36:00	3:51:46										Downlink SDR Segment 5									Ground Command
03/17/94 09:38:36	3:54:22		70.0	305.9	2313.4						N70D									
03/17/94 09:51:52	4:07:38		60.0	306.3	2539.9						N60D									
03/17/94 10:04:00	4:19:46																			
03/17/94 10:06:30	4:22:16		50.0	306.4	2729.1						N50D									
03/17/94 10:16:30	4:32:16								CAN	LOS										
03/17/94 10:22:14	4:38:00		40.0	306.4	2861.2						N40D									
03/17/94 10:25:00	4:40:46																			
03/17/94 10:38:39	4:54:25		30.0	306.4	2920.5						N30D									
03/17/94 10:42:37	4:58:23		27.6	306.4	2922.8						Aposelene									

Orbit 122 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/17/94 10:42:37	0:00:00		27.6	306.4	2922.8							Aposelene							Downlinking SSSR Segment 6 (orbit 121)
03/17/94 10:55:08	0:12:31		20.0	306.4	2899.6							INPM							Enter penumbra
03/17/94 10:55:12	0:12:35		20.0	306.4	2899.3							N20D							
03/17/94 10:56:02	0:13:25		19.5	306.3	2896.1							INUM							Enter umbra
03/17/94 11:06:00	0:23:23												Downlink SSSR Segment 7						Ground Command
03/17/94 11:11:19	0:28:42		10.0	306.3	2800.5							N10D							
03/17/94 11:26:31	0:43:54		0.0	306.2	2636.4							Equator - D							
03/17/94 11:40:27	0:57:50		-10.0	306.2	2425.4							S10D							
03/17/94 11:52:58	1:10:21		-20.0	306.2	2187.4							S20D							
03/17/94 12:00:00	1:17:23												Select ST-A						Ground Command ST-B blocked by Moon
03/17/94 12:02:05	1:19:28		-28.2	306.2	1986.0							OUTUM							Exit umbra
03/17/94 12:02:49	1:20:12		-28.9	306.2	1968.8							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/17/94 12:03:46	1:21:09	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/17/94 12:04:00	1:21:23		-30.0	306.2	1940.7							S30D							
03/17/94 12:13:40	1:31:03		-40.0	306.2	1699.3							S40D							
																			Standard Prep2 Script
03/17/94 12:16:17	1:33:40	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/17/94 12:21:17	1:38:40	0											Msg "WRNG: Omni/2k in 1 min.."						
03/17/94 12:22:06	1:39:29		-50.0	306.3	1472.8							S50D							
03/17/94 12:22:17	1:39:40	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/17/94 12:23:17	1:40:40	60											Switch to omni antennas						
03/17/94 12:24:17	1:41:40	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/17/94 12:24:47	1:42:10	30											UV & HR cameras ON						
03/17/94 12:29:29	1:46:52		-60.0	306.5	1267.0							S60D							
03/17/94 12:33:52	1:51:15	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/17/94 12:34:17	1:51:40	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/17/94 12:34:32	1:51:55	15											Stop imaging - select ST-A						
03/17/94 12:35:57	1:53:20		-70.0	307.0	1084.7							S70D							

Last Update: 02/01/2021 21:22:22
By:tcs

Orbit 122
Actual Timeline

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Orbit 122 Timeline - Type A Orbit

03/17/94 12:36:17	1:53:40	105														Perform LWIR imaging (DHU SEQT 25)			
03/17/94 12:36:32	1:53:55	15														Perform NIR imaging (DHU SEQT 31)			
03/17/94 12:36:47	1:54:09	15															Err:508		Slew to nadir (inertial pointing)
03/17/94 12:37:17	1:54:40	30														Laser Power ON			
Err:508																			
03/17/94 12:41:42	1:59:05			-80.0	308.4	926.7										S80D			
Err:508																			
03/17/94 12:44:46	2:02:09	0														Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/17/94 12:45:47	2:03:09	60														Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 9)			START MAPPING
03/17/94 12:46:47	2:04:10	60														MAXS			Set SA step rate to LO
03/17/94 12:46:51	2:04:14			-89.5	36.4	792.9										South Pole			
03/17/94 12:47:29	2:04:52			-88.6	104.5	777.1										LDAWN			
03/17/94 12:51:28	2:08:51	281														S80A			Load exposure table LUNARZ75S; Select DHU SEQT 3
03/17/94 12:51:31	2:08:54			-80.0	122.6	682.2										S80A			
03/17/94 12:55:46	2:13:09	258														S70A			Load exposure table LUNARZ65S; Select DHU SEQT 4
03/17/94 12:55:49	2:13:12			-70.0	124.0	592.8										S70A			
03/17/94 12:59:48	2:17:11	242														S60A			Load exposure table LUNARZ55S; Select DHU SEQT 6
03/17/94 12:59:51	2:17:14			-60.0	124.5	523.9										S60A			
03/17/94 13:03:37	2:21:00	229														S50A			Record in SSDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5
03/17/94 13:03:40	2:21:03			-50.0	124.7	474.5										S50A			
03/17/94 13:07:18	2:24:40	221														S40A			Load exposure table LUNARZ35S
03/17/94 13:07:21	2:24:43			-40.0	124.9	443.4										S40A			
03/17/94 13:10:54	2:28:17	216														S30A			Load exposure table LUNARZ25S
03/17/94 13:10:57	2:28:20			-30.0	125.0	430.4										S30A			
03/17/94 13:11:49	2:29:12			-27.6	125.0	429.8										Periselene			
03/17/94 13:14:30	2:31:53	216														S20A			Load exposure table LUNARZ15S
03/17/94 13:14:33	2:31:56			-20.0	125.1	435.0										S20A			
03/17/94 13:16:04	2:33:27															MAD			MLOSM
03/17/94 13:18:08	2:35:31	218														S10A			Load exposure table LUNARZ05S; Select DHU SEQT 6
03/17/94 13:18:11	2:35:34			-10.0	125.1	457.4										S10A			
03/17/94 13:21:34	2:38:57															MAD			MAOSM
03/17/94 13:21:53	2:39:16	225														MEQA			Record in SSDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7
03/17/94 13:21:56	2:39:19			0.0	125.2	497.9										Equator- A			
03/17/94 13:25:48	2:43:11	235														N10A			Load exposure table LUNARZ15N; Select DHU SEQT 8

Last Update: 02/01/2021 21:22:22
By:tcs

Orbit 122
Actual Timeline

Orbit 122 Timeline - Type A Orbit

03/17/94 13:25:51	2:43:14		10.0	125.2	557.4					N10A									
03/17/94 13:29:57	2:47:20	249								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/17/94 13:30:00	2:47:23		20.0	125.3	636.8					N20A									
03/17/94 13:30:57	2:48:20	60									Laser power OFF								
03/17/94 13:34:26	2:51:49	209								N30A	Load CEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10								IR and UV Uncompressed
03/17/94 13:34:29	2:51:52		30.0	125.4	737.2					N30A									
03/17/94 13:39:21	2:56:43	295								N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4
03/17/94 13:39:24	2:56:47		40.0	125.5	859.9					N40A									Resume compression
03/17/94 13:44:47	3:02:10	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
03/17/94 13:44:50	3:02:13		50.0	125.6	1006.2					N50A									
03/17/94 13:50:54	3:08:17	367								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/17/94 13:50:57	3:08:20		60.0	125.8	1176.8					N60A									
03/17/94 13:57:49	3:15:11	415								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								Resume HiRes imaging
03/17/94 13:57:52	3:15:15		70.0	126.3	1371.6					N70A									
03/17/94 14:05:44	3:23:07	475								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
03/17/94 14:05:47	3:23:10		80.0	127.7	1588.9					N80A									
03/17/94 14:06:44	3:24:07	60									Load DEQ_10.UMI into SEQT 10								Restore compressed SEQT 10
Err:508																			
03/17/94 14:14:50	3:32:13		89.5	215.5	1824.0					North Pole									
Standard Post Script																			
03/17/94 14:15:47	3:33:10	0									Park filters (DHU SEQT 27)								
03/17/94 14:15:57	3:33:20	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)
03/17/94 14:16:07	3:33:30		88.6	283.2	1855.7					LDUSK									
03/17/94 14:23:51	3:41:14									PMK	AOS								
03/17/94 14:25:11	3:42:34		80.0	301.7	2069.1					N80D									
03/17/94 14:25:52	3:43:15	595									Perform UVO Imaging (DHU SEQT 29)								Radiometric imaging
03/17/94 14:26:07	3:43:30	15									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/17/94 14:26:22	3:43:44	15									Perform NIR imaging (Select DHU SEQT 31)								
03/17/94 14:26:36	3:43:59	15									Perform HiRes Imaging (DHU SEQT 30)								Radiometric imaging

Orbit 122 Timeline - Type A Orbit

03/17/94 14:26:54	3:44:17	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/17/94 14:32:54	3:50:17	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/17/94 14:34:00	3:51:23									Switch to DHU mode @ 128 kbps; Downlink SDR Segment 1						Ground Command
03/17/94 14:36:59	3:54:22		70.0	303.1	2313.4					N70D						
03/17/94 14:50:15	4:07:38		60.0	303.5	2539.8					N60D						
03/17/94 15:04:53	4:22:16		50.0	303.6	2728.8					N50D						
03/17/94 15:12:00	4:29:23															
03/17/94 15:20:37	4:38:00		40.0	303.7	2860.9					N40D						Ground Command
03/17/94 15:37:02	4:54:25		30.0	303.7	2920.1					N30D						
03/17/94 15:40:59	4:58:22		27.6	303.6	2922.4					Aposelene						

Orbit 123 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/17/94 15:40:59	0:00:00		27.6	303.6	2922.4							Aposelene							Downlinking SSSDR Segment 2 (orbit 122)
03/17/94 15:45:00	0:04:01												Downlink SSSDR Segment 3; Uplink & schedule L123 scripts						Ground Command
03/17/94 15:53:24	0:12:25		20.1	303.6	2899.5							INPM							Enter penumbra
03/17/94 15:53:34	0:12:35		20.0	303.6	2898.9							N20D							
03/17/94 15:54:18	0:13:19		19.6	303.6	2896.1							INUM							Enter umbra
03/17/94 16:09:41	0:28:42		10.0	303.6	2800.1							N10D							
03/17/94 16:16:00	0:35:01												Downlink SSSDR Segment 4						Ground Command
03/17/94 16:24:53	0:43:54		0.0	303.5	2636.1							Equator - D							
03/17/94 16:38:49	0:57:50		-10.0	303.5	2425.1							S10D							
03/17/94 16:44:00	1:03:01												Update state vector (GNC53_17MAR1630)						Ground Command
03/17/94 16:50:00	1:09:01												Select ST-A						Ground Command ST-B blocked by Moon
03/17/94 16:51:20	1:10:21		-20.0	303.5	2187.3							S20D							
03/17/94 17:00:30	1:19:31		-28.2	303.5	1984.7							OUTUM							Exit umbra
03/17/94 17:01:14	1:20:15		-28.9	303.5	1967.5							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/17/94 17:02:11	1:21:12	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/17/94 17:02:22	1:21:23		-30.0	303.5	1940.6							S30D							
03/17/94 17:12:02	1:31:03		-40.0	303.5	1699.3							S40D							
																			Standard Prep2 Script
03/17/94 17:14:40	1:33:41	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/17/94 17:19:40	1:38:41	0											Msg "WRNG: Omni/2k in 1 min.."						
03/17/94 17:20:28	1:39:29		-50.0	303.6	1472.9							S50D							
03/17/94 17:20:40	1:39:41	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/17/94 17:21:40	1:40:41	60											Switch to omni antennas						
03/17/94 17:22:40	1:41:41	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/17/94 17:23:10	1:42:11	30											UV & HR cameras ON						
03/17/94 17:27:51	1:46:52		-60.0	303.9	1267.1							S60D							

Orbit 123 Timeline - Type B Orbit

03/17/94 17:32:15	1:51:16	545								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables								Start SSSR in Segment 5
03/17/94 17:32:40	1:51:41	25								Perform NIR imaging (DHU SEQT 31)								Dark Field imaging starts
03/17/94 17:32:55	1:51:56	15								Stop imaging - select ST-A								
03/17/94 17:34:19	1:53:20		-70.0	304.4	1084.9					S70D								
03/17/94 17:34:40	1:53:41	105								Perform LWIR imaging (DHU SEQT 25)								
03/17/94 17:34:55	1:53:56	15								Perform NIR imaging (DHU SEQT 31)								
03/17/94 17:35:10	1:54:11	15															Err:508	Slew to nadir (inertial pointing)
03/17/94 17:35:40	1:54:41	30								Laser Power ON								
Err:508																		
03/17/94 17:40:04	1:59:05		-80.0	305.9	927.0					S80D								
03/17/94 17:40:58	1:59:59									GDS AOS								
Err:508																		
03/17/94 17:43:10	2:02:10	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/17/94 17:44:10	2:03:11	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)								START MAPPING
03/17/94 17:45:10	2:04:11	60								MAXS								
03/17/94 17:45:13	2:04:14		-89.5	33.8	793.2					South Pole								
03/17/94 17:45:51	2:04:52		-88.6	100.4	777.5					LDAWN								
03/17/94 17:49:50	2:08:51	280								S80A								
03/17/94 17:49:53	2:08:54		-80.0	119.7	682.5					S80A								
03/17/94 17:54:08	2:13:09	258								S70A								
03/17/94 17:54:11	2:13:12		-70.0	121.2	593.2					S70A								
03/17/94 17:58:10	2:17:11	242								S60A								
03/17/94 17:58:13	2:17:14		-60.0	121.7	524.3					S60A								
03/17/94 18:01:59	2:21:00	229								S50A								
03/17/94 18:02:02	2:21:03		-50.0	122.0	474.8					S50A								
03/17/94 18:05:40	2:24:41	221								S40A								
03/17/94 18:05:43	2:24:43		-40.0	122.1	443.8					S40A								
03/17/94 18:09:16	2:28:17	216								S30A								
03/17/94 18:09:19	2:28:20		-30.0	122.2	430.7					S30A								
03/17/94 18:10:11	2:29:12		-27.6	122.3	430.2					Periselene								
03/17/94 18:12:52	2:31:53	216								S20A								
03/17/94 18:12:55	2:31:56		-20.0	122.3	435.4					S20A								
03/17/94 18:16:31	2:35:31	219								S10A								
03/17/94 18:16:34	2:35:35		-10.0	122.4	457.8					S10A								

Orbit 123 Timeline - Type B Orbit

03/17/94 18:20:15	2:39:16	224								MEQA	Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 7
03/17/94 18:20:18	2:39:19		0.0	122.5	498.4					Equator - A							
03/17/94 18:24:10	2:43:11	235								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/17/94 18:24:13	2:43:14		10.0	122.5	557.9					N10A							
03/17/94 18:28:20	2:47:21	250								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/17/94 18:28:23	2:47:24		20.0	122.6	637.3					N20A							
03/17/94 18:29:20	2:48:21	60									Laser power OFF						
03/17/94 18:32:49	2:51:50	209								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
03/17/94 18:32:52	2:51:53		30.0	122.7	737.7					N30A							
03/17/94 18:37:44	2:56:45	295								N40A	Load CEQ_10U.UMI into SEQT 10; Switch to inertial pointing (ORB_123RW); Load exposure table LUNARZ45N; Select DHU SEQT 10						Initiate oblique viewing
03/17/94 18:37:47	2:56:48		40.0	122.8	860.5					N40A							IR and UV uncompressed
03/17/94 18:43:10	3:02:11	326								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11						Resume compression
03/17/94 18:43:13	3:02:14		50.0	122.9	1006.8					N50A							
03/17/94 18:49:17	3:08:17	367								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12						
03/17/94 18:49:20	3:08:21		60.0	123.1	1177.4					N60A							
03/17/94 18:53:26	3:12:27	249									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19						End oblique viewing - resume nadir pointing
03/17/94 18:56:12	3:15:13	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						Resume HiRes imaging
03/17/94 18:56:16	3:15:17		70.0	123.6	1372.2					N70A							
03/17/94 19:04:07	3:23:07	475								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
03/17/94 19:04:10	3:23:11		80.0	125.2	1589.4					N80A							
03/17/94 19:05:07	3:24:08	60									Load DEQ_10.UMI into SEQT 10						Restore compressed SEQT 10
Err:508																	
03/17/94 19:13:13	3:32:13		89.5	211.6	1824.1					North Pole							
Standard Post Script																	
03/17/94 19:14:10	3:33:11	0									Park filters (DHU SEQT 27)						
03/17/94 19:14:20	3:33:21	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table						Slew to Vega (inertial pointing)
03/17/94 19:14:30	3:33:31		88.6	279.3	1856.1					LDUSK							
03/17/94 19:23:35	3:42:36		80.0	298.8	2069.4					N80D							
03/17/94 19:24:15	3:43:16	595									Perform UVO Imaging (DHU SEQT 29)						Radiometric imaging

Orbit 123 Timeline - Tyne R Orbit

03/17/94 19:24:30	3:43:31	15								Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/17/94 19:24:45	3:43:46	15								Perform NIR imaging (Select DHU SEQT 31)						
03/17/94 19:25:00	3:44:00	15								Perform HiRes Imaging (DHU SEQT 30)						Radiometric imaging
03/17/94 19:25:17	3:44:18	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/17/94 19:31:17	3:50:18	360								Switch to HGA						READY FOR DATA DUMP
																End Post Script
03/17/94 19:32:00	3:51:01									Switch to DHU mode @ 128 kbps						Ground Command
03/17/94 19:34:00	3:53:01									Downlink SSSDR Segment 5						Ground Command
03/17/94 19:35:23	3:54:24		70.0	300.3	2313.7				N70D							
03/17/94 19:48:39	4:07:40		60.0	300.7	2539.9				N60D							
03/17/94 20:03:17	4:22:17		50.0	300.9	2728.8				N50D							
03/17/94 20:10:00	4:29:01									Downlink SSSDR Segment 6						Ground Command
03/17/94 20:19:01	4:38:02		40.0	300.9	2860.7				N40D							
03/17/94 20:35:25	4:54:25		30.0	300.9	2919.7				N30D							
03/17/94 20:39:21	4:58:22		27.6	300.9	2922.0				Aposelene							

Orbit 124 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/17/94 20:39:21	0:00:00		27.6	300.9	2922.0							Aposelene							Downlinking SSSR Segment 6 (orbit 123)
03/17/94 20:44:00	0:04:39												Downlink SSSR Segment 7						Ground Command
03/17/94 20:46:00	0:06:39												Uplink & schedule L124 scripts						Ground Command
03/17/94 20:51:42	0:12:21		20.2	300.9	2899.4							INPM							Enter penumbra
03/17/94 20:51:58	0:12:37		20.0	300.9	2898.5							N20D							
03/17/94 20:52:35	0:13:14		19.6	300.9	2896.1							INUM							Enter umbra
03/17/94 21:08:04	0:28:43		10.0	300.8	2799.6							N10D							
03/17/94 21:23:16	0:43:55		0.0	300.8	2635.5							Equator - D							
03/17/94 21:37:12	0:57:51		-10.0	300.8	2424.6							S10D							
03/17/94 21:39:00	0:59:39												SSDR to IDLE - downlink complete						Ground Command
03/17/94 21:49:42	1:10:21		-20.0	300.8	2186.9							S20D							
03/17/94 21:58:56	1:19:35		-28.3	300.8	1983.1							OUTUM							Exit umbra
03/17/94 21:59:39	1:20:18		-29.0	300.8	1965.9							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/17/94 22:00:36	1:21:15	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/17/94 22:00:45	1:21:24		-30.0	300.8	1940.3							S30D							
03/17/94 22:03:00	1:23:39												Select ST-A						Ground Command ST-B blocked by Moon
03/17/94 22:10:24	1:31:03		-40.0	300.8	1699.0							S40D							
																			Standard Prep2 Script
03/17/94 22:13:02	1:33:41	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/17/94 22:18:02	1:38:41	0											Msg "WRNG: Omni/2k in 1 min.."						
03/17/94 22:18:50	1:39:29		-50.0	301.0	1472.7							S50D							
03/17/94 22:19:02	1:39:41	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/17/94 22:20:02	1:40:41	60											Switch to omni antennas						
03/17/94 22:21:02	1:41:41	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/17/94 22:21:32	1:42:11	30											UV & HR cameras ON						
03/17/94 22:26:13	1:46:52		-60.0	301.2	1267.0							S60D							
03/17/94 22:30:37	1:51:16	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/17/94 22:31:02	1:51:41	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 124 Timeline - Type A Orbit

03/17/94 23:18:41	2:39:20		0.0	119.7	498.8					Equator - A				
03/17/94 23:22:33	2:43:12	236								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			Resume compression
03/17/94 23:22:36	2:43:15		10.0	119.8	558.3					N10A				
03/17/94 23:26:42	2:47:21	249								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/17/94 23:26:46	2:47:25		20.0	119.9	637.7					N20A				
03/17/94 23:27:42	2:48:21	60									Laser power OFF			
03/17/94 23:31:12	2:51:51	210								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/17/94 23:31:15	2:51:54		30.0	119.9	738.2					N30A				
03/17/94 23:36:06	2:56:45	294								N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SDDR Segment 4
03/17/94 23:36:10	2:56:49		40.0	120.1	861.0					N40A				
03/17/94 23:41:33	3:02:12	327								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12			
03/17/94 23:41:36	3:02:15		50.0	120.2	1007.4					N50A				
03/17/94 23:47:40	3:08:19	367								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13			
03/17/94 23:47:43	3:08:22		60.0	120.5	1178.0					N60A				
03/17/94 23:54:36	3:15:15	416								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14			Resume HiRes imaging
03/17/94 23:54:39	3:15:18		70.0	121.0	1372.8					N70A				
03/18/94 00:02:30	3:23:09	474								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15			
03/18/94 00:02:34	3:23:13		80.0	122.6	1590.0					N80A				
03/18/94 00:03:30	3:24:09	60									Load DEQ_07.UMI into SEQT 7			Restore compressed SEQT 7
Err:508														
03/18/94 00:11:37	3:32:16		89.4	208.7	1824.7					North Pole				
Standard Post Script														
03/18/94 00:12:33	3:33:12	0									Park filters (DHU SEQT 27)			
03/18/94 00:12:43	3:33:22	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table			Slew to Vega (inertial pointing)
03/18/94 00:12:54	3:33:33		88.6	275.4	1856.5					LDUSK				
03/18/94 00:21:58	3:42:37		80.0	295.9	2069.9					N80D				
03/18/94 00:22:38	3:43:17	595									Perform UVO Imaging (DHU SEQT 29)			Radiometric imaging
03/18/94 00:22:53	3:43:32	15									Perform LWIR imaging (DHU SEQT 25)			Dark Field imaging starts
03/18/94 00:23:07	3:43:46	15									Perform NIR imaging (Select DHU SEQT 31)			
03/18/94 00:23:22	3:44:01	15									Perform HiRes Imaging (DHU SEQT 30)			Radiometric imaging

Orbit 124 Timeline - Type A Orbit

03/18/94 00:23:40	3:44:19	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)						Slew HGA to Earth
03/18/94 00:29:40	3:50:19	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/18/94 00:33:00	3:53:39									Switch to DHU mode @ 128 kbps						Ground Command
03/18/94 00:33:47	3:54:26		70.0	297.5	2314.0					N70D						
03/18/94 00:34:00	3:54:39															
03/18/94 00:34:00	3:54:39									Downlink SDR Segment 1						Ground Command
03/18/94 00:47:03	4:07:42		60.0	297.9	2540.2					N60D						
03/18/94 01:01:41	4:22:20		50.0	298.1	2728.9					N50D						
03/18/94 01:08:00	4:28:39															
03/18/94 01:08:00	4:28:39									Downlink SDR Segment 2						Ground Command
03/18/94 01:17:25	4:38:04		40.0	298.2	2860.6					N40D						
03/18/94 01:30:00	4:50:39															
03/18/94 01:30:00	4:50:39									DHU CRASH! Start software reload						Ground Command
03/18/94 01:33:49	4:54:28		30.0	298.2	2919.5					N30D						
03/18/94 01:37:43	4:58:22		27.6	298.2	2921.7					Aposelene						

Orbit 125 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/18/94 01:37:43	0:00:00		27.6	298.2	2921.7							Aposelene							Recovering from DHU crash
03/18/94 01:50:00	0:12:17		20.2	298.1	2899.4							INPM							Enter penumbra
03/18/94 01:50:21	0:12:38		20.0	298.1	2898.0							N20D							
03/18/94 01:50:53	0:13:10		19.7	298.1	2896.0							INUM							Enter umbra
03/18/94 02:06:28	0:28:45		10.0	298.1	2799.1							N10D							
03/18/94 02:10:00	0:32:17		-10.0	298.0	2424.0								Select ST-B; Upload LUNAR_D SEQ tables						Ground Command
03/18/94 02:18:23	0:40:40										CAN	AOS							
03/18/94 02:21:39	0:43:56		0.0	298.1	2635.0							Equator - D							
03/18/94 02:24:00	0:46:17		-10.0	298.0	2424.0								Downlink SDDR Segment 3; LWIR camera ON; Take snapshot image with LWIR; LWIR camera OFF; Uplink & schedule L125 scripts; Upload exposure & compression tables						Ground Command
03/18/94 02:35:35	0:57:52		-10.0	298.0	2424.0							S10D							
03/18/94 02:48:05	1:10:22		-20.0	298.0	2186.3							S20D							
03/18/94 02:57:21	1:19:38		-28.3	298.1	1981.3							OUTUM							Exit umbra
03/18/94 02:58:05	1:20:22		-29.0	298.1	1964.3							OUTPM							Exit penumbra
																			Standard Prep1 Script
03/18/94 02:59:01	1:21:18	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/18/94 02:59:07	1:21:24		-30.0	298.1	1939.9							S30D							
03/18/94 03:08:47	1:31:04		-40.0	298.1	1698.7							S40D							
																			Standard Prep2 Script
03/18/94 03:11:23	1:33:40	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/18/94 03:16:23	1:38:40	0											Msg "WRNG: Omni/2k in 1 min.."						
03/18/94 03:17:13	1:39:30		-50.0	298.3	1472.4							S50D							
03/18/94 03:17:23	1:39:40	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SDDR data downlink
03/18/94 03:18:23	1:40:40	60											Switch to omni antennas						
03/18/94 03:19:23	1:41:40	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/18/94 03:19:53	1:42:10	30											UV & HR cameras ON						
03/18/94 03:24:35	1:46:52		-60.0	298.5	1266.8							S60D							

Orbit 125 Timeline - Type B Orbit

03/18/94 03:28:58	1:51:15	545								Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables							Start SSSR in Segment 5
03/18/94 03:29:23	1:51:40	25								Perform NIR imaging (DHU SEQT 31)							Dark Field imaging starts
03/18/94 03:29:38	1:51:55	15								Stop imaging - select ST-A							
03/18/94 03:31:04	1:53:21		-70.0	299.1	1084.7					S70D							
03/18/94 03:31:23	1:53:40	105								Perform LWIR imaging (DHU SEQT 25)							
03/18/94 03:31:38	1:53:55	15								Perform NIR imaging (DHU SEQT 31)							
03/18/94 03:31:53	1:54:10	15															Err:508
03/18/94 03:32:23	1:54:40	30								Laser Power ON							
																	Err:508
03/18/94 03:36:48	1:59:05		-80.0	300.8	926.9					S80D							Err:508
																	Err:508
03/18/94 03:39:53	2:02:10	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ855							
03/18/94 03:40:53	2:03:10	60								Switch to lunar mapping mode (ACSMode=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/18/94 03:41:53	2:04:10	60								MAXS							
03/18/94 03:41:57	2:04:14		-89.4	27.9	793.3					South Pole							
03/18/94 03:42:35	2:04:52		-88.6	92.7	777.7					LDAWN							
03/18/94 03:46:33	2:08:50	280								S80A							
03/18/94 03:46:37	2:08:54		-80.0	113.9	682.8					S80A							
03/18/94 03:50:52	2:13:09	259								S70A							
03/18/94 03:50:55	2:13:12		-70.0	115.6	593.5					S70A							
03/18/94 03:54:54	2:17:11	242								S60A							
03/18/94 03:54:57	2:17:14		-60.0	116.2	524.7					S60A							
03/18/94 03:55:48	2:18:05									PMK							
03/18/94 03:58:43	2:21:00	229								S50A							
03/18/94 03:58:46	2:21:03		-50.0	116.5	475.3					S50A							
03/18/94 04:02:24	2:24:41	221								S40A							
03/18/94 04:02:27	2:24:44		-40.0	116.6	444.4					S40A							
03/18/94 04:06:00	2:28:17	216								S30A							
03/18/94 04:06:04	2:28:21		-30.0	116.8	431.4					S30A							
03/18/94 04:06:54	2:29:11		-27.7	116.8	430.9					Periselene							
03/18/94 04:09:36	2:31:53	216								S20A							
03/18/94 04:09:40	2:31:57		-20.0	116.9	436.1					S20A							
03/18/94 04:13:15	2:35:32	219								S10A							
03/18/94 04:13:18	2:35:35		-10.0	116.9	458.5					S10A							

Orbit 125 Timeline - Type B Orbit

03/18/94 04:17:00	2:39:17	225								MEQA	Load CEQ_07U.UMI into SEQT 7; Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7	SSDR Segment 7 UV and IR uncompressed
03/18/94 04:17:03	2:39:20		0.0	117.0	499.2					Equator - A		
03/18/94 04:20:55	2:43:12	235								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8	Resume compression
03/18/94 04:20:58	2:43:15		10.0	117.1	558.8					N10A		
03/18/94 04:25:05	2:47:22	250								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	
03/18/94 04:25:08	2:47:25		20.0	117.1	638.2					N20A		
03/18/94 04:26:05	2:48:22	60									Laser power OFF	
03/18/94 04:29:34	2:51:51	209								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/18/94 04:29:37	2:51:54		30.0	117.2	738.7					N30A		
03/18/94 04:34:29	2:56:46	295								N40A	Switch to inertial pointing (ORB_125RW); Load exposure table LUNARZ45N; Select DHU SEQT 10	Initiate oblique viewing
03/18/94 04:34:32	2:56:49		40.0	117.3	861.6					N40A		
03/18/94 04:39:56	3:02:13	327								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11	
03/18/94 04:39:59	3:02:16		50.0	117.5	1008.0					N50A		
03/18/94 04:46:03	3:08:20	367								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	
03/18/94 04:46:06	3:08:23		60.0	117.8	1178.6					N60A		
03/18/94 04:50:12	3:12:29	249									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing
03/18/94 04:52:58	3:15:15	166								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	Resume HiRes imaging
03/18/94 04:53:02	3:15:19		70.0	118.3	1373.4					N70A		
03/18/94 05:00:54	3:23:11	476								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/18/94 05:00:57	3:23:14		80.0	120.0	1590.7					N80A		
03/18/94 05:01:54	3:24:11	60									Load DEQ_07.UMI into SEQT 7	Restore compressed SEQT 10
												Err:508
03/18/94 05:10:00	3:32:17		89.4	205.9	1825.3					North Pole		
												Standard Post Script
03/18/94 05:10:57	3:33:14	0									Park filters (DHU SEQT 27)	
03/18/94 05:11:07	3:33:24	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table	Slew to Vega (inertial pointing)
03/18/94 05:11:17	3:33:34		88.6	271.6	1857.0					LDUSK		
03/18/94 05:20:22	3:42:39		80.0	293.0	2070.5					N80D		
03/18/94 05:21:02	3:43:19	595									Perform UVO Imaging (DHU SEQT 29)	Radiometric imaging

Orbit 125 Timeline - Tyne R Orbit

03/18/94 05:21:17	3:43:34	15								Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/18/94 05:21:32	3:43:49	15								Perform NIR imaging (Select DHU SEQT 31)							
03/18/94 05:21:47	3:44:03	15								Perform HiRes Imaging (DHU SEQT 30)							Radiometric imaging
03/18/94 05:22:03	3:44:20	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
03/18/94 05:28:03	3:50:20	360								Switch to HGA							READY FOR DATA DUMP
End Post Script																	
03/18/94 05:30:00	3:52:17									Switch to DHU mode @ 128 kbps							Ground Command
03/18/94 05:32:00	3:54:17									Downlink SSSR Segment 5							Ground Command
03/18/94 05:32:11	3:54:28		70.0	294.7	2314.5					N70D							
03/18/94 05:45:27	4:07:44		60.0	295.1	2540.5					N60D							
03/18/94 05:52:00	4:14:17																
03/18/94 06:00:05	4:22:22		50.0	295.3	2729.1					N50D							
03/18/94 06:01:00	4:23:17																
03/18/94 06:08:00	4:30:17								GDS	LOS							
03/18/94 06:15:49	4:38:06		40.0	295.4	2860.5					N40D							
03/18/94 06:32:13	4:54:30		30.0	295.4	2919.2					N30D							
03/18/94 06:36:05	4:58:22		27.7	295.4	2921.5					Aposelene							

Orbit 126 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/18/94 06:36:05	0:00:00		27.7	295.4	2921.5							Aposelene							Downlinking SSSDR Segment 6 (orbit 125)
03/18/94 06:37:00	0:00:55												Downlink SSSDR Segment 7						Ground Command
03/18/94 06:48:18	0:12:13		20.3	295.4	2899.3							INPM							Enter penumbra
03/18/94 06:48:45	0:12:40		20.0	295.4	2897.6							N20D							
03/18/94 06:49:11	0:13:06		19.7	295.4	2896.0							INUM							Enter umbra
03/18/94 07:04:51	0:28:46		10.0	295.4	2798.6							N10D							
03/18/94 07:20:03	0:43:58		0.0	295.3	2634.4							Equator - D							
03/18/94 07:33:00	0:56:55												DHU CRASH! Start software reload						Ground Command
03/18/94 07:33:58	0:57:53		-10.0	295.3	2423.4							S10D							
03/18/94 07:40:00	1:03:55												LWIR camera ON; Select ST-A; Select ST-B; Take snapshot image with LWIR; Stop imaging; LWIR camera OFF						Ground Command
03/18/94 07:45:00	1:08:55												Upload exposure tables; Select ST-A; Resume downlink SSSDR Segment 7						Ground Command
03/18/94 07:46:28	1:10:23		-20.0	295.3	2185.7							S20D							
03/18/94 07:55:47	1:19:42		-28.4	295.3	1979.5							OUTUM							Exit umbra
03/18/94 07:56:31	1:20:26		-29.1	295.3	1962.5							OUTPM							Exit penumbra
03/18/94 07:57:30	1:21:25		-30.0	295.3	1939.3							S30D							
																			Standard Prep1 Script
03/18/94 07:57:31	1:21:26	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/18/94 08:05:00	1:28:55												SSDR to IDLE - downlink complete						Ground Command
03/18/94 08:07:09	1:31:04		-40.0	295.4	1698.2							S40D							
																			Standard Prep2 Script
03/18/94 08:09:49	1:33:44	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/18/94 08:14:49	1:38:44	0											Msg "WRNG: Omni/2k in 1 min.."						
03/18/94 08:15:35	1:39:30		-50.0	295.6	1472.0							S50D							
03/18/94 08:15:49	1:39:44	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/18/94 08:16:49	1:40:44	60											Switch to omni antennas						

Orbit 126 Timeline - Type A Orbit

03/18/94 08:17:49	1:41:44	60								Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/18/94 08:18:19	1:42:14	30								UV & HR cameras ON						
03/18/94 08:22:57	1:46:52		-60.0	295.8	1266.5					S60D						
03/18/94 08:27:24	1:51:19	545								Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/18/94 08:27:49	1:51:44	25								Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/18/94 08:28:04	1:51:59	15								Stop imaging - select ST-A						
03/18/94 08:29:26	1:53:21		-70.0	296.4	1084.5					S70D						
03/18/94 08:29:49	1:53:44	105								Perform LWIR imaging (DHU SEQT 25)						
03/18/94 08:30:04	1:53:59	15								Perform NIR imaging (DHU SEQT 31)						
03/18/94 08:30:19	1:54:14	15									Err:508					Slew to nadir (inertial pointing)
03/18/94 08:30:49	1:54:44	30								Laser Power ON						
																Err:508
03/18/94 08:35:11	1:59:06		-80.0	298.2	926.7					S80D						Err:508
																Err:508
03/18/94 08:38:19	2:02:13	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/18/94 08:39:19	2:03:14	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)						START MAPPING
03/18/94 08:40:19	2:04:14	60	-89.4	25.2	793.2					South Pole Set SA step rate to LO						
03/18/94 08:40:57	2:04:52		-88.6	88.9	777.6					LDAWN						
03/18/94 08:44:59	2:08:54	280	-80.0	111.0	682.7					S80A Load exposure table LUNARZ75S; Select DHU SEQT 3						
03/18/94 08:49:17	2:13:12	258	-70.0	112.8	593.5					S70A Load exposure table LUNARZ65S; Select DHU SEQT 4						
03/18/94 08:53:19	2:17:14	242	-60.0	113.4	524.8					S60A Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/18/94 08:57:08	2:21:03	229	-50.0	113.7	475.4					S50A Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5						SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/18/94 09:00:49	2:24:44	221	-40.0	113.9	444.5					S40A Load exposure table LUNARZ35S						
03/18/94 09:04:26	2:28:21	217	-30.0	114.0	431.6					S30A Load exposure table LUNARZ25S						
03/18/94 09:05:16	2:29:11		-27.7	114.0	431.1					Periselenes						
03/18/94 09:08:02	2:31:57	216	-20.0	114.1	436.3					S20A Load exposure table LUNARZ15S						
03/18/94 09:11:40	2:35:35	218	-10.0	114.2	458.9					S10A Load exposure table LUNARZ05S; Select DHU SEQT 6						
03/18/94 09:15:25	2:39:20	225	0.0	114.3	499.6					Equator - A Load CEQ_07U.UMI into SEQT 7; Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 3 UV and IR uncompressed

Orbit 126 Timeline - Type A Orbit

03/18/94 09:19:20	2:43:15	235	10.0	114.4	559.2					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								Resume compression
03/18/94 09:23:30	2:47:25	250	20.0	114.4	638.7					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/18/94 09:24:30	2:48:25	60									Laser power OFF								
03/18/94 09:28:00	2:51:55	210	30.0	114.5	739.2					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/18/94 09:32:55	2:56:50	295	40.0	114.6	862.2					N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4
03/18/94 09:38:22	3:02:17	327	50.0	114.8	1008.6					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
03/18/94 09:44:29	3:08:24	367	60.0	115.1	1179.3					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/18/94 09:51:25	3:15:20	416	70.0	115.7	1374.2					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								Resume HiRes imaging
03/18/94 09:59:21	3:23:16	476	80.0	117.5	1591.5					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
03/18/94 10:00:21	3:24:16	60									Load DEQ_07.UMI into SEQT 7								Restore compressed SEQT 7
Err:508																			
03/18/94 10:04:14	3:28:09									MAD	AOS								
03/18/94 10:08:24	3:32:19		89.4	204.0	1826.2						North Pole								
Standard Post Script																			
03/18/94 10:09:24	3:33:19	0									Park filters (DHU SEQT 27)								
03/18/94 10:09:34	3:33:29	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)
03/18/94 10:09:40	3:33:35		88.6	267.8	1857.7						LDUSK								
03/18/94 10:18:45	3:42:40		80.0	290.1	2071.1						N80D								
03/18/94 10:19:29	3:43:24	595									Perform UVO Imaging (DHU SEQT 29)								Radiometric imaging
03/18/94 10:19:44	3:43:39	15									Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/18/94 10:19:59	3:43:54	15									Perform NIR imaging (Select DHU SEQT 31)								
03/18/94 10:20:13	3:44:08	15									Perform HiRes Imaging (DHU SEQT 30)								Radiometric imaging
03/18/94 10:20:30	3:44:25	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
03/18/94 10:26:30	3:50:25	360									Switch to HGA								READY FOR DATA DUMP
End Post Script																			
03/18/94 10:27:00	3:50:55										Switch to DHU mode @ 128 kbps								Ground Command
03/18/94 10:30:35	3:54:30		70.0	291.8	2315.1						N70D								

Orbit 126 Timeline - Type A Orbit

03/18/94 10:31:00	3:54:55										Downlink SDR Segment 1							Ground Command
03/18/94 10:43:51	4:07:46		60.0	292.4	2541.0					N60D								
03/18/94 10:46:17	4:10:12								CAN	LOS								
03/18/94 10:58:29	4:22:24		50.0	292.6	2729.4					N50D								
03/18/94 11:04:00	4:27:55										Downlink SDR Segment 2							Ground Command
03/18/94 11:14:13	4:38:08		40.0	292.7	2860.6					N40D								
03/18/94 11:30:37	4:54:32		30.0	292.7	2919.1					N30D								
03/18/94 11:34:26	4:58:21		27.7	292.7	2921.3					Aposelene								

Orbit 127 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/18/94 11:34:26	0:00:00		27.7	292.7	2921.3							Aposelene							Downlinking SSSR Segment 2 (orbit 126)
03/18/94 11:44:00	0:09:34												Downlink SSSR Segment 3						Ground Command
03/18/94 11:46:37	0:12:11		20.3	292.7	2899.3							INPM							Enter penumbra
03/18/94 11:47:09	0:12:43		20.0	292.7	2897.3							N20D							
03/18/94 11:47:30	0:13:04		19.8	292.7	2896.0							INUM							Enter umbra
03/18/94 12:03:15	0:28:49		10.0	292.6	2798.0							N10D							
03/18/94 12:15:00	0:40:34												Downlink SSSR Segment 4						Ground Command
03/18/94 12:18:26	0:44:00		0.0	292.6	2633.7							Equator - D							
03/18/94 12:32:22	0:57:56		-10.0	292.6	2422.7							S10D							
03/18/94 12:44:51	1:10:25		-20.0	292.6	2185.0							S20D							
03/18/94 12:54:13	1:19:47		-28.4	292.6	1977.5							OUTUM							Exit umbra
03/18/94 12:54:57	1:20:31		-29.1	292.6	1960.5							OUTPM							Exit penumbra
03/18/94 12:55:53	1:21:27		-30.0	292.6	1938.6							S30D							
																			Standard Prep1 Script
03/18/94 12:55:57	1:21:31	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/18/94 13:05:32	1:31:06		-40.0	292.7	1697.5							S40D							
																			Standard Prep2 Script
03/18/94 13:08:11	1:33:45	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/18/94 13:13:11	1:38:45	0											Msg "WRNG: Omni/2k in 1 min.."						
03/18/94 13:13:57	1:39:31		-50.0	292.9	1471.5							S50D							
03/18/94 13:14:11	1:39:45	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSSR data downlink
03/18/94 13:15:11	1:40:45	60											Switch to omni antennas						
03/18/94 13:16:11	1:41:45	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/18/94 13:16:41	1:42:15	30											UV & HR cameras ON						
03/18/94 13:21:19	1:46:53		-60.0	293.2	1266.0							S60D							
03/18/94 13:25:46	1:51:20	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5
03/18/94 13:26:11	1:51:45	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/18/94 13:26:26	1:52:00	15											Stop imaging - select ST-A						
03/18/94 13:27:48	1:53:22		-70.0	293.8	1084.1							S70D							

Orbit 127 Timeline - Type B Orbit

03/18/94 13:28:11	1:53:45	105										Perform LWIR imaging (DHU SEQT 25)		
03/18/94 13:28:26	1:54:00	15										Perform NIR imaging (DHU SEQT 31)		
03/18/94 13:28:41	1:54:15	15											Err:508	Slew to nadir (inertial pointing)
03/18/94 13:29:11	1:54:45	30										Laser Power ON		
Err:508														
03/18/94 13:33:33	1:59:07		-80.0	295.6	926.4							S80D		
Err:508														
03/18/94 13:36:40	2:02:15	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S		
03/18/94 13:37:41	2:03:15	60										Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)		START MAPPING
03/18/94 13:38:41	2:04:15	60	-89.3	23.3	792.9							South Pole Set SA step rate to LO		
03/18/94 13:39:19	2:04:53		-88.5	85.2	777.5							LDAWN		
03/18/94 13:43:21	2:08:55	280	-80.0	108.1	682.6							S80A Load exposure table LUNARZ75S; Select DHU SEQT 17		
03/18/94 13:47:39	2:13:13	258	-70.0	110.0	593.5							S70A Load exposure table LUNARZ65S; Select DHU SEQT 4		
03/18/94 13:51:41	2:17:15	242	-60.0	110.6	524.8							S60A Load exposure table LUNARZ55S; Select DHU SEQT 6		
03/18/94 13:55:30	2:21:04	229	-50.0	110.9	475.5							S50A Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5		SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/18/94 13:59:11	2:24:45	221	-40.0	111.1	444.7							S40A Load exposure table LUNARZ35S		
03/18/94 14:02:48	2:28:22	217	-30.0	111.3	431.8							S30A Load exposure table LUNARZ25S		
03/18/94 14:03:37	2:29:11		-27.7	111.3	431.3							Periselene		
03/18/94 14:06:24	2:31:58	216	-20.0	111.4	436.6							S20A Load exposure table LUNARZ15S		
03/18/94 14:10:02	2:35:36	218	-10.0	111.5	459.1							S10A Load exposure table LUNARZ05S; Select DHU SEQT 6		
03/18/94 14:13:47	2:39:21	225	0.0	111.5	499.9							Equator - A Load CEQ_07U.UMI into SEQT 7; Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7		SSDR Segment 7 UV and IR uncompressed
03/18/94 14:17:43	2:43:17	236	10.0	111.6	559.6							N10A Load exposure table LUNARZ15N; Select DHU SEQT 8		Resume compression
03/18/94 14:21:53	2:47:27	250	20.0	111.7	639.1							N20A Load exposure table LUNARZ25N; Select DHU SEQT 9		
03/18/94 14:22:53	2:48:27	60										Laser power OFF		
03/18/94 14:26:22	2:51:56	209	30.0	111.8	739.8							N30A Load exposure table LUNARZ35N; Select DHU SEQT 10		
03/18/94 14:31:17	2:56:51	295	40.0	111.9	862.7							N40A Switch to inertial pointing (ORB_127RW); Load exposure table LUNARZ45N; Select DHU SEQT 10		Initiate oblique viewing
03/18/94 14:36:44	3:02:18	327										N50A Load exposure table LUNARZ55N; Select DHU SEQT 11		
03/18/94 14:36:45	3:02:19		50.0	112.1	1009.3							N50A		

Orbit 127 Timeline - Type B Orbit

03/18/94 14:42:52	3:08:26	368	60.0	112.4	1180.0					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12						
03/18/94 14:47:01	3:12:35	250									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19						End oblique viewing - resume nadir pointing
03/18/94 14:49:48	3:15:22	166	70.0	113.0	1375.0					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						Resume HiRes imaging
03/18/94 14:57:44	3:23:18	476	80.0	114.9	1592.3					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
03/18/94 14:58:44	3:24:18	60									Load DEQ_07.UMI into SEQT 7						Restore compressed SEQT 10
Err:508																	
03/18/94 15:06:37	3:32:11									PMK	AOS						
03/18/94 15:06:47	3:32:21		89.3	200.8	1826.9						North Pole						
Standard Post Script																	
03/18/94 15:07:47	3:33:21	0									Park filters (DHU SEQT 27)						
03/18/94 15:07:57	3:33:31	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table						Slew to Vega (inertial pointing)
03/18/94 15:08:03	3:33:37		88.5	264.1	1858.4						LDUSK						
03/18/94 15:17:09	3:42:43		80.0	287.2	2071.9						N80D						
03/18/94 15:17:52	3:43:26	595									Perform UVO Imaging (DHU SEQT 29)						Radiometric imaging
03/18/94 15:18:07	3:43:41	15									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/18/94 15:18:22	3:43:56	15									Perform NIR imaging (Select DHU SEQT 31)						
03/18/94 15:18:37	3:44:11	15									Perform HiRes Imaging (DHU SEQT 30)						Radiometric imaging
03/18/94 15:18:53	3:44:27	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/18/94 15:24:53	3:50:27	360									Switch to HGA						READY FOR DATA DUMP
End Post Script																	
03/18/94 15:25:00	3:50:34										Switch to DHU mode @ 128 kbps						Ground Command - time approx
03/18/94 15:28:59	3:54:33		70.0	289.0	2315.8						N70D						
03/18/94 15:30:00	3:55:34										Downlink SSSR Segment 5						Ground Command
03/18/94 15:42:15	4:07:49		60.0	289.6	2541.6						N60D						
03/18/94 15:56:54	4:22:28		50.0	289.8	2729.8						N50D						
03/18/94 16:03:00	4:28:34										Downlink SSSR Segment 6						Ground Command
03/18/94 16:12:38	4:38:12		40.0	289.9	2860.8						N40D						
03/18/94 16:18:00	4:43:34										Update state vector (GNC53_18MAR1600)						Ground Command
03/18/94 16:29:02	4:54:36		30.0	289.9	2919.0						N30D						
03/18/94 16:32:48	4:58:22		27.7	289.9	2921.1						Aposelene						

Orbit 128 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/18/94 16:32:48	0:00:00		27.7	289.9	2921.1							Aposelene							Downlinking SSSDR Segment 6 (orbit 127)
03/18/94 16:37:00	0:04:12		20.4	289.9	2899.2								Downlink SSSDR Segment 7						Ground Command
03/18/94 16:44:56	0:12:08		20.4	289.9	2899.2							INPM							Enter penumbra
03/18/94 16:45:34	0:12:46		20.0	289.9	2896.9							N20D							
03/18/94 16:45:49	0:13:01		19.8	289.9	2895.9							INUM							Enter umbra
03/18/94 17:01:39	0:28:51		10.0	289.9	2797.5							N10D							
03/18/94 17:16:50	0:44:02		0.0	289.9	2633.0							Equator - D							
03/18/94 17:30:45	0:57:57		-10.0	289.9	2421.9							S10D							
03/18/94 17:35:00	1:02:12		20.4	289.9	2899.2								SSDR to IDLE - downlink complete						Ground Command
03/18/94 17:38:00	1:05:12		20.4	289.9	2899.2								Select ST-A						Ground Command ST-B blocked by Moon
03/18/94 17:43:14	1:10:26		-20.0	289.9	2184.1							S20D							
03/18/94 17:52:39	1:19:51		-28.5	289.9	1975.5							OUTUM							Exit umbra
03/18/94 17:53:23	1:20:35		-29.2	289.9	1958.6							OUTPM							Exit penumbra
03/18/94 17:54:15	1:21:27		-30.0	289.9	1937.8							S30D							
Standard Prep1 Script																			
03/18/94 17:54:23	1:21:35	0											NIR camera & cryocooler ON; SA mode to AUTO						
End Prep1 Script																			
03/18/94 18:03:54	1:31:06		-40.0	290.0	1696.8							S40D							
Standard Prep2 Script																			
03/18/94 18:06:33	1:33:45	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
End Prep2 Script																			
Err:508																			
03/18/94 18:11:33	1:38:45	0											Msg "WRNG: Omni/2k in 1 min.."						
03/18/94 18:12:20	1:39:32		-50.0	290.2	1470.8							S50D							
03/18/94 18:12:33	1:39:45	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/18/94 18:13:33	1:40:45	60											Switch to omni antennas						
03/18/94 18:14:33	1:41:45	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/18/94 18:15:03	1:42:15	30											UV & HR cameras ON						
03/18/94 18:19:42	1:46:53		-60.0	290.5	1265.5							S60D							
03/18/94 18:24:08	1:51:20	545											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 1; Load lunar dark exposure tables						Start SSSDR in Segment 1
03/18/94 18:24:33	1:51:45	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/18/94 18:24:48	1:52:00	15											Stop imaging - select ST-A						

Orbit 128 Timeline - Type A Orbit

03/18/94 18:26:10	1:53:22		-70.0	291.1	1083.6				S70D					
03/18/94 18:26:33	1:53:45	105								Perform LWIR imaging (DHU SEQT 25)				
03/18/94 18:26:48	1:54:00	15								Perform NIR imaging (DHU SEQT 31)				
03/18/94 18:27:03	1:54:14	15									Err:508			Slew to nadir (inertial pointing)
03/18/94 18:27:33	1:54:44	30								Laser Power ON				
Err:508														
03/18/94 18:29:15	1:56:26								GDS	AOS				
03/18/94 18:31:55	1:59:07		-80.0	293.0	926.0					S80D				
Err:508														
03/18/94 18:35:02	2:02:14	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/18/94 18:36:03	2:03:14	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)				START MAPPING
03/18/94 18:37:03	2:04:14	60	-89.3	20.0	792.7				South Pole	Set SA step rate to LO				
03/18/94 18:37:40	2:04:52		-88.5	81.5	777.3				LDAWN					
03/18/94 18:41:42	2:08:54		-80.0	105.3	682.4					S80A				
03/18/94 18:41:43	2:08:55	280								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3			
03/18/94 18:46:01	2:13:13	258	-70.0	107.2	593.3					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/18/94 18:50:03	2:17:14	242	-60.0	107.9	524.7					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/18/94 18:53:52	2:21:04	229	-50.0	108.2	475.5					S50A	Record in SDDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/18/94 18:57:33	2:24:45	221	-40.0	108.4	444.7					S40A	Load exposure table LUNARZ35S			
03/18/94 19:01:10	2:28:22	217	-30.0	108.5	431.9					S30A	Load exposure table LUNARZ25S			
03/18/94 19:01:58	2:29:09		-27.8	108.6	431.4				Periselene					
03/18/94 19:04:46	2:31:58	216	-20.0	108.6	436.7					S20A	Load exposure table LUNARZ15S			
03/18/94 19:08:24	2:35:36	218	-10.0	108.7	459.4					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/18/94 19:12:09	2:39:21	225	0.0	108.8	500.2				Equator - A	Record in SDDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3
03/18/94 19:16:05	2:43:16	236	10.0	108.9	560.0					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/18/94 19:20:15	2:47:27	250	20.0	109.0	639.6					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/18/94 19:21:15	2:48:27	60									Laser power OFF			
03/18/94 19:24:44	2:51:56		30.0	109.1	740.3					N30A				
03/18/94 19:24:45	2:51:57	210								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/18/94 19:29:40	2:56:51	295	40.0	109.2	863.3					N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SSDR Segment 4

Orbit 128 Timeline - Type A Orbit

03/18/94 19:35:07	3:02:19	327	50.0	109.4	1009.9				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12								
03/18/94 19:41:14	3:08:25		60.0	109.7	1180.8				N60A									
03/18/94 19:41:15	3:08:27	368							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/18/94 19:48:11	3:15:23	416	70.0	110.4	1375.8				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								Resume HiRes imaging
03/18/94 19:56:07	3:23:19	476	80.0	112.3	1593.2				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
Err:508																		
03/18/94 20:05:11	3:32:23		89.3	198.9	1828.1				North Pole									
Standard Post Script																		
03/18/94 20:06:11	3:33:23	0								Park filters (DHU SEQT 27)								
03/18/94 20:06:21	3:33:33	10								Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table								Slew to Vega (inertial pointing)
03/18/94 20:06:26	3:33:38		88.5	260.5	1859.2				LDUSK									
03/18/94 20:15:33	3:42:45		80.0	284.4	2072.7				N80D									
03/18/94 20:16:16	3:43:28	595								Perform UVO Imaging (DHU SEQT 29)								Radiometric imaging
03/18/94 20:16:31	3:43:43	15								Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/18/94 20:16:46	3:43:57	15								Perform NIR imaging (Select DHU SEQT 31)								
03/18/94 20:17:00	3:44:12	15								Perform HiRes Imaging (DHU SEQT 30)								Radiometric imaging
03/18/94 20:17:17	3:44:29	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)								Slew HGA to Earth
03/18/94 20:23:17	3:50:29	360								Switch to HGA								READY FOR DATA DUMP
End Post Script																		
03/18/94 20:24:00	3:51:12									Switch to DHU mode @ 128 kbps; Downlink SSSR Segment 1								Ground Command
03/18/94 20:27:22	3:54:34		70.0	286.3	2316.6				N70D									
03/18/94 20:40:40	4:07:51		60.0	286.8	2542.3				N60D									
03/18/94 20:55:18	4:22:30		50.0	287.1	2730.3				N50D									
03/18/94 21:02:00	4:29:11									Downlink SSSR Segment 2								Ground Command
03/18/94 21:11:02	4:38:14		40.0	287.2	2861.0				N40D									
03/18/94 21:27:26	4:54:38		30.0	287.2	2918.9				N30D									
03/18/94 21:31:09	4:58:21		27.8	287.2	2921.0				Aposelene									

Orbit 129 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/18/94 21:31:09	0:00:00		27.8	287.2	2921.0							Aposelene							Downlinking SSSDR Segment 2 (orbit 128)
03/18/94 21:40:00	0:08:51												Downlink SSSDR Segment 3						Ground Command
03/18/94 21:43:16	0:12:07		20.4	287.2	2899.2							INPM							Enter penumbra
03/18/94 21:43:58	0:12:49		20.0	287.2	2896.6							N20D							
03/18/94 21:44:08	0:12:59		19.9	287.2	2895.9							INUM							Enter umbra
03/18/94 22:00:00	0:28:51												Downlink SSSDR Segment 4						Ground Command
03/18/94 22:00:04	0:28:55		10.0	287.2	2796.9							N10D							
03/18/94 22:15:14	0:44:05		0.0	287.1	2632.2							Equator - D							
03/18/94 22:17:00	0:45:51												Downlink SSSDR data patches						Ground Command
03/18/94 22:25:00	0:53:51												Uplink & schedule L130 scripts						Ground Command
03/18/94 22:29:09	0:58:00		-10.0	287.1	2421.0							S10D							
03/18/94 22:36:00	1:04:51												SSDR to IDLE - downlink complete						Ground Command
03/18/94 22:41:37	1:10:28		-20.0	287.2	2183.2							S20D							
03/18/94 22:51:06	1:19:57		-28.5	287.2	1973.4							OUTUM							Exit umbra
03/18/94 22:51:49	1:20:40		-29.2	287.2	1956.5							OUTPM							Exit penumbra
03/18/94 22:52:38	1:21:29		-30.0	287.2	1936.9							S30D							
																			Standard Prep1 Script
03/18/94 22:52:49	1:21:40	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/18/94 23:02:17	1:31:08		-40.0	287.3	1696.0							S40D							
																			Standard Prep2 Script
03/18/94 23:04:55	1:33:46	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/18/94 23:09:55	1:38:46	0											Msg "WRNG: Omni/2k in 1 min.."						
03/18/94 23:10:43	1:39:34											S50D							
03/18/94 23:10:55	1:39:46	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop SSSDR data downlink
03/18/94 23:11:55	1:40:46	60											Switch to omni antennas						
03/18/94 23:12:55	1:41:46	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/18/94 23:13:25	1:42:16	30											UV & HR cameras ON						
03/18/94 23:18:04	1:46:55		-60.0	287.8	1264.8							S60D							
03/18/94 23:22:30	1:51:21	545											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 5; Load lunar dark exposure tables						Start SSSDR in Segment 5

Orbit 129 Timeline - Tyne B Orbit

03/18/94 23:22:55	1:51:46	25								Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/18/94 23:23:10	1:52:01	15								Stop imaging - select ST-A					
03/18/94 23:24:32	1:53:23		-70.0	288.4	1083.1				S70D						
03/18/94 23:24:55	1:53:46	105								Perform LWIR imaging (DHU SEQT 25)					
03/18/94 23:25:10	1:54:01	15								Perform NIR imaging (DHU SEQT 31)					
03/18/94 23:25:25	1:54:16	15									Err:508				Slew to nadir (inertial pointing)
03/18/94 23:25:55	1:54:46	30								Laser Power ON					
															Err:508
03/18/94 23:30:17	1:59:08		-80.0	290.4	925.6				S80D						Err:508
															Err:508
03/18/94 23:33:24	2:02:15	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/18/94 23:34:25	2:03:16	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/18/94 23:35:25	2:04:16	60	-89.3	17.6	792.3				South Pole	Set SA step rate to LO					
03/18/94 23:36:02	2:04:53		-88.5	78.0	777.0				LDAWN						
03/18/94 23:40:04	2:08:55	279	-80.0	102.4	682.2				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/18/94 23:41:27	2:10:18							MAD	LOS						
03/18/94 23:44:23	2:13:14	259	-70.0	104.4	593.1				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/18/94 23:48:24	2:17:15	241	-60.0	105.1	524.6				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/18/94 23:52:14	2:21:05	230	-50.0	105.4	475.4				S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/18/94 23:55:55	2:24:46	221	-40.0	105.6	444.7				S40A	Load exposure table LUNARZ35S					
03/18/94 23:59:31	2:28:22	216	-30.0	105.8	432.0				S30A	Load exposure table LUNARZ25S					
03/19/94 00:00:19	2:29:10		-27.8	105.8	431.5				Periselene						
03/19/94 00:03:07	2:31:58	216	-20.0	105.9	436.9				S20A	Load exposure table LUNARZ15S					
03/19/94 00:06:46	2:35:37	219	-10.0	106.0	459.6				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/19/94 00:10:31	2:39:22	225	0.0	106.1	500.5				Equator - A	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 7
03/19/94 00:14:27	2:43:18	236	10.0	106.2	560.3				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/19/94 00:18:37	2:47:28	250	20.0	106.3	640.0				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					
03/19/94 00:19:37	2:48:28	60								Laser power OFF					
03/19/94 00:23:07	2:51:58	210							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					

Orbit 129 Timeline - Type B Orbit

03/19/94 00:28:02	2:56:53	295	40.0	106.5	864.0					N40A	Switch to inertial pointing (ORB_129RW); Load exposure table LUNARZ45N; Select DHU SEQT 10	Initiate oblique viewing
03/19/94 00:33:29	3:02:20	327	50.0	106.7	1010.6					N50A	Load CEQ_11U.UMI into SEQT11; Load exposure table LUNARZ55N; Select DHU SEQT 11	IR and UV Uncompressed
03/19/94 00:39:37	3:08:28	368	60.0	107.0	1181.6					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	Resume compression
03/19/94 00:43:47	3:12:38	250									Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing
03/19/94 00:46:34	3:15:25	167	70.0	107.7	1376.7					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	Resume HiRes imaging
03/19/94 00:54:30	3:23:21	476	80.0	109.7	1594.2					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/19/94 00:55:30	3:24:21	60									Load DEQ_011.UMI into SEQT 11	Restore compressed SEQT 11
Err:508												
03/19/94 01:03:34	3:32:25		89.3	195.8	1828.9					North Pole		
Standard Post Script												
03/19/94 01:04:34	3:33:25	0									Park filters (DHU SEQT 27)	
03/19/94 01:04:44	3:33:35	10									Set SA step rate to HI; Select ST-A; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table	Slew to Vega (inertial pointing)
03/19/94 01:04:50	3:33:41		88.5	256.9	1860.1					LDUSK		
03/19/94 01:13:56	3:42:47		80.0	281.5	2073.6					N80D		
03/19/94 01:14:39	3:43:30	595									Perform UVO Imaging (DHU SEQT 29)	Radiometric imaging
03/19/94 01:14:54	3:43:45	15									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/19/94 01:15:09	3:44:00	15									Perform NIR imaging (Select DHU SEQT 31)	
03/19/94 01:15:24	3:44:15	15									Perform HiRes Imaging (DHU SEQT 30)	Radiometric imaging
03/19/94 01:15:40	3:44:31	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)	Slew HGA to Earth
03/19/94 01:21:40	3:50:31	360									Switch to HGA	READY FOR DATA DUMP
End Post Script												
03/19/94 01:23:00	3:51:51										Switch to DHU mode @ 128 kbps	Ground Command - time approx
03/19/94 01:25:46	3:54:37		70.0	283.5	2317.5					N70D		
03/19/94 01:27:00	3:55:51										Downlink SSSR Segment 5	Ground Command
03/19/94 01:39:04	4:07:55		60.0	284.1	2543.0					N60D		
03/19/94 01:53:43	4:22:34		50.0	284.3	2730.8					N50D		
03/19/94 01:57:00	4:25:51										Downlink SSSR Segment 6	Ground Command

Orbit 129 Timeline - Type B Orbit

03/19/94 02:09:27	4:38:18		40.0	284.4	2861.3						N40D					
03/19/94 02:25:51	4:54:42		30.0	284.4	2918.9						N30D					
03/19/94 02:29:00	4:57:51											Downlink SDR Segment 7				Ground Command
03/19/94 02:29:29	4:58:20		27.8	284.4	2920.9						Aposelene					

Orbit 130 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/19/94 02:29:29	0:00:00		27.8	284.4	2920.9							Aposelene							Downlinking SSSR Segment 7 (orbit 129)
03/19/94 02:41:36	0:12:07		20.5	284.4	2899.2							INPM							Enter penumbra
03/19/94 02:42:23	0:12:54		20.0	284.4	2896.3							N20D							
03/19/94 02:42:28	0:12:59		19.9	284.4	2895.9							INUM							Enter umbra
03/19/94 02:58:28	0:28:59		10.0	284.4	2796.3							N10D							
03/19/94 03:10:36	0:41:07										CAN	AOS							
03/19/94 03:13:38	0:44:09		0.0	284.4	2631.4							Equator - D							
03/19/94 03:21:00	0:51:31												SSDR to IDLE - downlink complete						Ground Command
03/19/94 03:27:33	0:58:04		-10.0	284.4	2420.0							S10D							
03/19/94 03:39:00	1:09:31		20.4	289.9	2899.2								Select ST-A						Ground Command ST-B blocked by Moon
03/19/94 03:40:01	1:10:32		-20.0	284.4	2182.2							S20D							
03/19/94 03:49:32	1:20:03		-28.6	284.5	1971.2							OUTUM							Exit umbra
03/19/94 03:50:15	1:20:46		-29.3	284.5	1954.3							OUTPM							Exit penumbra
03/19/94 03:51:02	1:21:33		-30.0	284.5	1935.9							S30D							
																			Standard Prep1 Script
03/19/94 03:51:16	1:21:47	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/19/94 04:00:40	1:31:11		-40.0	284.6	1695.0							S40D							
																			Standard Prep2 Script
03/19/94 04:03:17	1:33:48	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/19/94 04:08:17	1:38:48	0											Msg "WRNG: Omni/2k in 1 min.."						
03/19/94 04:09:05	1:39:36		-50.0	284.8	1469.2							S50D							
03/19/94 04:09:17	1:39:48	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/19/94 04:10:17	1:40:48	60											Switch to omni antennas						
03/19/94 04:11:17	1:41:48	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/19/94 04:11:47	1:42:18	30											UV & HR cameras ON						
03/19/94 04:16:26	1:46:57		-60.0	285.1	1264.0							S60D							
03/19/94 04:20:52	1:51:23	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/19/94 04:21:17	1:51:48	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/19/94 04:21:32	1:52:03	15											Stop imaging - select ST-A						

Orbit 130 Timeline - Type A Orbit

03/19/94 04:22:54	1:53:25		-70.0	285.8	1082.4				S70D									
03/19/94 04:23:17	1:53:48	105								Perform LWIR imaging (DHU SEQT 25)								
03/19/94 04:23:32	1:54:03	15								Perform NIR imaging (DHU SEQT 31)								
03/19/94 04:23:47	1:54:18	15									Err:508							Slew to nadir (inertial pointing)
03/19/94 04:24:17	1:54:48	30								Laser Power ON								
Err:508																		
03/19/94 04:28:39	1:59:10		-80.0	287.8	925.0				S80D									
Err:508																		
03/19/94 04:31:47	2:02:18	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/19/94 04:32:47	2:03:18	60								Switch to lunar mapping mode; GNC14POSRW (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)								START MAPPING
03/19/94 04:33:46	2:04:17		-89.3	12.5	792.2				South Pole									
03/19/94 04:33:47	2:04:18	60							MAXS	Set SA step rate to LO								
03/19/94 04:34:24	2:04:55		-88.5	74.5	776.6				LDAWN									
03/19/94 04:38:26	2:08:57	279	-80.0	99.6	681.8				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3								
03/19/94 04:42:45	2:13:16	259	-70.0	101.6	592.9				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4								
03/19/94 04:46:46	2:17:17	241	-60.0	102.3	524.4				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/19/94 04:47:45	2:18:16								PMK	LOS								
03/19/94 04:50:35	2:21:06	229	-50.0	102.7	475.3				S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5								SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/19/94 04:54:16	2:24:47	221	-40.0	102.9	444.7				S40A	Load exposure table LUNARZ35S								
03/19/94 04:57:53	2:28:24	217	-30.0	103.0	432.0				S30A	Load exposure table LUNARZ25S								
03/19/94 04:58:40	2:29:11		-27.8	103.1	431.6				Periselene									
03/19/94 05:01:29	2:32:00	216	-20.0	103.2	437.0				S20A	Load exposure table LUNARZ15S								
03/19/94 05:05:08	2:35:39	219	-10.0	103.3	459.8				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/19/94 05:08:53	2:39:24	225	0.0	103.4	500.8				Equator - A	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 3
03/19/94 05:12:48	2:43:19	235	10.0	103.5	560.6				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/19/94 05:16:58	2:47:29		20.0	103.6	640.4				N20A									
03/19/94 05:16:59	2:47:30	251							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/19/94 05:17:59	2:48:30	60								Laser power OFF								
03/19/94 05:21:28	2:51:59		30.0	103.7	741.3				N30A									
03/19/94 05:21:29	2:52:00	210							N30A	Load CEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10								IR and UV uncompressed

Orbit 130 Timeline - Type A Orbit

03/19/94 05:26:24	2:56:55	295	40.0	103.8	864.6					N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4
03/19/94 05:31:52	3:02:23	328	50.0	104.0	1011.3					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	Resume HiRes imaging
03/19/94 05:37:59	3:08:30		60.0	104.3	1182.4					N60A		
03/19/94 05:38:00	3:08:31	368								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13	
03/19/94 05:44:57	3:15:28	417	70.0	105.0	1377.6					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
03/19/94 05:52:53	3:23:24	476	80.0	107.1	1595.2					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
03/19/94 05:53:53	3:24:24	60									Load DEQ_10.UMI into SEQT 10	Restore compressed SEQT 10
Err:508												
03/19/94 06:01:57	3:32:28		89.3	192.7	1829.8					North Pole		
Standard Post Script												
03/19/94 06:02:57	3:33:28	0									Stop Imaging - select ST-A	
03/19/94 06:03:02	3:33:33	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table	
03/19/94 06:03:13	3:33:44		88.5	253.5	1861.1					LDUSK		
03/19/94 06:06:02	3:36:33	180									Park filters (DHU SEQT 27)	
03/19/94 06:06:16	3:36:47	15									Select ST-A;	
03/19/94 06:12:20	3:42:51		80.0	278.7	2074.7					N80D		
03/19/94 06:12:56	3:43:27	400									Perform UVO Imaging (DHU SEQT 29)	Radiometric imaging
03/19/94 06:13:11	3:43:42	15									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/19/94 06:13:26	3:43:57	15									Perform NIR imaging (Select DHU SEQT 31)	
03/19/94 06:13:41	3:44:12	15									Perform HiRes Imaging (DHU SEQT 30)	Radiometric imaging
03/19/94 06:13:59	3:44:30	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/19/94 06:19:59	3:50:30	360									Switch to HGA	READY FOR DATA DUMP
End Post Script												
03/19/94 06:24:10	3:54:41		70.0	280.7	2318.5					N70D		
03/19/94 06:30:00	4:00:31										Switch to DHU mode @ 128 kbps	Ground Command
03/19/94 06:37:00	4:07:31										Downlink SSSR Segment 1	Ground Command
03/19/94 06:37:28	4:07:59		60.0	281.3	2543.9					N60D		
03/19/94 06:52:07	4:22:38		50.0	281.6	2731.5					N50D		
03/19/94 06:57:15	4:27:46									GDS	LOS	
03/19/94 07:07:52	4:38:23		40.0	281.7	2861.7					N40D		

Orbit 130 Timeline - Type A Orbit

03/19/94 07:24:16	4:54:47		30.0	281.7	2919.0						N30D				
03/19/94 07:27:50	4:58:21		27.8	281.7	2920.9						Aposelene				

Orbit 132 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/19/94 12:26:11	0:00:00		27.9	279.0	2920.9							Aposelene							Downlinking SSSR Segment 3 (orbit 130)
03/19/94 12:36:00	0:09:49												Downlink SSSR Segment 4						Ground Command
03/19/94 12:38:17	0:12:06		20.6	279.0	2899.1							INPM							Enter penumbra
03/19/94 12:39:09	0:12:58		20.0	279.0	2895.9							INUM							Enter umbra
03/19/94 12:39:13	0:13:02		20.0	279.0	2895.7							N20D							
03/19/94 12:55:18	0:29:07		10.0	279.0	2795.0							N10D							
03/19/94 13:08:00	0:41:49												SSDR to IDLE - downlink complete						Ground Command
03/19/94 13:10:27	0:44:16		0.0	279.0	2629.6							Equator - D							
03/19/94 13:24:21	0:58:10		-10.0	279.0	2417.9							S10D							
03/19/94 13:36:48	1:10:37		-20.0	279.0	2179.9							S20D							
03/19/94 13:46:25	1:20:14		-28.7	279.0	1966.5							OUTUM							Exit umbra
03/19/94 13:47:08	1:20:57		-29.3	279.0	1949.7							OUTPM							Exit penumbra
03/19/94 13:47:48	1:21:37		-30.0	279.1	1933.6							S30D							
																			Standard Prep1 Script
03/19/94 13:48:08	1:21:57	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/19/94 13:57:26	1:31:15		-40.0	279.2	1692.8							S40D							
																			Standard Prep2 Script
03/19/94 14:00:00	1:33:49	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/19/94 14:01:00	1:34:49												Select ST-A						Ground Command ST-B blocked by Moon
																			Err:508
03/19/94 14:05:00	1:38:49	0											Msg "WRNG: Omni/2k in 1 min.."						
03/19/94 14:05:50	1:39:39		-50.0	279.4	1467.1							S50D							
03/19/94 14:06:00	1:39:49	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/19/94 14:07:00	1:40:49	60											Switch to omni antennas						
03/19/94 14:08:00	1:41:49	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/19/94 14:08:30	1:42:19	30											UV & HR cameras ON						
03/19/94 14:13:11	1:47:00		-60.0	279.7	1262.2							S60D							
03/19/94 14:17:35	1:51:24	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/19/94 14:18:00	1:51:49	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/19/94 14:18:15	1:52:04	15											Stop imaging - select ST-A						

Orbit 132 Timeline - Type A Orbit

03/19/94 14:19:39	1:53:28		-70.0	280.4	1080.8				S70D				
03/19/94 14:20:00	1:53:49	105								Perform LWIR imaging (DHU SEQT 25)			
03/19/94 14:20:15	1:54:04	15								Perform NIR imaging (DHU SEQT 31)			
03/19/94 14:20:30	1:54:19	15									Err:508		Slew to nadir (inertial pointing)
03/19/94 14:21:00	1:54:49	30								Laser Power ON			
Err:508													
03/19/94 14:25:23	1:59:12		-80.0	282.5	923.6				S80D				
Err:508													
03/19/94 14:28:29	2:02:18	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/19/94 14:29:30	2:03:19	60								Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 9)			START MAPPING
03/19/94 14:30:30	2:04:19	60	790.9	790.9	790.9				South Pole	Set SA step rate to LO			
03/19/94 14:31:07	2:04:56		-88.5	67.8	775.5				LDAWN				
03/19/94 14:35:09	2:08:58	279	-80.0	93.9	680.9				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3			
03/19/94 14:39:28	2:13:17	259	-70.0	96.1	592.1				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/19/94 14:43:29	2:17:18	241	-60.0	96.8	523.9				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/19/94 14:47:18	2:21:07	229	-50.0	97.2	474.9				S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/19/94 14:50:59	2:24:48	221	-40.0	97.4	444.5				S40A	Load exposure table LUNARZ35S			
03/19/94 14:54:36	2:28:25	217	-30.0	97.6	432.0				S30A	Load exposure table LUNARZ25S			
03/19/94 14:55:21	2:29:10		-27.9	97.6	431.6				Periselene				
03/19/94 14:58:12	2:32:01	216	-20.0	97.7	437.1				S20A	Load exposure table LUNARZ15S			
03/19/94 15:01:51	2:35:40	219	-10.0	97.8	460.1				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/19/94 15:05:36	2:39:25	225	0.0	97.9	501.2				Equator - A	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
03/19/94 15:09:31	2:43:20	235	10.0	98.0	561.3				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/19/94 15:13:42	2:47:31	251	20.0	98.1	641.3				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/19/94 15:14:42	2:48:31	60								Laser power OFF			
03/19/94 15:18:12	2:52:01	210	30.0	98.2	742.4				N30A	Load CEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10			UV and IR Uncompressed
03/19/94 15:23:08	2:56:57	296	40.0	98.4	865.8				N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SSDR Segment 4 Resume compression
03/19/94 15:28:36	3:02:25	328	50.0	98.6	1012.9				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12			Resume HiRes imaging

Orbit 132 Timeline - Type A Orbit

03/19/94 15:34:44	3:08:33	368	60.0	98.9	1184.2					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13						
03/19/94 15:41:42	3:15:31	418	70.0	99.7	1379.6					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						
03/19/94 15:49:39	3:23:28	477	80.0	101.8	1597.4					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15						
03/19/94 15:50:39	3:24:28	60									Load DEQ_10.UMI into SEQT 10						Restore compressed SEQT 10
Err:508																	
03/19/94 15:54:23	3:28:12									PMK	AOS						
03/19/94 15:58:43	3:32:32		89.2	187.3	1832.2						North Pole						
Standard Post Script																	
03/19/94 15:59:44	3:33:33	0										Stop Imaging - select ST-A					
03/19/94 15:59:49	3:33:38	5										Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table					
03/19/94 15:59:59	3:33:48		88.5	246.8	1863.2						LDUSK						
03/19/94 16:02:49	3:36:38	180										Park opaque filter on HiRes (DHU SEQT 27)					
03/19/94 16:03:04	3:36:53	15										Select ST-A					
03/19/94 16:09:07	3:42:56		80.0	273.0	2076.9						N80D						
03/19/94 16:09:44	3:43:33	400										Perform UVO Imaging (DHU SEQT 29)					Radiometric imaging
03/19/94 16:09:59	3:43:48	15										Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/19/94 16:10:13	3:44:02	15										Perform NIR imaging (Select DHU SEQT 31)					
03/19/94 16:10:28	3:44:17	15										Perform HiRes Imaging (DHU SEQT 30)					Radiometric imaging
03/19/94 16:10:46	3:44:35	18										Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)					Slew HGA to Earth
03/19/94 16:16:46	3:50:35	360										Switch to HGA					READY FOR DATA DUMP
End Post Script																	
03/19/94 16:20:58	3:54:47		70.0	275.1	2320.7						N70D						
03/19/94 16:24:00	3:57:49											Switch to DHU mode @ 128 kbps					Ground Command
03/19/94 16:26:00	3:59:49											Downlink SSSR Segment 1					Ground Command
03/19/94 16:34:17	4:08:06		60.0	275.8	2545.9						N60D						
03/19/94 16:48:57	4:22:46		50.0	276.1	2733.0						N50D						
03/19/94 16:57:00	4:30:49											Downlink SSSR Segment 2					Ground Command
03/19/94 17:04:42	4:38:31		40.0	276.2	2862.6						N40D						
03/19/94 17:21:06	4:54:55		30.0	276.2	2919.2						N30D						
03/19/94 17:24:31	4:58:20		27.9	276.2	2920.9						Aposelene						

Orbit 133 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/19/94 17:24:31	0:00:00		27.9	276.2	2920.9							Aposelene							Downlinking SSSDR Segment 2 (orbit 132)
03/19/94 17:30:00	0:05:29												Downlink SSSDR Segment 3						Ground Command
03/19/94 17:36:38	0:12:07		20.6	276.2	2899.1							INPM							Enter penumbra
03/19/94 17:37:30	0:12:59		20.1	276.2	2895.9							INUM							Enter umbra
03/19/94 17:37:38	0:13:07		20.0	276.2	2895.4							N20D							
03/19/94 17:41:00	0:16:29												Uplink & schedule L133 scripts						Ground Command
03/19/94 17:53:43	0:29:12		10.0	276.2	2794.4							N10D							
03/19/94 18:01:00	0:36:29												Downlink SSSDR Segment 4						Ground Command
03/19/94 18:08:52	0:44:21		0.0	276.2	2628.7							Equator - D							
03/19/94 18:21:00	0:56:29												SSDR to IDLE - downlink complete						Ground Command
03/19/94 18:22:45	0:58:14		-10.0	276.2	2416.8							S10D							
03/19/94 18:35:12	1:10:41		-20.0	276.3	2178.8							S20D							
03/19/94 18:44:51	1:20:20		-28.7	276.3	1964.1							OUTUM							Exit umbra
03/19/94 18:45:34	1:21:03		-29.4	276.3	1947.3							OUTPM							Exit penumbra
03/19/94 18:46:12	1:21:41		-30.0	276.3	1932.4							S30D							
																			Standard Prep1 Script
03/19/94 18:46:34	1:22:03	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/19/94 18:55:49	1:31:18		-40.0	276.4	1691.7							S40D							
																			Standard Prep2 Script
03/19/94 18:58:22	1:33:51	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/19/94 19:03:22	1:38:51	0											Msg "WRNG: Omni/2k in 1 min.."						
03/19/94 19:04:13	1:39:42		-50.0	276.6	1466.1							S50D							
03/19/94 19:04:22	1:39:51	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/19/94 19:05:22	1:40:51	60											Switch to omni antennas						
03/19/94 19:06:22	1:41:51	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/19/94 19:06:52	1:42:21	30											UV & HR cameras ON						
03/19/94 19:11:33	1:47:02		-60.0	277.0	1261.2							S60D							
03/19/94 19:15:57	1:51:26	545											Initialize filters (DHU SEQT 28); Record in SSSDR Segment 5; Load lunar dark exposure tables						Start SSSDR in Segment 5
03/19/94 19:16:22	1:51:51	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 133 Timeline - Type B Orbit

03/19/94 19:16:37	1:52:06	15										Stop imaging - select ST-A					
03/19/94 19:18:01	1:53:30		-70.0	277.7	1079.9					S70D							
03/19/94 19:18:22	1:53:51	105										Perform LWIR imaging (DHU SEQT 25)					
03/19/94 19:18:37	1:54:06	15										Perform NIR imaging (DHU SEQT 31)					
03/19/94 19:18:52	1:54:21	15											Err:508				Slew to nadir (inertial pointing)
03/19/94 19:18:54	1:54:23									GDS	AOS						
03/19/94 19:19:22	1:54:51	30										Laser Power ON					
																	Err:508
03/19/94 19:23:45	1:59:14		-80.0	279.9	922.8					S80D							Err:508
																	Err:508
03/19/94 19:26:51	2:02:20	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/19/94 19:27:52	2:03:20	60										Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/19/94 19:28:52	2:04:21	60	-89.2	6.0	790.2					South Pole		Set SA step rate to LO					
03/19/94 19:29:29	2:04:58		-88.5	64.6	774.9					LDAWN							
03/19/94 19:33:31	2:09:00	279	-80.0	91.1	680.4					S80A		Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/19/94 19:37:49	2:13:18	258	-70.0	93.3	591.7					S70A		Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/19/94 19:41:50	2:17:19	241	-60.0	94.1	523.6					S60A		Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/19/94 19:45:39	2:21:08	229	-50.0	94.4	474.7					S50A		Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/19/94 19:49:20	2:24:49	221	-40.0	94.7	444.3					S40A		Load exposure table LUNARZ35S					
03/19/94 19:52:57	2:28:26	217	-30.0	94.8	431.9					S30A		Load exposure table LUNARZ25S					
03/19/94 19:53:41	2:29:10		-28.0	94.9	431.5					Periselene							
03/19/94 19:56:33	2:32:02	216	-20.0	95.0	437.2					S20A		Load exposure table LUNARZ15S					
03/19/94 20:00:12	2:35:41	219	-10.0	95.1	460.2					S10A		Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/19/94 20:03:57	2:39:26	225	0.0	95.2	501.4					Equator - A		Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 7
03/19/94 20:07:53	2:43:22	236	10.0	95.3	561.6					N10A		Load CEQ_8U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8					UV and IR uncompressed
03/19/94 20:12:03	2:47:32	250	20.0	95.4	641.7					N20A		Load exposure table LUNARZ25N; Select DHU SEQT 9					Resume compression
03/19/94 20:13:03	2:48:32	60										Laser power OFF					
03/19/94 20:16:34	2:52:03	211	30.0	95.5	742.9					N30A		Load exposure table LUNARZ35N; Select DHU SEQT 10					
03/19/94 20:21:29	2:56:58	295	40.0	95.7	866.5					N40A		Switch to inertial pointing (ORB_133RW); Load exposure table LUNARZ45N; Select DHU SEQT 10					Initiate oblique viewing

Orbit 133 Timeline - Type B Orbit

03/19/94 20:26:58	3:02:27	329	50.0	95.9	1013.6				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11					Resume HiRes imaging
03/19/94 20:33:06	3:08:35	368	60.0	96.2	1185.0				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12					
03/19/94 20:37:16	3:12:45	251								Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19					End oblique viewing - resume nadir pointing
03/19/94 20:40:04	3:15:33	167	70.0	97.0	1380.6				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20					
03/19/94 20:48:02	3:23:31	478	80.0	99.1	1598.6				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21					
03/19/94 20:49:02	3:24:31	60								Load DEQ_08.UMI into SEQT 8					Restore compressed SEQT 8
Err:508															
03/19/94 20:57:07	3:32:36		89.2	185.3	1833.6				North Pole						
Standard Post Script															
03/19/94 20:58:07	3:33:36	0								Stop Imaging - select ST-A					
03/19/94 20:58:12	3:33:41	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table					
03/19/94 20:58:22	3:33:51		88.5	243.6	1864.4				LDUSK						
03/19/94 21:01:12	3:36:41	180								Park opaque filter on HiRes (DHU SEQT 27)					
03/19/94 21:01:27	3:36:55	15								Select ST-A					
03/19/94 21:07:30	3:42:59		80.0	270.2	2078.1				N80D						
03/19/94 21:08:06	3:43:35	400								Perform UVO Imaging (DHU SEQT 29)					Radiometric imaging
03/19/94 21:08:21	3:43:50	15								Perform LWIR imaging (DHU SEQT 25)					Dark Field imaging starts
03/19/94 21:08:36	3:44:05	15								Perform NIR imaging (Select DHU SEQT 31)					
03/19/94 21:08:51	3:44:20	15								Perform HiRes Imaging (DHU SEQT 30)					Radiometric imaging
03/19/94 21:09:09	3:44:38	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)					Slew HGA to Earth
03/19/94 21:15:09	3:50:38	360								Switch to HGA					READY FOR DATA DUMP
End Post Script															
03/19/94 21:16:00	3:51:29									Switch to DHU mode @ 128 kbps					Ground Command
03/19/94 21:19:22	3:54:51		70.0	272.4	2321.9				N70D						
03/19/94 21:24:00	3:59:29									Downlink SDR Segment 5					Ground Command
03/19/94 21:32:41	4:08:10		60.0	273.0	2546.9				N60D						
03/19/94 21:47:21	4:22:50		50.0	273.3	2733.9				N50D						
03/19/94 21:51:00	4:26:29									Downlink SDR Segment 6					Ground Command
03/19/94 22:03:07	4:38:36		40.0	273.4	2863.1				N40D						
03/19/94 22:19:31	4:55:00		30.0	273.5	2919.3				N30D						

Orbit 133 Timeline - Type B Orbit

03/19/94 22:22:51	4:58:20		28.0	273.5	2920.9						Aposelene									

Orbit 134 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/19/94 22:22:51	0:00:00		28.0	273.5	2920.9							Aposelene							Downlinking SSDR Segment 6 (orbit 133)
03/19/94 22:24:00	0:01:09												Downlink SSDR Segment 7						Ground Command
03/19/94 22:28:00	0:05:09												Uplink & schedule L134 scripts						Ground Command
03/19/94 22:34:59	0:12:08		20.6	273.5	2899.1							INPM							Enter penumbra
03/19/94 22:35:51	0:12:59		20.1	273.5	2895.9							INUM							Enter umbra
03/19/94 22:36:03	0:13:12		20.0	273.5	2895.1							N20D							
03/19/94 22:52:08	0:29:17		10.0	273.5	2793.7							N10D							
03/19/94 23:07:17	0:44:26		0.0	273.5	2627.8							Equator - D							
03/19/94 23:21:09	0:58:18		-10.0	273.5	2415.7							S10D							
03/19/94 23:24:00	1:01:09												SSDR to IDLE - downlink complete						Ground Command
03/19/94 23:33:36	1:10:45		-20.0	273.5	2177.5							S20D							
03/19/94 23:43:18	1:20:27		-28.8	273.6	1961.7							OUTUM							Exit umbra
03/19/94 23:44:00	1:21:09		-29.4	273.6	1945.0							OUTPM							Exit penumbra
03/19/94 23:44:35	1:21:44		-30.0	273.6	1931.1							S30D							
																			Standard Prep1 Script
03/19/94 23:45:00	1:22:09	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/19/94 23:54:12	1:31:20		-40.0	273.7	1690.4							S40D							
																			Standard Prep2 Script
03/19/94 23:56:43	1:33:52	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/19/94 23:59:00	1:36:09												Select ST-A						Ground Command ST-B blocked by Moon
																			Err:508
03/20/94 00:01:43	1:38:52	0											Msg "WRNG: Omni/2k in 1 min.."						
03/20/94 00:02:35	1:39:43		-50.0	273.9	1464.9							S50D							
03/20/94 00:02:43	1:39:52	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/20/94 00:03:43	1:40:52	60											Switch to omni antennas						
03/20/94 00:04:43	1:41:52	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/20/94 00:05:13	1:42:22	30											UV & HR cameras ON						
03/20/94 00:09:56	1:47:04		-60.0	274.3	1260.2							S60D							
03/20/94 00:14:18	1:51:27	545											Initialize filters (DHU SEQT 28); Record in SSDR Segment 1; Load lunar dark exposure tables						Start SSDR in Segment 1
03/20/94 00:14:43	1:51:52	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 134 Timeline - Type A Orbit

03/20/94 00:14:58	1:52:07	15								Stop imaging - select ST-A									
03/20/94 00:16:23	1:53:31		-70.0	275.0	1079.0				S70D										
03/20/94 00:16:43	1:53:52	105								Perform LWIR imaging (DHU SEQT 25)									
03/20/94 00:16:58	1:54:07	15								Perform NIR imaging (DHU SEQT 31)									
03/20/94 00:17:13	1:54:22	15									Err:508								Slew to nadir (inertial pointing)
03/20/94 00:17:43	1:54:52	30								Laser Power ON									
Err:508																			
03/20/94 00:22:07	1:59:16		-80.0	277.2	922.0				S80D										
Err:508																			
03/20/94 00:25:13	2:02:21	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S									
03/20/94 00:26:13	2:03:22	60								Switch to lunar mapping mode (ACSMmode=LunarMapping); Start Imaging (DHU SEQT 9)									START MAPPING
03/20/94 00:27:13	2:04:22	60	-89.2	1.6	789.8				South Pole	Set SA step rate to LO									
03/20/94 00:27:51	2:05:00		-88.5	61.4	774.3				LDAWN										
03/20/94 00:31:41	2:08:50							MAD	LOS										
03/20/94 00:31:52	2:09:01	279	-80.0	88.3	679.9				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3									
03/20/94 00:36:11	2:13:20	259	-70.0	90.5	591.3				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4									
03/20/94 00:40:12	2:17:21	241	-60.0	91.3	523.2				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6									
03/20/94 00:44:01	2:21:10	229	-50.0	91.7	474.4				S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5									SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/20/94 00:47:42	2:24:51	221	-40.0	91.9	444.2				S40A	Load exposure table LUNARZ35S									
03/20/94 00:51:18	2:28:26	216	-30.0	92.1	431.8				S30A	Load exposure table LUNARZ25S									
03/20/94 00:52:01	2:29:09		-28.0	92.1	431.5				Periselene										
03/20/94 00:54:54	2:32:03	216	-20.0	92.2	437.2				S20A	Load exposure table LUNARZ15S									
03/20/94 00:58:33	2:35:42	219	-10.0	92.3	460.3				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6									
03/20/94 01:02:18	2:39:27	225	0.0	92.4	501.6				Equator - A	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7									SSDR Segment 3
03/20/94 01:06:14	2:43:23	236	10.0	92.5	561.9				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8									
03/20/94 01:10:25	2:47:34	251	20.0	92.7	642.1				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9									
03/20/94 01:11:25	2:48:34	60								Laser power OFF									
03/20/94 01:14:55	2:52:04	210	30.0	92.8	743.4				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10									
03/20/94 01:19:51	2:56:59	296	40.0	92.9	867.1				N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11									SSDR Segment 4
03/20/94 01:25:19	3:02:27	328	50.0	93.2	1014.4				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12									Resume HiRes imaging

Last Update: 02/01/2021 21:22:24
By:tcs

Orbit 134
Actual Timeline

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Orbit 134 Timeline - Type A Orbit

03/20/94 01:31:28	3:08:37	369	60.0	93.5	1185.9					N60A	Load CEQ_19U.UMI into SEQT 19; Load exposure table LUNARZ65N; Select DHU SEQT 19						UV and IR uncompressed
03/20/94 01:38:26	3:15:35	418	70.0	94.3	1381.6					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14						Resume compression
03/20/94 01:46:23	3:23:31	477								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15						
03/20/94 01:46:24	3:23:33		80.0	96.5	1599.7					N80A							
03/20/94 01:47:23	3:24:32	60									Load DEQ_19.UMI into SEQT 19						Restore compressed SEQT 19
Err:508																	
03/20/94 01:55:29	3:32:37		89.2	181.3	1834.4					North Pole							
Standard Post Script																	
03/20/94 01:56:30	3:33:39	0									Stop Imaging - select ST-A						
03/20/94 01:56:35	3:33:44	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table						
03/20/94 01:56:45	3:33:54		88.5	240.5	1865.6					LDUSK							
03/20/94 01:59:35	3:36:44	180									Park opaque filter on HiRes (DHU SEQT 27)						
03/20/94 01:59:50	3:36:58	15									Select ST-A						
03/20/94 02:05:53	3:43:01		80.0	267.4	2079.4					N80D							
03/20/94 02:06:30	3:43:38	400									Perform UVO Imaging (DHU SEQT 29)						Radiometric imaging
03/20/94 02:06:44	3:43:53	15									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/20/94 02:06:59	3:44:08	15									Perform NIR imaging (Select DHU SEQT 31)						
03/20/94 02:07:14	3:44:23	15									Perform HiRes Imaging (DHU SEQT 30)						Radiometric imaging
03/20/94 02:07:32	3:44:41	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)						Slew HGA to Earth
03/20/94 02:13:32	3:50:41	360									Switch to HGA						READY FOR DATA DUMP
End Post Script																	
03/20/94 02:14:00	3:51:09										Switch to DHU mode @ 128 kbps						Ground Command
03/20/94 02:17:46	3:54:55		70.0	269.6	2323.1					N70D							
03/20/94 02:21:00	3:58:09										Downlink SSSDR Segment 1						Ground Command
03/20/94 02:31:05	4:08:14		60.0	270.3	2548.0					N60D							
03/20/94 02:45:46	4:22:55		50.0	270.6	2734.7					N50D							
03/20/94 02:57:00	4:34:09										Downlink SSSDR Segment 2; Uplink & schedule L135 scripts						Ground Command
03/20/94 03:01:32	4:38:41		40.0	270.7	2863.7					N40D							
03/20/94 03:17:57	4:55:06		30.0	270.8	2919.4					N30D							

Orbit 134 Timeline - Type A Orbit

03/20/94	03:21:11	4:58:19	28.0	270.8	2921.0				Aposelene				
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Orbit 135 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/20/94 03:21:11	0:00:00		28.0	270.8	2921.0							Aposelene							Downlinking SSSR Segment 2 (orbit 134)
03/20/94 03:29:00	0:07:49		20.7	270.8	2899.1								Downlink SSSR Segment 3						Ground Command
03/20/94 03:33:21	0:12:10		20.7	270.8	2899.1							INPM							Enter penumbra
03/20/94 03:34:13	0:13:02		20.2	270.8	2895.8							INUM							Enter umbra
03/20/94 03:34:28	0:13:17		20.0	270.8	2894.8							N20D							
03/20/94 03:50:33	0:29:22		10.0	270.8	2793.1							N10D							
03/20/94 03:54:00	0:32:49		20.7	270.8	2899.1								Downlink SSSR Segment 4						Ground Command
03/20/94 04:00:43	0:39:32										CAN	AOS							
03/20/94 04:05:41	0:44:30		0.0	270.8	2626.8							Equator - D							
03/20/94 04:15:00	0:53:49		20.7	270.8	2899.1								Update state vector (GNC53_20MAR0400)						Ground Command - time approx
03/20/94 04:19:33	0:58:22		-10.0	270.8	2414.5							S10D							
03/20/94 04:20:00	0:58:49		20.7	270.8	2899.1								SSDR to IDLE - downlink complete						Ground Command
03/20/94 04:32:00	1:10:49		-20.0	270.8	2176.2							S20D							
03/20/94 04:41:44	1:20:33		-28.8	270.9	1959.3							OUTUM							Exit umbra
03/20/94 04:42:26	1:21:15		-29.5	270.9	1942.6							OUTPM							Exit penumbra
03/20/94 04:42:58	1:21:47		-30.0	270.9	1929.8							S30D							
																			Standard Prep1 Script
03/20/94 04:43:26	1:22:15	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/20/94 04:52:35	1:31:24		-40.0	271.0	1689.2							S40D							
																			Standard Prep2 Script
03/20/94 04:55:06	1:33:55	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/20/94 05:00:06	1:38:55	0											Msg "WRNG: Omni/2k in 1 min.."						
03/20/94 05:00:58	1:39:47		-50.0	271.2	1463.8							S50D							
03/20/94 05:01:06	1:39:55	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/20/94 05:02:06	1:40:55	60											Switch to omni antennas						
03/20/94 05:03:06	1:41:55	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/20/94 05:03:36	1:42:25	30											UV & HR cameras ON						
03/20/94 05:08:18	1:47:07		-60.0	271.6	1259.1							S60D							
03/20/94 05:12:41	1:51:30	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load lunar dark exposure tables						Start SSSR in Segment 5

Orbit 135 Timeline - Type B Orbit

03/20/94 05:13:06	1:51:55	25								Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/20/94 05:13:21	1:52:10	15								Stop imaging - select ST-A					
03/20/94 05:14:45	1:53:34		-70.0	272.3	1078.1				S70D						
03/20/94 05:15:06	1:53:55	105								Perform LWIR imaging (DHU SEQT 25)					
03/20/94 05:15:21	1:54:10	15								Perform NIR imaging (DHU SEQT 31)					
03/20/94 05:15:36	1:54:25	15									Err:508				Slew to nadir (inertial pointing)
03/20/94 05:16:06	1:54:55	30								Laser Power ON					
															Err:508
03/20/94 05:20:28	1:59:17		-80.0	274.6	921.2				S80D						Err:508
															Err:508
03/20/94 05:23:36	2:02:25	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/20/94 05:24:36	2:03:25	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/20/94 05:25:36	2:04:25	60	-89.2	1.2	788.7				South Pole	Set SA step rate to LO					
03/20/94 05:26:12	2:05:01		-88.5	58.4	773.6				LDAWN						
03/20/94 05:30:14	2:09:03	278	-80.0	85.5	679.3				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/20/94 05:34:32	2:13:21	258	-70.0	87.8	590.8				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/20/94 05:37:25	2:16:14							PMK	LOS						
03/20/94 05:38:33	2:17:22	241	-60.0	88.6	522.8				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/20/94 05:42:22	2:21:11	229	-50.0	88.9	474.2				S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/20/94 05:46:03	2:24:52	221	-40.0	89.2	444.0				S40A	Load exposure table LUNARZ35S					
03/20/94 05:49:39	2:28:28	216	-30.0	89.4	431.7				S30A	Load exposure table LUNARZ25S					
03/20/94 05:50:21	2:29:10		-28.1	89.4	431.4				Periselene						
03/20/94 05:53:15	2:32:04	216	-20.0	89.5	437.2				S20A	Load exposure table LUNARZ15S					
03/20/94 05:56:54	2:35:43	219	-10.0	89.6	460.4				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/20/94 06:00:39	2:39:28	225							MEQA	Load CEQ_7U.UMI into SEQT 7; Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 7 IR and UV uncompressed
03/20/94 06:00:40	2:39:29		0.0	89.7	501.8				Equator - A						
03/20/94 06:04:35	2:43:24	236	10.0	89.8	562.2				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					Resume compression
03/20/94 06:08:46	2:47:35	251	20.0	89.9	642.5				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					
03/20/94 06:09:46	2:48:35	60								Laser power OFF					
03/20/94 06:13:16	2:52:05	210	30.0	90.1	743.9				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					

Orbit 135 Timeline - Type B Orbit

03/20/94 06:18:12	2:57:01	296							N40A	Switch to inertial pointing (GC12i13501); Load exposure table LUNARZ45N; Select DHU SEQT 10	Initiate oblique viewing
03/20/94 06:18:13	2:57:02		40.0	90.2	867.8				N40A		
03/20/94 06:23:41	3:02:30	329	50.0	90.4	1015.2				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11	Resume HiRes imaging
03/20/94 06:29:50	3:08:39	369	60.0	90.8	1186.8				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	
03/20/94 06:34:01	3:12:50	251								Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing
03/20/94 06:36:49	3:15:38	168	70.0	91.6	1382.6				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	
03/20/94 06:44:47	3:23:36	478	80.0	93.8	1600.9				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/20/94 06:45:47	3:24:36	60								Load DEQ_07.UMI into SEQT 7	Restore compressed SEQT 7
Err:508											
03/20/94 06:53:53	3:32:42		89.2	179.4	1835.9				North Pole		
Standard Post Script											
03/20/94 06:54:52	3:33:41	0								Stop Imaging - select ST-A	
03/20/94 06:54:57	3:33:46	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table	Slew to Vega
03/20/94 06:55:08	3:33:57		88.5	237.5	1866.8				LDUSK		
03/20/94 06:57:57	3:36:46	180								Park opaque filter on HiRes (DHU SEQT 27)	
03/20/94 06:58:12	3:37:01	15								Select ST-A	
03/20/94 07:04:17	3:43:06		80.0	264.7	2080.7				N80D		
03/20/94 07:04:52	3:43:41	400								Perform UVO Imaging (DHU SEQT 29)	Radiometric imaging
03/20/94 07:05:06	3:43:55	15								Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/20/94 07:05:21	3:44:10	15								Perform NIR imaging (Select DHU SEQT 31)	
03/20/94 07:05:36	3:44:25	15								Perform HiRes Imaging (DHU SEQT 30)	Radiometric imaging
03/20/94 07:05:54	3:44:43	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/20/94 07:11:54	3:50:43	360								Switch to HGA	READY FOR DATA DUMP;
End Post Script											
03/20/94 07:12:00	3:50:49									Switch to DHU mode @ 128 kbps; Ranging B ON; Ranging A OFF	Ground Command
03/20/94 07:16:10	3:54:59		70.0	266.9	2324.4				N70D		

Orbit 135 Timeline - Type B Orbit

03/20/94 07:22:00	4:00:49													Downlink SSSR Segment 5	Ground Command
03/20/94 07:29:30	4:08:19		60.0	267.5	2549.2					N60D					
03/20/94 07:44:11	4:23:00		50.0	267.8	2735.6					N50D					
03/20/94 07:47:42	4:26:31								GDS	LOS					
03/20/94 07:50:00	4:28:49													Downlink SSSR Segment 6	Ground Command
03/20/94 07:56:00	4:34:49													Uplink & schedule L136 scripts	Ground Command
03/20/94 07:59:57	4:38:46		40.0	268.0	2864.2					N40D					
03/20/94 08:16:22	4:55:11		30.0	268.0	2919.6					N30D					
03/20/94 08:19:31	4:58:20		28.1	268.0	2921.1					Aposelene					

Orbit 136 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/20/94 08:19:31	0:00:00		28.1	268.0	2921.1							Aposelene							Downlinking SSSR Segment 6 (orbit 135)
03/20/94 08:28:00	0:08:29												Downlink SSSR Segment 7						Ground Command
03/20/94 08:31:43	0:12:12		20.7	268.0	2899.0							INPM							Enter penumbra
03/20/94 08:32:34	0:13:03		20.2	268.0	2895.8							INUM							Enter umbra
03/20/94 08:32:53	0:13:22		20.0	268.0	2894.6							N20D							
03/20/94 08:48:58	0:29:27		10.0	268.0	2792.4							N10D							
03/20/94 08:50:00	0:30:29												Ranging B OFF						Ground Command
03/20/94 09:03:00	0:43:29												SSDR to IDLE - downlink stopped						Ground Command - stopped due to ground comm problem
03/20/94 09:04:06	0:44:35		0.0	268.0	2625.8							Equator - D							
03/20/94 09:17:58	0:58:27		-10.0	268.1	2413.3							S10D							
03/20/94 09:30:23	1:10:52		-20.0	268.1	2174.9							S20D							
03/20/94 09:40:10	1:20:39		-28.8	268.1	1956.9							OUTUM							Exit umbra
03/20/94 09:40:52	1:21:21		-29.5	268.2	1940.2							OUTPM							Exit penumbra
03/20/94 09:41:22	1:21:51		-30.0	268.2	1928.5							S30D							
																			Standard Prep1 Script
03/20/94 09:41:52	1:22:21	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/20/94 09:50:58	1:31:27		-40.0	268.3	1687.9							S40D							
																			Standard Prep2 Script
03/20/94 09:53:26	1:33:55	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/20/94 09:58:26	1:38:55	0											Msg "WRNG: Omni/2k in 1 min.."						
03/20/94 09:59:21	1:39:50		-50.0	268.5	1462.5							S50D							
03/20/94 09:59:26	1:39:55	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/20/94 10:00:26	1:40:55	60											Switch to omni antennas						
03/20/94 10:01:26	1:41:55	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/20/94 10:01:56	1:42:25	30											UV & HR cameras ON						
03/20/94 10:06:40	1:47:09		-60.0	268.8	1258.1							S60D							
03/20/94 10:11:01	1:51:30	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load lunar dark exposure tables						Start SSSR in Segment 1
03/20/94 10:11:26	1:51:55	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/20/94 10:11:41	1:52:10	15											Stop imaging - select ST-A						

Orbit 136 Timeline - Type A Orbit

03/20/94 10:13:07	1:53:36		-70.0	269.6	1077.1				S70D										
03/20/94 10:13:26	1:53:55	105																	Perform LWIR imaging (DHU SEQT 25)
03/20/94 10:13:41	1:54:10	15																	Perform NIR imaging (DHU SEQT 31)
03/20/94 10:13:56	1:54:25	15																	Err:508
03/20/94 10:14:26	1:54:55	30																	Slew to nadir (inertial pointing)
Err:508																			
03/20/94 10:18:50	1:59:19		-80.0	271.9	920.3				S80D										Err:508
Err:508																			
03/20/94 10:21:55	2:02:25	0																	Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S
03/20/94 10:22:56	2:03:25	60																	Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)
03/20/94 10:23:56	2:04:25	60							MAXS										START MAPPING
03/20/94 10:23:57	2:04:26		-89.2	358.5	787.9				South Pole										
03/20/94 10:24:34	2:05:03		-88.5	55.4	772.9				LDAWN										
03/20/94 10:28:35	2:09:04	279	-80.0	82.8	678.7				S80A										Load exposure table LUNARZ75S; Select DHU SEQT 3
03/20/94 10:32:53	2:13:22	258	-70.0	85.0	590.3				S70A										Load exposure table LUNARZ65S; Select DHU SEQT 4
03/20/94 10:36:54	2:17:23	241	-60.0	85.8	522.4				S60A										Load exposure table LUNARZ55S; Select DHU SEQT 6
03/20/94 10:40:43	2:21:12	229	-50.0	86.2	473.9				S50A										Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5
03/20/94 10:44:24	2:24:53	221	-40.0	86.5	443.8				S40A										SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/20/94 10:48:00	2:28:29	216	-30.0	86.6	431.6				S30A										Load exposure table LUNARZ35S
03/20/94 10:48:41	2:29:10		-28.1	86.7	431.3				Periselene										Load exposure table LUNARZ25S
03/20/94 10:51:36	2:32:05	216	-20.0	86.8	437.2				S20A										Load exposure table LUNARZ15S
03/20/94 10:55:15	2:35:44	219	-10.0	86.9	460.5				S10A										Load exposure table LUNARZ05S; Select DHU SEQT 6
03/20/94 10:59:01	2:39:30	226	0.0	87.0	502.0				Equator - A										Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7
03/20/94 11:02:56	2:43:25	235	10.0	87.1	562.5				N10A										SSDR Segment 3
03/20/94 11:07:07	2:47:36	251	20.0	87.2	642.9				N20A										Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8
03/20/94 11:08:07	2:48:36	60																	IR and UV uncompressed
03/20/94 11:11:38	2:52:07	211	30.0	87.3	744.5				N30A										Load exposure table LUNARZ25N; Select DHU SEQT 9
03/20/94 11:16:34	2:57:03	296	40.0	87.5	868.4				N40A										Resume compression
03/20/94 11:22:03	3:02:32	329	50.0	87.7	1016.0				N50A										Laser power OFF
																			Load exposure table LUNARZ35N; Select DHU SEQT 10
																			Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11
																			SSDR Segment 4
																			Load exposure table LUNARZ55N; Select DHU SEQT 12
																			Resume HiRes imaging

Orbit 136 Timeline - Type A Orbit

03/20/94 11:28:12	3:08:41	369	60.0	88.1	1187.8				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13								
03/20/94 11:35:11	3:15:40	419	70.0	88.8	1383.7				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14								
03/20/94 11:43:09	3:23:38	478	80.0	91.1	1602.1				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15								
03/20/94 11:43:15	3:23:44								MAD	AOS								
03/20/94 11:44:09	3:24:38	60									Load DEQ_08.UMI into SEQT 8							Restore compressed SEQT 8
Err:508																		
03/20/94 11:52:15	3:32:44		89.2	176.1	1837.0				North Pole									
Standard Post Script																		
03/20/94 11:53:15	3:33:44	0									Stop Imaging - select ST-A							
03/20/94 11:53:20	3:33:49	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load dark images exposure table							
03/20/94 11:53:30	3:33:59		88.5	234.5	1868.0				LDUSK									
03/20/94 11:56:20	3:36:49	180									Park opaque filter on HiRes (DHU SEQT 27)							
03/20/94 11:56:35	3:37:04	15									Select ST-A							
03/20/94 12:02:40	3:43:09		80.0	261.9	2082.0				N80D									
03/20/94 12:03:15	3:43:44	400									Perform UVO Imaging (DHU SEQT 29)							Radiometric imaging
03/20/94 12:03:29	3:43:59	15									Perform LWIR imaging (DHU SEQT 25)							Dark Field imaging starts
03/20/94 12:03:44	3:44:13	15									Perform NIR imaging (Select DHU SEQT 31)							
03/20/94 12:03:59	3:44:28	15									Perform HiRes Imaging (DHU SEQT 30)							Radiometric imaging
03/20/94 12:04:17	3:44:46	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)							Slew HGA to Earth
03/20/94 12:10:17	3:50:46	360									Switch to HGA							READY FOR DATA DUMP
End Post Script																		
03/20/94 12:12:00	3:52:29										Switch to DHU mode @ 128 kbps							Ground Command - time approx
03/20/94 12:14:33	3:55:02		70.0	264.1	2325.7				N70D									
03/20/94 12:17:00	3:57:29										Resume downlink SSSR Segment 7 (orbit 135)							Ground Command
03/20/94 12:26:19	4:06:48								LOS	CAN								
03/20/94 12:27:54	4:08:23		60.0	264.8	2550.3					N60D								
03/20/94 12:42:36	4:23:05		50.0	265.1	2736.6					N50D								
03/20/94 12:45:00	4:25:29										Downlink SSSR Segment 1							Ground Command
03/20/94 12:58:22	4:38:51		40.0	265.2	2864.8					N40D								
03/20/94 13:01:00	4:41:29										Uplink ST exposure tables (EXPDAY5)							Ground Command

Orbit 136 Timeline - Type A Orbit

03/20/94 13:14:47	4:55:16		30.0	265.3	2919.7						N30D						
03/20/94 13:16:00	4:56:29											Downlink SDR Segment 2					Ground Command
03/20/94 13:17:51	4:58:20		28.1	265.3	2921.1						Aposelene						

Orbit 137 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/20/94 13:17:51	0:00:00		28.1	265.3	2921.1							Aposelene							Downlinking SSSR Segment 2 (orbit 136)
03/20/94 13:30:05	0:12:14		20.8	265.3	2899.0							INPM							Enter penumbra
03/20/94 13:30:56	0:13:05		20.2	265.3	2895.7							INUM							Enter umbra
03/20/94 13:31:19	0:13:28		20.0	265.3	2894.3							N20D							
03/20/94 13:47:23	0:29:32		10.0	265.3	2791.7							N10D							
03/20/94 13:54:00	0:36:09												Downlink SSSR Segment 3						Ground Command
03/20/94 14:02:30	0:44:39		0.0	265.3	2624.8							Equator - D							
03/20/94 14:16:22	0:58:31		-10.0	265.3	2412.1							S10D							
03/20/94 14:28:47	1:10:56		-20.0	265.4	2173.6							S20D							
03/20/94 14:31:00	1:13:09												Downlink SSSR Segment 4						Ground Command
03/20/94 14:38:36	1:20:45		-28.9	265.4	1954.5							OUTUM							Exit umbra
03/20/94 14:39:18	1:21:27		-29.6	265.4	1937.8							OUTPM							Exit penumbra
03/20/94 14:39:45	1:21:54		-30.0	265.4	1927.2							S30D							
																			Standard Prep1 Script
03/20/94 14:40:18	1:22:27	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/20/94 14:49:21	1:31:30		-40.0	265.6	1686.6							S40D							
03/20/94 14:50:00	1:32:09												Downlink SSSR data patches						Ground Command
																			Standard Prep2 Script
03/20/94 14:51:48	1:33:57	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/20/94 14:54:00	1:36:09												SSDR to IDLE - downlink complete						Ground Command
																			Err:508
03/20/94 14:56:48	1:38:57	0											Msg "WRNG: Omni/2k in 1 min.."						
03/20/94 14:57:43	1:39:52		-50.0	265.8	1461.3							S50D							
03/20/94 14:57:48	1:39:57	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/20/94 14:58:48	1:40:57	60											Switch to omni antennas						
03/20/94 14:59:48	1:41:57	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/20/94 15:00:18	1:42:27	30											UV & HR cameras ON						
03/20/94 15:05:02	1:47:11		-60.0	266.1	1257.0							S60D							
03/20/94 15:09:23	1:51:32	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/20/94 15:09:48	1:51:57	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Last Update: 02/01/2021 21:22:25
By:tcs

Orbit 137
Actual Timeline

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Orbit 137 Timeline - Type B Orbit

03/20/94 15:10:06	1:52:15	18												Stop imaging - select ST-A			
03/20/94 15:11:18	1:53:27	72												Perform UV0 imaging (DHU SEQT 29)			Also image with both Star Trackers
03/20/94 15:11:29	1:53:38		-70.0	266.9	1076.1					S70D							
03/20/94 15:11:33	1:53:42	15												Perform HR imaging (DHU SEQT 30)			Also image with both Star Trackers
03/20/94 15:11:48	1:53:57	15												Perform LWIR imaging (DHU SEQT 25)			
03/20/94 15:12:03	1:54:12	15												Perform NIR imaging (DHU SEQT 31)			
03/20/94 15:12:18	1:54:27	15													Err:508		Slew to nadir (inertial pointing)
03/20/94 15:12:48	1:54:57	30												Laser Power ON			
																	Err:508
03/20/94 15:17:12	1:59:21		-80.0	269.1	919.5					S80D							Err:508
																	Err:508
03/20/94 15:20:17	2:02:26	0												Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/20/94 15:21:18	2:03:27	60												Switch to lunar mapping mode (ACSMode=LunarMapping); Start imaging (DHU SEQT 16)			START MAPPING
03/20/94 15:22:18	2:04:27	60	-89.2	354.5	787.4					South Pole				Set SA step rate to LO			
03/20/94 15:22:55	2:05:04		-88.5	52.5	772.2					LDAWN							
03/20/94 15:26:56	2:09:05	278								S80A				Load exposure table LUNARZ75S; Select DHU SEQT 17			
03/20/94 15:31:14	2:13:23	258	-70.0	82.3	589.8					S70A				Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/20/94 15:35:15	2:17:24	241	-60.0	83.1	522.1					S60A				Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/20/94 15:39:04	2:21:13	229	-50.0	83.5	473.6					S50A				Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/20/94 15:42:45	2:24:54	221	-40.0	83.7	443.6					S40A				Load exposure table LUNARZ35S			
03/20/94 15:46:21	2:28:30	216	-30.0	83.9	431.5					S30A				Load exposure table LUNARZ25S			
03/20/94 15:47:01	2:29:10		-28.2	83.9	431.3					Periselene							
03/20/94 15:49:57	2:32:06	216	-20.0	84.0	437.2					S20A				Load exposure table LUNARZ15S			
03/20/94 15:53:36	2:35:45	219	-10.0	84.2	460.6					S10A				Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/20/94 15:57:22	2:39:31	226	0.0	84.3	502.2					Equator - A				Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 7
03/20/94 16:01:17	2:43:26	235								N10A				Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/20/94 16:01:18	2:43:27		10.0	84.4	562.8					N10A							
03/20/94 16:05:28	2:47:37	251	20.0	84.5	643.4					N20A				Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/20/94 16:06:28	2:48:37	60												Laser power OFF			
03/20/94 16:09:59	2:52:08	211	30.0	84.6	745.0					N30A				Load exposure table LUNARZ35N; Select DHU SEQT 10			

Orbit 137 Timeline - Type B Orbit

03/20/94 16:14:55	2:57:04	296	40.0	84.8	869.1					N40A	Switch to inertial pointing (ORB_137RW); Load exposure table LUNARZ45N; Select DHU SEQT 10	Initiate oblique viewing
03/20/94 16:20:24	3:02:33	329	50.0	85.0	1016.8					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11	Resume HiRes imaging
03/20/94 16:26:34	3:08:43	370	60.0	85.4	1188.7					N60A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ65N; Select DHU SEQT 12	UV and IR Uncompressed
03/20/94 16:30:45	3:12:54	251									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing Resume compression
03/20/94 16:33:33	3:15:42	168	70.0	86.1	1384.8					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	
03/20/94 16:41:32	3:23:41	479	80.0	88.4	1603.3					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/20/94 16:42:32	3:24:41	60									Load DEQ_12.UMI into SEQT 12	Restore compressed SEQT 12
Err:508												
03/20/94 16:47:16	3:29:25									PMK	AOS	
03/20/94 16:50:38	3:32:47		89.2	174.1	1838.6						North Pole	
Standard Post Script												
03/20/94 16:51:38	3:33:47	0									Stop Imaging - select ST-A	
03/20/94 16:51:43	3:33:52	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega
03/20/94 16:51:53	3:34:02		88.5	231.7	1869.3					LDUSK		
03/20/94 16:54:43	3:36:52	180									Park opaque filter on HiRes (DHU SEQT 27)	
03/20/94 16:54:58	3:37:07	15									Select ST-A	
03/20/94 17:01:03	3:43:12		80.0	259.2	2083.3					N80D		
03/20/94 17:01:38	3:43:47	400									Perform UVO Imaging (DHU SEQT 29)	Also image with both star trackers
03/20/94 17:01:53	3:44:02	15									Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/20/94 17:01:58	3:44:07	5									Perform NIR imaging (Select DHU SEQT 31)	
03/20/94 17:02:10	3:44:19	12									Load exposure table LUNIRDKS1	
03/20/94 17:02:22	3:44:31	12									Load exposure table LUNIRDKS2	
03/20/94 17:02:34	3:44:43	12									Perform HiRes Imaging (DHU SEQT 30)	Also image with both star trackers
03/20/94 17:02:52	3:45:01	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/20/94 17:08:52	3:51:01	360									Switch to HGA	READY FOR DATA DUMP
End Post Script												

Orbit 137 Timeline - Type B Orbit

03/20/94 17:10:00	3:52:09															Switch to DHU mode @ 128 kbps							Ground Command
03/20/94 17:11:00	3:53:09															Downlink SDR Segment 5							Ground Command
03/20/94 17:12:57	3:55:06		70.0	261.4	2327.0										N70D								
03/20/94 17:26:18	4:08:27		60.0	262.1	2551.5										N60D								
03/20/94 17:41:00	4:23:09		50.0	262.4	2737.5										N50D								
03/20/94 17:45:00	4:27:09															Downlink SDR Segment 6							Ground Command
03/20/94 17:56:47	4:38:56		40.0	262.5	2865.4										N40D								
03/20/94 18:13:12	4:55:21		30.0	262.6	2919.9										N30D								
03/20/94 18:16:11	4:58:20		28.2	262.6	2921.2										Aposelene								

Orbit 138 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/20/94 18:16:11	0:00:00		28.2	262.6	2921.2							Aposelene							Downlinking SSSR Segment 6 (orbit 137)
03/20/94 18:18:00	0:01:49												Downlink SSSR Segment 7; Uplink & schedule L138 scripts						Ground Command
03/20/94 18:28:27	0:12:16		20.8	262.6	2898.9							INPM							Enter penumbra
03/20/94 18:29:18	0:13:07		20.3	262.6	2895.7							INUM							Enter umbra
03/20/94 18:29:44	0:13:33		20.0	262.6	2894.0							N20D							
03/20/94 18:45:48	0:29:37		10.0	262.6	2791.0							N10D							
03/20/94 19:00:55	0:44:44		0.0	262.6	2623.8							Equator - D							
03/20/94 19:11:00	0:54:49												SSDR to IDLE - downlink complete						Ground Command
03/20/94 19:14:46	0:58:35		-10.0	262.6	2410.9							S10D							
03/20/94 19:27:11	1:11:00		-20.0	262.6	2172.3							S20D							
03/20/94 19:37:02	1:20:51		-28.9	262.7	1952.1							OUTUM							Exit umbra
03/20/94 19:37:44	1:21:33		-29.6	262.7	1935.4							OUTPM							Exit penumbra
03/20/94 19:38:08	1:21:57		-30.0	262.7	1925.8							S30D							
																			Standard Prep1 Script
03/20/94 19:38:44	1:22:33	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/20/94 19:47:44	1:31:33		-40.0	262.8	1685.3							S40D							
																			Standard Prep2 Script
03/20/94 19:50:09	1:33:58	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/20/94 19:55:09	1:38:58	0											Msg "WRNG: Omni/2k in 1 min.."						
03/20/94 19:56:06	1:39:55		-50.0	263.0	1460.1							S50D							
03/20/94 19:56:09	1:39:58	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/20/94 19:57:09	1:40:58	60											Switch to omni antennas						
03/20/94 19:58:09	1:41:58	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/20/94 19:58:39	1:42:28	30											UV & HR cameras ON						
03/20/94 20:03:24	1:47:13		-60.0	263.4	1255.8							S60D							
03/20/94 20:07:44	1:51:33	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
03/20/94 20:08:09	1:51:58	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/20/94 20:08:27	1:52:16	18											Stop imaging - select ST-A						
03/20/94 20:09:34	1:53:23										AOS	GDS							

Orbit 138 Timeline - Type A Orbit

03/20/94 20:09:39	1:53:28	72									Perform UV0 imaging (DHU SEQT 29)					Also image with both Star Trackers
03/20/94 20:09:51	1:53:40		-70.0	264.1	1075.1					S70D						
03/20/94 20:09:54	1:53:43	15									Perform HR imaging (DHU SEQT 30)					Also image with both Star Trackers
03/20/94 20:10:09	1:53:58	15									Perform LWIR imaging (DHU SEQT 25)					
03/20/94 20:10:24	1:54:13	15									Perform NIR imaging (DHU SEQT 31)					
03/20/94 20:10:39	1:54:28	15										Err:508				Slew to nadir (inertial pointing)
03/20/94 20:11:09	1:54:58	30									Laser Power ON					
																Err:508
03/20/94 20:15:33	1:59:22		-80.0	266.4	918.6					S80D						Err:508
																Err:508
03/20/94 20:18:39	2:02:28	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/20/94 20:19:39	2:03:28	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)					START MAPPING
03/20/94 20:20:39	2:04:28	60	-89.2	351.1	786.8					South Pole	Set SA step rate to LO					
03/20/94 20:21:16	2:05:05		-88.5	49.7	771.5					LDAWN						
03/20/94 20:25:18	2:09:07	279	-80.0	77.3	677.5					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3					
03/20/94 20:29:35	2:13:24	257								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/20/94 20:29:36	2:13:25		-70.0	79.6	589.3					S70A						
03/20/94 20:33:36	2:17:25	241	-60.0	80.3	521.7					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/20/94 20:37:25	2:21:14	229	-50.0	80.7	473.3					S50A	Record in SDDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/20/94 20:41:06	2:24:55	221	-40.0	81.0	443.4					S40A	Load exposure table LUNARZ35S					
03/20/94 20:44:42	2:28:31	216	-30.0	81.2	431.5					S30A	Load exposure table LUNARZ25S					
03/20/94 20:45:20	2:29:09		-28.3	81.2	431.2					Periselene						
03/20/94 20:48:18	2:32:07	216	-20.0	81.3	437.2					S20A	Load exposure table LUNARZ15S					
03/20/94 20:51:57	2:35:46	219	-10.0	81.4	460.7					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/20/94 20:55:42	2:39:31	225								MEQA	Record in SDDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 3
03/20/94 20:55:43	2:39:32		0.0	81.5	502.5					Equator - A						
03/20/94 20:59:38	2:43:27	236								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/20/94 20:59:39	2:43:28		10.0	81.6	563.2					N10A						
03/20/94 21:03:49	2:47:38	251	20.0	81.7	643.8					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					
03/20/94 21:04:49	2:48:38	60									Laser power OFF					
03/20/94 21:08:20	2:52:09	211	30.0	81.9	745.6					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10					

Orbit 138 Timeline - Type A Orbit

03/20/94 21:13:17	2:57:06	297	40.0	82.0	869.8				N40A	Record in SSSR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11				SSDR Segment 4
03/20/94 21:18:46	3:02:35	329	50.0	82.3	1017.6				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12				Resume HiRes imaging
03/20/94 21:24:55	3:08:44	369							N60A	Load CEQ_19U.UMI into SEQT 19; Load exposure table LUNARZ65N; Select DHU SEQT 19				UV and IR Uncompressed
03/20/94 21:24:56	3:08:45		60.0	82.6	1189.7				N60A					
03/20/94 21:31:55	3:15:44	420	70.0	83.4	1385.9				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14				Resume compression
03/20/94 21:39:54	3:23:43	479	80.0	85.7	1604.6				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15				
03/20/94 21:40:54	3:24:43	60								Load DEQ_19.UMI into SEQT 19				Restore compressed SEQT 19
Err:508														
03/20/94 21:49:01	3:32:50		89.2	170.9	1839.7				North Pole					
Standard Post Script														
03/20/94 21:50:01	3:33:50	0								Stop Imaging - select ST-A				
03/20/94 21:50:06	3:33:55	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)				Slew to Vega
03/20/94 21:50:16	3:34:05		88.5	228.9	1870.6				LDUSK					
03/20/94 21:53:06	3:36:55	180								Park opaque filter on HiRes (DHU SEQT 27)				
03/20/94 21:53:21	3:37:10	15								Select ST-A				
03/20/94 21:59:27	3:43:16		80.0	256.4	2084.7				N80D					
03/20/94 22:00:00	3:43:49	400								Perform UVO Imaging (DHU SEQT 29)				Also image with both star trackers
03/20/94 22:00:15	3:44:04	15								Perform LWIR imaging (DHU SEQT 25)				Dark Field imaging starts
03/20/94 22:00:20	3:44:09	5								Perform NIR imaging (Select DHU SEQT 31)				
03/20/94 22:00:32	3:44:21	12								Load exposure table LUNIRDKS1				
03/20/94 22:00:45	3:44:34	12								Load exposure table LUNIRDKS2				
03/20/94 22:00:57	3:44:46	12								Perform HiRes Imaging (DHU SEQT 30)				Also image with both star trackers
03/20/94 22:01:15	3:45:04	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)				Slew HGA to Earth
03/20/94 22:07:15	3:51:04	360								Switch to HGA				READY FOR DATA DUMP
End Post Script														
03/20/94 22:09:00	3:52:49									Switch to DHU mode @ 128 kbps				Ground Command
03/20/94 22:13:00	3:56:49									Downlink SSSR Segment 1				Ground Command
03/20/94 22:11:21	3:55:10		70.0	258.6	2328.3				N70D					

Orbit 138 Timeline - Type A Orbit

03/20/94 22:24:43	4:08:32		60.0	259.3	2552.7					N60D						
03/20/94 22:39:25	4:23:14		50.0	259.6	2738.4					N50D						
03/20/94 22:51:00	4:34:49										Downlink SDR Segment 2					Ground Command
03/20/94 22:55:12	4:39:01		40.0	259.8	2866.0					N40D						
03/20/94 23:11:38	4:55:27		30.0	259.8	2920.0					N30D						
03/20/94 23:14:30	4:58:19		28.3	259.8	2921.3					Aposelene						

Orbit 139 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/20/94 23:14:30	0:00:00		28.3	259.8	2921.3							Aposelene							Downlinking SSSDR Segment 2 (orbit 138)
03/20/94 23:26:49	0:12:19		20.8	259.8	2898.8							INPM							Enter penumbra
03/20/94 23:27:00	0:12:30												Downlink SSSDR Segment 3						Ground Command
03/20/94 23:27:41	0:13:11		20.3	259.8	2895.6							INUM							Enter umbra
03/20/94 23:28:09	0:13:39		20.0	259.8	2893.7							N20D							
03/20/94 23:44:13	0:29:43		10.0	259.8	2790.3							N10D							
03/20/94 23:49:00	0:34:30												Downlink SSSDR Segment 4						Ground Command
03/20/94 23:59:20	0:44:50		0.0	259.8	2622.7							Equator - D							
03/21/94 00:03:00	0:48:30												Uplink & schedule L139ALT scripts						Ground Command
03/21/94 00:13:10	0:58:40		-10.0	259.9	2409.6							S10D							
03/21/94 00:19:00	1:04:30												SSDR to IDLE - downlink complete						Ground Command
03/21/94 00:25:35	1:11:05		-20.0	259.9	2170.9							S20D							
03/21/94 00:35:28	1:20:58		-29.0	260.0	1949.7							OUTUM							Exit umbra
03/21/94 00:36:10	1:21:40		-29.6	260.0	1933.1							OUTPM							Exit penumbra
03/21/94 00:36:32	1:22:02		-30.0	260.0	1924.4							S30D							
																			LM Prep1_139 Script
03/21/94 00:37:10	1:22:40	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed; NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
																			Err:508
03/21/94 00:38:20	1:23:50	0											Msg "WRNG: Omni/2k in 1 min.."						
03/21/94 00:39:20	1:24:50	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/21/94 00:40:20	1:25:50	60											Switch to omni antennas						
03/21/94 00:41:20	1:26:50	60											UV & HR cameras ON; Initialize filters (DHU SEQT 28); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX) Load IEQ_30CD.UMI into SEQT30						Start SSSDR in Segment 1
03/21/94 00:41:30	1:27:00	10											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/21/94 00:46:06	1:31:36		-40.0	260.1	1683.9							S40D							
03/21/94 00:46:30	1:32:00	300											Perform UV & HR imaging (DHU SEQT 30)						
03/21/94 00:54:28	1:39:58		-50.0	260.3	1458.8							S50D							
03/21/94 01:01:47	1:47:17		-60.0	260.7	1254.7							S60D							
03/21/94 01:04:30	1:50:00	1080											Stop imaging - select ST-A						

Orbit 139 Timeline - Tyne B Orbit

03/21/94 01:06:06	1:51:36	96								Load IEQ_30.UMI into SEQT30 Record in SDR Segment 5								SSDR Segment 5
03/21/94 01:06:31	1:52:01	25								Perform NIR imaging (DHU SEQT 31)								Dark Field imaging starts
03/21/94 01:06:49	1:52:19	18								Stop imaging - select ST-A								
03/21/94 01:08:01	1:53:31	72								Perform UV0 imaging (DHU SEQT 29)								Also image with both Star Trackers
03/21/94 01:08:12	1:53:42		-70.0	261.4	1074.1				S70D									
03/21/94 01:08:16	1:53:46	15								Perform HR imaging (DHU SEQT 30)								Also image with both Star Trackers
03/21/94 01:08:31	1:54:01	15								Perform LWIR imaging (DHU SEQT 25)								
03/21/94 01:08:46	1:54:16	15								Perform NIR imaging (DHU SEQT 31)								
03/21/94 01:09:01	1:54:31	15																Err:508
03/21/94 01:09:31	1:55:01	30								Laser Power ON								Slew to nadir (inertial pointing)
																		Err:508
03/21/94 01:13:55	1:59:25		-80.0	263.7	917.8				S80D									Err:508
																		Err:508
03/21/94 01:17:01	2:02:31	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/21/94 01:18:01	2:03:31	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)								START MAPPING
03/21/94 01:18:26	2:03:56							MAD	LOS									
03/21/94 01:19:01	2:04:31	60	-89.2	349.3	785.9				South Pole	Set SA step rate to LO								
03/21/94 01:19:38	2:05:08		-88.5	47.0	770.8				LDAWN									
03/21/94 01:23:39	2:09:09	278	-80.0	74.6	676.8				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17								
03/21/94 01:27:57	2:13:27	258	-70.0	76.8	588.8				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4								
03/21/94 01:31:57	2:17:27	240	-60.0	77.6	521.3				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/21/94 01:35:46	2:21:16	229	-50.0	78.0	473.0				S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5								SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/21/94 01:39:27	2:24:57	221	-40.0	78.3	443.2				S40A	Load exposure table LUNARZ35S								
03/21/94 01:43:03	2:28:33	216	-30.0	78.4	431.4				S30A	Load exposure table LUNARZ25S								
03/21/94 01:43:40	2:29:10		-28.3	78.5	431.1				Periselene									
03/21/94 01:46:39	2:32:09	216	-20.0	78.6	437.2				S20A	Load exposure table LUNARZ15S								
03/21/94 01:50:18	2:35:48	219	-10.0	78.7	460.8				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/21/94 01:54:03	2:39:33	225							MEQA	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 7
03/21/94 01:54:04	2:39:34		0.0	78.8	502.7				Equator - A									
03/21/94 01:57:59	2:43:29	236							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/21/94 01:58:00	2:43:30		10.0	78.9	563.5				N10A									

Orbit 139 Timeline - Type B Orbit

03/21/94 02:02:10	2:47:40	251							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/21/94 02:02:11	2:47:41		20.0	79.0	644.3				N20A									
03/21/94 02:03:10	2:48:40	60								Laser power OFF								
03/21/94 02:06:41	2:52:11	211	30.0	79.1	746.2				N30A	Load CEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N Select DHU SEQT 10								UV and IR uncompressed
03/21/94 02:11:38	2:57:08	297	40.0	79.3	870.5				N40A	Switch to inertial pointing (ORB_139RW); Load exposure table LUNARZ45N; Select DHU SEQT 10								Initiate oblique viewing
03/21/94 02:17:07	3:02:37	329							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11								Resume HiRes imaging Resume compression
03/21/94 02:17:08	3:02:38		50.0	79.5	1018.5				N50A									
03/21/94 02:23:17	3:08:47	370	60.0	79.9	1190.7				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12								
03/21/94 02:27:29	3:12:59	252								Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19								End oblique viewing - resume nadir pointing
03/21/94 02:30:17	3:15:47	168	70.0	80.7	1387.1				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20								
03/21/94 02:38:17	3:23:47	480	80.0	82.9	1605.8				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21								
03/21/94 02:39:17	3:24:47	60								Load DEQ_10.UMI into SEQT 10								Restore compressed SEQT 10
Err:508																		
03/21/94 02:47:24	3:32:54		89.2	168.3	1841.1				North Pole									
Standard Post Script																		
03/21/94 02:48:24	3:33:54	0								Stop Imaging - select ST-A								
03/21/94 02:48:29	3:33:59	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)								Slew to Vega
03/21/94 02:48:39	3:34:09		88.5	226.2	1872.0				LDUSK									
03/21/94 02:51:29	3:36:59	180								Park opaque filter on HiRes (DHU SEQT 27)								
03/21/94 02:51:44	3:37:14	15								Select ST-A								
03/21/94 02:57:50	3:43:20		80.0	253.7	2086.1				N80D									
03/21/94 02:58:24	3:43:54	400								Perform UVO Imaging (DHU SEQT 29)								Also image with both star trackers
03/21/94 02:58:38	3:44:08	15								Perform LWIR imaging (DHU SEQT 25)								Dark Field imaging starts
03/21/94 02:58:43	3:44:13	5								Perform NIR imaging (Select DHU SEQT 31)								
03/21/94 02:58:55	3:44:26	12								Load exposure table LUNIRDKS1								
03/21/94 02:59:08	3:44:38	12								Load exposure table LUNIRDKS2								
03/21/94 02:59:20	3:44:50	12								Perform HiRes Imaging (DHU SEQT 30)								Also image with both star trackers

Orbit 139 Timeline - Type B Orbit

03/21/94 02:59:38	3:45:08	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/21/94 03:05:38	3:51:08	360									Switch to HGA						READY FOR DATA DUMP
																	End Post Script
03/21/94 03:06:00	3:51:30										Switch to DHU mode @ 128 kbps						Ground Command
03/21/94 03:08:00	3:53:30										Downlink SSSR Segment 5						Ground Command
03/21/94 03:09:45	3:55:15		70.0	255.9	2329.7					N70D							
03/21/94 03:23:07	4:08:37		60.0	256.6	2553.9					N60D							
03/21/94 03:37:50	4:23:20		50.0	256.9	2739.4					N50D							
03/21/94 03:43:00	4:28:30										Downlink SSSR Segment 6						Ground Command
03/21/94 03:53:37	4:39:07		40.0	257.0	2866.6					N40D							
03/21/94 04:10:03	4:55:33		30.0	257.1	2920.2					N30D							
03/21/94 04:12:50	4:58:20		28.3	257.1	2921.3					Aposelene							

Orbit 140 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/21/94 04:12:50	0:00:00		28.3	257.1	2921.3							Aposelene							Downlinking SSSR Segment 6 (orbit 139)
03/21/94 04:17:00	0:04:10												Downlink SSSR Segment 7						Ground Command
03/21/94 04:25:12	0:12:22		20.8	257.1	2898.7							INPM							Enter penumbra
03/21/94 04:26:03	0:13:13		20.3	257.1	2895.4							INUM							Enter umbra
03/21/94 04:26:34	0:13:44		20.0	257.1	2893.3							N20D							
03/21/94 04:42:38	0:29:48		10.0	257.1	2789.5							N10D							
03/21/94 04:48:12	0:35:22										CAN	AOS							
03/21/94 04:57:45	0:44:55		0.0	257.1	2621.7							Equator - D							
03/21/94 05:11:35	0:58:45		-10.0	257.1	2408.3							S10D							
03/21/94 05:23:58	1:11:08		-20.0	257.2	2169.5							S20D							
03/21/94 05:29:00	1:16:10												Downlink SSSR data patch						Ground Command
03/21/94 05:30:00	1:17:10												Downlink SSSR Segment 1 (orb 139)						Ground Command
03/21/94 05:33:53	1:21:03		-29.0	257.2	1947.4							OUTUM							Exit umbra
03/21/94 05:34:35	1:21:45		-29.7	257.2	1930.7							OUTPM							Exit penumbra
03/21/94 05:34:55	1:22:05		-30.0	257.2	1923.0							S30D							
																			Standard Prep1 Script
03/21/94 05:35:35	1:22:45	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/21/94 05:41:00	1:28:10												SSDR to IDLE - downlink complete						Ground Command
03/21/94 05:44:29	1:31:39		-40.0	257.4	1682.6							S40D							
																			Standard Prep2 Script
03/21/94 05:46:52	1:34:02	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/21/94 05:51:52	1:39:02	0											Msg "WRNG: Omni/2k in 1 min.."						
03/21/94 05:52:50	1:40:00		-50.0	257.6	1457.6							S50D							
03/21/94 05:52:52	1:40:02	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/21/94 05:53:52	1:41:02	60											Switch to omni antennas						
03/21/94 05:54:52	1:42:02	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/21/94 05:55:22	1:42:32	30											UV & HR cameras ON						
03/21/94 06:00:09	1:47:19		-60.0	257.9	1253.6							S60D							
03/21/94 06:04:27	1:51:37	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1

Orbit 140 Timeline - Type A Orbit

03/21/94 06:04:52	1:52:02	25								Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/21/94 06:05:10	1:52:20	18								Stop imaging - select ST-A					
03/21/94 06:06:22	1:53:32	72								Perform UV0 imaging (DHU SEQT 29)					Also image with both Star Trackers
03/21/94 06:06:34	1:53:44		-70.0	258.7	1073.1				S70D						
03/21/94 06:06:37	1:53:47	15								Perform HR imaging (DHU SEQT 30)					Also image with both Star Trackers
03/21/94 06:06:52	1:54:02	15								Perform LWIR imaging (DHU SEQT 25)					
03/21/94 06:07:07	1:54:17	15								Perform NIR imaging (DHU SEQT 31)					
03/21/94 06:07:22	1:54:32	15									Err:508				Slew to nadir (inertial pointing)
03/21/94 06:07:52	1:55:02	30								Laser Power ON					
															Err:508
03/21/94 06:12:17	1:59:27		-80.0	260.9	916.9				S80D						
															Err:508
03/21/94 06:15:22	2:02:32	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/21/94 06:16:22	2:03:32	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)					START MAPPING
03/21/94 06:17:22	2:04:32	60	-89.2	345.7	785.3				South Pole	Set SA step rate to LO					
03/21/94 06:17:59	2:05:09		-88.5	44.4	770.1				LDAWN						
03/21/94 06:22:00	2:09:10	278	-80.0	71.8	676.2				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3					
03/21/94 06:24:14	2:11:24					###		PMK	LOS						
03/21/94 06:26:18	2:13:28	258	-70.0	74.1	588.3	###			S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/21/94 06:30:18	2:17:28	240	-60.0	74.9	520.9	###			S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/21/94 06:34:07	2:21:17	229	-50.0	75.3	472.8				S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/21/94 06:37:48	2:24:58	221	-40.0	75.5	443.1				S40A	Load exposure table LUNARZ35S					
03/21/94 06:41:24	2:28:34	216	-30.0	75.7	431.3				S30A	Load exposure table LUNARZ25S					
03/21/94 06:42:00	2:29:10		-28.4	75.7	431.1				Periselene						
03/21/94 06:45:00	2:32:10	216	-20.0	75.8	437.2				S20A	Load exposure table LUNARZ15S					
03/21/94 06:48:39	2:35:49	219	-10.0	76.0	461.0				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/21/94 06:52:24	2:39:34	225							MEQA	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 3
03/21/94 06:52:25	2:39:35		0.0	76.1	502.9				Equator - A						
03/21/94 06:56:20	2:43:30	236							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/21/94 06:56:21	2:43:31		10.0	76.2	563.9				N10A						
03/21/94 07:00:31	2:47:41	251							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					

Orbit 140 Timeline - Type A Orbit

03/21/94 07:00:32	2:47:42		20.0	76.3	644.7				N20A			
03/21/94 07:01:31	2:48:41	60								Laser power OFF		
03/21/94 07:05:03	2:52:13	212	30.0	76.4	746.8				N30A	Load CEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10	UV and IR uncompressed	
03/21/94 07:09:59	2:57:09	296							N40A	Record in SSSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4	
03/21/94 07:10:00	2:57:10		40.0	76.6	871.3				N40A			
03/21/94 07:15:29	3:02:39	330	50.0	76.8	1019.4				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	Resume HiRes imaging	
03/21/94 07:21:39	3:08:49	370	60.0	77.2	1191.8				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13		
03/21/94 07:28:39	3:15:49	420	70.0	77.9	1388.2				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14		
03/21/94 07:36:39	3:23:49	480	80.0	80.1	1607.1				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15		
03/21/94 07:37:39	3:24:49	60								Load DEQ_10.UMI into SEQT 10	Restore compressed SEQT 10	
												Err:508
03/21/94 07:45:47	3:32:57		89.2	165.6	1842.5				North Pole			
												Standard Post Script
03/21/94 07:46:47	3:33:57	0								Stop Imaging - select ST-A		
03/21/94 07:46:52	3:34:02	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega	
03/21/94 07:47:02	3:34:12		88.5	223.6	1873.3				LDUSK			
03/21/94 07:49:52	3:37:02	180								Park opaque filter on HiRes (DHU SEQT 27)		
03/21/94 07:50:07	3:37:17	15								Select ST-A		
03/21/94 07:56:13	3:43:23		80.0	251.0	2087.5				N80D			
03/21/94 07:56:47	3:43:57	400								Perform UVO Imaging (DHU SEQT 29)	Also image with both star trackers	
03/21/94 07:57:01	3:44:11	15								Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts	
03/21/94 07:57:06	3:44:16	5								Perform NIR imaging (Select DHU SEQT 31)		
03/21/94 07:57:19	3:44:29	12								Load exposure table LUNIRDKS1		
03/21/94 07:57:31	3:44:41	12								Load exposure table LUNIRDKS2		
03/21/94 07:57:43	3:44:53	12								Perform HiRes Imaging (DHU SEQT 30)	Also image with both star trackers	
03/21/94 07:58:01	3:45:11	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth	
03/21/94 08:04:11	3:51:21	360								Switch to HGA	READY FOR DATA DUMP	

Orbit 140 Timeline - Type A Orbit

													End Post Script	
03/21/94 08:08:00	3:55:10												Switch to DHU mode @ 128 kbps	Ground Command
03/21/94 08:08:09	3:55:19		70.0	253.2	2331.1							N70D		
03/21/94 08:15:00	4:02:10												Downlink SDR Segment 1; Uplink & schedule L141 scripts	Ground Command
03/21/94 08:21:31	4:08:41		60.0	253.9	2555.1							N60D		
03/21/94 08:36:15	4:23:25		50.0	254.2	2740.3							N50D		
03/21/94 08:38:58	4:26:08								GDS			LOS		
03/21/94 08:52:02	4:39:12		40.0	254.3	2867.1							N40D		
03/21/94 08:57:00	4:44:10												Downlink SDR Segment 2	Ground Command
03/21/94 09:08:28	4:55:38		30.0	254.4	2920.3							N30D		
03/21/94 09:11:10	4:58:20		28.4	254.4	2921.4							Aposelene		

Orbit 141 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/21/94 09:11:10	0:00:00		28.4	254.4	2921.4							Aposelene							Downlinking SSSR Segment 2 (orbit 140)
03/21/94 09:23:34	0:12:24		20.9	254.4	2898.5							INPM							Enter penumbra
03/21/94 09:24:26	0:13:16		20.3	254.4	2895.3							INUM							Enter umbra
03/21/94 09:25:00	0:13:50		20.0	254.4	2893.0							N20D							
03/21/94 09:30:00	0:18:50												Downlink SSSR Segment 3						Ground Command
03/21/94 09:41:03	0:29:53		10.0	254.4	2788.8							N10D							
03/21/94 09:56:09	0:44:59		0.0	254.4	2620.6							Equator - D							
03/21/94 10:00:00	0:48:50												Downlink SSSR Segment 4						Ground Command
03/21/94 10:09:59	0:58:49		-10.0	254.4	2407.0							S10D							
03/21/94 10:22:22	1:11:12		-20.0	254.4	2168.1							S20D							
03/21/94 10:26:00	1:14:50												Downlink SSSR data patches						Ground Command
03/21/94 10:32:00	1:20:50												SSDR to IDLE - downlink complete						Ground Command
03/21/94 10:32:19	1:21:09		-29.0	254.5	1945.1							OUTUM							Exit umbra
03/21/94 10:33:01	1:21:51		-29.7	254.5	1928.4							OUTPM							Exit penumbra
03/21/94 10:33:18	1:22:08		-30.0	254.5	1921.6							S30D							
																			Standard Prep1 Script
03/21/94 10:34:01	1:22:51	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/21/94 10:42:52	1:31:42		-40.0	254.6	1681.2							S40D							
																			Standard Prep2 Script
03/21/94 10:45:13	1:34:03	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/21/94 10:50:13	1:39:03	0											Msg "WRNG: Omni/2k in 1 min.."						
03/21/94 10:51:13	1:40:03		-50.0	254.8	1456.3							S50D							
03/21/94 10:51:13	1:40:03	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/21/94 10:52:13	1:41:03	60											Switch to omni antennas						
03/21/94 10:53:13	1:42:03	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/21/94 10:53:43	1:42:33	30											UV & HR cameras ON						
03/21/94 10:58:31	1:47:21		-60.0	255.2	1252.4							S60D							
03/21/94 11:02:48	1:51:38	545											Initialize filters (DHU SEQT 28); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/21/94 11:03:13	1:52:03	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 141 Timeline - Type B Orbit

03/21/94 11:03:31	1:52:21	18									Stop imaging - select ST-A						
03/21/94 11:04:43	1:53:33	72									Perform UV0 imaging (DHU SEQT 29)						Also image with both Star Trackers
03/21/94 11:04:56	1:53:46		-70.0	255.9	1072.1					S70D							
03/21/94 11:04:58	1:53:48	15									Perform HR imaging (DHU SEQT 30)						Also image with both Star Trackers
03/21/94 11:05:13	1:54:03	15									Perform LWIR imaging (DHU SEQT 25)						
03/21/94 11:05:28	1:54:18	15									Perform NIR imaging (DHU SEQT 31)						
03/21/94 11:05:43	1:54:33	15										Err:508					Slew to nadir (inertial pointing)
03/21/94 11:06:13	1:55:03	30									Laser Power ON						
Err:508																	
03/21/94 11:10:38	1:59:28		-80.0	258.2	916.1					S80D							
Err:508																	
03/21/94 11:13:43	2:02:33	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/21/94 11:14:43	2:03:33	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)						START MAPPING
03/21/94 11:15:43	2:04:33	60								MAXS	Set SA step rate to LO						
03/21/94 11:15:44	2:04:34		-89.2	344.5	784.4					South Pole							
03/21/94 11:16:20	2:05:10		-88.5	41.8	769.4					LDAWN							
03/21/94 11:20:21	2:09:11	278								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17						
03/21/94 11:20:22	2:09:12		-80.0	69.2	675.6					S80A							
03/21/94 11:24:39	2:13:29	258	-70.0	71.4	587.9					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4						
03/21/94 11:28:39	2:17:29	240	-60.0	72.2	520.5					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/21/94 11:32:28	2:21:18	229	-50.0	72.6	472.5					S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5						SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/21/94 11:36:08	2:24:58	220								S40A	Load exposure table LUNARZ35S						
03/21/94 11:36:09	2:24:59		-40.0	72.8	442.9					S40A							
03/21/94 11:39:45	2:28:35	217	-30.0	73.0	431.3					S30A	Load exposure table LUNARZ25S						
03/21/94 11:40:19	2:29:09		-28.4	73.0	431.0					Periselene							
03/21/94 11:43:21	2:32:11	216	-20.0	73.1	437.3					S20A	Load exposure table LUNARZ15S						
03/21/94 11:47:00	2:35:50	219	-10.0	73.2	461.1					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						
03/21/94 11:50:45	2:39:35	225								MEQA	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 7
03/21/94 11:50:46	2:39:36		0.0	73.3	503.2					Equator - A							
03/21/94 11:54:41	2:43:31	236								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/21/94 11:54:42	2:43:32		10.0	73.4	564.2					N10A							

Orbit 141 Timeline - Type B Orbit

03/21/94 11:58:53	2:47:43	252	20.0	73.5	645.2					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/21/94 11:59:53	2:48:43	60									Laser power OFF						
03/21/94 12:03:24	2:52:14	211	30.0	73.7	747.4					N30A	Load CEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10						UV and IR uncompressed
03/21/94 12:08:21	2:57:11	297	40.0	73.8	872.0					N40A	Switch to inertial pointing (ORB_141RW); Load exposure table LUNARZ45N; Select DHU SEQT 10						Initiate oblique viewing
03/21/94 12:13:51	3:02:41	330	50.0	74.1	1020.3					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11						Resume HiRes imaging Resume compression
03/21/94 12:20:01	3:08:51	370	60.0	74.4	1192.8					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12						
03/21/94 12:24:13	3:13:03	252									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19						End oblique viewing - resume nadir pointing
03/21/94 12:27:01	3:15:51	168	70.0	75.2	1389.4					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						
03/21/94 12:35:02	3:23:52	481	80.0	77.4	1608.4					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
03/21/94 12:36:02	3:24:52	60									Load DEQ_10.UMI into SEQT 10						Restore compressed SEQT 10
Err:508																	
03/21/94 12:41:43	3:30:33									MAD	AOS						
03/21/94 12:44:10	3:33:00		89.2	162.9	1843.9						North Pole						
Standard Post Script																	
03/21/94 12:45:10	3:34:00	0									Stop Imaging - select ST-A						
03/21/94 12:45:15	3:34:05	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)						Slew to Vega (inertial pointing)
03/21/94 12:45:25	3:34:15		88.5	221.1	1874.7						LDUSK						
03/21/94 12:48:15	3:37:05	180									Park opaque filter on HiRes (DHU SEQT 27)						
03/21/94 12:48:30	3:37:20	15									Select ST-A						
03/21/94 12:54:37	3:43:27		80.0	248.3	2088.9						N80D						
03/21/94 12:55:10	3:44:00	400									Perform UVO Imaging (DHU SEQT 29)						Also image with both star trackers
03/21/94 12:55:25	3:44:15	15									Perform LWIR imaging (DHU SEQT 25)						Dark Field imaging starts
03/21/94 12:55:30	3:44:19	5									Perform NIR imaging (Select DHU SEQT 31)						
03/21/94 12:55:42	3:44:32	12									Load exposure table LUNIRDKS1						
03/21/94 12:55:54	3:44:44	12									Load exposure table LUNIRDKS2						
03/21/94 12:56:06	3:44:56	12									Perform HiRes Imaging (DHU SEQT 30)						Also image with both star trackers

Orbit 141 Timeline - Type B Orbit

03/21/94 12:56:24	3:45:14	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/21/94 13:02:24	3:51:14	360									Switch to HGA						READY FOR DATA DUMP
End Post Script																	
03/21/94 13:06:33	3:55:23		70.0	250.5	2332.4						N70D						
03/21/94 13:19:56	4:08:46		60.0	251.2	2556.3						N60D						
03/21/94 13:34:38	4:23:28									CAN	LOS						
03/21/94 13:34:40	4:23:30		50.0	251.5	2741.2						N50D						
03/21/94 13:50:28	4:39:18		40.0	251.6	2867.7						N40D						
03/21/94 13:56:00	4:44:50											Switch to DHU mode @ 128 kbps					Ground Command - delayed because of problems commanding from DMOC
03/21/94 14:03:00	4:51:50											Downlink SSSDR Segment 5					Ground Command
03/21/94 14:06:54	4:55:44		30.0	251.6	2920.4						N30D						
03/21/94 14:09:29	4:58:19		28.4	251.6	2921.4						Aposelene						

Orbit 142 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/21/94 14:09:29	0:00:00		28.4	251.6	2921.4							Aposelene							Downlinking SDDR Segment 5 (orbit 141)
03/21/94 14:17:00	0:07:31												Update state vector (GNC53_21MAR1300)						Ground Command
03/21/94 14:19:00	0:09:31												Uplink & schedule L142 scripts						Ground Command
03/21/94 14:21:57	0:12:28		20.9	251.7	2898.4							INPM							Enter penumbra
03/21/94 14:22:48	0:13:19		20.4	251.7	2895.1							INUM							Enter umbra
03/21/94 14:23:25	0:13:56		20.0	251.7	2892.6							N20D							
03/21/94 14:39:28	0:29:59		10.0	251.7	2788.0							N10D							
03/21/94 14:43:00	0:33:31												Downlink SDDR Segment 6						Ground Command
03/21/94 14:52:00	0:42:31												Load CEQ_30.UMI into SEQT 30						Ground Command
03/21/94 14:54:34	0:45:05		0.0	251.7	2619.5							Equator - D							
03/21/94 15:07:00	0:57:31												Uplink & schedule new L142 mapping script						Ground Command - uncompr. band removed to reduce data
03/21/94 15:08:23	0:58:54		-10.0	251.7	2405.7							S10D							
03/21/94 15:19:00	1:09:31												Downlink SDDR Segment 7						Ground Command
03/21/94 15:20:46	1:11:17		-20.0	251.7	2166.7							S20D							
03/21/94 15:30:44	1:21:15		-29.1	251.8	1942.8							OUTUM							Exit umbra
03/21/94 15:31:26	1:21:57		-29.8	251.8	1926.2							OUTPM							Exit penumbra
03/21/94 15:31:41	1:22:12		-30.0	251.8	1920.2							S30D							
																			Standard Prep1 Script
03/21/94 15:32:26	1:22:57	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/21/94 15:41:15	1:31:46		-40.0	251.9	1679.9							S40D							
																			Standard Prep2 Script
03/21/94 15:43:35	1:34:06	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/21/94 15:48:35	1:39:06	0											Msg "WRNG: Omni/2k in 1 min.."						
03/21/94 15:49:35	1:40:06		-50.0	252.1	1455.1							S50D							
03/21/94 15:49:35	1:40:06	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/21/94 15:50:35	1:41:06	60											Switch to omni antennas						
03/21/94 15:51:35	1:42:06	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/21/94 15:52:05	1:42:36	30											UV & HR cameras ON						
03/21/94 15:56:53	1:47:24		-60.0	252.4	1251.4							S60D							
03/21/94 15:59:00	1:49:31												Ranging A ON						Ground Command

Orbit 142 Timeline - Type A Orbit

03/21/94 16:01:10	1:51:41	545								Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)				Note: different initialization Start SSSR in Segment 1
03/21/94 16:01:35	1:52:06	25								Perform NIR imaging (DHU SEQT 31)				Dark Field imaging starts
03/21/94 16:01:53	1:52:24	18								Stop imaging - select ST-A				
03/21/94 16:03:05	1:53:36	72								Perform UV0 imaging (DHU SEQT 29)				Also image with both Star Trackers
03/21/94 16:03:18	1:53:49		-70.0	253.2	1071.2				S70D					
03/21/94 16:03:20	1:53:51	15								Perform HR imaging (DHU SEQT 30)				Also image with both Star Trackers
03/21/94 16:03:35	1:54:06	15								Perform LWIR imaging (DHU SEQT 25)				
03/21/94 16:03:50	1:54:21	15								Perform NIR imaging (DHU SEQT 31)				
03/21/94 16:04:05	1:54:36	15									Err:508			Slew to nadir (inertial pointing)
03/21/94 16:04:35	1:55:06	30								Laser Power ON				
														Err:508
03/21/94 16:08:59	1:59:30		-80.0	255.4	915.3				S80D					Err:508
														Err:508
03/21/94 16:12:05	2:02:36	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S				
03/21/94 16:13:05	2:03:36	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)				START MAPPING
03/21/94 16:14:05	2:04:36	60	-89.2	341.0	783.8				South Pole	Set SA step rate to LO				
03/21/94 16:14:42	2:05:13		-88.5	39.4	768.8				LDAWN					
03/21/94 16:18:43	2:09:14	278	-80.0	66.5	675.1				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3				
03/21/94 16:23:00	2:13:31	257	-70.0	68.7	587.4				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4				
03/21/94 16:27:00	2:17:31	240	-60.0	69.5	520.2				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/21/94 16:30:49	2:21:20	229	-50.0	69.8	472.3				S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/21/94 16:34:30	2:25:01	221	-40.0	70.1	442.8				S40A	Load exposure table LUNARZ35S				
03/21/94 16:38:06	2:28:37	216	-30.0	70.3	431.3				S30A	Load exposure table LUNARZ25S				
03/21/94 16:38:39	2:29:10		-28.5	70.3	431.0				Periselene					
03/21/94 16:41:42	2:32:13	216	-20.0	70.4	437.4				S20A	Load exposure table LUNARZ15S				
03/21/94 16:45:21	2:35:52	219	-10.0	70.5	461.3				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/21/94 16:49:06	2:39:37	225	0.0	70.6	503.5				Equator - A	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3
03/21/94 16:53:03	2:43:34	237	10.0	70.7	564.6				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8				
03/21/94 16:57:14	2:47:45	251	20.0	70.8	645.8				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				

Orbit 142 Timeline - Type A Orbit

03/21/94 16:58:14	2:48:45	60										Laser power OFF		
03/21/94 17:01:45	2:52:16	211	30.0	70.9	748.1							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/21/94 17:06:42	2:57:13	297	40.0	71.1	872.8							N40A	Record in SSSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4
03/21/94 17:12:12	3:02:43	330	50.0	71.3	1021.2							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	
03/21/94 17:18:23	3:08:54	371	60.0	71.7	1193.8							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13	
03/21/94 17:25:24	3:15:55	421	70.0	72.4	1390.6							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14	
03/21/94 17:33:24	3:23:55	480	80.0	74.6	1609.7							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15	
Err:508														
03/21/94 17:42:33	3:33:04		89.2	160.2	1845.3							North Pole		
Special Post Script														
03/21/94 17:43:33	3:34:04	0											Stop Imaging (Select DHU SEQT 1)	
03/21/94 17:43:38	3:34:09	5											Set SA step rate to HI; Slew s/c sensors to Betelgeuse (ACSMODE=StarPointing, Index=5); Laser power OFF; Load Betel. exposure tables (LUNBETEL)	Slew to Betelgeuse
03/21/94 17:43:48	3:34:19		88.5	218.7	1876.0							LDUSK		
03/21/94 17:45:05	3:35:36											PMK	AOS	
03/21/94 17:46:38	3:37:09	180											Park opaque filter on HiRes (DHU SEQT 27)	
03/21/94 17:46:53	3:37:24	15											Select ST-A	
03/21/94 17:52:00	3:42:31												Ranging A OFF	Ground Command
03/21/94 17:53:00	3:43:31		80.0	245.6	2090.4							N80D		
03/21/94 17:53:32	3:44:03	400											Perform UVO Imaging (DHU SEQT 29)	Also image with both star trackers
03/21/94 17:53:47	3:44:18	15											Perform LWIR imaging (DHU SEQT 25)	Dark Field imaging starts
03/21/94 17:53:52	3:44:23	5											Perform NIR imaging (Select DHU SEQT 31)	
03/21/94 17:54:04	3:44:35	12											Load exposure table LUNIRDKS1	
03/21/94 17:54:17	3:44:48	12											Load exposure table LUNIRDKS2	
03/21/94 17:54:29	3:45:00	12											Perform HiRes Imaging (DHU SEQT 30)	Also image with both star trackers
03/21/94 17:54:47	3:45:18	18											Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)	Slew HGA to Earth
03/21/94 18:00:47	3:51:18	360											Switch to HGA	READY FOR DATA DUMP
End Post Script														
03/21/94 18:03:00	3:53:31												Switch to DHU mode @ 128 kbps	Ground Command

Orbit 142 Timeline - Type A Orbit

03/21/94 18:04:00	3:54:31										Downlink SSSR Segment 7 (orb 141)								Ground Command
03/21/94 18:04:57	3:55:28		70.0	247.8	2333.8						N70D								
03/21/94 18:18:20	4:08:51		60.0	248.5	2557.5						N60D								
03/21/94 18:32:00	4:22:31																		
03/21/94 18:33:05	4:23:36		50.0	248.7	2742.1						N50D								
03/21/94 18:35:00	4:25:31											Switch to bypass mode @ 8 kbps; Reload DHU software & tables							Ground Command
03/21/94 18:48:53	4:39:24		40.0	248.9	2868.2						N40D								
03/21/94 18:57:00	4:47:31											Switch to DHU mode @ 128 kbps; Downlink SSSR Segment 7 cont.;							Ground Command
03/21/94 19:04:00	4:54:31											Select ST-B							Ground Command
03/21/94 19:05:19	4:55:50		30.0	248.9	2920.4						N30D								
03/21/94 19:07:49	4:58:20		28.5	248.9	2921.4						Aposelene								

Orbit 143 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/21/94 19:07:49	0:00:00		28.5	248.9	2921.4							Aposelene							Downlinking SSSR Segment 7 (orbit 141)
03/21/94 19:13:00	0:05:11												Downlink SSSR Segment 1 (orb 142)						Ground Command
03/21/94 19:20:20	0:12:31		20.9	248.9	2898.1							INPM							Enter penumbra
03/21/94 19:21:11	0:13:22		20.4	248.9	2894.8							INUM							Enter umbra
03/21/94 19:21:50	0:14:01		20.0	248.9	2892.2							N20D							
03/21/94 19:37:53	0:30:04		10.0	248.9	2787.2							N10D							
03/21/94 19:48:00	0:40:11												Downlink SSSR Segment 2						Ground Command
03/21/94 19:52:58	0:45:09		0.0	248.9	2618.4							Equator - D							
03/21/94 20:06:47	0:58:58		-10.0	248.9	2404.4							S10D							
03/21/94 20:19:09	1:11:20		-20.0	249.0	2165.3							S20D							
03/21/94 20:21:00	1:13:11												Downlink SSSR Segment 3						Ground Command
03/21/94 20:29:09	1:21:20		-29.1	249.0	1940.6							OUTUM							Exit umbra
03/21/94 20:29:51	1:22:02		-29.8	249.0	1924.0							OUTPM							Exit penumbra
03/21/94 20:30:04	1:22:15		-30.0	249.0	1918.8							S30D							
																			Standard Prep1 Script
03/21/94 20:30:51	1:23:02	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/21/94 20:39:37	1:31:48		-40.0	249.1	1678.6							S40D							
03/21/94 20:41:00	1:33:11												Downlink SSSR Segment 4						Ground Command
																			Standard Prep2 Script
03/21/94 20:41:56	1:34:07	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/21/94 20:46:56	1:39:07	0											Msg "WRNG: Omni/2k in 1 min.."						
03/21/94 20:47:56	1:40:07	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data downlink stopped
03/21/94 20:47:57	1:40:08		-50.0	249.3	1453.9							S50D							
03/21/94 20:48:56	1:41:07	60											Switch to omni antennas						
03/21/94 20:49:56	1:42:07	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/21/94 20:50:26	1:42:37	30											UV & HR cameras ON						
03/21/94 20:55:15	1:47:26		-60.0	249.7	1250.3							S60D							
03/21/94 20:59:31	1:51:42	545											Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/21/94 20:59:56	1:52:07	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 143 Timeline - Type B Orbit

03/21/94 21:00:14	1:52:25	18									Stop imaging - select ST-A							
03/21/94 21:00:50	1:53:01								GDS	AOS								
03/21/94 21:01:26	1:53:37	72									Perform UV0 imaging (DHU SEQT 29)							Also image with both Star Trackers
03/21/94 21:01:39	1:53:50		-70.0	250.4	1070.3					S70D								
03/21/94 21:01:41	1:53:52	15									Perform HR imaging (DHU SEQT 30)							Also image with both Star Trackers
03/21/94 21:01:56	1:54:07	15									Perform LWIR imaging (DHU SEQT 25)							
03/21/94 21:02:11	1:54:22	15									Perform NIR imaging (DHU SEQT 31)							
03/21/94 21:02:26	1:54:37	15																Err:508
03/21/94 21:02:56	1:55:07	30									Laser Power ON							Slew to nadir (inertial pointing)
																		Err:508
03/21/94 21:07:21	1:59:32		-80.0	252.6	914.5					S80D								Err:508
																		Err:508
03/21/94 21:10:26	2:02:37	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S							
03/21/94 21:11:26	2:03:37	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING
03/21/94 21:12:26	2:04:37	60	-89.2	337.4	783.3					South Pole	Set SA step rate to LO							
03/21/94 21:13:03	2:05:14		-88.5	37.1	768.2					LDAWN								
03/21/94 21:17:04	2:09:15	278	-80.0	63.8	674.5					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17							
03/21/94 21:21:21	2:13:32	257	-70.0	66.0	587.0					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4							
03/21/94 21:25:21	2:17:32	240	-60.0	66.8	519.9					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/21/94 21:29:10	2:21:21	229	-50.0	67.1	472.1					S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5							SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/21/94 21:32:50	2:25:01	220	-40.0	67.4	442.7					S40A	Load exposure table LUNARZ35S							
03/21/94 21:36:27	2:28:38	217	-30.0	67.5	431.3					S30A	Load exposure table LUNARZ25S							
03/21/94 21:36:59	2:29:10		-28.5	67.6	431.1					Periselene								
03/21/94 21:40:03	2:32:14	216	-20.0	67.7	437.5					S20A	Load exposure table LUNARZ15S							
03/21/94 21:43:42	2:35:53	219	-10.0	67.8	461.5					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/21/94 21:47:27	2:39:38	225								Equator - A	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7							SSDR Segment 7
03/21/94 21:51:24	2:43:35	237	10.0	68.0	565.1					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							
03/21/94 21:55:35	2:47:46	251	20.0	68.1	646.3					N20A	Load CEQ_09U.UMI into SEQT 09; Load exposure table LUNARZ25N; Select DHU SEQT 9							UV and IR uncompressed
03/21/94 21:56:35	2:48:46	60									Laser power OFF							
03/21/94 22:00:07	2:52:18	212	30.0	68.2	748.7					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							Resume compression

Orbit 143 Timeline - Type B Orbit

03/21/94 22:05:04	2:57:15	297	40.0	68.3	873.6				N40A	Switch to inertial pointing (ORB_143RW); Load exposure table LUNARZ45N; Select DHU SEQT 10					Initiate oblique viewing
03/21/94 22:10:34	3:02:45	330	50.0	68.6	1022.1				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11					Resume HiRes imaging
03/21/94 22:16:45	3:08:56	371	60.0	68.9	1194.9				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12					
03/21/94 22:20:57	3:13:08	253								Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19					End oblique viewing - resume nadir pointing
03/21/94 22:23:46	3:15:57	168	70.0	69.6	1391.8				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20					
03/21/94 22:31:47	3:23:58	481	80.0	71.8	1610.9				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21					
03/21/94 22:32:47	3:24:58	60								Load DEQ_09.UMI into SEQT 09					Restore compressed SEQT 9
Err:508															
03/21/94 22:40:56	3:33:07		89.2	157.6	1846.7				North Pole						
Standard Post Script															
03/21/94 22:41:56	3:34:07	0								Stop Imaging - select ST-A					
03/21/94 22:42:01	3:34:12	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)					Slew to Vega (inertial pointing)
03/21/94 22:42:11	3:34:22		88.5	216.4	1877.4				LDUSK						
03/21/94 22:45:01	3:37:12	180								Park opaque filter on HiRes (DHU SEQT 27)					
03/21/94 22:45:16	3:37:27	15								Select ST-A					
03/21/94 22:51:24	3:43:35		80.0	243.0	2091.8				N80D						
03/21/94 22:51:56	3:44:07	400								Perform UVO Imaging (DHU SEQT 29)					Also image with both star trackers
03/21/94 22:52:10	3:44:21	15								Perform LWIR imaging (DHU SEQT 25)					No data
03/21/94 22:52:15	3:44:26	5								Perform NIR imaging (Select DHU SEQT 31)					
03/21/94 22:52:28	3:44:38	12								Load exposure table LUNIRDKS1					
03/21/94 22:52:40	3:44:51	12								Load exposure table LUNIRDKS2					
03/21/94 22:52:52	3:45:03	12								Perform HiRes Imaging (DHU SEQT 30)					Also image with both star trackers
03/21/94 22:53:10	3:45:21	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)					Slew HGA to Earth
03/21/94 22:59:10	3:51:21	360								Switch to HGA					READY FOR DATA DUMP
End Post Script															
03/21/94 23:00:00	3:52:11									Switch to DHU mode @ 128 kbps					Ground Command

Orbit 143 Timeline - Tyne B Orbit

03/21/94 23:01:00	3:53:11																					Resume downlink SSTR Segment 3 (orbit 142)																	Ground Command		
03/21/94 23:03:21	3:55:32		70.0	245.1	2335.1																	N70D																			
03/21/94 23:04:00	3:56:11																						Downlink SSTR Segment 4 (orb 142)																Ground Command		
03/21/94 23:16:45	4:08:56		60.0	245.7	2558.6																		N60D																		
03/21/94 23:22:00	4:14:11																						Downlink SSTR Segment 5																Ground Command		
03/21/94 23:31:30	4:23:41		50.0	246.0	2743.0																		N50D																		
03/21/94 23:41:00	4:33:11																						Uplink & schedule L144 scripts																Ground Command		
03/21/94 23:47:18	4:39:29		40.0	246.1	2868.6																		N40D																		
03/21/94 23:52:00	4:44:11																						Downlink SSTR Segment 6																Ground Command		
03/22/94 00:03:44	4:55:55		30.0	246.2	2920.5																		N30D																		
03/22/94 00:06:09	4:58:20		28.5	246.2	2921.3																		Aposelene																		

Orbit 144 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/22/94 00:06:09	0:00:00		28.5	246.2	2921.3							Aposelene							Downlinking SDR Segment 6 (orbit 143)
03/22/94 00:18:43	0:12:34		20.9	246.2	2897.9							INPM							Enter penumbra
03/22/94 00:19:34	0:13:25		20.4	246.2	2894.6							INUM							Enter umbra
03/22/94 00:20:15	0:14:06		20.0	246.2	2891.8							N20D							
03/22/94 00:27:00	0:20:51												Downlink SDR Segment 7						Ground Command
03/22/94 00:36:18	0:30:09		10.0	246.2	2786.4							N10D							
03/22/94 00:51:23	0:45:14		0.0	246.2	2617.2							Equator - D							
03/22/94 01:05:11	0:59:02		-10.0	246.2	2403.1							S10D							
03/22/94 01:17:33	1:11:24		-20.0	246.2	2164.0							S20D							
03/22/94 01:25:00	1:18:51												SSDR to IDLE - downlink complete						Ground Command
03/22/94 01:27:34	1:21:25		-29.1	246.3	1938.6							OUTUM							Exit umbra
03/22/94 01:28:16	1:22:07		-29.8	246.3	1922.0							OUTPM							Exit penumbra
03/22/94 01:28:27	1:22:18		-30.0	246.3	1917.5							S30D							
																			Standard Prep1 Script
03/22/94 01:29:16	1:23:07	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/22/94 01:38:00	1:31:51		-40.0	246.4	1677.4							S40D							
																			Standard Prep2 Script
03/22/94 01:40:18	1:34:09	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/22/94 01:45:18	1:39:09	0											Msg "WRNG: Omni/2k in 1 min.."						
03/22/94 01:46:18	1:40:09	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/22/94 01:46:20	1:40:11		-50.0	246.6	1452.8							S50D							
03/22/94 01:47:18	1:41:09	60											Switch to omni antennas						
03/22/94 01:48:18	1:42:09	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/22/94 01:48:48	1:42:39	30											UV & HR cameras ON						
03/22/94 01:53:37	1:47:28		-60.0	246.9	1249.3							S60D							
03/22/94 01:57:53	1:51:44	545											Initialize filters (DHU SEQT 27); Record in SDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 1
03/22/94 01:58:18	1:52:09	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/22/94 01:58:36	1:52:27	18											Stop imaging - select ST-A						
03/22/94 01:59:48	1:53:39	72											Perform UV0 imaging (DHU SEQT 29)						Also image with both Star Trackers

Orbit 144 Timeline - Type A Orbit

03/22/94 02:00:01	1:53:52		-70.0	247.6	1069.4				S70D										
03/22/94 02:00:03	1:53:54	15								Perform HR imaging (DHU SEQT 30)									Also image with both Star Trackers
03/22/94 02:00:18	1:54:09	15								Perform LWIR imaging (DHU SEQT 25)									
03/22/94 02:00:33	1:54:24	15								Perform NIR imaging (DHU SEQT 31)									
03/22/94 02:00:48	1:54:39	15																	Err:508
03/22/94 02:01:18	1:55:09	30								Laser Power ON									
Err:508																			
03/22/94 02:04:13	1:58:04								MAD	LOS									
03/22/94 02:05:42	1:59:33		-80.0	249.7	913.8					S80D									
Err:508																			
03/22/94 02:08:48	2:02:39	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/22/94 02:09:48	2:03:39	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)								START MAPPING
03/22/94 02:10:48	2:04:39	60	-89.3	336.4	782.4					South Pole	Set SA step rate to LO								
03/22/94 02:11:24	2:05:15		-88.5	34.8	767.6					LDAWN									
03/22/94 02:15:25	2:09:16	277	-80.0	61.2	674.1					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3								
03/22/94 02:19:42	2:13:33	257	-70.0	63.3	586.7					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4								
03/22/94 02:23:43	2:17:34	241	-60.0	64.0	519.7					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/22/94 02:27:31	2:21:22	228	-50.0	64.4	472.0					S50A	Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5								SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/22/94 02:31:11	2:25:02	220								S40A	Load exposure table LUNARZ35S								
03/22/94 02:31:12	2:25:03		-40.0	64.6	442.7					S40A									
03/22/94 02:34:48	2:28:39	217	-30.0	64.8	431.3					S30A	Load exposure table LUNARZ25S								
03/22/94 02:35:19	2:29:10		-28.6	64.8	431.2					Periselene									
03/22/94 02:38:24	2:32:15	216	-20.0	64.9	437.7					S20A	Load exposure table LUNARZ15S								
03/22/94 02:42:03	2:35:54	219	-10.0	65.0	461.8					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/22/94 02:45:49	2:39:40	226	0.0	65.1	504.2					Equator - A	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 3
03/22/94 02:49:45	2:43:36	236	10.0	65.2	565.5					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8								
03/22/94 02:53:56	2:47:47	251	20.0	65.3	646.9					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/22/94 02:54:56	2:48:47	60									Laser power OFF								
03/22/94 02:58:28	2:52:19	212	30.0	65.5	749.4					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10								
03/22/94 03:03:26	2:57:17	298	40.0	65.6	874.4					N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11								SSDR Segment 4

Orbit 144 Timeline - Type A Orbit

03/22/94 03:08:56	3:02:47	330	50.0	65.8	1023.0					N50A	Load CEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ55N; Select DHU SEQT 12					UV and IR uncompressed Resume HiRes imaging
03/22/94 03:15:07	3:08:58	371	60.0	66.2	1195.9					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13					Resume compression
03/22/94 03:22:08	3:15:59	421	70.0	66.8	1392.9					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14					
03/22/94 03:30:10	3:24:01	482	80.0	68.9	1612.2					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15					
03/22/94 03:31:10	3:25:01	60									Load DEQ_12.UMI into SEQT 12					Restore compressed SEQT 12
Err:508																
03/22/94 03:39:19	3:33:10		89.3	154.4	1847.9					North Pole						
Standard Post Script																
03/22/94 03:40:19	3:34:10	0									Stop Imaging - select ST-A					
03/22/94 03:40:24	3:34:15	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)					Slew to Vega (inertial pointing)
03/22/94 03:40:34	3:34:25		88.5	214.2	1878.7					LDUSK						
03/22/94 03:43:24	3:37:15	180									Park opaque filter on HiRes (DHU SEQT 27)					
03/22/94 03:43:39	3:37:30	15									Select ST-A					
03/22/94 03:49:48	3:43:39		80.0	240.3	2093.1					N80D						
03/22/94 03:50:19	3:44:10	400									Perform UVO Imaging (DHU SEQT 29)					Also image with both star trackers
03/22/94 03:50:33	3:44:24	15									Perform LWIR imaging (DHU SEQT 25)					
03/22/94 03:50:38	3:44:29	5									Perform NIR imaging (DHU SEQT 31)					
03/22/94 03:50:51	3:44:42	12									Load exposure table LUNIRDKS1					
03/22/94 03:51:03	3:44:54	12									Load exposure table LUNIRDKS2					
03/22/94 03:51:15	3:45:06	12									Perform HiRes Imaging (DHU SEQT 30)					Also image with both star trackers

Orbit 144 Timeline - Type A Orbit

03/22/94 03:51:33	3:45:24	18								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Slew HGA to Earth
03/22/94 03:57:33	3:51:24	360								Switch to HGA						READY FOR DATA DUMP
End Post Script																
03/22/94 03:58:00	3:51:51									Switch to DHU mode @ 128 kbps						Ground Command
03/22/94 03:59:00	3:52:51									Downlink SSSR Segment 1						Ground Command
03/22/94 04:01:45	3:55:36		70.0	242.4	2336.4					N70D						
03/22/94 04:15:10	4:09:01		60.0	243.0	2559.7					N60D						
03/22/94 04:29:54	4:23:45		50.0	243.3	2743.8					N50D						
03/22/94 04:36:00	4:29:51										Downlink SSSR Segment 2					Ground Command
03/22/94 04:45:43	4:39:34		40.0	243.4	2869.0					N40D						
03/22/94 05:02:09	4:56:00		30.0	243.5	2920.4					N30D						
03/22/94 05:04:29	4:58:20		28.6	243.5	2921.2					Aposelene						

Orbit 145 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/22/94 05:04:29	0:00:00		28.6	243.5	2921.2							Aposelene							Downlinking SSSDR Segment 2 (orbit 144)
03/22/94 05:09:00	0:04:31												Downlink SSSDR Segment 3						Ground Command
03/22/94 05:17:06	0:12:37		21.0	243.5	2897.6							INPM							Enter penumbra
03/22/94 05:17:57	0:13:28		20.4	243.5	2894.3							INUM							Enter umbra
03/22/94 05:18:40	0:14:11		20.0	243.5	2891.3							N20D							
03/22/94 05:28:00	0:23:31												Downlink SSSDR Segment 4						Ground Command
03/22/94 05:32:41	0:28:11										CAN	AOS							
03/22/94 05:34:43	0:30:14		10.0	243.5	2785.5							N10D							
03/22/94 05:49:47	0:45:18		0.0	243.5	2616.1							Equator - D							
03/22/94 05:58:00	0:53:31												SSDR to IDLE - downlink complete						Ground Command
03/22/94 06:03:35	0:59:06		-10.0	243.5	2401.9							S10D							
03/22/94 06:15:56	1:11:27		-20.0	243.5	2162.6							S20D							
03/22/94 06:25:59	1:21:30		-29.2	243.5	1936.6							OUTUM							Exit umbra
03/22/94 06:26:41	1:22:12		-29.8	243.5	1920.0							OUTPM							Exit penumbra
03/22/94 06:26:50	1:22:21		-30.0	243.5	1916.2							S30D							
																			Standard Prep1 Script
03/22/94 06:27:41	1:23:12	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/22/94 06:36:22	1:31:53		-40.0	243.6	1676.2							S40D							
																			Standard Prep2 Script
03/22/94 06:38:39	1:34:10	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/22/94 06:43:39	1:39:10	0											Msg "WRNG: Omni/2k in 1 min.."						
03/22/94 06:44:39	1:40:10	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/22/94 06:44:42	1:40:13		-50.0	243.8	1451.7							S50D							
03/22/94 06:45:39	1:41:10	60											Switch to omni antennas						
03/22/94 06:46:39	1:42:10	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/22/94 06:47:09	1:42:40	30											UV & HR cameras ON						
03/22/94 06:51:58	1:47:29		-60.0	244.1	1248.4							S60D							
03/22/94 06:56:14	1:51:45	545											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 5
03/22/94 06:56:39	1:52:10	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 145 Timeline - Type B Orbit

03/22/94 06:56:57	1:52:28	18									Stop imaging - select ST-A								
03/22/94 06:58:09	1:53:40	72									Perform UV0 imaging (DHU SEQT 29)								Also image with both Star Trackers
03/22/94 06:58:23	1:53:54		-70.0	244.8	1068.7					S70D									
03/22/94 06:58:24	1:53:55	15									Perform HR imaging (DHU SEQT 30)								Also image with both Star Trackers
03/22/94 06:58:39	1:54:10	15									Perform LWIR imaging (DHU SEQT 25)								
03/22/94 06:58:54	1:54:25	15									Perform NIR imaging (DHU SEQT 31)								
03/22/94 06:59:09	1:54:40	15										Err:508							Slew to nadir (inertial pointing)
03/22/94 06:59:39	1:55:10	30									Laser Power ON								
																			Err:508
03/22/94 07:04:04	1:59:35		-80.0	246.9	913.2					S80D									Err:508
																			Err:508
03/22/94 07:07:08	2:02:39	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/22/94 07:07:56	2:03:27								PMK	LOS									
03/22/94 07:08:09	2:03:39	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)								START MAPPING
03/22/94 07:09:09	2:04:40	60	-89.3	332.7	782.1					South Pole	Set SA step rate to LO								
03/22/94 07:09:45	2:05:16		-88.5	32.7	767.1					LDAWN									
03/22/94 07:13:46	2:09:17	277								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17								
03/22/94 07:13:47	2:09:18		-80.0	58.5	673.7					S80A									
03/22/94 07:18:03	2:13:34	257	-70.0	60.6	586.4					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4								
03/22/94 07:22:04	2:17:35	241	-60.0	61.3	519.5					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/22/94 07:25:52	2:21:23	228	-50.0	61.7	471.9					S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5								SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/22/94 07:29:32	2:25:03	220								S40A	Load exposure table LUNARZ35S								
03/22/94 07:29:33	2:25:04		-40.0	61.9	442.7					S40A									
03/22/94 07:33:09	2:28:40	217	-30.0	62.1	431.4					S30A	Load exposure table LUNARZ25S								
03/22/94 07:33:39	2:29:10		-28.6	62.1	431.3					Periselene									
03/22/94 07:36:45	2:32:16	216	-20.0	62.2	437.9					S20A	Load exposure table LUNARZ15S								
03/22/94 07:40:24	2:35:55	219	-10.0	62.3	462.1					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/22/94 07:44:10	2:39:41	226	0.0	62.4	504.6					Equator - A	Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 7
03/22/94 07:48:06	2:43:37	236	10.0	62.5	566.0					N10A	Load CEQ_08U.UMI into SEQT 08; Load exposure table LUNARZ15N; Select DHU SEQT 8								UV and IR uncompressed
03/22/94 07:52:18	2:47:48	252	20.0	62.6	647.5					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9								Resume compression

Orbit 145 Timeline - Type B Orbit

03/22/94 07:53:18	2:48:49	60									Laser power OFF			
03/22/94 07:56:50	2:52:21	212	30.0	62.7	750.1					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/22/94 08:01:47	2:57:18	297	40.0	62.9	875.2					N40A	Switch to inertial pointing (ORB_145RW); Load exposure table LUNARZ45N; Select DHU SEQT 10			Initiate oblique viewing
03/22/94 08:07:18	3:02:49	331	50.0	63.1	1023.9					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11			Resume HiRes imaging
03/22/94 08:13:29	3:09:00	371	60.0	63.4	1197.0					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12			
03/22/94 08:17:42	3:13:13	253									Slew s/c sensors to nadir (ACSMMode=LunarMapping); Select DHU SEQT 19			End oblique viewing - resume nadir pointing
03/22/94 08:20:31	3:16:02	169	70.0	64.1	1394.1					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20			
03/22/94 08:28:32	3:24:03	481								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21			
03/22/94 08:28:33	3:24:04		80.0	66.1	1613.4					N80A				
03/22/94 08:29:32	3:25:03	60									Load DEQ_08.UMI into SEQT 08			Restore compressed SEQT 8
Err:508														
03/22/94 08:37:42	3:33:13		89.3	151.5	1849.2					North Pole				
Standard Post Script														
03/22/94 08:38:42	3:34:13	0									Stop Imaging - select ST-A			
03/22/94 08:38:47	3:34:18	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)			Slew to Vega (inertial pointing)
03/22/94 08:38:57	3:34:28		88.5	212.0	1880.0					LDUSK				
03/22/94 08:41:47	3:37:18	180									Park opaque filter on HiRes (DHU SEQT 27)			
03/22/94 08:42:02	3:37:33	15									Select ST-A			
03/22/94 08:48:12	3:43:43		80.0	237.7	2094.5					N80D				
03/22/94 08:48:42	3:44:13	400									Perform UVO Imaging (DHU SEQT 29)			Also image with both star trackers
03/22/94 08:48:57	3:44:27	15									Perform LWIR imaging (DHU SEQT 25)			No data
03/22/94 08:49:02	3:44:32	5									Perform NIR imaging (Select DHU SEQT 31)			
03/22/94 08:49:14	3:44:45	12									Load exposure table LUNIRDKS1			
03/22/94 08:49:26	3:44:57	12									Load exposure table LUNIRDKS2			
03/22/94 08:49:38	3:45:09	12									Perform HiRes Imaging (DHU SEQT 30)			Also image with both star trackers
03/22/94 08:49:56	3:45:27	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)			Slew HGA to Earth

Orbit 145 Timeline - Type B Orbit

03/22/94 08:55:56	3:51:27	360								Switch to HGA	READY FOR DATA DUMP
											End Post Script
03/22/94 08:56:00	3:51:31									Switch to DHU mode @ 128 kbps	Ground Command
03/22/94 08:59:00	3:54:31									Downlink SSSR Segment 5	Ground Command
03/22/94 09:00:09	3:55:40		70.0	239.7	2337.6				N70D		
03/22/94 09:07:00	4:02:31									Uplink & schedule L146 scripts	Ground Command
03/22/94 09:13:34	4:09:05		60.0	240.3	2560.7				N60D		
03/22/94 09:28:19	4:23:50		50.0	240.6	2744.5				N50D		
03/22/94 09:30:37	4:26:08							GDS	LOS		
03/22/94 09:33:00	4:28:31									Downlink SSSR Segment 6	Ground Command
03/22/94 09:44:08	4:39:39		40.0	240.7	2869.4				N40D		
03/22/94 10:00:35	4:56:06		30.0	240.7	2920.3				N30D		
03/22/94 10:02:49	4:58:19		28.7	240.7	2921.1				Aposelene		

Orbit 146 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/22/94 10:02:49	0:00:00		28.7	240.7	2921.1							Aposelene							Downlinking SSSDR Segment 6 (orbit 145)
03/22/94 10:07:00	0:04:11												Downlink SSSDR Segment 7						Ground Command
03/22/94 10:15:30	0:12:41		21.0	240.7	2897.2							INPM							Enter penumbra
03/22/94 10:16:21	0:13:32		20.5	240.7	2893.9							INUM							Enter umbra
03/22/94 10:17:05	0:14:16		20.0	240.7	2890.8							N20D							
03/22/94 10:25:00	0:22:11												DHU Reset Reload DHU tables (including SEQ_LUNAR_D)						Ground Command for reloading DHU
03/22/94 10:33:07	0:30:18		10.0	240.7	2784.7							N10D							
03/22/94 10:48:12	0:45:23		0.0	240.7	2615.0							Equator - D							
03/22/94 10:49:00	0:46:11												Resume downlink SSSDR Segment 7						Ground Command
03/22/94 11:01:59	0:59:10		-10.0	240.7	2400.6							S10D							
03/22/94 11:14:20	1:11:31		-20.0	240.7	2161.4							S20D							
03/22/94 11:24:24	1:21:35		-29.2	240.8	1934.7							OUTUM							Exit umbra
03/22/94 11:25:05	1:22:16		-29.9	240.8	1918.2							OUTPM							Exit penumbra
03/22/94 11:25:13	1:22:24		-30.0	240.8	1915.0							S30D							
																			Standard Prep1 Script
03/22/94 11:26:05	1:23:16	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/22/94 11:34:45	1:31:56		-40.0	240.9	1675.1							S40D							
																			Standard Prep2 Script
03/22/94 11:37:00	1:34:11	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/22/94 11:42:00	1:39:11	0											Msg "WRNG: Omni/2k in 1 min.."						
03/22/94 11:43:04	1:40:15		-50.0	241.1	1450.8							S50D							
03/22/94 11:43:00	1:40:11	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/22/94 11:44:00	1:41:11	60											Switch to omni antennas						
03/22/94 11:45:00	1:42:11	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/22/94 11:45:30	1:42:41	30											UV & HR cameras ON						
03/22/94 11:50:20	1:47:31		-60.0	241.4	1247.5							S60D							
03/22/94 11:54:35	1:51:46	545											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1
03/22/94 11:55:00	1:52:11	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 146 Timeline - Type A Orbit

03/22/94 11:55:06	1:52:17	6									Stop imaging - select ST-A					
03/22/94 11:56:18	1:53:29	72									Perform UV0 imaging (DHU SEQT 29)					
03/22/94 11:56:24	1:53:35	6									Perform HR imaging (DHU SEQT 30)					
03/22/94 11:56:30	1:53:41	6									Perform LWIR imaging (DHU SEQT 25)					
03/22/94 11:56:34	1:53:45	4									Perform NIR imaging (DHU SEQT 31)					
03/22/94 11:56:40	1:53:51	6										Err:508				Slew to nadir (inertial pointing)
03/22/94 11:56:44	1:53:55		-70.0	242.0	1068.0				S70D							
03/22/94 11:57:10	1:54:21	30									Laser Power ON					
																Err:508
03/22/94 12:02:25	1:59:36		-80.0	244.1	912.6				S80D							Err:508
																Err:508
03/22/94 12:05:30	2:02:41	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85					NOTE: Separate NIR exposure tables used for high latitude bands
03/22/94 12:06:30	2:03:41	60									Switch to lunar mapping mode (ACSMMode=LunarMapping); Start Imaging (DHU SEQT 9)					START MAPPING
03/22/94 12:07:30	2:04:41	60							MAXS		Set SA step rate to LO					
03/22/94 12:07:31	2:04:42		-89.3	330.4	781.6				South Pole							
03/22/94 12:08:07	2:05:18		-88.6	30.6	766.7				LDAWN							
03/22/94 12:12:08	2:09:19	278	-80.0	55.9	673.3				S80A		Load exposure table LUNARZ75S; Load Exposure table LUNNIR75; Select DHU SEQT 3					
03/22/94 12:16:25	2:13:36	257	-70.0	58.0	586.1				S70A		Load exposure table LUNARZ65S; Load Exposure table LUNNIR65; Select DHU SEQT 4					
03/22/94 12:20:25	2:17:36	240	-60.0	58.6	519.4				S60A		Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/22/94 12:24:13	2:21:24	228	-50.0	59.0	471.9				S50A		Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/22/94 12:27:54	2:25:05	221	-40.0	59.2	442.8				S40A		Load exposure table LUNARZ35S					
03/22/94 12:31:30	2:28:41	216	-30.0	59.4	431.6				S30A		Load exposure table LUNARZ25S					
03/22/94 12:31:59	2:29:10		-28.7	59.4	431.5				Periselene							
03/22/94 12:35:06	2:32:17	216	-20.0	59.5	438.1				S20A		Load exposure table LUNARZ15S					
03/22/94 12:38:45	2:35:56	219	-10.0	59.6	462.4				S10A		Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/22/94 12:42:31	2:39:42	226	0.0	59.7	505.0				Equator - A		Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 3
03/22/94 12:46:28	2:43:39	237	10.0	59.8	566.6				N10A		Load CEQ_08U.UMI into SEQT 08; Load exposure table LUNARZ15N; Select DHU SEQT 8					UV and IR uncompresseddd
03/22/94 12:50:39	2:47:50	251	20.0	59.9	648.1				N20A		Load exposure table LUNARZ25N; Select DHU SEQT 9					Resume compression

Orbit 146 Timeline - Type A Orbit

03/22/94 12:51:39	2:48:50	60									Laser power OFF	
03/22/94 12:55:11	2:52:22	212	30.0	60.0	750.8					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/22/94 13:00:09	2:57:20	298	40.0	60.1	876.1					N40A	Record in SSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4
03/22/94 13:05:40	3:02:51	331	50.0	60.3	1024.9					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	Resume HiRes imaging
03/22/94 13:11:52	3:09:03	372	60.0	60.6	1198.0					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 13	
03/22/94 13:18:53	3:16:04	421	70.0	61.3	1395.2					N70A	Load exposure table LUNARZ75N; Load Exposure table LUNNIR75; Select DHU SEQT 14	
03/22/94 13:26:55	3:24:06	482	80.0	63.3	1614.6					N80A	Load exposure table LUNARZ85N; Load Exposure table LUNNIR85; Select DHU SEQT 15	
03/22/94 13:27:55	3:25:06	60									Load DEQ_08.UMI into SEQT 08	Restore compressed SEQT 8
												Err:508
03/22/94 13:36:06	3:33:17		89.3	149.5	1850.6					North Pole		
												Standard Post Script
03/22/94 13:37:06	3:34:17	0									Stop Imaging - select ST-A	
03/22/94 13:37:11	3:34:22	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)
03/22/94 13:37:21	3:34:32		88.6	210.0	1881.2					LDUSK		
03/22/94 13:40:11	3:37:22	180									Park opaque filter on HiRes (DHU SEQT 27)	
03/22/94 13:40:26	3:37:37	15									Select ST-A; Activate waitwhileslew for 400 sec	
03/22/94 13:40:27	3:37:38	1									Perform UVO Imaging (DHU SEQT 29)	Time is at end of slew (waitwhileslew used)
Err:508	Err:508	6									Perform LWIR imaging (DHU SEQT 25)	
Err:508	Err:508	3									Perform NIR imaging (DHU SEQT 31)	
Err:508	Err:508	6									Load exposure table LUNIRDKS1	
Err:508	Err:508	6									Load exposure table LUNIRDKS2	
Err:508	Err:508	6									Perform HiRes Imaging (DHU SEQT 30)	No data
Err:508	Err:508	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec	Slew HGA to Earth with active waitwhileslew
03/22/94 13:44:47	3:41:58									MAD	AOS	

Orbit 147 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/22/94 15:01:09	0:00:00		28.7	238.0	2920.9							Aposelene							Downlinking SSSDR Segment 2 (orbit 146)
03/22/94 15:04:00	0:02:51												Downlink SSSDR Segment 3						Ground Command
03/22/94 15:13:53	0:12:44		21.0	238.0	2896.8							INPM							Enter penumbra
03/22/94 15:14:44	0:13:35		20.5	238.0	2893.5							INUM							Enter umbra
03/22/94 15:15:30	0:14:21		20.0	238.0	2890.3							N20D							
03/22/94 15:31:32	0:30:23		10.0	238.0	2783.8							N10D							
03/22/94 15:39:00	0:37:51												Downlink SSSDR Segment 4						Ground Command
03/22/94 15:46:36	0:45:27		0.0	238.0	2614.0							Equator - D							
03/22/94 15:53:00	0:51:51												Uplink baseline script (BASELINE.UMI)						Ground Command
03/22/94 16:00:22	0:59:13		-10.0	238.0	2399.5							S10D							
03/22/94 16:12:00	1:10:51												SSDR to IDLE - downlink complete						Ground Command
03/22/94 16:12:43	1:11:34		-20.0	238.0	2160.2							S20D							
03/22/94 16:22:48	1:21:39		-29.2	238.0	1933.0							OUTUM							Exit umbra
03/22/94 16:23:29	1:22:20		-29.9	238.0	1916.5							OUTPM							Exit penumbra
03/22/94 16:23:36	1:22:27		-30.0	238.0	1913.9							S30D							
																			Standard Prep1 Script
03/22/94 16:24:29	1:23:20	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/22/94 16:33:07	1:31:58		-40.0	238.1	1674.0							S40D							
																			Standard Prep2 Script
03/22/94 16:35:41	1:34:33	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/22/94 16:41:11	1:40:02	0											Msg "WRNG: Omni/2k in 1 min.."						
03/22/94 16:41:26	1:40:17		-50.0	238.3	1449.9							S50D							
03/22/94 16:42:11	1:41:02	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/22/94 16:43:11	1:42:02	60											Switch to omni antennas						
03/22/94 16:44:11	1:43:02	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/22/94 16:44:41	1:43:33	30											UV & HR cameras ON						
03/22/94 16:48:42	1:47:33		-60.0	238.6	1246.8							S60D							
03/22/94 16:53:46	1:52:37	545											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 5
03/22/94 16:54:11	1:53:03	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 147 Timeline - Type B Orbit

03/22/94 16:54:17	1:53:09	6														Stop imaging - select ST-A								
03/22/94 16:55:06	1:53:57		-70.0	239.2	1067.4					S70D														
03/22/94 16:55:29	1:54:21	72														Perform UV0 imaging (DHU SEQT 29)								
03/22/94 16:55:35	1:54:27	6														Perform HR imaging (DHU SEQT 30)								
03/22/94 16:55:42	1:54:33	6														Perform LWIR imaging (DHU SEQT 25)								
03/22/94 16:55:46	1:54:37	4														Perform NIR imaging (DHU SEQT 31)								
03/22/94 16:55:52	1:54:43	6															Err:508							Slew to nadir (inertial pointing)
03/22/94 16:56:22	1:55:13	30														Laser Power ON								
Err:508																								
03/22/94 17:00:47	1:59:38		-80.0	241.2	912.2					S80D														
Err:508																								
03/22/94 17:03:52	2:02:43	0														Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S								
03/22/94 17:04:52	2:03:43	60														Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)								START MAPPING
03/22/94 17:05:52	2:04:43	60	-89.3	328.1	781.2					South Pole						Set SA step rate to LO								
03/22/94 17:06:28	2:05:19		-88.6	28.6	766.4					LDAWN														
03/22/94 17:10:29	2:09:20	277	-80.0	53.3	673.1					S80A						Load exposure table LUNARZ75S; Select DHU SEQT 17								
03/22/94 17:14:46	2:13:37	257	-70.0	55.3	586.0					S70A						Load exposure table LUNARZ65S; Select DHU SEQT 4								
03/22/94 17:18:46	2:17:37	240	-60.0	56.0	519.3					S60A						Load exposure table LUNARZ55S; Select DHU SEQT 6								
03/22/94 17:22:34	2:21:25	228	-50.0	56.3	471.9					S50A						Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5								SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/22/94 17:26:15	2:25:06	221	-40.0	56.5	442.9					S40A						Load exposure table LUNARZ35S								
03/22/94 17:29:51	2:28:42	216	-30.0	56.6	431.8					S30A						Load exposure table LUNARZ25S								
03/22/94 17:30:19	2:29:10		-28.7	56.7	431.7					Periselene														
03/22/94 17:33:27	2:32:18	216								S20A						Load exposure table LUNARZ15S								
03/22/94 17:37:07	2:35:58	220	-10.0	56.8	462.8					S10A						Load exposure table LUNARZ05S; Select DHU SEQT 6								
03/22/94 17:40:53	2:39:44	226	0.0	56.9	505.5					Equator - A						Record in SSSR Segment 7; Load CEQ_07U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7								SSDR Segment 7 UV and IR uncompressed
03/22/94 17:44:49	2:43:40	236	10.0	57.0	567.1					N10A						Load exposure table LUNARZ15N; Select DHU SEQT 8								Resume compression
03/22/94 17:49:01	2:47:52	252	20.0	57.1	648.8					N20A						Load exposure table LUNARZ25N; Select DHU SEQT 9								
03/22/94 17:50:01	2:48:52	60														Laser power OFF								
03/22/94 17:53:33	2:52:24	212	30.0	57.2	751.6					N30A						Load exposure table LUNARZ35N; Select DHU SEQT 10								

Orbit 147 Timeline - Type B Orbit

03/22/94 17:58:31	2:57:22	298	40.0	57.3	876.9					N40A	Switch to inertial pointing (ORB_147RW); Load exposure table LUNARZ45N; Select DHU SEQT 10	Initiate oblique viewing
03/22/94 18:04:02	3:02:53	331	50.0	57.5	1025.8					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11	Resume HiRes imaging
03/22/94 18:10:14	3:09:05	372	60.0	57.8	1199.1					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	
03/22/94 18:14:27	3:13:18	253									Slew s/c sensors to nadir (ACSMMode=LunarMapping, -X axis forward); Select DHU SEQT 19	End oblique viewing - resume nadir pointing BACKWARDS FLIGHT TEST (-X along velocity vector)
03/22/94 18:17:16	3:16:07	169	70.0	58.5	1396.3					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	
03/22/94 18:25:18	3:24:09	482	80.0	60.4	1615.7					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/22/94 18:26:18	3:25:09	60									Load DEQ_07.UMI into SEQT 07	Restore compressed SEQT 7
												Err:508
03/22/94 18:34:29	3:33:20		89.3	146.1	1851.6					North Pole		
												Standard Post Script
03/22/94 18:35:29	3:34:20	0									Stop Imaging - select ST-A	
03/22/94 18:35:34	3:34:25	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)
03/22/94 18:35:44	3:34:35		88.6	208.1	1882.3					LDUSK		
03/22/94 18:38:34	3:37:25	180									Park opaque filter on HiRes (DHU SEQT 27)	
03/22/94 18:38:49	3:37:40	15									Select ST-A; Activate waitwhileslew for 400 sec	
03/22/94 18:40:06	3:38:57	77									Perform UVO Imaging (DHU SEQT 29)	Time approx (at end of slew) No data
Err:508	Err:508	6									Perform LWIR imaging (DHU SEQT 25)	
Err:508	Err:508	3									Perform NIR imaging (DHU SEQT 31)	
Err:508	Err:508	6									Load exposure table LUNIRDKS1	
Err:508	Err:508	6									Load exposure table LUNIRDKS2	
Err:508	Err:508	6									Perform HiRes Imaging (DHU SEQT 30)	
Err:508	Err:508	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center); Activate waitwhile slew for 360 sec	Slew HGA to Earth with active waitwhileslew
03/22/94 18:44:59	3:43:50		80.0	232.5	2096.9					N80D		

Orbit 148 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/22/94 19:59:29	0:00:00		28.7	235.3	2920.6							Aposelene							Downlinking SSSR Segment 6 (orbit 147)
03/22/94 20:07:00	0:07:31												Downlink SSSR Segment 7						Ground Command
03/22/94 20:12:16	0:12:47		21.0	235.3	2896.4							INPM							Enter penumbra
03/22/94 20:13:07	0:13:38		20.5	235.3	2893.0							INUM							Enter umbra
03/22/94 20:13:55	0:14:26		20.0	235.3	2889.7							N20D							
03/22/94 20:29:56	0:30:27		10.0	235.3	2783.0							N10D							
03/22/94 20:42:00	0:42:31												Update state vector (GNC53_22MAR2000)						Ground Command
03/22/94 20:45:00	0:45:31		0.0	235.2	2612.9							Equator - D							
03/22/94 20:58:46	0:59:17		-10.0	235.2	2398.3							S10D							
03/22/94 21:09:00	1:09:31												SSDR to IDLE - downlink complete						Ground Command
03/22/94 21:11:06	1:11:37		-20.0	235.3	2159.1							S20D							
03/22/94 21:21:12	1:21:43		-29.2	235.3	1931.5							OUTUM							Exit umbra
03/22/94 21:21:53	1:22:24		-29.9	235.3	1915.0							OUTPM							Exit penumbra
03/22/94 21:21:58	1:22:29		-30.0	235.3	1912.9							S30D							
03/22/94 21:22:00	1:22:31												Load CEQ_21.UMI into SEQT 21						Ground Command
																			Standard Prep1 Script
03/22/94 21:22:53	1:23:24	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/22/94 21:31:30	1:32:01		-40.0	235.4	1673.1							S40D							
																			Standard Prep2 Script
03/22/94 21:34:02	1:34:33	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/22/94 21:39:32	1:40:03	0											Msg "WRNG: Omni/2k in 1 min.."						
03/22/94 21:39:48	1:40:19		-50.0	235.5	1449.1							S50D							
03/22/94 21:40:32	1:41:03	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/22/94 21:41:32	1:42:03	60											Switch to omni antennas						
03/22/94 21:42:32	1:43:03	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/22/94 21:43:02	1:43:33	30											UV & HR cameras ON						
03/22/94 21:47:04	1:47:35		-60.0	235.8	1246.2							S60D							
03/22/94 21:52:07	1:52:38	545											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
03/22/94 21:52:25	1:52:56										GDS	AOS							

Orbit 148 Timeline - Type A Orbit

03/22/94 21:52:32	1:53:03	25								Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/22/94 21:52:38	1:53:09	6								Stop imaging - select ST-A					
03/22/94 21:53:27	1:53:58		-70.0	236.4	1066.9				S70D						
03/22/94 21:53:50	1:54:21	72								Perform UV0 imaging (DHU SEQT 29)					No data
03/22/94 21:53:56	1:54:27	6								Perform HR imaging (DHU SEQT 30)					
03/22/94 21:54:02	1:54:33	6								Perform LWIR imaging (DHU SEQT 25)					
03/22/94 21:54:07	1:54:38	4								Perform NIR imaging (DHU SEQT 31)					
03/22/94 21:54:13	1:54:44	6									Err:508				Slew to nadir (inertial pointing)
03/22/94 21:54:43	1:55:14	30								Laser Power ON					
Err:508															
03/22/94 21:59:08	1:59:39		-80.0	238.3	911.8				S80D						
Err:508															
03/22/94 22:02:12	2:02:44	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/22/94 22:03:13	2:03:44	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)					START MAPPING
03/22/94 22:04:13	2:04:44	60	-89.3	324.1	781.1				South Pole	Set SA step rate to LO					
03/22/94 22:04:49	2:05:20		-88.6	26.8	766.2				LDAWN						
03/22/94 22:08:50	2:09:21	277							S80A	Load exposure table LUNARZ75S; Select DHU SEQT 3					
03/22/94 22:13:07	2:13:38	257	-70.0	52.6	586.0				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/22/94 22:17:07	2:17:38	240	-60.0	53.3	519.4				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/22/94 22:20:56	2:21:27	229	-50.0	53.6	472.1				S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/22/94 22:24:36	2:25:07	220	-40.0	53.8	443.2				S40A	Load exposure table LUNARZ35S					
03/22/94 22:28:13	2:28:44	217	-30.0	53.9	432.1				S30A	Load exposure table LUNARZ25S					
03/22/94 22:28:39	2:29:10		-28.8	53.9	432.0				Periselene						
03/22/94 22:31:49	2:32:20	216	-20.0	54.0	438.8				S20A	Load exposure table LUNARZ15S					
03/22/94 22:35:28	2:35:59	219	-10.0	54.1	463.3				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/22/94 22:39:14	2:39:45	226	0.0	54.2	506.0				Equator - A	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 3
03/22/94 22:43:11	2:43:42	237	10.0	54.3	567.7				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/22/94 22:44:01	2:44:32	50								Load EEQ_03H.UMI into SEQT 03					Hires color burst unsuccessful since SEQT 3 was not selected due to script error
03/22/94 22:47:23	2:47:54	202	20.0	54.4	649.5				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					

Orbit 148 Timeline - Type A Orbit

03/22/94 22:48:23	2:48:54	60									Laser power OFF		
03/22/94 22:51:55	2:52:26	212	30.0	54.5	752.4					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10		
03/22/94 22:56:53	2:57:24	298	40.0	54.6	877.8					N40A	Record in SSSDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11		SSDR Segment 4
03/22/94 23:02:24	3:02:55	331	50.0	54.8	1026.8					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12		Resume HiRes imaging
03/22/94 23:08:37	3:09:08	373	60.0	55.1	1200.1					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 13		
03/22/94 23:15:39	3:16:10	422	70.0	55.7	1397.4					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 14		
03/22/94 23:23:41	3:24:12	482								N80A	Load exposure table LUNARZ85N; Select DHU SEQT 15		
03/22/94 23:23:42	3:24:13		80.0	57.5	1616.8					N80A			
03/22/94 23:24:41	3:25:12	60									Load DEQ_03.UMI into SEQT 03		Restore standard SEQT 3
													Err:508
03/22/94 23:32:53	3:33:24		89.3	144.0	1852.9					North Pole			
													Standard Post Script
03/22/94 23:33:53	3:34:24	0									Stop Imaging - select ST-A		
03/22/94 23:33:58	3:34:29	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)		Slew to Vega (inertial pointing)
03/22/94 23:34:08	3:34:39		88.6	206.2	1883.4					LDUSK			
03/22/94 23:36:58	3:37:29	180									Park opaque filter on HiRes (DHU SEQT 27)		
03/22/94 23:37:13	3:37:44	15									Select DHU SEQT 1		
03/22/94 23:37:50	3:38:21	37									Perform UVO Imaging (DHU SEQT 29)		Time is at end of slew (waitwhileslew used) No data
03/22/94 23:37:56	3:38:27	6									Perform LWIR imaging (DHU SEQT 25)		
03/22/94 23:37:59	3:38:30	3									Perform NIR imaging (DHU SEQT 31)		
03/22/94 23:38:05	3:38:36	6									Load exposure table LUNIRDKS1		

Orbit 148 Timeline - Type A Orbit

03/22/94 23:38:11	3:38:42	6									Load exposure table LUNIRDKS2							
03/22/94 23:38:17	3:38:48	6									Perform HiRes Imaging (DHU SEQT 30)							No data
03/22/94 23:38:23	3:38:54	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center); Activate waitwhile slew for 360 sec							Slew HGA to Earth with active waitwhileslew
03/22/94 23:42:00	3:42:31	217									Switch to HGA							READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
End Post Script																		
03/22/94 23:43:00	3:43:31										Switch to DHU mode @ 128 kbps							Ground Command
03/22/94 23:43:23	3:43:54		80.0	229.9	2098.0													N80D
03/22/94 23:45:00	3:45:31										Downlink SDR Segment 1							Ground Command
03/22/94 23:55:22	3:55:53		70.0	231.7	2340.7													N70D
03/23/94 00:08:48	4:09:19		60.0	232.3	2563.2													N60D
03/23/94 00:22:00	4:22:31										Downlink SDR Segment 2							Ground Command
03/23/94 00:23:34	4:24:05		50.0	232.5	2746.1													N50D
03/23/94 00:26:00	4:26:31										Uplink & schedule L149 scripts							Ground Command
03/23/94 00:39:23	4:39:54		40.0	232.6	2869.9													N40D
03/23/94 00:55:49	4:56:20		30.0	232.6	2919.7													N30D
03/23/94 00:57:00	4:57:31										Downlink SDR Segment 3							Ground Command
03/23/94 00:57:49	4:58:20		28.8	232.6	2920.3													Aposelene

Orbit 149 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/23/94 00:57:49	0:00:00		28.8	232.6	2920.3							Aposelene							Downlinking SSSR Segment 3 (orbit 148)
03/23/94 01:10:39	0:12:50		21.0	232.6	2895.9							INPM							Enter penumbra
03/23/94 01:11:30	0:13:41		20.5	232.6	2892.5							INUM							Enter umbra
03/23/94 01:12:19	0:14:30		20.0	232.6	2889.1							N20D							
03/23/94 01:15:00	0:17:11												Downlink SSSR Segment 4						Ground Command
03/23/94 01:28:20	0:30:31		10.0	232.5	2782.1							N10D							
03/23/94 01:31:00	0:33:11												SSDR to IDLE - downlink complete						Ground Command
03/23/94 01:43:23	0:45:34		0.0	232.5	2611.9							Equator - D							
03/23/94 01:57:09	0:59:20		-10.0	232.5	2397.3							S10D							
03/23/94 02:09:28	1:11:39		-20.0	232.5	2158.1							S20D							
03/23/94 02:19:35	1:21:46		-29.3	232.5	1930.2							OUTUM							Exit umbra
03/23/94 02:20:16	1:22:27		-29.9	232.5	1913.7							OUTPM							Exit penumbra
03/23/94 02:20:21	1:22:32		-30.0	232.5	1911.9							S30D							
																			Standard Prep1 Script
03/23/94 02:21:16	1:23:27	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/23/94 02:29:52	1:32:03		-40.0	232.6	1672.3							S40D							
																			Standard Prep2 Script
03/23/94 02:32:25	1:34:36	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/23/94 02:37:55	1:40:06	0											Msg "WRNG: Omni/2k in 1 min.."						
03/23/94 02:38:10	1:40:21		-50.0	232.8	1448.5							S50D							
03/23/94 02:38:55	1:41:06	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/23/94 02:39:55	1:42:06	60											Switch to omni antennas						
03/23/94 02:40:55	1:43:06	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/23/94 02:41:25	1:43:36	30											UV & HR cameras ON						
03/23/94 02:45:26	1:47:37		-60.0	233.0	1245.7							S60D							
03/23/94 02:47:18	1:49:29										MAD	LOS							
03/23/94 02:50:30	1:52:41	545											Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/23/94 02:50:55	1:53:06	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/23/94 02:51:07	1:53:18	12											Stop imaging - select ST-A						

Orbit 149 Timeline - Type B Orbit

03/23/94 02:51:49	1:54:00		-70.0	233.6	1066.5				S70D				
03/23/94 02:52:19	1:54:30	72								Perform UV0 imaging (DHU SEQT 29)			
03/23/94 02:52:31	1:54:42	12								Perform HR imaging (DHU SEQT 30)			
03/23/94 02:52:43	1:54:54	12								Perform LWIR imaging (DHU SEQT 25)			
03/23/94 02:52:55	1:55:06	12								Perform NIR imaging (DHU SEQT 31)			
03/23/94 02:53:07	1:55:18	12									Err:508		Slew to nadir (inertial pointing)
03/23/94 02:53:37	1:55:48	30								Laser Power ON			
													Err:508
03/23/94 02:57:30	1:59:41		-80.0	235.4	911.6				S80D				
													Err:508
03/23/94 03:00:34	2:02:45	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ855			
03/23/94 03:01:35	2:03:46	60								Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 16)			START MAPPING
03/23/94 03:02:35	2:04:46	60	-89.4	323.2	780.7				South Pole	Set SA step rate to LO			
03/23/94 03:03:11	2:05:22		-88.6	24.9	766.1				LDAWN				
03/23/94 03:07:12	2:09:23	277	-80.0	48.1	672.9				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17			
03/23/94 03:11:29	2:13:40	257	-70.0	50.0	586.0				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/23/94 03:15:29	2:17:40	240	-60.0	50.6	519.5				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/23/94 03:19:17	2:21:28	228	-50.0	50.9	472.3				S50A	Record in SDDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5			SDDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/23/94 03:22:58	2:25:09	221	-40.0	51.1	443.5				S40A	Load exposure table LUNARZ35S			
03/23/94 03:26:34	2:28:45	216	-30.0	51.2	432.5				S30A	Load exposure table LUNARZ25S			
03/23/94 03:27:00	2:29:11		-28.8	51.2	432.4				Periselene				
03/23/94 03:30:10	2:32:21	216							S20A	Load exposure table LUNARZ15S			
03/23/94 03:30:11	2:32:22		-20.0	51.3	439.2				S20A				
03/23/94 03:33:50	2:36:01	220	-10.0	51.4	463.8				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/23/94 03:37:36	2:39:47	226	0.0	51.5	506.6				Equator - A	Record in SDDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7			SDDR Segment 7
03/23/94 03:41:33	2:43:44	237	10.0	51.5	568.4				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/23/94 03:45:45	2:47:56	252	20.0	51.6	650.2				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/23/94 03:46:45	2:48:56	60								Laser power OFF			
03/23/94 03:50:17	2:52:28	212	30.0	51.7	753.2				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			

Orbit 149 Timeline - Type B Orbit

03/23/94 03:55:16	2:57:27	299	40.0	51.8	878.6					N40A	Switch to inertial pointing (ORB_149RW); Load exposure table LUNARZ45N; Select DHU SEQT 10						Initiate oblique viewing
03/23/94 04:00:47	3:02:58	331	50.0	52.0	1027.7					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11						Resume HiRes imaging
03/23/94 04:06:59	3:09:10	372								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12						
03/23/94 04:07:00	3:09:11		60.0	52.3	1201.1					N60A							
03/23/94 04:11:12	3:13:23	254									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Load CEQ_19U.UMI into SEQT 19; Select DHU SEQT 19						End oblique viewing - resume nadir pointing UV and IR uncompressed
03/23/94 04:14:02	3:16:13	169	70.0	52.9	1398.4					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						
03/23/94 04:22:05	3:24:16	483	80.0	54.6	1617.9					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
03/23/94 04:23:05	3:25:16	60									Load DEQ_19.UMI into SEQT 19						Restore compressed SEQT 19
Err:508																	
03/23/94 04:31:17	3:33:28		89.4	141.7	1854.1					North Pole							
Standard Post Script																	
03/23/94 04:32:16	3:34:27	0									Stop Imaging - select ST-A						
03/23/94 04:32:21	3:34:32	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)						Slew to Vega (inertial pointing)
03/23/94 04:32:31	3:34:42		88.6	204.4	1884.4					LDUSK							
03/23/94 04:35:21	3:37:32	180									Park opaque filter on HiRes (DHU SEQT 27)						
03/23/94 04:35:36	3:37:47	15									Select ST-A; Activate waitwhileslew for 400 sec						
03/23/94 04:36:18	3:38:29	42									Perform UVO Imaging (DHU SEQT 29)						Start dark field & calibration imaging
03/23/94 04:36:32	3:38:43	15									Perform LWIR imaging (DHU SEQT 25)						
03/23/94 04:36:37	3:38:48	5									Perform NIR imaging (DHU SEQT 31)						
03/23/94 04:36:50	3:39:01	12									Load exposure table LUNIRDKS1						
03/23/94 04:37:02	3:39:13	12									Load exposure table LUNIRDKS2						
03/23/94 04:37:14	3:39:25	12									Perform HiRes Imaging (DHU SEQT 30)						No data
03/23/94 04:37:32	3:39:43	18									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec						Slew HGA to Earth with active waitwhileslew
03/23/94 04:41:48	3:43:59		80.0	227.3	2099.0					N80D							

Orbit 149 Timeline - Type B Orbit

03/23/94 04:39:30	3:41:41	118																		Switch to HGA	READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwholeslew
																					End Post Script
03/23/94 04:40:00	3:42:11																			Switch to DHU mode @ 128 kbps	Ground Command
03/23/94 04:44:00	3:46:11																			Downlink SDR Segment 5	Ground Command
03/23/94 04:48:00	3:50:11																			Uplink & schedule L150 scripts	Ground Command
03/23/94 04:53:47	3:55:58		70.0	229.0	2341.6															N70D	
03/23/94 05:07:13	4:09:24		60.0	229.6	2563.9															N60D	
03/23/94 05:15:00	4:17:11																			Downlink SDR Segment 6	Ground Command
03/23/94 05:21:59	4:24:10		50.0	229.8	2746.4															N50D	
03/23/94 05:37:48	4:39:59		40.0	229.8	2869.8															N40D	
03/23/94 05:47:00	4:49:11																			Downlink SDR Segment 7	Ground Command
03/23/94 05:54:14	4:56:25		30.0	229.9	2919.3															N30D	
03/23/94 05:56:10	4:58:21		28.8	229.9	2919.9															Aposelene	

Orbit 150 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/23/94 05:56:10	0:00:00		28.8	229.9	2919.9							Aposelene							Downlinking SDDR Segment 7 (orbit 149)
03/23/94 06:09:02	0:12:51		21.0	229.8	2895.3							INPM							Enter penumbra
03/23/94 06:09:40	0:13:29										CAN	AOS							
03/23/94 06:09:53	0:13:42		20.5	229.8	2892.0							INUM							Enter umbra
03/23/94 06:10:44	0:14:34		20.0	229.8	2888.4							N20D							
03/23/94 06:26:44	0:30:34		10.0	229.8	2781.2							N10D							
03/23/94 06:32:00	0:35:50												SSDR to IDLE - downlink complete						Ground Command
03/23/94 06:41:47	0:45:37		0.0	229.8	2610.9							Equator - D							
03/23/94 06:55:32	0:59:22		-10.0	229.8	2396.3							S10D							
03/23/94 07:07:51	1:11:41		-20.0	229.8	2157.2							S20D							
03/23/94 07:17:58	1:21:47		-29.3	229.8	1929.1							OUTUM							Exit umbra
03/23/94 07:18:40	1:22:30		-29.9	229.8	1912.6							OUTPM							Exit penumbra
03/23/94 07:18:43	1:22:33		-30.0	229.8	1911.1							S30D							
																			Standard Prep1 Script
03/23/94 07:19:40	1:23:30	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/23/94 07:28:14	1:32:03		-40.0	229.9	1671.7							S40D							
																			Standard Prep2 Script
03/23/94 07:30:46	1:34:36	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/23/94 07:36:16	1:40:06	0											Msg "WRNG: Omni/2k in 1 min.."						
03/23/94 07:36:32	1:40:22		-50.0	230.0	1447.9							S50D							
03/23/94 07:37:16	1:41:06	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/23/94 07:38:16	1:42:06	60											Switch to omni antennas						
03/23/94 07:39:16	1:43:06	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/23/94 07:39:46	1:43:36	30											UV & HR cameras ON						
03/23/94 07:41:00	1:44:50												Ranging A ON						Ground Command
03/23/94 07:43:47	1:47:36		-60.0	230.3	1245.3							S60D							
03/23/94 07:48:41	1:52:31										PMK	LOS							
03/23/94 07:48:51	1:52:40	545											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
03/23/94 07:49:16	1:53:06	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 150 Timeline - Type A Orbit

03/23/94 07:49:28	1:53:18	12													Stop imaging - select ST-A				
03/23/94 07:50:11	1:54:01		-70.0	230.8	1066.3					S70D									
03/23/94 07:50:40	1:54:30	72													Perform UV0 imaging (DHU SEQT 29)				
03/23/94 07:50:52	1:54:41	12													Perform HR imaging (DHU SEQT 30)				
03/23/94 07:51:04	1:54:54	12													Perform LWIR imaging (DHU SEQT 25)				
03/23/94 07:51:16	1:55:06	12													Perform NIR imaging (DHU SEQT 31)				
03/23/94 07:51:28	1:55:18	12														Err:508			Slew to nadir (inertial pointing)
03/23/94 07:51:58	1:55:48	30													Laser Power ON				
Err:508																			
03/23/94 07:55:51	1:59:41		-80.0	232.5	911.5					S80D									
Err:508																			
03/23/94 07:58:56	2:02:45	0													Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85				NOTE: Separate NIR exposure tables used for high latitude bands
03/23/94 07:59:56	2:03:46	60													Switch to lunar mapping mode (ACSMmode=LunarMapping); Start Imaging (DHU SEQT 9)				START MAPPING
03/23/94 08:00:56	2:04:46	60	-89.4	318.8	780.9					South Pole					Set SA step rate to LO				
03/23/94 08:01:32	2:05:21		-88.6	23.2	766.1					LDAWN									
03/23/94 08:05:33	2:09:23	277								S80A					Load exposure table LUNARZ75S; Load Exposure table LUNNIR75; Select DHU SEQT 3				
03/23/94 08:05:34	2:09:23		-80.0	45.6	672.9					S80A									
03/23/94 08:09:50	2:13:40	257	-70.0	47.3	586.2					S70A					Load exposure table LUNARZ65S; Load Exposure table LUNNIR65; Select DHU SEQT 4				
03/23/94 08:13:50	2:17:40	240	-60.0	47.9	519.8					S60A					Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/23/94 08:17:39	2:21:29	229	-50.0	48.2	472.6					S50A					Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/23/94 08:21:19	2:25:09	220	-40.0	48.4	443.8					S40A					Load exposure table LUNARZ35S				
03/23/94 08:24:56	2:28:45	217	-30.0	48.5	433.0					S30A					Load exposure table LUNARZ25S				
03/23/94 08:25:21	2:29:11		-28.8	48.5	432.8					Periselene									
03/23/94 08:28:32	2:32:22		-20.0	48.6	439.8					S20A									
03/23/94 08:28:33	2:32:23	217								S20A					Load exposure table LUNARZ15S				
03/23/94 08:32:12	2:36:02		-10.0	48.7	464.4					S10A									
03/23/94 08:32:13	2:36:03	220								S10A					Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/23/94 08:35:58	2:39:48		0.0	48.7	507.2					MEQA									
03/23/94 08:35:59	2:39:49	226								Equator - A					Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3
03/23/94 08:39:55	2:43:45		10.0	48.8	569.1					N10A									

Orbit 150 Timeline - Type A Orbit

03/23/94 08:39:56	2:43:46	237							N10A	Load CEQ_08U.UMI into SEQT 08; Load exposure table LUNARZ15N; Select DHU SEQT 8	UV and IR uncompressed
03/23/94 08:44:07	2:47:56		20.0	48.9	650.9				N20A		
03/23/94 08:44:08	2:47:58	252							N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9	Resume compression
03/23/94 08:45:08	2:48:58	60								Laser power OFF	
03/23/94 08:48:40	2:52:30		30.0	49.0	754.0				N30A		
03/23/94 08:48:41	2:52:30	213							N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10	
03/23/94 08:53:38	2:57:28		40.0	49.1	879.5				N40A		
03/23/94 08:53:39	2:57:29	298							N40A	Record in SDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4
03/23/94 08:59:10	3:03:00		50.0	49.2	1028.7				N50A		
03/23/94 08:59:11	3:03:01	332							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	Resume HiRes imaging
03/23/94 09:05:23	3:09:13	372	60.0	49.5	1202.1				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 13	
03/23/94 09:12:25	3:16:15		70.0	50.0	1399.4				N70A		
03/23/94 09:12:26	3:16:16	423							N70A	Load exposure table LUNARZ75N; Load Exposure table LUNNIR75; Select DHU SEQT 14	
03/23/94 09:20:28	3:24:17		80.0	51.7	1618.8				N80A		
03/23/94 09:20:29	3:24:19	483							N80A	Load exposure table LUNARZ85N; Load Exposure table LUNNIR85; Select DHU SEQT 15	
03/23/94 09:21:28	3:25:18	60								Load DEQ_08.UMI into SEQT 08	Restore compressed SEQT 8
Err:508											
03/23/94 09:29:40	3:33:30		89.4	138.1	1854.9				North Pole		
Standard Post Script											
03/23/94 09:30:40	3:34:30	0								Stop Imaging - select ST-A	
03/23/94 09:30:45	3:34:35	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)
03/23/94 09:30:55	3:34:45		88.6	202.7	1885.3				LDUSK		
03/23/94 09:33:45	3:37:35	180								Park opaque filter on HiRes (DHU SEQT 27)	
03/23/94 09:34:00	3:37:49	15								Select ST-A; Activate waitwhileslew for 400 sec	
03/23/94 09:40:12	3:44:02		80.0	224.8	2100.0				N80D		
03/23/94 09:34:44	3:38:34	44								Perform UVO Imaging (DHU SEQT 29)	Time is at end of slew (waitwhileslew used)
03/23/94 09:34:56	3:38:46	12								Perform LWIR imaging (DHU SEQT 25)	

Orbit 150 Timeline - Type A Orbit

03/23/94 09:35:08	3:38:58	12									Perform NIR imaging (DHU SEQT 31)						
03/23/94 09:35:14	3:39:04	6									Load exposure table LUNIRDKS1						
03/23/94 09:35:20	3:39:10	6									Load exposure table LUNIRDKS2						
03/23/94 09:35:26	3:39:16	6									Perform HiRes Imaging (DHU SEQT 30)						
03/23/94 09:35:32	3:39:22	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec						Slew HGA to Earth with active waitwhileslew
03/23/94 09:36:00	3:39:50										Ranging A OFF						Ground Command
03/23/94 09:37:00	3:40:49	88									Switch to HGA						READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
End Post Script																	
03/23/94 09:38:00	3:41:50										Switch to DHU mode @ 128 kbps						Ground Command
03/23/94 09:41:00	3:44:50										Downlink SSSR Segment 1						Ground Command
03/23/94 09:49:00	3:52:50										Uplink & schedule L151 scripts						Ground Command
03/23/94 09:52:11	3:56:01		70.0	226.4	2342.3					N70D							
03/23/94 10:05:37	4:09:27		60.0	226.9	2564.3					N60D							
03/23/94 10:15:00	4:18:50										Downlink SSSR Segment 2						Ground Command
03/23/94 10:20:23	4:24:13		50.0	227.1	2746.6					N50D							
03/23/94 10:21:31	4:25:21								GDS	LOS							
03/23/94 10:36:13	4:40:03		40.0	227.1	2869.7					N40D							
03/23/94 10:47:00	4:50:50										Downlink SSSR Segment 3						Ground Command
03/23/94 10:52:38	4:56:28		30.0	227.1	2918.9					N30D							
03/23/94 10:54:31	4:58:21		28.9	227.1	2919.4					Aposelene							

Orbit 151 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/23/94 10:54:31	0:00:00		28.9	227.1	2919.4							Aposelene							Downlinking SSSR Segment 3 (orbit 150)
03/23/94 11:07:25	0:12:54		21.0	227.1	2894.7							INPM							Enter penumbra
03/23/94 11:08:16	0:13:45		20.5	227.1	2891.3							INUM							Enter umbra
03/23/94 11:09:08	0:14:37		20.0	227.1	2887.7							N20D							
03/23/94 11:22:00	0:27:29												Downlink SSSR Segment 4						Ground Command
03/23/94 11:25:08	0:30:37		10.0	227.1	2780.4							N10D							
03/23/94 11:40:00	0:45:29												Downlink SSSR data patches						Ground Command
03/23/94 11:40:10	0:45:39		0.0	227.0	2610.0							Equator - D							
03/23/94 11:50:00	0:55:29												SSDR to IDLE - downlink complete						Ground Command - time approx
03/23/94 11:53:55	0:59:24		-10.0	227.0	2395.4							S10D							
03/23/94 12:06:14	1:11:43		-20.0	227.0	2156.3							S20D							
03/23/94 12:16:21	1:21:50		-29.3	227.0	1928.1							OUTUM							Exit umbra
03/23/94 12:17:02	1:22:31		-30.0	227.0	1911.6							OUTPM							Exit penumbra
03/23/94 12:17:05	1:22:34		-30.0	227.0	1910.4							S30D							
																			Standard Prep1 Script
03/23/94 12:18:02	1:23:31	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/23/94 12:26:36	1:32:05		-40.0	227.1	1671.1							S40D							Standard Prep2 Script
03/23/94 12:29:08	1:34:37	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/23/94 12:34:38	1:40:07	0											Msg "WRNG: Omni/2k in 1 min.."						
03/23/94 12:34:53	1:40:22		-50.0	227.2	1447.6							S50D							
03/23/94 12:35:38	1:41:07	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/23/94 12:36:38	1:42:07	60											Switch to omni antennas						
03/23/94 12:37:38	1:43:07	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/23/94 12:38:08	1:43:37	30											UV & HR cameras ON						
03/23/94 12:42:09	1:47:38		-60.0	227.5	1245.1							S60D							
03/23/94 12:47:13	1:52:42	545											Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/23/94 12:47:38	1:53:07	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/23/94 12:47:50	1:53:19	12											Stop imaging - select ST-A						

Orbit 151 Timeline - Type B Orbit

03/23/94 12:48:32	1:54:01		-70.0	228.0	1066.2				S70D				
03/23/94 12:49:02	1:54:31	72								Perform UV0 imaging (DHU SEQT 29)			
03/23/94 12:49:14	1:54:43	12								Perform HR imaging (DHU SEQT 30)			
03/23/94 12:49:26	1:54:55	12								Perform LWIR imaging (DHU SEQT 25)			
03/23/94 12:49:38	1:55:07	12								Perform NIR imaging (DHU SEQT 31)			
03/23/94 12:49:50	1:55:19	12									Err:508		Slew to nadir (inertial pointing)
03/23/94 12:50:20	1:55:49	30								Laser Power ON			
										Err:508			
03/23/94 12:54:13	1:59:42		-80.0	229.6	911.5				S80D				
										Err:508			
03/23/94 12:57:18	2:02:47	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S			
03/23/94 12:58:18	2:03:47	60								Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start imaging (DHU SEQT 16)			START MAPPING
03/23/94 12:59:18	2:04:47	60	-89.4	317.6	780.8				South Pole	Set SA step rate to LO			
03/23/94 12:59:54	2:05:23		-88.6	21.6	766.2				LDAWN				
03/23/94 13:03:55	2:09:24	277	-80.0	43.0	673.1				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17			
03/23/94 13:08:12	2:13:41	257	-70.0	44.7	586.4				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4			
03/23/94 13:12:12	2:17:41	240	-60.0	45.2	520.1				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/23/94 13:16:00	2:21:29	228	-50.0	45.5	473.0				S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/23/94 13:19:41	2:25:10	221	-40.0	45.6	444.3				S40A	Load exposure table LUNARZ35S			
03/23/94 13:23:18	2:28:47	217	-30.0	45.8	433.5				S30A	Load exposure table LUNARZ25S			
03/23/94 13:23:42	2:29:11		-28.9	45.8	433.4				Periselene				
03/23/94 13:26:54	2:32:23	216	-20.0	45.9	440.3				S20A	Load exposure table LUNARZ15S			
03/23/94 13:30:34	2:36:03	220	-10.0	45.9	465.0				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/23/94 13:34:20	2:39:49	226	0.0	46.0	507.9				Equator - A	Record in SSSR Segment 7; Load CEQ_07U.UMI into SEQT 07; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 7 UV and IR uncompressed
03/23/94 13:38:17	2:43:46	237	10.0	46.1	569.8				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			Resume compression
03/23/94 13:42:30	2:47:59	253	20.0	46.1	651.7				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/23/94 13:43:30	2:48:59	60								Laser power OFF			
03/23/94 13:47:02	2:52:31	212	30.0	46.2	754.8				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			

Orbit 151 Timeline - Type B Orbit

03/23/94 13:52:01	2:57:30	299	40.0	46.3	880.4					N40A	Switch to inertial pointing (ORB_151RW); Load exposure table LUNARZ45N; Select DHU SEQT 10	Initiate oblique viewing
03/23/94 13:57:33	3:03:02	332	50.0	46.5	1029.6					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11	Resume HiRes imaging
03/23/94 14:03:46	3:09:15	373	60.0	46.7	1203.0					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	
03/23/94 14:07:59	3:13:28	254									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing
03/23/94 14:10:49	3:16:18	169	70.0	47.2	1400.4					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	
03/23/94 14:18:52	3:24:21	483	80.0	48.8	1619.8					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/23/94 14:19:52	3:25:21	60									Load DEQ_07.UMI into SEQT 07	Restore compressed SEQT 7
Err:508												
03/23/94 14:28:04	3:33:33		89.4	134.7	1855.6					North pole		
Standard Post Script												
03/23/94 14:29:04	3:34:33	0									Stop Imaging - select ST-A	
03/23/94 14:29:09	3:34:38	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)
03/23/94 14:29:19	3:34:48		88.6	201.1	1886.2					LDUSK		
03/23/94 14:32:09	3:37:38	180									Park opaque filter on HiRes (DHU SEQT 27)	
03/23/94 14:32:24	3:37:53	15									Select ST-A; Activate waitwhileslew for 400 sec	
03/23/94 14:33:08	3:38:37	44									Perform UVO Imaging (DHU SEQT 29)	Start calibration imaging
03/23/94 14:33:20	3:38:49	12									Perform LWIR imaging (DHU SEQT 25)	
03/23/94 14:33:32	3:39:01	12									Perform NIR imaging (DHU SEQT 31)	
03/23/94 14:33:38	3:39:07	6									Load exposure table LUNIRDKS1	
03/23/94 14:33:44	3:39:13	6									Load exposure table LUNIRDKS2	
03/23/94 14:33:50	3:39:19	6									Perform HiRes Imaging (DHU SEQT 30)	No data
03/23/94 14:33:56	3:39:25	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec	Slew HGA to Earth with active waitwhileslew
03/23/94 14:38:00	3:43:29	244									Switch to HGA	READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
End Post Script												

Orbit 152 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/23/94 15:52:52	0:00:00		28.9	224.4	2918.8							Aposelene							Downlinking SSSR Segment 6 (orbit 151)
03/23/94 16:05:49	0:12:57		21.1	224.4	2894.0							INPM							Enter penumbra
03/23/94 16:06:39	0:13:47		20.5	224.4	2890.6							INUM							Enter umbra
03/23/94 16:07:00	0:14:08												Downlink SSSR Segment 7						Ground Command
03/23/94 16:07:32	0:14:40		20.0	224.4	2887.0							N20D							
03/23/94 16:23:31	0:30:39		10.0	224.3	2779.5							N10D							
03/23/94 16:34:00	0:41:08												Update state vector (GNC53_23MAR1600)						Ground Command
03/23/94 16:38:33	0:45:41		0.0	224.3	2609.1							Equator - D							
03/23/94 16:52:18	0:59:26		-10.0	224.3	2394.5							S10D							
03/23/94 17:04:36	1:11:44		-20.0	224.3	2155.6							S20D							
03/23/94 17:14:44	1:21:52		-29.3	224.3	1927.4							OUTUM							Exit umbra
03/23/94 17:15:25	1:22:33		-30.0	224.3	1910.9							OUTPM							Exit penumbra
03/23/94 17:15:27	1:22:35		-30.0	224.3	1909.9							S30D							
																			Standard Prep1 Script
03/23/94 17:16:25	1:23:33	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/23/94 17:24:58	1:32:06		-40.0	224.3	1670.7							S40D							
03/23/94 17:27:00	1:34:08												SSDR to IDLE - downlink complete; Uplink DHU Sequence Series 'E' (SEQ_LUNAR_E)						Ground Command
																			Standard Prep2 Script
03/23/94 17:27:29	1:34:37	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/23/94 17:32:59	1:40:07	0											Msg "WRNG: Omni/2k in 1 min.."						
03/23/94 17:33:00	1:40:08												DHU uplink halted, incomplete						Ground Command
03/23/94 17:33:15	1:40:23		-50.0	224.5	1447.3							S50D							
03/23/94 17:33:59	1:41:07	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/23/94 17:34:59	1:42:07	60											Switch to omni antennas						
03/23/94 17:35:59	1:43:07	60											Select ST-A; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/23/94 17:36:29	1:43:37	30											UV & HR cameras ON						
03/23/94 17:40:31	1:47:39		-60.0	224.7	1245.0							S60D							
03/23/94 17:45:34	1:52:42	545											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1

Orbit 152 Timeline - Type A Orbit

03/23/94 17:45:59	1:53:07	25								Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/23/94 17:46:11	1:53:19	12								Stop imaging - select ST-A					
03/23/94 17:46:54	1:54:02		-70.0	225.2	1066.2				S70D						
03/23/94 17:47:23	1:54:31	72								Perform UV0 imaging (DHU SEQT 29)					
03/23/94 17:47:35	1:54:43	12								Perform HR imaging (DHU SEQT 30)					
03/23/94 17:47:47	1:54:55	12								Perform LWIR imaging (DHU SEQT 25)					
03/23/94 17:47:59	1:55:07	12								Perform NIR imaging (DHU SEQT 31)					
03/23/94 17:48:11	1:55:19	12									Err:508				Slew to nadir (inertial pointing)
03/23/94 17:48:41	1:55:49	30								Laser Power ON					
Err:508															
03/23/94 17:52:34	1:59:42		-80.0	226.7	911.7				S80D						
Err:508															
03/23/94 17:55:38	2:02:47	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85					
03/23/94 17:56:39	2:03:47	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)					START MAPPING
03/23/94 17:57:39	2:04:47	60	-89.5	313.1	781.3				South Pole	Set SA step rate to LO					
03/23/94 17:58:15	2:05:23		-88.6	20.0	766.5				LDAWN						
03/23/94 18:02:17	2:09:25	278	-80.0	40.4	673.4				S80A	Load exposure table LUNARZ75S; Load Exposure table LUNNIR75; Select DHU SEQT 3					
03/23/94 18:06:33	2:13:41	256							S70A	Load exposure table LUNARZ65S; Load Exposure table LUNNIR65; Select DHU SEQT 4					
03/23/94 18:06:34	2:13:42		-70.0	42.0	586.8				S70A						
03/23/94 18:10:34	2:17:42	241	-60.0	42.5	520.6				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/23/94 18:14:22	2:21:30	228	-50.0	42.8	473.5				S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/23/94 18:18:03	2:25:11	221	-40.0	42.9	444.9				S40A	Load exposure table LUNARZ35S					
03/23/94 18:21:40	2:28:48	217	-30.0	43.0	434.1				S30A	Load exposure table LUNARZ25S					
03/23/94 18:22:04	2:29:12		-28.9	43.1	434.0				Periselene						
03/23/94 18:25:17	2:32:25	217	-20.0	43.1	441.0				S20A	Load exposure table LUNARZ15S					
03/23/94 18:28:56	2:36:04	219	-10.0	43.2	465.7				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/23/94 18:32:43	2:39:51	227	0.0	43.3	508.7				Equator - A	Record in SSSR Segment 3; Load CEQ_07U.UMI into SEQT 07; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 3 UV and IR uncompressed
03/23/94 18:36:40	2:43:48	237	10.0	43.3	570.6				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					Resume compression

Orbit 152 Timeline - Type A Orbit

03/23/94 18:40:52	2:48:00	252	20.0	43.4	652.6								N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				
03/23/94 18:41:52	2:49:00	60												Laser power OFF				
03/23/94 18:45:25	2:52:33	213	30.0	43.5	755.7								N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10				
03/23/94 18:50:24	2:57:32	299	40.0	43.5	881.3								N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11				SDDR Segment 4
03/23/94 18:55:56	3:03:04	332	50.0	43.7	1030.5								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12				Resume HiRes imaging
03/23/94 19:02:09	3:09:17	373	60.0	43.9	1204.0								N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 13				
03/23/94 19:09:12	3:16:20	423	70.0	44.4	1401.3								N70A	Load exposure table LUNARZ75N; Load Exposure table LUNNIR75; Select DHU SEQT 14				
03/23/94 19:17:16	3:24:24	484	80.0	45.9	1620.6								N80A	Load exposure table LUNARZ85N; Load Exposure table LUNNIR85; Select DHU SEQT 15				
03/23/94 19:18:16	3:25:24	60												Load DEQ_07.UMI into SEQT 07				Restore compressed SEQT 7
Err:508																		
03/23/94 19:26:29	3:33:37		89.5	133.4	1856.7								North Pole					
Standard Post Script																		
03/23/94 19:27:29	3:34:37	0												Stop Imaging - select ST-A				
03/23/94 19:27:34	3:34:42	5												Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)				Slew to Vega (inertial pointing)
03/23/94 19:27:43	3:34:51		88.6	199.5	1886.9								LDUSK					
03/23/94 19:30:34	3:37:42	180												Park opaque filter on HiRes (DHU SEQT 27)				
03/23/94 19:30:49	3:37:57	15												Select ST-A; Activate waitwhileslew for 400 sec				
03/23/94 19:31:32	3:38:40	43												Perform UVO Imaging (DHU SEQT 29)				Time is at end of slew (waitwhileslew used)
03/23/94 19:31:44	3:38:52	12												Perform LWIR imaging (DHU SEQT 25)				
03/23/94 19:31:56	3:39:04	12												Perform NIR imaging (DHU SEQT 31)				
03/23/94 19:32:02	3:39:10	6												Load exposure table LUNIRDKS1				
03/23/94 19:32:08	3:39:16	6												Load exposure table LUNIRDKS2				
03/23/94 19:32:14	3:39:22	6												Perform HiRes Imaging (DHU SEQT 30)				

Orbit 152 Timeline - Type A Orbit

03/23/94 19:32:20	3:39:28	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/23/94 19:36:00	3:43:08	220									Switch to HGA					READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
End Post Script																
03/23/94 19:37:00	3:44:08										Switch to DHU mode @ 128 kbps					Ground Command
03/23/94 19:37:01	3:44:09		80.0	219.6	2101.5						N80D					
03/23/94 19:41:00	3:48:08											Downlink SSSDR Segment 1				Ground Command
03/23/94 19:49:00	3:56:08		70.0	221.1	2343.4						N70D					
03/23/94 19:52:45	3:59:53										PMK	AOS				
03/23/94 20:02:27	4:09:35		60.0	221.5	2564.9							N60D				
03/23/94 20:17:13	4:24:21		50.0	221.7	2746.6							N50D				
03/23/94 20:20:00	4:27:08												Downlink SSSDR Segment 2			Ground Command
03/23/94 20:33:02	4:40:10		40.0	221.7	2869.1							N40D				
03/23/94 20:39:00	4:46:08												Uplink DHU sequence series 'E' (SEQ_LUNAR_E)			Ground Command
03/23/94 20:48:00	4:55:08												Uplink and schedule L153 scripts			Ground Command
03/23/94 20:49:27	4:56:35		30.0	221.7	2917.7							N30D				
03/23/94 20:51:14	4:58:22		28.9	221.7	2918.2							Aposelene				

Orbit 153 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment	
03/23/94 20:51:14	0:00:00		28.9	221.7	2918.2							Aposelene							Downlinking SSDR Segment 2 (orbit 152)	
03/23/94 21:03:00	0:11:46												Downlink SSDR Segment 3						Ground Command	
03/23/94 21:04:12	0:12:58		21.1	221.7	2893.3							INPM							Enter penumbra	
03/23/94 21:05:02	0:13:48		20.5	221.7	2889.9							INUM							Enter umbra	
03/23/94 21:05:56	0:14:42		20.0	221.7	2886.2							N20D								
03/23/94 21:21:55	0:30:41		10.0	221.6	2778.6							N10D								
03/23/94 21:36:56	0:45:42		0.0	221.6	2608.2							Equator - D								
03/23/94 21:39:00	0:47:46												Downlink SSDR Segment 4						Ground Command	
03/23/94 21:50:40	0:59:26		-10.0	221.5	2393.8							S10D								
03/23/94 22:02:58	1:11:44		-20.0	221.5	2155.0							S20D								
03/23/94 22:13:06	1:21:52		-29.3	221.5	1926.9							OUTUM							Exit umbra	
03/23/94 22:13:47	1:22:33		-30.0	221.5	1910.5							OUTPM							Exit penumbra	
03/23/94 22:13:49	1:22:35		-30.0	221.5	1909.5							S30D								
																			Standard Prep1 Script	
03/23/94 22:14:47	1:23:33	0											NIR camera & cryocooler ON; SA mode to AUTO							
																			End Prep1 Script	
03/23/94 22:23:19	1:32:05		-40.0	221.6	1670.5							S40D								
																			Standard Prep2 Script	
03/23/94 22:25:36	1:34:22	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed							
																			End Prep2 Script	
																			Err:508	
03/23/94 22:30:48	1:39:34	0											Msg "WRNG: Omni/2k in 1 min.."							
03/23/94 22:31:37	1:40:23		-50.0	221.7	1447.3							S50D								
03/23/94 22:31:48	1:40:34	60											SSDR to IDLE; Switch to 2 kbps bypass mode							
03/23/94 22:32:48	1:41:34	60											Switch to omni antennas							
03/23/94 22:33:48	1:42:34	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						NOTE: Startracker B is now default	
03/23/94 22:34:18	1:43:04	30											UV & HR cameras ON							Slew to Crux
03/23/94 22:38:52	1:47:38		-60.0	221.9	1245.1							S60D								
03/23/94 22:43:23	1:52:09	545											Initialize filters (DHU SEQT 27); Record in SSDR Segment 5; Load Crux exposure table (LUNCRUX)							Start SSDR in Segment 5
03/23/94 22:43:48	1:52:34	25											Perform NIR imaging (DHU SEQT 31)							Dark Field imaging starts
03/23/94 22:44:00	1:52:46	12											Stop imaging - select ST-B							
03/23/94 22:45:12	1:53:58	72											Perform UV0 imaging (DHU SEQT 29)							

Orbit 153 Timeline - Type B Orbit

03/23/94 22:45:15	1:54:01		-70.0	222.4	1066.4				S70D									
03/23/94 22:45:24	1:54:10	12								Perform HR imaging (DHU SEQT 30)								
03/23/94 22:45:37	1:54:22	12								Perform LWIR imaging (DHU SEQT 25)								
03/23/94 22:45:49	1:54:35	12								Perform NIR imaging (DHU SEQT 31)								
03/23/94 22:46:01	1:54:47	12									Err:508							Slew to nadir (inertial pointing)
03/23/94 22:46:31	1:55:17	30								Laser Power ON								
Err:508																		
03/23/94 22:50:31	1:59:17								GDS	AOS								
03/23/94 22:50:56	1:59:42		-80.0	223.8	912.0					S80D								
Err:508																		
03/23/94 22:54:01	2:02:47	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S							
03/23/94 22:55:01	2:03:47	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)							START MAPPING NOTE: E-Series SEQT are now being used!
03/23/94 22:56:01	2:04:47	60	-89.5	311.0	781.6					South Pole	Set SA step rate to LO							
03/23/94 22:56:37	2:05:23		-88.7	18.4	766.9					LDAWN								
03/23/94 23:00:39	2:09:25	278	-80.0	37.9	673.8					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17							
03/23/94 23:04:55	2:13:41	256	-70.0	39.4	587.3					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4							
03/23/94 23:08:56	2:17:42	241	-60.0	39.8	521.1					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6							
03/23/94 23:12:44	2:21:30	228	-50.0	40.1	474.1					S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5							SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/23/94 23:16:25	2:25:10	221	-40.0	40.2	445.5					S40A	Load exposure table LUNARZ35S							
03/23/94 23:20:02	2:28:48	217	-30.0	40.3	434.8					S30A	Load exposure table LUNARZ25S							
03/23/94 23:20:26	2:29:12		-28.9	40.3	434.7					Periselene								
03/23/94 23:23:39	2:32:25	217	-20.0	40.4	441.7					S20A	Load exposure table LUNARZ15S							
03/23/94 23:27:19	2:36:05	220	-10.0	40.5	466.5					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6							
03/23/94 23:31:05	2:39:51	226	0.0	40.5	509.5					Equator - A	Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7							SSDR Segment 7
03/23/94 23:35:03	2:43:49	238	10.0	40.6	571.5					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8							
03/23/94 23:39:15	2:48:01	252	20.0	40.6	653.4					N20A	Load CEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9							UV and IR uncompressed
03/23/94 23:40:15	2:49:01	60									Laser power OFF							
03/23/94 23:43:48	2:52:33	213	30.0	40.7	756.6					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							Resume compression

Orbit 153 Timeline - Type B Orbit

03/23/94 23:48:48	2:57:34	300	40.0	40.8	882.2				N40A	Switch to inertial pointing (ORB_153RW); Load exposure table LUNARZ45N; Select DHU SEQT 10					Initiate oblique viewing
03/23/94 23:54:20	3:03:05	332	50.0	40.9	1031.5				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11					Resume HiRes imaging
03/24/94 00:00:33	3:09:19	373	60.0	41.1	1204.9				N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12					
03/24/94 00:04:46	3:13:32	254								Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19					End oblique viewing - resume nadir pointing
03/24/94 00:07:36	3:16:21	169	70.0	41.6	1402.2				N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20					
03/24/94 00:15:40	3:24:25	483	80.0	43.0	1621.4				N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21					
03/24/94 00:16:40	3:25:26	60								Load DEQ_09.UMI into SEQT 9					Restore compressed SEQT 9
Err:508															
03/24/94 00:24:53	3:33:39		89.5	129.5	1857.2				North pole						
Standard Post Script															
03/24/94 00:25:53	3:34:39	0								Stop Imaging - select ST-B					
03/24/94 00:25:58	3:34:44	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)					Slew to Vega (inertial pointing)
03/24/94 00:26:07	3:34:53		88.7	198.0	1887.5				LDUSK						
03/24/94 00:28:58	3:37:44	180								Park opaque filter on HiRes (DHU SEQT 27)					
03/24/94 00:29:13	3:37:59	15								Select ST-B; Activate waitwhileslew for 400 sec					
03/24/94 00:29:57	3:38:43	44								Perform UVO Imaging (DHU SEQT 29)					Start calibration imaging
03/24/94 00:30:09	3:38:55	12								Perform LWIR imaging (DHU SEQT 25)					
03/24/94 00:30:21	3:39:07	12								Perform NIR imaging (DHU SEQT 31)					
03/24/94 00:30:27	3:39:13	6								Load exposure table LUNIRDKS1					
03/24/94 00:30:33	3:39:19	6								Load exposure table LUNIRDKS2					
03/24/94 00:30:39	3:39:25	6								Perform HiRes Imaging (DHU SEQT 30)					No data
03/24/94 00:30:45	3:39:31	6								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/24/94 00:33:00	3:41:46	135								Switch to HGA					READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
End Post Script															

Orbit 153 Timeline - Type B Orbit

03/24/94 00:34:00	3:42:45																		Switch to DHU mode @ 128 kbps							Ground Command	
03/24/94 00:35:00	3:43:46																		Downlink SDR Segment 5							Ground Command	
03/24/94 00:35:25	3:44:11		80.0	217.1	2102.0													N80D									
03/24/94 00:47:25	3:56:11		70.0	218.4	2343.7													N70D									
03/24/94 01:00:51	4:09:37		60.0	218.8	2565.0													N60D									
03/24/94 01:14:00	4:22:46																		Downlink SDR Segment 6							Ground Command	
03/24/94 01:15:37	4:24:23		50.0	219.0	2746.3													N50D									
03/24/94 01:21:00	4:29:46																		Uplink and schedule L154 scripts							Ground Command	
03/24/94 01:31:26	4:40:12		40.0	219.0	2868.6													N40D									
03/24/94 01:47:51	4:56:37		30.0	219.0	2917.0													N30D									
03/24/94 01:49:00	4:57:46																		Downlink SDR Segment 7							Ground Command	
03/24/94 01:49:35	4:58:21		28.9	219.0	2917.4													Aposelene									

Orbit 154 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/24/94 01:49:35	0:00:00		28.9	219.0	2917.4							Aposelene							Downlink SSSDR Segment 7 (orbit 153)
03/24/94 02:02:34	0:12:59		21.1	218.9	2892.5							INPM							Enter penumbra
03/24/94 02:03:25	0:13:50		20.6	218.9	2889.1							INUM							Enter umbra
03/24/94 02:04:19	0:14:44		20.0	218.9	2885.3							N20D							
03/24/94 02:20:18	0:30:43		10.0	218.9	2777.7							N10D							
03/24/94 02:35:19	0:45:44		0.0	218.8	2607.5							Equator - D							
03/24/94 02:44:00	0:54:25												SSDR to IDLE - downlink complete						Ground Command
03/24/94 02:49:02	0:59:27		-10.0	218.8	2393.2							S10D							
03/24/94 03:01:20	1:11:45		-20.0	218.8	2154.6							S20D							
03/24/94 03:11:27	1:21:52		-29.3	218.8	1926.7							OUTUM							Exit umbra
03/24/94 03:12:08	1:22:33		-30.0	218.8	1910.3							OUTPM							Exit penumbra
03/24/94 03:12:11	1:22:36		-30.0	218.8	1909.2							S30D							
																			Standard Prep1 Script
03/24/94 03:13:08	1:23:33	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/24/94 03:21:41	1:32:06		-40.0	218.8	1670.4							S40D							
03/24/94 03:22:58	1:33:23										MAD	LOS							
																			Standard Prep2 Script
03/24/94 03:23:58	1:34:23	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/24/94 03:29:10	1:39:35	0											Msg "WRNG: Omni/2k in 1 min.."						
03/24/94 03:29:58	1:40:23		-50.0	218.9	1447.4							S50D							
03/24/94 03:30:10	1:40:35	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/24/94 03:31:10	1:41:35	60											Switch to omni antennas						
03/24/94 03:32:10	1:42:35	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/24/94 03:32:40	1:43:05	30											UV & HR cameras ON						
03/24/94 03:37:14	1:47:39		-60.0	219.1	1245.3							S60D							
03/24/94 03:41:45	1:52:10	545											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1
03/24/94 03:42:10	1:52:35	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/24/94 03:42:22	1:52:47	12											Stop imaging - select ST-B						
03/24/94 03:43:34	1:53:59	72											Perform UV0 imaging (DHU SEQT 29)						

Orbit 154 Timeline - Type A Orbit

03/24/94 03:43:37	1:54:02		-70.0	219.5	1066.8				S70D				
03/24/94 03:43:46	1:54:11	12								Perform HR imaging (DHU SEQT 30)			
03/24/94 03:43:59	1:54:24	12								Perform LWIR imaging (DHU SEQT 25)			
03/24/94 03:44:11	1:54:36	12								Perform NIR imaging (DHU SEQT 31)			
03/24/94 03:44:23	1:54:48	12									Err:508		Slew to nadir (inertial pointing)
03/24/94 03:44:53	1:55:18	30								Laser Power ON			
										Err:508			
03/24/94 03:49:17	1:59:42		-80.0	220.9	912.5				S80D				
										Err:508			
03/24/94 03:52:23	2:02:48	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85			
03/24/94 03:53:23	2:03:48	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)			START MAPPING
03/24/94 03:54:23	2:04:48	60	-89.5	309.1	782.0				South Pole	Set SA step rate to LO			
03/24/94 03:54:59	2:05:24		-88.7	17.0	767.5				LDAWN				
03/24/94 03:59:01	2:09:26	278	-80.0	35.3	674.4				S80A	Load exposure table LUNARZ75S; Load Exposure table LUNNIR75; Select DHU SEQT 3			
03/24/94 04:03:17	2:13:42	256	-70.0	36.7	588.0				S70A	Load exposure table LUNARZ65S; Load Exposure table LUNNIR65; Select DHU SEQT 4			
03/24/94 04:07:18	2:17:43	241	-60.0	37.2	521.8				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/24/94 04:11:07	2:21:32	229	-50.0	37.4	474.9				S50A	Record in SDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/24/94 04:14:48	2:25:13	221	-40.0	37.5	446.3				S40A	Load exposure table LUNARZ35S			
03/24/94 04:18:25	2:28:50	217	-30.0	37.6	435.6				S30A	Load exposure table LUNARZ25S			
03/24/94 04:18:48	2:29:13		-28.9	37.6	435.5				Periselene				
03/24/94 04:22:02	2:32:27	217	-20.0	37.7	442.6				S20A	Load exposure table LUNARZ15S			
03/24/94 04:25:42	2:36:07	220	-10.0	37.7	467.3				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/24/94 04:29:28	2:39:53	226	0.0	37.8	510.4				Equator - A	Record in SDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
03/24/94 04:33:26	2:43:51	238	10.0	37.8	572.4				N10A	Load CEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8			UV and IR uncompressed
03/24/94 04:37:39	2:48:04	253	20.0	37.9	654.4				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			Resume compression
03/24/94 04:38:39	2:49:04	60								Laser power OFF			
03/24/94 04:42:12	2:52:37	213	30.0	37.9	757.5				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			

Orbit 154 Timeline - Type A Orbit

03/24/94 04:47:11	2:57:36	299	40.0	38.0	883.2					N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11					SSDR Segment 4
03/24/94 04:52:44	3:03:09	333	50.0	38.1	1032.3					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12					Resume HiRes imaging
03/24/94 04:58:57	3:09:22	373	60.0	38.3	1205.7					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 13					
03/24/94 05:06:01	3:16:26	424	70.0	38.7	1403.0					N70A	Load exposure table LUNARZ75N; Load Exposure table LUNNIR75; Select DHU SEQT 14					
03/24/94 05:14:04	3:24:29	483	80.0	40.0	1622.0					N80A	Load exposure table LUNARZ85N; Load Exposure table LUNNIR85; Select DHU SEQT 15					
03/24/94 05:15:04	3:25:29	60									Load EEQ_08.UMI into SEQT 08					Restore compressed SEQT 8
Err:508																
03/24/94 05:23:18	3:33:43		89.5	128.2	1858.0					North Pole						
Standard Post Script																
03/24/94 05:24:18	3:34:43	0									Stop Imaging - select ST-B					
03/24/94 05:24:23	3:34:48	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)					Slew to Vega (inertial pointing)
03/24/94 05:24:32	3:34:57		88.7	196.6	1887.9					LDUSK						
03/24/94 05:27:23	3:37:48	180									Park opaque filter on HiRes (DHU SEQT 27)					
03/24/94 05:27:38	3:38:03	15									Select ST-B; Activate waitwhileslew for 400 sec					
03/24/94 05:28:19	3:38:44	41									Perform UVO Imaging (DHU SEQT 29)					Start calibration imaging
03/24/94 05:28:31	3:38:56	12									Perform LWIR imaging (DHU SEQT 25)					
03/24/94 05:28:43	3:39:08	12									Perform NIR imaging (DHU SEQT 31)					
03/24/94 05:28:49	3:39:14	6									Load exposure table LUNIRDKS1					
03/24/94 05:28:55	3:39:20	6									Load exposure table LUNIRDKS2					
03/24/94 05:29:01	3:39:26	6									Perform HiRes Imaging (DHU SEQT 30)					One image only, filter 1
03/24/94 05:29:07	3:39:32	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/24/94 05:32:00	3:42:25	173									Switch to HGA					READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
End Post Script																

Orbit 154 Timeline - Type A Orbit

03/24/94 05:33:00	3:43:25												Switch to DHU mode @ 128 kbps							Ground Command
03/24/94 05:33:50	3:44:15		80.0	214.5	2102.5								N80D							
03/24/94 05:34:00	3:44:25													Downlink SDR Segment 1						Ground Command
03/24/94 05:39:00	3:49:25													Uplink and schedule L155 scripts						Ground Command
03/24/94 05:45:50	3:56:15		70.0	215.8	2343.9								N70D							
03/24/94 05:59:16	4:09:41		60.0	216.2	2564.8								N60D							
03/24/94 06:11:00	4:21:25													Downlink SDR Segment 2						Ground Command
03/24/94 06:14:02	4:24:27		50.0	216.3	2745.9								N50D							
03/24/94 06:29:50	4:40:15		40.0	216.3	2867.9								N40D							
03/24/94 06:43:39	4:54:04										CAN		AOS							
03/24/94 06:45:00	4:55:25													Downlink SDR Segment 3						Ground Command
03/24/94 06:46:14	4:56:39		30.0	216.3	2916.1								N30D							
03/24/94 06:47:58	4:58:23		29.0	216.3	2916.6								Aposelene							

Orbit 155 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/24/94 06:47:58	0:00:00		29.0	216.3	2916.6							Aposelene	Downlink SSSR Segment 3 (orb 154)						Ground Command
03/24/94 07:00:57	0:12:59		21.1	216.2	2891.6							INPM							Enter penumbra
03/24/94 07:01:48	0:13:50		20.6	216.2	2888.2							INUM							Enter umbra
03/24/94 07:02:42	0:14:44		20.0	216.2	2884.4							N20D							
03/24/94 07:18:40	0:30:42		10.0	216.2	2776.9							N10D							
03/24/94 07:19:00	0:31:02												Downlink SSSR Segment 4						Ground Command
03/24/94 07:33:41	0:45:43		0.0	216.1	2606.7							Equator - D							
03/24/94 07:37:00	0:49:02												Downlink SSSR data patches						Ground Command
03/24/94 07:41:00	0:53:02												SSDR to IDLE - downlink complete						Ground Command
03/24/94 07:47:24	0:59:26		-10.0	216.1	2392.6							S10D							
03/24/94 07:59:42	1:11:44		-20.0	216.0	2154.3							S20D							
03/24/94 08:09:48	1:21:50		-29.3	216.0	1926.7							OUTUM							Exit umbra
03/24/94 08:10:30	1:22:32		-30.0	216.0	1910.3							OUTPM							Exit penumbra
03/24/94 08:10:33	1:22:35		-30.0	216.0	1909.1							S30D							
																			Standard Prep1 Script
03/24/94 08:11:30	1:23:32	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/24/94 08:20:02	1:32:04		-40.0	216.1	1670.6							S40D							
																			Standard Prep2 Script
03/24/94 08:22:20	1:34:22	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/24/94 08:26:55	1:38:57										PMK	LOS							
																			Err:508
03/24/94 08:27:32	1:39:34	0											Msg "WRNG: Omni/2k in 1 min.."						
03/24/94 08:28:20	1:40:22		-50.0	216.1	1447.7							S50D							
03/24/94 08:28:32	1:40:34	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/24/94 08:29:32	1:41:34	60											Switch to omni antennas						
03/24/94 08:30:32	1:42:34	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/24/94 08:31:02	1:43:04	30											UV & HR cameras ON						
03/24/94 08:35:35	1:47:37		-60.0	216.3	1245.8							S60D							
03/24/94 08:40:07	1:52:09	545											Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/24/94 08:40:32	1:52:34	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts

Orbit 155 Timeline - Type B Orbit

03/24/94 08:40:44	1:52:46	12									Stop imaging - select ST-B						
03/24/94 08:41:56	1:53:58	72									Perform UV0 imaging (DHU SEQT 29)						
03/24/94 08:41:58	1:54:00		-70.0	216.7	1067.4					S70D							
03/24/94 08:42:08	1:54:10	12									Perform HR imaging (DHU SEQT 30)						
03/24/94 08:42:21	1:54:22	12									Perform LWIR imaging (DHU SEQT 25)						
03/24/94 08:42:33	1:54:35	12									Perform NIR imaging (DHU SEQT 31)						
03/24/94 08:42:45	1:54:47	12										Err:508					Slew to nadir (inertial pointing)
03/24/94 08:43:15	1:55:17	30									Laser Power ON						
																	Err:508
03/24/94 08:47:39	1:59:41		-80.0	218.0	913.1					S80D							
																	Err:508
03/24/94 08:50:45	2:02:47	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/24/94 08:51:45	2:03:47	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)						START MAPPING
03/24/94 08:52:45	2:04:47	60	-89.6	307.1	782.7					South Pole	Set SA step rate to LO						
03/24/94 08:53:20	2:05:22		-88.7	15.5	768.3					LDAWN							
03/24/94 08:57:23	2:09:25	278	-80.0	32.8	675.2					S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17						
03/24/94 09:01:40	2:13:42	257	-70.0	34.1	588.8					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4						
03/24/94 09:05:40	2:17:42	240	-60.0	34.5	522.7					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6						
03/24/94 09:09:29	2:21:31	229	-50.0	34.7	475.7					S50A	Record in SDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5						SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/24/94 09:13:10	2:25:12	221	-40.0	34.8	447.2					S40A	Load exposure table LUNARZ35S						
03/24/94 09:16:48	2:28:50	218	-30.0	34.9	436.5					S30A	Load exposure table LUNARZ25S						
03/24/94 09:17:10	2:29:12		-29.0	34.9	436.4					Periselene							
03/24/94 09:20:25	2:32:27	217	-20.0	35.0	443.5					S20A	Load exposure table LUNARZ15S						
03/24/94 09:24:05	2:36:07	220	-10.0	35.0	468.3					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6						
03/24/94 09:27:52	2:39:54	227	0.0	35.1	511.3					Equator - A	Record in SDR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7						SSDR Segment 7
03/24/94 09:31:49	2:43:51	237	10.0	35.1	573.3					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8						
03/24/94 09:36:02	2:48:04	253	20.0	35.1	655.3					N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9						
03/24/94 09:37:02	2:49:04	60									Laser power OFF						
03/24/94 09:40:35	2:52:37	213								N30A	Load EEQ_10C.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10						Color HiRes images
03/24/94 09:40:36	2:52:38		30.0	35.2	758.5					N30A							

Orbit 155 Timeline - Type B Orbit

03/24/94 09:45:34	2:57:36	299	40.0	35.3	884.1					N40A	Load EEQ_10.UMI into SEQT 10; Switch to inertial pointing (ORB_155RW); Load exposure table LUNARZ45N; Select DHU SEQT 10	Initiate oblique viewing HiRes imaging stopped
03/24/94 09:45:35	2:57:37		40.0	35.3	884.1					N40A		
03/24/94 09:51:07	3:03:09	333	50.0	35.4	1033.2					N50A	Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ55N; Select DHU SEQT 11	UV and IR uncompressed Resume HiRes imaging
03/24/94 09:51:08	3:03:10		50.0	35.4	1033.2					N50A		
03/24/94 09:57:21	3:09:23	373	60.0	35.5	1206.5					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12	Resume compression
03/24/94 09:57:22	3:09:24		60.0	35.5	1206.5					N60A		
03/24/94 10:01:35	3:13:37	254									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19	End oblique viewing - resume nadir pointing
03/24/94 10:04:25	3:16:27	170	70.0	35.9	1403.7					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20	
03/24/94 10:12:29	3:24:31	484	80.0	37.1	1622.6					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21	
03/24/94 10:13:29	3:25:31	60									Load EEQ_11.UMI into SEQT 11	Restore compressed SEQT 9
Err:508												
03/24/94 10:21:42	3:33:44		89.6	123.9	1858.1					North pole		
Standard Post Script												
03/24/94 10:22:42	3:34:44	0									Stop Imaging - select ST-B	
03/24/94 10:22:47	3:34:49	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)
03/24/94 10:22:56	3:34:58		88.7	195.1	1888.3					LDUSK		
03/24/94 10:25:47	3:37:49	180									Park opaque filter on HiRes (DHU SEQT 27)	
03/24/94 10:26:02	3:38:04	15									Select ST-B; Activate waitwhileslew for 400 sec	
03/24/94 10:26:44	3:38:46	42									Perform UVO Imaging (DHU SEQT 29)	Start calibration imaging
03/24/94 10:26:56	3:38:58	12									Perform LWIR imaging (DHU SEQT 25)	
03/24/94 10:27:08	3:39:10	12									Perform NIR imaging (DHU SEQT 31)	
03/24/94 10:27:14	3:39:16	6									Load exposure table LUNIRDKS1	
03/24/94 10:27:20	3:39:22	6									Load exposure table LUNIRDKS2	
03/24/94 10:27:26	3:39:28	6									Perform HiRes Imaging (DHU SEQT 30)	1 (one) hires image, filter 1

Orbit 155 Timeline - Type B Orbit

03/24/94 10:27:32	3:39:34	6								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/24/94 10:29:00	3:41:02	88								Switch to HGA					READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
End Post Script															
03/24/94 10:30:00	3:42:02									Switch to DHU mode @ 128 kbps					Ground Command
03/24/94 10:31:00	3:43:02									Downlink SSSR Segment 5					Ground Command
03/24/94 10:32:15	3:44:17		80.0	212.0	2102.7					N80D					
03/24/94 10:36:00	3:48:02														
03/24/94 10:36:00	3:48:02									Uplink and schedule L156 scripts					Ground Command
03/24/94 10:44:14	3:56:16		70.0	213.2	2343.8					N70D					
03/24/94 10:57:40	4:09:42		60.0	213.5	2564.5					N60D					
03/24/94 11:05:02	4:17:04								GDS	LOS					
03/24/94 11:06:00	4:18:02														
03/24/94 11:06:00	4:18:02									Downlink SSSR Segment 6					Ground Command
03/24/94 11:12:26	4:24:28		50.0	213.6	2745.3					N50D					
03/24/94 11:28:14	4:40:16		40.0	213.6	2867.1					N40D					
03/24/94 11:40:00	4:52:02														
03/24/94 11:40:00	4:52:02														
03/24/94 11:44:38	4:56:40		30.0	213.6	2915.2					N30D					
03/24/94 11:46:20	4:58:22		29.0	213.5	2915.6					Aposelene					

Orbit 156 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/24/94 11:46:20	0:00:00		29.0	213.5	2915.6							Aposelene							Downlink SSSDR Segment 7 (orbit 155)
03/24/94 11:59:20	0:13:00		21.1	213.5	2890.7							INPM							Enter penumbra
03/24/94 12:00:10	0:13:50		20.6	213.5	2887.3							INUM							Enter umbra
03/24/94 12:01:05	0:14:45		20.0	213.5	2883.4							N20D							
03/24/94 12:17:03	0:30:43		10.0	213.4	2776.0							N10D							
03/24/94 12:32:03	0:45:43		0.0	213.4	2606.1							Equator - D							
03/24/94 12:40:00	0:53:40												SSDR to IDLE - downlink complete						Ground Command
03/24/94 12:45:46	0:59:26		-10.0	213.3	2392.2							S10D							
03/24/94 12:58:03	1:11:43		-20.0	213.3	2154.2							S20D							
03/24/94 13:08:09	1:21:49		-29.3	213.3	1927.1							OUTUM							Exit umbra
03/24/94 13:08:50	1:22:30		-29.9	213.3	1910.7							OUTPM							Exit penumbra
03/24/94 13:08:54	1:22:34		-30.0	213.3	1909.3							S30D							
																			Standard Prep1 Script
03/24/94 13:09:50	1:23:30	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/24/94 13:18:24	1:32:04		-40.0	213.3	1670.9							S40D							
																			Standard Prep2 Script
03/24/94 13:20:42	1:34:22	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/24/94 13:25:54	1:39:34	0											Msg "WRNG: Omni/2k in 1 min.."						
03/24/94 13:26:41	1:40:21		-50.0	213.4	1448.2							S50D							
03/24/94 13:26:54	1:40:34	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/24/94 13:27:54	1:41:34	60											Switch to omni antennas						
03/24/94 13:28:54	1:42:34	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/24/94 13:29:24	1:43:04	30											UV & HR cameras ON						
03/24/94 13:33:57	1:47:37		-60.0	213.5	1246.4							S60D							
03/24/94 13:38:29	1:52:09	545											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1
03/24/94 13:38:54	1:52:34	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/24/94 13:39:06	1:52:46	12											Stop imaging - select ST-B						
03/24/94 13:40:18	1:53:58	72											Perform UV1 imaging (DHU SEQT 29)						NOTE: UV1 instead of UV0
03/24/94 13:40:20	1:54:00		-70.0	213.9	1068.2							S70D							

Orbit 156 Timeline - Type A Orbit

03/24/94 13:40:30	1:54:10	12								Perform HR imaging (DHU SEQT 30)			
03/24/94 13:40:42	1:54:22	12								Perform LWIR imaging (DHU SEQT 25)			
03/24/94 13:40:55	1:54:35	12								Perform NIR imaging (DHU SEQT 31)			
03/24/94 13:41:07	1:54:47	12									Err:508		Slew to nadir (inertial pointing)
03/24/94 13:41:37	1:55:17	30								Laser Power ON			
													Err:508
03/24/94 13:46:01	1:59:41		-80.0	215.0	914.0				S80D				
													Err:508
03/24/94 13:49:07	2:02:47	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85			
03/24/94 13:50:07	2:03:47	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)			START MAPPING
03/24/94 13:51:07	2:04:47	60	-89.6	304.9	783.5				South Pole	Set SA step rate to LO			
03/24/94 13:51:42	2:05:22		-88.7	14.2	769.2				LDAWN				
03/24/94 13:55:45	2:09:25	278	-80.0	30.3	676.1				S80A	Load exposure table LUNARZ75S; Load Exposure table LUNNIR75; Select DHU SEQT 3			
03/24/94 14:00:02	2:13:42	257	-70.0	31.4	589.7				S70A	Load exposure table LUNARZ65S; Load Exposure table LUNNIR65; Select DHU SEQT 4			
03/24/94 14:04:03	2:17:43	241	-60.0	31.8	523.6				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6			
03/24/94 14:07:52	2:21:32	229	-50.0	32.0	476.7				S50A	Record in SDDR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5			SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/24/94 14:11:33	2:25:13	221	-40.0	32.1	448.2				S40A	Load exposure table LUNARZ35S			
03/24/94 14:15:11	2:28:51	218	-30.0	32.2	437.5				S30A	Load exposure table LUNARZ25S			
03/24/94 14:15:33	2:29:13		-29.0	32.2	437.4				Periselene				
03/24/94 14:18:48	2:32:28	217	-20.0	32.2	444.5				S20A	Load exposure table LUNARZ15S			
03/24/94 14:22:28	2:36:08	220	-10.0	32.3	469.3				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6			
03/24/94 14:26:15	2:39:55	227	0.0	32.3	512.3				Equator - A	Record in SDDR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7			SSDR Segment 3
03/24/94 14:30:13	2:43:53	238	10.0	32.4	574.3				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8			
03/24/94 14:31:03	2:44:43	51								Load EEQ_03H.UMI into SEQT 03; Select DHU SEQT 3			HiRes color bursts for 12-20N
03/24/94 14:34:26	2:48:06	202	20.0	32.4	656.3				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9			
03/24/94 14:35:26	2:49:06	60								Laser power OFF			
03/24/94 14:39:00	2:52:40	214	30.0	32.4	759.4				N30A	Load EEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35N; Select DHU SEQT 10			UV and IR uncompressed

Orbit 156 Timeline - Type A Orbit

03/24/94 14:43:59	2:57:39	299	40.0	32.5	885.0				N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11	SSDR Segment 4
03/24/94 14:49:32	3:03:12	333	50.0	32.6	1034.1				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12	Resume HiRes imaging
03/24/94 14:55:46	3:09:26	374	60.0	32.7	1207.3				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 13	
03/24/94 15:02:50	3:16:30	424	70.0	33.1	1404.3				N70A	Load exposure table LUNARZ75N; Load Exposure table LUNNIR75; Select DHU SEQT 14	
03/24/94 15:10:54	3:24:34	484	80.0	34.2	1623.0				N80A	Load exposure table LUNARZ85N; Load Exposure table LUNNIR85; Select DHU SEQT 15	
03/24/94 15:11:54	3:25:34	60								Load EEQ_10.UMI into SEQT 10; Load EEQ_03.UMI into SEQT 03;	Restore original SEQT 10 Restore original SEQT 3
Err:508											
03/24/94 15:20:07	3:33:47		89.6	121.5	1858.5				North Pole		
Standard Post Script											
03/24/94 15:21:07	3:34:47	0								Stop Imaging - select ST-B	
03/24/94 15:21:12	3:34:52	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)
03/24/94 15:21:21	3:35:01		88.7	193.8	1888.4				LDUSK		
03/24/94 15:24:12	3:37:52	180								Park opaque filter on HiRes (DHU SEQT 27)	
03/24/94 15:24:27	3:38:07	15								Select ST-B; Activate waitwhileslew for 400 sec	
03/24/94 15:25:09	3:38:49	42								Perform UV1 Imaging (DHU SEQT 29)	Start calibration imaging NOTE: UV1 instead of UV0
03/24/94 15:25:21	3:39:01	12								Perform LWIR imaging (DHU SEQT 25)	
03/24/94 15:25:33	3:39:13	12								Perform NIR imaging (DHU SEQT 31)	
03/24/94 15:25:39	3:39:19	6								Load exposure table LUNIRDKS1	
03/24/94 15:25:45	3:39:25	6								Load exposure table LUNIRDKS2	
03/24/94 15:25:51	3:39:31	6								Perform HiRes Imaging (DHU SEQT 30)	
03/24/94 15:25:57	3:39:37	6								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec	Slew HGA to Earth with active waitwhileslew
03/24/94 15:28:00	3:41:40	123								Switch to HGA	READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew

Orbit 156 Timeline - Type A Orbit

													End Post Script	
03/24/94	15:29:00	3:42:40											Switch to DHU mode @ 128 kbps	Ground Command
03/24/94	15:30:00	3:43:40											Downlink SSTR Segment 1	Ground Command
03/24/94	15:30:40	3:44:20	80.0	209.5	2102.7							N80D		
03/24/94	15:42:39	3:56:19	70.0	210.5	2343.6							N70D		
03/24/94	15:54:28	4:08:08								MAD		AOS		
03/24/94	15:56:05	4:09:45	60.0	210.8	2564.0							N60D		
03/24/94	16:10:50	4:24:30	50.0	210.9	2744.5							N50D		
03/24/94	16:26:37	4:40:17	40.0	210.9	2866.1							N40D		
03/24/94	16:43:01	4:56:41	30.0	210.8	2914.1							N30D		
03/24/94	16:43:19	4:56:59								CAN		LOS		
03/24/94	16:44:43	4:58:23	29.0	210.8	2914.6							Aposelene		

Orbit 157 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/24/94 16:44:43	0:00:00		29.0	210.8	2914.6							Aposelene							Downlinking SSSDR Segment 1 (orbit 156)
03/24/94 16:48:00	0:03:17												Downlink SSSDR Segment 2						Ground Command
03/24/94 16:49:00	0:04:17												Uplink & schedule L157 scripts						Ground Command
03/24/94 16:59:00	0:14:17												Update state vector (GNC53_24MAR1600)						Ground Command
03/24/94 16:57:42	0:12:59		21.1	210.8	2889.7							INPM							Enter penumbra
03/24/94 16:58:33	0:13:50		20.6	210.8	2886.3							INUM							Enter umbra
03/24/94 16:59:27	0:14:44		20.0	210.8	2882.4							N20D							
03/24/94 17:15:25	0:30:42		10.0	210.7	2775.2							N10D							
03/24/94 17:30:24	0:45:41		0.0	210.6	2605.5							Equator - D							
03/24/94 17:37:00	0:52:17												Downlink SSSDR Segment 3						Ground Command
03/24/94 17:44:07	0:59:24		-10.0	210.6	2392.0							S10D							
03/24/94 17:56:24	1:11:41		-20.0	210.5	2154.2							S20D							
03/24/94 18:06:29	1:21:46		-29.3	210.5	1927.7							OUTUM							Exit umbra
03/24/94 18:07:10	1:22:27		-29.9	210.5	1911.4							OUTPM							Exit penumbra
03/24/94 18:07:15	1:22:32		-30.0	210.5	1909.6							S30D							
03/24/94 18:08:00	1:23:17												Downlink SSSDR Segment 4						Ground Command
																			Standard Prep1 Script
03/24/94 18:08:10	1:23:27	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/24/94 18:16:45	1:32:02		-40.0	210.5	1671.5							S40D							
																			Standard Prep2 Script
03/24/94 18:19:04	1:34:21	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/24/94 18:24:16	1:39:33	0											Msg "WRNG: Omni/2k in 1 min.."						
03/24/94 18:25:02	1:40:18		-50.0	210.6	1448.9							S50D							
03/24/94 18:25:16	1:40:33	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
03/24/94 18:26:16	1:41:33	60											Switch to omni antennas						
03/24/94 18:27:16	1:42:33	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/24/94 18:27:46	1:43:03	30											UV & HR cameras ON						
03/24/94 18:32:18	1:47:35		-60.0	210.7	1247.3							S60D							
03/24/94 18:36:51	1:52:08	545											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 5

Orbit 157 Timeline - Type B Orbit

03/24/94 18:37:16	1:52:33	25								Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/24/94 18:37:28	1:52:45	12								Stop imaging - select ST-B					
03/24/94 18:38:40	1:53:57	72								Perform UV1 imaging (DHU SEQT 29)					NOTE: UV1 instead of UV0
03/24/94 18:38:42	1:53:59		-70.0	211.1	1069.1				S70D						
03/24/94 18:38:52	1:54:09	12								Perform HR imaging (DHU SEQT 30)					
03/24/94 18:39:04	1:54:21	12								Perform LWIR imaging (DHU SEQT 25)					
03/24/94 18:39:17	1:54:33	12								Perform NIR imaging (DHU SEQT 31)					
03/24/94 18:39:29	1:54:46	12									Err:508				Slew to nadir (inertial pointing)
03/24/94 18:39:59	1:55:16	30								Laser Power ON					
															Err:508
03/24/94 18:44:23	1:59:40		-80.0	212.1	915.0				S80D						
															Err:508
03/24/94 18:47:29	2:02:45	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/24/94 18:48:29	2:03:46	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/24/94 18:49:29	2:04:46	60	-89.6	302.3	784.6				South Pole	Set SA step rate to LO					
03/24/94 18:50:04	2:05:21		-88.7	12.8	770.3				LDAWN						
03/24/94 18:54:07	2:09:24	278	-80.0	27.7	677.2				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/24/94 18:58:24	2:13:41	257	-70.0	28.8	590.8				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/24/94 19:02:25	2:17:42	241	-60.0	29.1	524.8				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/24/94 19:06:15	2:21:32	230	-50.0	29.3	477.9				S50A	Record in SSSR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5					SSDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/24/94 19:09:56	2:25:13	221	-40.0	29.4	449.3				S40A	Load exposure table LUNARZ35S					
03/24/94 19:13:34	2:28:51	218	-30.0	29.5	438.6				S30A	Load exposure table LUNARZ25S					
03/24/94 19:13:56	2:29:12		-29.0	29.5	438.5				Periselene						
03/24/94 19:17:11	2:32:28	217	-20.0	29.5	445.6				S20A	Load exposure table LUNARZ15S					
03/24/94 19:20:51	2:36:08	220							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/24/94 19:20:52	2:36:09		-10.0	29.6	470.4				S10A						
03/24/94 19:24:39	2:39:56	228	0.0	29.6	513.4				Equator - A	Record in SSSR Segment 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SSDR Segment 7
03/24/94 19:28:37	2:43:54	238	10.0	29.6	575.4				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					
03/24/94 19:32:50	2:48:07	253	20.0	29.6	657.3				N20A	Load EEQ_09H.UMI into SEQT 9; Load exposure table LUNARZ25N; Select DHU SEQT 9					Color HiRes images
03/24/94 19:33:50	2:49:07	60								Laser power OFF					

Orbit 157 Timeline - Type B Orbit

03/24/94 19:37:24	2:52:41	214	30.0	29.7	760.4						N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10							HiRes imaging stopped
03/24/94 19:42:24	2:57:41	300	40.0	29.7	885.9						N40A	Switch to inertial pointing (ORB_157RW); Load exposure table LUNARZ45N; Select DHU SEQT 10							Initiate oblique viewing
03/24/94 19:47:57	3:03:14	333	50.0	29.8	1034.9						N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11							Resume HiRes imaging
03/24/94 19:54:11	3:09:28	374	60.0	30.0	1208.0						N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12							
03/24/94 19:58:25	3:13:42	254										Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19							End oblique viewing - resume nadir pointing
03/24/94 20:01:15	3:16:32	170	70.0	30.3	1404.8						N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20							
03/24/94 20:09:19	3:24:36	484	80.0	31.3	1623.4						N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21							
03/24/94 20:10:19	3:25:36	60										Load EEQ_09.UMI into SEQT 9							Restore original SEQT 9
Err:508																			
03/24/94 20:18:32	3:33:49		89.6	119.2	1858.7						North pole								
Standard Post Script																			
03/24/94 20:19:32	3:34:49	0										Stop Imaging - select ST-B							
03/24/94 20:19:37	3:34:54	5										Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)							Slew to Vega (inertial pointing)
03/24/94 20:19:46	3:35:03		88.7	192.3	1888.4						LDUSK								
03/24/94 20:22:37	3:37:54	180										Park opaque filter on HiRes (DHU SEQT 27)							
03/24/94 20:22:52	3:38:08	15										Select ST-B; Activate waitwhileslew for 400 sec							
03/24/94 20:23:35	3:38:51	43										Perform UV1 Imaging (DHU SEQT 29)							Start calibration imaging NOTE: UV1 instead of UV0
03/24/94 20:23:47	3:39:04	12										Perform LWIR imaging (DHU SEQT 25)							
03/24/94 20:23:59	3:39:16	12										Perform NIR imaging (DHU SEQT 31)							
03/24/94 20:24:05	3:39:22	6										Load exposure table LUNIRDKS1							
03/24/94 20:24:11	3:39:28	6										Load exposure table LUNIRDKS2							
03/24/94 20:24:17	3:39:34	6										Perform HiRes Imaging (DHU SEQT 30)							
03/24/94 20:24:23	3:39:40	6										Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec							Slew HGA to Earth with active waitwhileslew

Orbit 157 Timeline - Type B Orbit

03/24/94 20:28:00	3:43:17	217									Switch to HGA				READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
															End Post Script
03/24/94 20:29:05	3:44:22		80.0	206.9	2102.6						N80D				
03/24/94 20:30:00	3:45:17										Switch to DHU mode @ 128 kbps				Ground Command
03/24/94 20:36:00	3:51:16										Downlink SSSR Segment 4				Ground Command
03/24/94 20:41:04	3:56:21		70.0	207.9	2343.2						N70D				
03/24/94 20:45:00	4:00:17										Downlink SSSR Segment 5				Ground Command
03/24/94 20:54:29	4:09:46		60.0	208.1	2563.3						N60D				
03/24/94 21:00:57	4:16:14										PMK				
03/24/94 21:09:14	4:24:31		50.0	208.2	2743.5						N50D				
03/24/94 21:25:00	4:40:17										Downlink SSSR Segment 6				Ground Command
03/24/94 21:25:01	4:40:18		40.0	208.2	2865.0						N40D				
03/24/94 21:29:00	4:44:17										Uplink and schedule L158 scripts				Ground Command
03/24/94 21:41:23	4:56:40		30.0	208.1	2913.0						N30D				
03/24/94 21:43:07	4:58:24		29.0	208.1	2913.4						Aposelene				

Orbit 158 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/24/94 21:43:07	0:00:00		29.0	208.1	2913.4							Aposelene							Downlink SSSR Segment 6 (orbit 157)
03/24/94 21:56:04	0:12:57		21.1	208.1	2888.6							INPM							Enter penumbra
03/24/94 21:56:55	0:13:48		20.6	208.1	2885.2							INUM							Enter umbra
03/24/94 21:57:50	0:14:43		20.0	208.0	2881.4							N20D							
03/24/94 22:00:00	0:16:53												Downlink SSSR Segment 7						Ground Command
03/24/94 22:13:46	0:30:39		10.0	208.0	2774.4							N10D							
03/24/94 22:28:45	0:45:38		0.0	207.9	2605.0							Equator - D							
03/24/94 22:41:00	0:57:53												SSDR to IDLE - downlink complete						Ground Command
03/24/94 22:42:28	0:59:21		-10.0	207.8	2391.8							S10D							
03/24/94 22:54:45	1:11:38		-20.0	207.8	2154.4							S20D							
03/24/94 23:04:49	1:21:42		-29.2	207.8	1928.7							OUTUM							Exit umbra
03/24/94 23:05:30	1:22:23		-29.9	207.8	1912.3							OUTPM							Exit penumbra
03/24/94 23:05:36	1:22:29		-30.0	207.8	1910.1							S30D							
																			Standard Prep1 Script
03/24/94 23:06:30	1:23:23	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/24/94 23:15:06	1:31:59		-40.0	207.8	1672.2							S40D							
																			Standard Prep2 Script
03/24/94 23:17:26	1:34:19	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/24/94 23:22:38	1:39:31	0											Msg "WRNG: Omni/2k in 1 min.."						
03/24/94 23:23:24	1:40:17		-50.0	207.8	1449.9							S50D							
03/24/94 23:23:38	1:40:31	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/24/94 23:24:38	1:41:31	60											Switch to omni antennas						
03/24/94 23:25:38	1:42:31	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/24/94 23:26:08	1:43:01	30											UV & HR cameras ON						
03/24/94 23:30:39	1:47:32		-60.0	207.9	1248.4							S60D							
03/24/94 23:35:13	1:52:06	545											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
03/24/94 23:35:38	1:52:31	25											Perform NIR imaging (DHU SEQT 31)						Dark Field imaging starts
03/24/94 23:35:50	1:52:43	12											Stop imaging - select ST-B						
03/24/94 23:37:02	1:53:55	72											Perform UV1 imaging (DHU SEQT 29)						NOTE: UV1 instead of UV0

Orbit 158 Timeline - Type A Orbit

03/24/94 23:37:03	1:53:56		-70.0	208.2	1070.3				S70D					
03/24/94 23:37:14	1:54:07	12								Perform HR imaging (DHU SEQT 30)				
03/24/94 23:37:26	1:54:19	12								Perform LWIR imaging (DHU SEQT 25)				
03/24/94 23:37:39	1:54:32	12								Perform NIR imaging (DHU SEQT 31)				
03/24/94 23:37:51	1:54:44	12									Err:508			NOTE: Erroneous pointing quaternion Slew to non-nadir point (inertial pointing)
03/24/94 23:38:21	1:55:14	30								Laser Power ON				
Err:508														
03/24/94 23:42:44	1:59:37		-80.0	209.2	916.3				S80D					
Err:508														
03/24/94 23:45:51	2:02:44	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85				
03/24/94 23:46:51	2:03:44	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 9)				START MAPPING: Large angle slew due to incorrect initial pointing vector
03/24/94 23:47:51	2:04:44	60	-89.7	299.2	785.9				South Pole	Set SA step rate to LO				
03/24/94 23:48:26	2:05:19		-88.7	11.3	771.6				LDAWN					
03/24/94 23:49:53	2:06:46								GDS AOS					
03/24/94 23:52:29	2:09:22	278	-80.0	25.2	678.4				S80A	Load exposure table LUNARZ75S; Load Exposure table LUNNIR75; Select DHU SEQT 3				
03/24/94 23:56:47	2:13:40	258	-70.0	26.1	592.1				S70A	Load exposure table LUNARZ65S; Load Exposure table LUNNIR65; Select DHU SEQT 4				
03/25/94 00:00:48	2:17:41	241	-60.0	26.5	526.0				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6				
03/25/94 00:04:38	2:21:31	230	-50.0	26.6	479.1				S50A	Record in SSSR Segment 2; Load exposure table LUNARZ45S; Select DHU SEQT 5				SSDR Segment 2 HiRes imaging stopped by gain setting in exposure table
03/25/94 00:08:19	2:25:12	221	-40.0	26.7	450.5				S40A	Load exposure table LUNARZ35S				
03/25/94 00:11:57	2:28:50	218	-30.0	26.8	439.9				S30A	Load exposure table LUNARZ25S				
03/25/94 00:12:20	2:29:13		-29.0	26.8	439.8				Periselene					
03/25/94 00:15:35	2:32:28	218	-20.0	26.8	446.8				S20A	Load exposure table LUNARZ15S				
03/25/94 00:19:15	2:36:08	220	-10.0	26.8	471.6				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6				
03/25/94 00:23:03	2:39:56	228	0.0	26.9	514.5				Equator - A	Record in SSSR Segment 3; Load exposure table LUNARZ05N; Select DHU SEQT 7				SSDR Segment 3
03/25/94 00:27:01	2:43:54	238	10.0	26.9	576.5				N10A	Load EEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15N; Select DHU SEQT 8				UV and IR uncompressed
03/25/94 00:31:15	2:48:08	254	20.0	26.9	658.4				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9				Resume compression
03/25/94 00:32:15	2:49:08	60								Laser power OFF				

Orbit 158 Timeline - Type A Orbit

03/25/94 00:35:49	2:52:42	214	30.0	26.9	761.4				N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10			
03/25/94 00:40:49	2:57:42	300	40.0	27.0	886.8				N40A	Record in SDDR Segment 4; Load exposure table LUNARZ45N; Select DHU SEQT 11			SDDR Segment 4
03/25/94 00:46:22	3:03:15	333	50.0	27.0	1035.7				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 12			Resume HiRes imaging
03/25/94 00:52:36	3:09:29	374	60.0	27.2	1208.7				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 13			
03/25/94 00:59:40	3:16:33	424	70.0	27.5	1405.3				N70A	Load exposure table LUNARZ75N; Load Exposure table LUNNIR75; Select DHU SEQT 14			
03/25/94 01:07:44	3:24:37	484	80.0	28.4	1623.6				N80A	Load exposure table LUNARZ85N; Load Exposure table LUNNIR85; Select DHU SEQT 15			
03/25/94 01:08:44	3:25:37	60								Load EEQ_08.UMI into SEQT 8			Restore original SEQT 8
Err:508													
03/25/94 01:16:57	3:33:50		89.7	115.1	1858.5				North Pole				
Standard Post Script													
03/25/94 01:17:57	3:34:50	0								Stop Imaging - select ST-B			
03/25/94 01:18:02	3:34:55	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)			Slew to Vega (inertial pointing)
03/25/94 01:18:11	3:35:04		88.7	190.9	1888.3				LDUSK				
03/25/94 01:21:02	3:37:55	180								Park opaque filter on HiRes (DHU SEQT 27)			
03/25/94 01:21:17	3:38:10	15								Select ST-B; Activate waitwhileslew for 400 sec			
03/25/94 01:22:01	3:38:54	44								Perform UV1 Imaging (DHU SEQT 29)			Start calibration imaging NOTE: UV1 instead of UV0
03/25/94 01:22:13	3:39:06	12								Perform LWIR imaging (DHU SEQT 25)			
03/25/94 01:22:25	3:39:18	12								Perform NIR imaging (DHU SEQT 31)			
03/25/94 01:22:31	3:39:24	6								Load exposure table LUNIRDKS1			
03/25/94 01:22:37	3:39:30	6								Load exposure table LUNIRDKS2			
03/25/94 01:22:43	3:39:36	6								Perform HiRes Imaging (DHU SEQT 30)			
03/25/94 01:22:49	3:39:42	6								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec			Slew HGA to Earth with active waitwhileslew
03/25/94 01:27:30	3:44:23		80.0	204.3	2102.4				N80D				

Orbit 158 Timeline - Type A Orbit

03/25/94 01:28:49	3:45:42	360																		Switch to HGA	READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
																					End Post Script
03/25/94 01:30:00	3:46:53																			Switch to DHU mode @ 128 kbps	Ground Command
03/25/94 01:31:00	3:47:53																			Downlink SSSDR Segment 1	Ground Command
03/25/94 01:39:29	3:56:22		70.0	205.2	2342.6															N70D	
03/25/94 01:42:00	3:58:53																			Uplink and schedule L159 scripts	Ground Command
03/25/94 01:52:54	4:09:47		60.0	205.4	2562.4															N60D	
03/25/94 02:07:38	4:24:31		50.0	205.5	2742.4															N50D	
03/25/94 02:13:00	4:29:53																			Downlink SSSDR Segment 2	Ground Command
03/25/94 02:19:00	4:35:53																			Cancel scheduled L159 scripts	Ground Command
03/25/94 02:22:00	4:38:53																			Re-uplink and schedule L159 scripts	Ground Command
03/25/94 02:23:24	4:40:17		40.0	205.5	2863.7															N40D	
03/25/94 02:39:46	4:56:39		30.0	205.4	2911.7															N30D	
03/25/94 02:41:30	4:58:23		28.9	205.4	2912.1															Aposelene	

Orbit 159 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/25/94 02:41:30	0:00:00		28.9	205.4	2912.1							Aposelene							Downlinking SSSDR Segment 2 (orbit 158)
03/25/94 02:48:00	0:06:30												Downlink SSSDR Segment 3						Ground Command
03/25/94 02:54:26	0:12:56		21.1	205.3	2887.5							INPM							Enter penumbra
03/25/94 02:55:17	0:13:47		20.6	205.3	2884.1							INUM							Enter umbra
03/25/94 02:56:11	0:14:41		20.0	205.3	2880.3							N20D							
03/25/94 03:12:07	0:30:37		10.0	205.2	2773.6							N10D							
03/25/94 03:20:00	0:38:30												Downlink SSSDR Segment 4						Ground Command
03/25/94 03:27:06	0:45:36		0.0	205.2	2604.6							Equator - D							
03/25/94 03:36:00	0:54:30												SSDR to IDLE - downlink complete						Ground Command
03/25/94 03:40:49	0:59:19		-10.0	205.1	2391.8							S10D							
03/25/94 03:45:00	1:03:30												Select ST-A						Ground Command - no matches
03/25/94 03:49:00	1:07:30												Select ST-B						Ground Command
03/25/94 03:53:06	1:11:36		-20.0	205.0	2154.8							S20D							
03/25/94 03:57:18	1:15:48										MAD	LOS							
03/25/94 04:03:08	1:21:38		-29.2	205.0	1929.9							OUTUM							Exit umbra
03/25/94 04:03:49	1:22:19		-29.9	205.0	1913.5							OUTPM							Exit penumbra
03/25/94 04:03:56	1:22:26		-30.0	205.0	1910.8							S30D							
																			Standard Prep1 Script
03/25/94 04:04:49	1:23:19	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/25/94 04:13:26	1:31:56		-40.0	205.0	1673.1							S40D							
																			Standard Prep2 Script
03/25/94 04:15:48	1:34:18	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
																			Err:508
03/25/94 04:21:00	1:39:30	0											Msg "WRNG: Omni/2k in 1 min.."						
03/25/94 04:21:45	1:40:15		-50.0	205.0	1451.0							S50D							
03/25/94 04:22:00	1:40:30	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/25/94 04:23:00	1:41:30	60											Switch to omni antennas						
03/25/94 04:24:00	1:42:30	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/25/94 04:24:30	1:43:00	30											UV & HR cameras ON						
03/25/94 04:29:01	1:47:31		-60.0	205.2	1249.6							S60D							
03/25/94 04:33:36	1:52:06	545											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 5

Orbit 159 Timeline - Type B Orbit

03/25/94 04:34:00	1:52:30	25								Perform NIR imaging (DHU SEQT 31)					Dark Field imaging starts
03/25/94 04:34:12	1:52:42	12								Stop imaging - select ST-B					
03/25/94 04:35:24	1:53:54	72								Perform UV imaging (DHU SEQT 29)					
03/25/94 04:35:25	1:53:55		-70.0	205.4	1071.6				S70D						
03/25/94 04:35:36	1:54:06	12								Perform HR imaging (DHU SEQT 30)					
03/25/94 04:35:48	1:54:18	12								Perform LWIR imaging (DHU SEQT 25)					
03/25/94 04:36:01	1:54:30	12								Perform NIR imaging (DHU SEQT 31)					
03/25/94 04:36:13	1:54:43	12									Err:508				Slew to nadir (inertial pointing)
03/25/94 04:36:43	1:55:13	30								Laser Power ON					
Err:508															
03/25/94 04:41:06	1:59:36		-80.0	206.3	917.7				S80D						
Err:508															
03/25/94 04:44:12	2:02:42	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S					
03/25/94 04:45:13	2:03:43	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start imaging (DHU SEQT 16)					START MAPPING
03/25/94 04:46:13	2:04:43	60	-89.7	295.5	787.4				South Pole	Set SA step rate to LO					
03/25/94 04:46:48	2:05:18		-88.7	9.8	773.1				LDAWN						
03/25/94 04:50:52	2:09:22	279	-80.0	22.6	679.8				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 17					
03/25/94 04:55:10	2:13:40	258	-70.0	23.5	593.5				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 4					
03/25/94 04:59:11	2:17:41	241	-60.0	23.8	527.4				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 6					
03/25/94 05:03:01	2:21:31	230	-50.0	23.9	480.5				S50A	Record in SDDR Segment 6; Load exposure table LUNARZ45S; Select DHU SEQT 5					SDDR Segment 6 HiRes imaging stopped by gain setting in exposure table
03/25/94 05:06:43	2:25:13	222	-40.0	24.0	451.9				S40A	Load exposure table LUNARZ35S					
03/25/94 05:10:21	2:28:51	218	-30.0	24.0	441.2				S30A	Load exposure table LUNARZ25S					
03/25/94 05:10:44	2:29:14		-28.9	24.0	441.1				Periselene						
03/25/94 05:13:59	2:32:29	218	-20.0	24.1	448.1				S20A	Load exposure table LUNARZ15S					
03/25/94 05:17:40	2:36:10	221	-10.0	24.1	472.8				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 6					
03/25/94 05:21:27	2:39:57	227	0.0	24.1	515.8				Equator - A	Record in SDDR Segment 7; Load EEQ_07U.UMI into SEQT 7; Load exposure table LUNARZ05N; Select DHU SEQT 7					SDDR Segment 7 UV and IR uncompressed
03/25/94 05:25:26	2:43:56	239	10.0	24.1	577.6				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 8					Resume compression
03/25/94 05:29:40	2:48:10	254	20.0	24.2	659.5				N20A	Load exposure table LUNARZ25N; Select DHU SEQT 9					
03/25/94 05:30:40	2:49:10	60								Laser power OFF					

Orbit 159 Timeline - Type B Orbit

03/25/94 05:34:14	2:52:44	214	30.0	24.2	762.4					N30A	Load exposure table LUNARZ35N; Select DHU SEQT 10						
03/25/94 05:39:14	2:57:44	300	40.0	24.2	887.7					N40A	Switch to inertial pointing (ORB_159RW); Load exposure table LUNARZ45N; Select DHU SEQT 10						Initiate oblique viewing
03/25/94 05:44:47	3:03:17	333	50.0	24.3	1036.5					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 11						Resume HiRes imaging
03/25/94 05:51:01	3:09:31	374	60.0	24.4	1209.3					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 12						
03/25/94 05:55:15	3:13:45	254									Slew s/c sensors to nadir (ACSMODE=LunarMapping); Select DHU SEQT 19						End oblique viewing - resume nadir pointing
03/25/94 05:58:05	3:16:35	170	70.0	24.6	1405.7					N70A	Load exposure table LUNARZ75N; Select DHU SEQT 20						
03/25/94 06:06:09	3:24:39	484	80.0	25.5	1623.8					N80A	Load exposure table LUNARZ85N; Select DHU SEQT 21						
03/25/94 06:07:09	3:25:39	60									Load EEQ_07.UMI into SEQT 7						Restore original SEQT 7
Err:508																	
03/25/94 06:15:23	3:33:53		89.7	113.9	1858.6					North pole							
Standard Post Script																	
03/25/94 06:16:23	3:34:53	0									Stop Imaging - select ST-B						
03/25/94 06:16:28	3:34:58	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)						Slew to Vega (inertial pointing)
03/25/94 06:16:36	3:35:06		88.7	189.3	1888.1					LDUSK							
03/25/94 06:19:28	3:37:58	180									Park opaque filter on HiRes (DHU SEQT 27)						
03/25/94 06:19:43	3:38:13	15									Select ST-B; Activate waitwhileslew for 400 sec						
03/25/94 06:20:26	3:38:56	43									Perform UV Imaging (DHU SEQT 29)						
03/25/94 06:20:38	3:39:08	12									Perform LWIR imaging (DHU SEQT 25)						
03/25/94 06:20:50	3:39:20	12									Perform NIR imaging (DHU SEQT 31)						
03/25/94 06:20:56	3:39:26	6									Load exposure table LUNIRDKS1						
03/25/94 06:21:02	3:39:32	6									Load exposure table LUNIRDKS2						
03/25/94 06:21:08	3:39:38	6									Perform HiRes Imaging (DHU SEQT 30)						
03/25/94 06:21:38	3:40:08	30									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec						Slew HGA to Earth with active waitwhileslew

Orbit 159 Timeline - Type B Orbit

03/25/94 06:25:00	3:43:30	202									Switch to HGA				READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
															End Post Script
03/25/94 06:25:30	3:44:00										Switch to DHU mode @ 128 kbps				Ground Command - time approx
03/25/94 06:25:55	3:44:25		80.0	201.8	2102.0					N80D					
03/25/94 06:31:00	3:49:30										Downlink SDR Segment 5				Ground Command
03/25/94 06:37:54	3:56:24		70.0	202.6	2341.8					N70D					
03/25/94 06:51:18	4:09:48		60.0	202.8	2561.3					N60D					
03/25/94 07:04:00	4:22:30										Downlink SDR Segment 6				Ground Command
03/25/94 07:06:02	4:24:32		50.0	202.8	2741.1					N50D					
03/25/94 07:15:05	4:33:35								CAN	AOS					
03/25/94 07:21:47	4:40:17		40.0	202.8	2862.3					N40D					
03/25/94 07:38:00	4:56:30										Downlink SDR Segment 7				Ground Command
03/25/94 07:38:08	4:56:38		30.0	202.7	2910.3					N30D					
03/25/94 07:39:55	4:58:25		28.9	202.7	2910.8					Aposelene					

Orbit 165 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/26/94 10:44:58	0:00:00		0.4	189.5	3561.6							Aposelene							
03/26/94 10:45:40	0:00:42		0.0	189.5	3561.6							MEQD							
03/26/94 11:04:58	0:20:00		-10.0	189.4	3521.9							S10D							
03/26/94 11:23:43	0:38:45		-20.0	189.4	3412.5							S20D							
03/26/94 11:24:27	0:39:29										CAN	MAOSM							Exit occultation
03/26/94 11:24:55	0:39:57		-20.7	189.4	3403.0							OUTUM							Exit umbra
03/26/94 11:25:57	0:40:59		-21.2	189.4	3394.7							OUTPM							Exit penumbra
03/26/94 11:26:42	0:41:44										GDS	MAOSM							
03/26/94 11:40:00	0:55:02												Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)						Ground Command
03/26/94 11:41:28	0:56:30		-30.0	189.3	3244.8							S30D							
03/26/94 11:47:00	1:02:02												Switch to DHU mode @ 128 kbps						Ground Command
03/26/94 11:50:00	1:05:02												Downlink SDR Segment 1						Ground Command
03/26/94 11:57:56	1:12:58		-40.0	189.3	3034.9							S40D							
03/26/94 11:59:00	1:14:02												Uplink and schedule Rotation 2 burn scripts (LROT2SETUP)						Ground Command Updatec scripts
03/26/94 12:05:00	1:20:02												SSDR to IDLE - pause for burn						Ground Command
03/26/94 12:09:10	1:24:12										GDS	LOS							
Burn2 Prep Script																			
03/26/94 12:14:00	1:29:02	0											Msg "WARNING: 2k in 1 min.."						
03/26/94 12:12:54	1:27:56		-50.0	189.3	2799.7							S50D							
Err:508	Err:508	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
Err:508	Err:508	1											Set downlink rate to 8 kbps						
Err:508	Err:508	1											Switch to RCSALL format						
Err:508	Err:508	60											Switch to omni antennas						
Err:508	Err:508	60											Set SA mode to AUTO; Slew to burn attitude (GNC12LROT2RW); NIR camera & cryocooler ON						Slew to burn attitude (inertial pointing) Prepare for orbit 165 mapping
End Burn Prep Script																			
03/26/94 12:26:23	1:41:25		-60.0	189.5	2555.1							S60D							
03/26/94 12:31:05	1:46:07	0											ST doors CLOSE						Scheduled Command
03/26/94 12:38:24	1:53:26		-70.0	189.9	2313.6							S70D							
DV_BURN LROT2 Script																			
03/26/94 12:40:24	1:55:26	0											Velocity jets ENABLE; GNC diagnostics OFF; Start IDC format 03						
03/26/94 12:40:25	1:55:27	1											Process IDC						
03/26/94 12:41:00	1:56:02	35											Start ROT2 burn with tight jets (GNC12LROT2JT)						
03/26/94 12:41:06	1:56:08	6											Start of burn						Periselene ROT BURN #2 @ 12:41:05.6

Orbit 165 Timeline - Type B Orbit

03/26/94 12:42:12	1:57:14	72															End of burn (duration=72.46 sec)
																	End Burn Script
																	LROT2 Post Burn Script
03/26/94 12:42:20	1:57:22	0															Keep burn attitude with loose jets (GNC12LROT2JL); Velocity jets DISABLE
Err:508	Err:508	60															IDC processing STOP; GNC diagnostics ON; Keep attitude with RW (GNC12LROT2RW)
																	End Post Burn Script
03/26/94 12:49:00	2:04:02																Uplink and schedule L165 scripts
03/26/94 12:49:15	2:04:17									S80D							Ground Command
03/26/94 12:56:00	2:11:02																Update state vector (GNC53_26MAR1242); Switch to DUPER mode in format 02
03/26/94 13:00:14	2:15:16		-90.0	107.0	1832.7					South Pole							Ground Command
03/26/94 13:01:23	2:16:25		-88.8	10.6	1804.5					LDAWN							
03/26/94 13:09:19	2:24:21		-80.0	10.0	1600.6					S80A							
																	Err:508
03/26/94 13:09:50	2:24:52	0															ST doors OPEN; LWIR camera & cryocooler ON; Select ST-B
03/26/94 13:10:49	2:25:51	59															Switch to DUPER format 02
03/26/94 13:10:50	2:25:52	1															Switch to 2 kbps bypass mode; Select omni antennas
03/26/94 13:17:16	2:32:18		-70.0	9.9	1386.0					S70A							
03/26/94 13:19:50	2:34:52	540															Sensor door OPEN; UV & HR cameras ON
03/26/94 13:20:50	2:35:52	60															Set SA step rate to HI; Slew s/c sensors to nadir (ACSMODE=LunarMapping)
																	Err:508
03/26/94 13:24:15	2:39:17		-60.0	9.8	1193.2					S60A							
																	Err:508
03/26/94 13:27:50	2:42:52	0															Record in SDR Segment 5; Initialize filters (DHU SEQT 28); Load exposure table LUNARZ55S; Start imaging (DHU SEQT 11)
03/26/94 13:28:50	2:43:52	60															Start SDR in Segment 5 START MAPPING
03/26/94 13:29:30	2:44:32																Set SA step rate to LO; Select DHU SEQT 11
03/26/94 13:29:50	2:44:52	60								S50A							Initialize filters (DHU SEQT 28); Select DHU SEQT 10
03/26/94 13:30:25	2:45:27		-50.0	9.7	1023.9					S50A							Load exposure table LUNARZ45S; Select DHU SEQT 10
03/26/94 13:34:51	2:49:53	301															Laser Power ON
03/26/94 13:35:20	2:50:22	29								S40A							Load exposure table LUNARZ35S; Select DHU SEQT 10
03/26/94 13:35:55	2:50:57		-40.0	9.7	878.5					S40A							

Orbit 165 Timeline - Type B Orbit

03/26/94 13:40:18	2:55:20	298							S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
03/26/94 13:40:53	2:55:55		-30.0	9.6	756.3				S30A					
03/26/94 13:44:51	2:59:53	273							S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
03/26/94 13:45:26	3:00:28		-20.0	9.6	656.3				S20A					
03/26/94 13:45:51	3:00:53	60								Record in SDDR Segment 6				SDDR Segment 6
03/26/94 13:49:04	3:04:06	193							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
03/26/94 13:49:39	3:04:41		-10.0	9.5	577.2				S10A					
03/26/94 13:53:02	3:08:04	238							MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6				
03/26/94 13:53:37	3:08:39		0.0	9.5	517.8				Equator - A					
03/26/94 13:56:50	3:11:52	228							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
03/26/94 13:57:25	3:12:27		10.0	9.5	477.3				N10A					
03/26/94 14:00:32	3:15:34	222							N20A	Load exposure table LUNARZ25N				
03/26/94 14:01:07	3:16:09		20.0	9.4	454.9				N20A					
03/26/94 14:03:54	3:18:56		27.6	9.4	449.8				Periselene					
03/26/94 14:04:10	3:19:12	218							N30A	Load exposure table LUNARZ35N				
03/26/94 14:04:46	3:19:48		30.0	9.4	450.3				N30A					
03/26/94 14:07:50	3:22:52	220							N40A	Load exposure table LUNARZ45N				
03/26/94 14:08:26	3:23:28		40.0	9.4	463.4				N40A					
03/26/94 14:08:50	3:23:52	60								Record in SDDR Segment 7				SDDR Segment 7
03/26/94 14:11:34	3:26:36	164							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6				
03/26/94 14:12:10	3:27:12		50.0	9.3	494.3				N50A					
03/26/94 14:15:26	3:30:28	232							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 4				
03/26/94 14:16:02	3:31:04		60.0	9.3	543.7				N60A					
03/26/94 14:19:30	3:34:32	244							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 17				
03/26/94 14:20:07	3:35:09		70.0	9.2	612.4				N70A					
03/26/94 14:23:51	3:38:53	261							N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85 Select DHU SEQT 16				Resume HiRes imaging Stop laser ranging
03/26/94 14:24:21	3:39:23	30								Laser power OFF				
Err:508														
03/26/94 14:24:29	3:39:31		80.0	9.1	701.3				N80A					
03/26/94 14:29:13	3:44:15		90.0	284.9	811.8				North Pole					
Standard LM Post Script														
03/26/94 14:29:35	3:44:37	0								Stop Imaging - select ST-B				
03/26/94 14:29:40	3:44:42	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)				Slew to Vega (inertial pointing)
03/26/94 14:29:48	3:44:50		88.8	189.9	826.4				LDUSK					

Orbit 165 Timeline - Tyne B Orbit

03/26/94 14:32:40	3:47:42	180								Park opaque filter on HiRes (DHU SEQT 27)								
03/26/94 14:32:55	3:47:57	15								Select ST-B; Activate waitwhileslew for 400 sec								
03/26/94 14:34:08	3:49:10	73								Perform UV Imaging (DHU SEQT 29)								Start calibration imaging
03/26/94 14:34:20	3:49:22	12								Perform LWIR imaging (DHU SEQT 25)								
03/26/94 14:34:26	3:49:28		80.0	189.2	945.0					N80D								
03/26/94 14:34:32	3:49:34	12								Perform NIR imaging (DHU SEQT 31)								
03/26/94 14:34:38	3:49:40	6								Load exposure table LUNIRDKS1								
03/26/94 14:34:44	3:49:46	6								Load exposure table LUNIRDKS2								
03/26/94 14:34:50	3:49:52	6								Perform HiRes Imaging (DHU SEQT 30)								
03/26/94 14:34:56	3:49:58	6								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec								Slew HGA to Earth with active waitwhileslew
03/26/94 14:40:00	3:55:02	304								Switch to HGA								READY FOR DATA DUMP - Time approximate. Earlier than plan because of waitwhileslew
End Post Script																		
03/26/94 14:40:14	3:55:16		70.0	189.1	1101.8					N70D								
03/26/94 14:41:00	3:56:02									Switch to DHU mode @ 128 kbps								Ground Command
03/26/94 14:44:00	3:59:02									Downlink SSSR Segment 5								Ground Command
03/26/94 14:46:46	4:01:48		60.0	189.0	1282.4					N60D								
03/26/94 14:54:11	4:09:13		50.0	189.0	1486.1					N50D								
03/26/94 15:00:00	4:15:02									Downlink SSSR Segment 6								Ground Command
03/26/94 15:02:39	4:17:41		40.0	188.9	1709.7					N40D								
03/26/94 15:11:00	4:26:02									Uplink and schedule L166 scripts								Ground Command
03/26/94 15:12:20	4:27:22		30.0	188.8	1947.6					N30D								
03/26/94 15:16:00	4:31:02		26.5	188.8	2031.7					INPM								Enter penumbra
03/26/94 15:16:43	4:31:45		25.9	188.8	2047.8					INUM								Enter umbra
03/26/94 15:23:00	4:38:02									SSDR to IDLE - pause for occultation								Ground Command
03/26/94 15:23:23	4:38:25		20.0	188.7	2190.1					N20D								
03/26/94 15:25:00	4:40:02									Transmitter OFF								Ground Command
03/26/94 15:25:23	4:40:25		17.5	188.6	2249.8				CAN	MLOSM								Enter occultation
03/26/94 15:35:51	4:50:53		10.0	188.6	2423.5					N10D								
03/26/94 15:49:44	5:04:46		0.0	188.4	2630.2					Equator - D								
03/26/94 16:04:50	5:19:52		-10.0	188.3	2790.7					S10D								
03/26/94 16:20:50	5:35:52		-20.0	188.1	2887.4					S20D								
03/26/94 16:25:35	5:40:37		-22.9	188.1	2901.7					OUTUM								Exit umbra
03/26/94 16:26:27	5:41:29		-23.4	188.1	2903.5					OUTPM								Exit penumbra
03/26/94 16:27:10	5:42:12		-24.5	188.1	2906.7				CAN	MAOSM								Exit occultation
03/26/94 16:31:00	5:46:02									Transmitter and ranging B ON								Ground Command

Orbit 165 Timeline - Type B Orbit

03/26/94 16:33:24	5:48:26	-27.7	188.0	2910.6						Aposelene							
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Orbit 166 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/26/94 16:33:24	0:00:00		-27.7	188.0	2910.6							Aposelene							Downlink paused for occultation
03/26/94 16:35:00	0:01:36												Downlink SSSR Segment 6						Ground Command
03/26/94 16:37:15	0:03:51		-30.0	188.0	2908.5							S30D							
03/26/94 16:51:00	0:17:36												Downlink SSSR Segment 7						Ground Command
03/26/94 16:53:32	0:20:08		-40.0	187.8	2851.1							S40D							
03/26/94 17:00:00	0:26:36												Cancel L635 mapping script						Ground Command
03/26/94 17:01:00	0:27:36												Uplink & schedule new L166 mapping script						Ground Command
																			Standard Prep1 Script
03/26/94 17:07:27	0:34:03	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/26/94 17:09:10	0:35:46		-50.0	187.7	2722.5							S50D							
03/26/94 17:23:00	0:49:36												Downlink SSSR data patches						Ground Command
03/26/94 17:23:44	0:50:20		-60.0	187.5	2537.8							S60D							
03/26/94 17:31:00	0:57:36												Redownload SSSR Segment 5						Ground Command - unknown dropouts in original downlink
																			Standard Prep2 Script
03/26/94 17:32:17	0:58:53	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/26/94 17:36:57	1:03:33		-70.0	187.4	2316.0							S70D							
																			Err:508
03/26/94 17:42:47	1:09:23	0											Msg "WARNING: 2k in 1 min.."						
03/26/94 17:43:47	1:10:23	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/26/94 17:44:47	1:11:23	60											Switch to omni antennas						
03/26/94 17:45:47	1:12:23	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/26/94 17:47:47	1:14:23	120											UV & HR cameras ON						
03/26/94 17:48:45	1:15:21		-80.0	187.2	2076.1							S80D							
03/26/94 17:51:47	1:18:23	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
03/26/94 17:52:17	1:18:53	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/26/94 17:52:27	1:19:03	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 166 Timeline - Type A Orbit

03/26/94 17:52:42	1:19:18	15									Err:508		Slew to nadir (inertial pointing)
													Err:508
													Err:508
03/26/94 17:57:42	1:24:18	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85
03/26/94 17:58:12	1:24:48	30											Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)
03/26/94 17:58:42	1:25:18	30								MAXS			Set SA step rate to LO
03/26/94 17:59:09	1:25:45		-90.0	95.5	1834.0					South Pole			
03/26/94 18:00:17	1:26:53		-88.8	8.5	1805.9					LDAWN			
03/26/94 18:07:46	1:34:22	544								S80A			Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Select DHU SEQT 14
03/26/94 18:08:15	1:34:51		-80.0	7.3	1601.7					S80A			Stop HiRes imaging
03/26/94 18:15:41	1:42:17	475								S70A			Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Select DHU SEQT 13
03/26/94 18:16:12	1:42:48		-70.0	7.2	1386.7					S70A			
03/26/94 18:19:47	1:46:23		-65.0	7.2	1287.9					MAD	AOS		
03/26/94 18:22:39	1:49:15	418								S60A			Load exposure table LUNARZ55S; Select DHU SEQT 12
03/26/94 18:23:11	1:49:47		-60.0	7.1	1193.6					S60A			
03/26/94 18:28:48	1:55:24	369								S50A			Load exposure table LUNARZ45S; Select DHU SEQT 11
03/26/94 18:29:21	1:55:57		-50.0	7.0	1024.0					S50A			
03/26/94 18:33:46	2:00:22	298											Laser Power ON
03/26/94 18:34:17	2:00:53	31								S40A			Load exposure table LUNARZ35S; Select DHU SEQT 10
03/26/94 18:34:51	2:01:27		-40.0	7.0	878.4					S40A			
03/26/94 18:35:17	2:01:53	60											Record in SDR Segment 2
03/26/94 18:39:14	2:05:50	237								S30A			Load exposure table LUNARZ25S; Select DHU SEQT 9
03/26/94 18:39:49	2:06:25		-30.0	6.9	756.0					S30A			
03/26/94 18:43:46	2:10:22	272								S20A			Load exposure table LUNARZ15S; Select DHU SEQT 8
03/26/94 18:44:22	2:10:58		-20.0	6.9	655.7					S20A			
03/26/94 18:47:59	2:14:35	253								S10A			Load exposure table LUNARZ05S; Select DHU SEQT 7
03/26/94 18:48:34	2:15:10		-10.0	6.8	576.4					S10A			
03/26/94 18:51:56	2:18:32	237								MEQA			Load exposure table LUNARZ05N; Select DHU SEQT 6
03/26/94 18:52:33	2:19:09		0.0	6.8	517.0					Equator - A			
03/26/94 18:55:44	2:22:20	228								N10A			Load exposure table LUNARZ15N; Select DHU SEQT 5
03/26/94 18:56:21	2:22:57		10.0	6.7	476.3					N10A			

Orbit 166 Timeline - Type A Orbit

03/26/94 18:56:44	2:23:20	60									Record in SSDR Segment 3				SSDR Segment 3
03/26/94 19:00:02	2:26:38		20.0	6.7	453.8						N20A				
03/26/94 19:00:25	2:27:01	221									N20A	Load exposure table LUNARZ25N			
03/26/94 19:02:50	2:29:26		27.7	6.7	448.6						Periselene				
03/26/94 19:03:41	2:30:17		30.0	6.7	449.0						N30A				
03/26/94 19:04:04	2:30:40	219									N30A	Load exposure table LUNARZ35N			
03/26/94 19:04:22	2:30:58		31.8	6.7	449.9						CAN	LOS			
03/26/94 19:07:21	2:33:57		40.0	6.6	462.0						N40A				
03/26/94 19:07:43	2:34:19	219									N40A	Load exposure table LUNARZ45N			
03/26/94 19:11:05	2:37:41		50.0	6.6	492.8						N50A				
03/26/94 19:11:27	2:38:03	224									N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6			
03/26/94 19:14:57	2:41:33		60.0	6.5	542.1						N60A				
03/26/94 19:15:19	2:41:55	232									N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 4			
03/26/94 19:16:19	2:42:55	60										Record in SSDR Segment 4			SSDR Segment 4
03/26/94 19:19:01	2:45:37		70.0	6.5	610.6						N70A				
03/26/94 19:20:23	2:46:59	244									N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 3			Resume HiRes imaging
03/26/94 19:23:23	2:49:59		80.0	6.3	699.4						N80A				
03/26/94 19:24:45	2:51:21	262									N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9			
03/26/94 19:25:15	2:51:51	30										Laser power OFF			
Err:508															
03/26/94 19:28:06	2:54:42		90.0	303.1	809.6						North Pole				
Standard LM Post Script															
03/26/94 19:28:38	2:55:14	0										Stop Imaging - select ST-B			
03/26/94 19:28:42	2:55:18		88.8	187.7	824.3						LDUSK				
03/26/94 19:28:43	2:55:19	5										Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)			Slew to Vega (inertial pointing)
03/26/94 19:31:43	2:58:19	180										Park opaque filter on HiRes (DHU SEQT 27)			
03/26/94 19:31:58	2:58:34	15										Select ST-B; Activate waitwhileslew for 400 sec			
03/26/94 19:31:43	2:58:19		80.0	186.5	942.9						N80D				
03/26/94 19:34:45	3:01:21	167										Perform UV Imaging (DHU SEQT 29)			Start calibration imaging No data
03/26/94 19:34:51	3:01:27	12										Perform LWIR imaging (DHU SEQT 25)			

Orbit 167 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/26/94 21:32:21	0:00:00		-27.7	185.3	2911.9							Aposelene							Data dump paused for occultation
03/26/94 21:34:00	0:01:39												Transmitter and ranging B ON						Ground Command
03/26/94 21:35:00	0:02:39												Startrackers ON; Select ST-B; Laser heater ON						Ground Command
03/26/94 21:36:05	0:03:44		-30.0	185.3	2909.9							S30D							
03/26/94 21:38:00	0:05:39												Downlink SSSDR Segment 2						Ground Command
03/26/94 21:40:00	0:07:39												Downlink SSSDR Segment 3						Ground Command
03/26/94 21:52:23	0:20:02		-40.0	185.1	2852.9							S40D							
03/26/94 21:56:00	0:23:39												Uplink and schedule L167 scripts						Ground Command
03/26/94 22:04:00	0:31:39												Delete SW patch TM_PATCH_DB						Ground Command - for BSR experiment
																			Standard Prep1 Script
03/26/94 22:06:49	0:34:28	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/26/94 22:08:02	0:35:41		-50.0	184.9	2724.6							S50D							
03/26/94 22:19:00	0:46:39												Downlink SSSDR Segment 1						Ground Command
03/26/94 22:22:36	0:50:15		-60.0	184.8	2539.9							S60D							
03/26/94 22:27:00	0:54:39												Update state vector (GNC53_26MAR2000)						Ground Command
03/26/94 22:30:00	0:57:39												Select ST-A						Ground Command ST-B blocked by Moon
																			Standard Prep2 Script
03/26/94 22:31:34	0:59:13	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/26/94 22:35:00	1:02:39												Downlink SSSDR Segment 4						Ground Command
03/26/94 22:35:51	1:03:30		-70.0	184.6	2318.0							S70D							
																			Err:508
03/26/94 22:43:34	1:11:13	0											Msg "WARNING: 2kbps in 1 min.."						
03/26/94 22:44:34	1:12:13	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
03/26/94 22:45:34	1:13:13	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/26/94 22:47:34	1:15:13	120											UV & HR cameras ON						
03/26/94 22:47:40	1:15:19		-80.0	184.4	2077.8							S80D							
03/26/94 22:48:30	1:16:09												Switch to omni antennas						Ground Command
03/26/94 22:50:04	1:17:43	150											Msg "WARNING: Omni in 1 min.."						

Orbit 167 Timeline - Type B Orbit

03/26/94 22:50:59	1:18:38	55								Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/26/94 22:51:04	1:18:43	5								Switch to omni antennas						
03/26/94 22:51:34	1:19:13	30								Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/26/94 22:51:49	1:19:28	15								Perform NIR imaging (DHU SEQT 31)						
03/26/94 22:52:04	1:19:43	15														
03/26/94 22:56:04	1:23:43	30								Laser Power ON						
																Err:508
																Err:508
03/26/94 22:56:04	1:23:43	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S						
03/26/94 22:56:34	1:24:13	30								Park opaque filter on HiRes (DHU SEQT 27)						Prevent HiRes images to reduce data
03/26/94 22:57:04	1:24:43	30								Switch to lunar mapping mode (ACSMODE=LunarMapping, -X forward) GNC14MINRW; Start Imaging (DHU SEQT 21)						FLYING BACKWARDS FOR BSR START MAPPING
03/26/94 22:58:04	1:25:43	60	-90.0	95.4	1835.5				South Pole	Set SA step rate to LO						
03/26/94 22:59:04	1:26:43	60								Msg "WARNING: HGA/2k in 1 min.."						
03/26/94 22:59:12	1:26:51		-88.8	6.2	1807.4				LDAWN							
03/26/94 23:00:04	1:27:43	60								Switch to HGA; Ranging A and B OFF; Auxiliary oscillator B ON						In preparation for BSR experiment
03/26/94 23:07:10	1:34:49	426	-80.0	4.6	1602.7				S80A	Load exposure table LUNARZ75S; Select DHU SEQT 20						
03/26/94 23:15:08	1:42:47	478	-70.0	4.5	1387.4				S70A	Load exposure table LUNARZ65S; Select DHU SEQT 19						
03/26/94 23:19:19	1:46:58	251								Slew to S. Pole using S40A attitude (ORB_167RW); Select DHU SEQT 12						Slew to S40A attitude using inertial pointing (-X toward Vel.)
03/26/94 23:22:07	1:49:46	168	-60.0	4.4	1193.9				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 11						
03/26/94 23:23:00	1:50:39									Switch to omni antennas						Ground Command
03/26/94 23:24:15	1:51:54		-56.7	4.4	1134.9				PMK	AOS						
03/26/94 23:28:00	1:55:39									Switch to HGA						Ground Command
03/26/94 23:28:17	1:55:56	370	-50.0	4.3	1024.1				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10						
03/26/94 23:33:47	2:01:26	330	-40.0	4.2	878.2				S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping, -X forward) GNC14MINRW; Load exposure table LUNARZ35S; Select DHU SEQT 10						Return to nadir mapping
03/26/94 23:34:00	2:01:39									Switch to omni antennas						Ground Command
03/26/94 23:34:47	2:02:26	60								Record in SSSR Segment 6						SSDR Segment 6
03/26/94 23:38:45	2:06:24	238	-30.0	4.2	755.6				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9						

Orbit 167 Timeline - Type B Orbit

03/26/94 23:43:18	2:10:57	273	-20.0	4.1	655.2				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8						Start laser ranging
03/26/94 23:47:31	2:15:10	253	-10.0	4.1	575.7				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
03/26/94 23:51:29	2:19:08	238	0.0	4.0	516.0				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6						
03/26/94 23:55:16	2:22:55	227	10.0	4.0	475.3				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
03/26/94 23:56:16	2:23:55	60								Record in SDR Segment 7						SSDR Segment 7
03/26/94 23:58:58	2:26:37	162	20.0	4.0	452.6				N20A	Load exposure table LUNARZ25N						
03/27/94 00:00:25	2:28:04	87								Load exposure table LUNARH25						HiRes attempted over Apollo 15 area (no data due to opaque filter)
03/27/94 00:01:47	2:29:26		27.8	3.9	447.3				Periselene							
03/27/94 00:02:36	2:30:15	131	30.0	3.9	447.7				N30A	Load exposure table LUNARZ35N						
03/27/94 00:06:16	2:33:55	220	40.0	3.9	460.5				N40A	Load exposure table LUNARZ45N						
										Select ST-B; Slew HGA to North Pole (BSR1GNC12); Set SA step rate to HI; Cameras & cryocoolers OFF; Sensor door CLOSE						Stop imaging Slew HGA to North Pole and prepare for BSR experiment
03/27/94 00:07:18	2:34:57	62								Laser power OFF						
03/27/94 00:07:48	2:35:27	30														
																Err:508
																L167 BSR Script
03/27/94 00:09:59	2:37:38	0	50.0	3.8	491.2				N50A	MSG " Start BSR167/Config RF..."						START BSR EXPERIMENT
										Ranging B OFF; Auxiliary oscillator B ON; TM subcarrier B OFF; Record data in SDR Segment 0; Inertial pointing w/ quaternion table (BSRQT_167_000)						SSDR Segment 0
03/27/94 00:10:00	2:37:39	1														
03/27/94 00:12:18	2:39:57															Beta=0°
03/27/94 00:13:51	2:41:30		60.0	3.8	540.4				N60A							
03/27/94 00:17:56	2:45:35		70.0	3.7	608.8				N70A							
03/27/94 00:20:00	2:47:39	600								Use QTable BSRQT_167_001.QTB						
03/27/94 00:22:17	2:49:56		80.0	3.6	697.5				N80A							
03/27/94 00:27:00	2:54:39		90.0	265.2	807.8				North Pole							
03/27/94 00:27:35	2:55:14		88.8	185.4	822.2				LDUSK							
03/27/94 00:30:00	2:57:39	600								Use QTable BSRQT_167_002.QTB						
03/27/94 00:32:11	2:59:50		80.0	183.9	940.7				N80D							
03/27/94 00:37:59	3:05:38		70.0	183.7	1097.3				N70D							
03/27/94 00:40:00	3:07:39	600								Use QTable BSRQT_167_003.QTB						
										Switch to omni antennas; TLM subcarrier B ON; Abort BSR script						Ground Command DSN unable to lock on HGA signal
03/27/94 00:42:00	3:09:39		60.0	183.6	1277.9				N60D							
03/27/94 00:44:29	3:12:08									Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Ground Command
03/27/94 00:46:00	3:13:39															

Orbit 167 Timeline - Type B Orbit

03/27/94 00:50:00	3:17:39									Sensor door OPEN; Switch to DHU mode @ 128 kbps; Switch to HGA										Ground Command
																				End BSR Script
03/27/94 00:51:53	3:19:32		50.0	183.5	1481.6					N50D										
03/27/94 00:55:00	3:22:39										Resume downlink SSDR Segment 4									Ground Command
03/27/94 01:00:21	3:28:00		40.0	183.4	1705.4					N40D										
03/27/94 01:13:37	3:41:16		26.6	183.3	2026.7					INPM										Enter penumbra
03/27/94 01:14:20	3:41:59		25.9	183.3	2042.8					INUM										Enter umbra
03/27/94 01:15:00	3:42:39		30.0	183.3	1943.7					N30D										
03/27/94 01:15:00	3:42:39										SSDR to IDLE - pause for occultation									Ground Command
03/27/94 01:18:34	3:46:13										Transmitter OFF									Ground Command
03/27/94 01:19:32	3:47:11		20.4	183.2	2176.2				PMK	MLOSM										
03/27/94 01:20:22	3:48:01		19.7	183.2	2193.2				MAD	MLOSM										Enter occultation
03/27/94 01:21:02	3:48:41		20.0	183.2	2186.8					N20D										
03/27/94 01:33:30	4:01:09		10.0	183.1	2421.2					N10D										
03/27/94 01:47:22	4:15:01		0.0	183.0	2629.0					Equator - D										
03/27/94 02:02:28	4:30:07		-10.0	182.8	2790.9					S10D										
03/27/94 02:18:28	4:46:07		-20.0	182.7	2889.0					S20D										
03/27/94 02:23:13	4:50:52		-22.9	182.6	2903.6					OUTUM										Exit umbra
03/27/94 02:24:04	4:51:43		-23.4	182.6	2905.6					OUTPM										Exit penumbra
03/27/94 02:29:46	4:57:25		-27.5	182.6	2913.4				GDS	MAOSM										Exit occultation
03/27/94 02:30:03	4:57:42		-27.7	182.5	2913.4				PMK	MAOSM										
03/27/94 02:30:27	4:58:06		-27.7	182.5	2913.4				MAD	MAOSM										
03/27/94 02:31:18	4:58:57		-27.8	182.6	2913.2					Aposelene										

Orbit 168 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/27/94 02:31:18	0:00:00		-27.8	182.6	2913.2							Aposelene							Data dump paused for occultation
03/27/94 02:32:00	0:00:42												Resume downlink SDR Segment 4						Ground Command
03/27/94 02:34:55	0:03:37		-30.0	182.5	2911.3							S30D							
03/27/94 02:40:00	0:08:42												Downlink SDR Segment 6						Ground Command
03/27/94 02:51:13	0:19:55		-40.0	182.4	2854.8							S40D							
																			Standard Prep1 Script
03/27/94 03:05:44	0:34:26	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/27/94 03:06:53	0:35:35		-50.0	182.2	2726.7							S50D							
03/27/94 03:08:00	0:36:42												Downlink SDR Segment 5						Ground Command
03/27/94 03:21:29	0:50:11		-60.0	182.1	2542.1							S60D							
																			Standard Prep2 Script
03/27/94 03:30:34	0:59:16	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/27/94 03:34:45	1:03:27		-70.0	181.9	2320.0							S70D							
03/27/94 03:36:00	1:04:42												Downlink SDR Segment 7						Ground Command
																			Err:508
03/27/94 03:41:04	1:09:46	0											Msg "WARNING: 2k in 1 min.."						
03/27/94 03:42:04	1:10:46	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/27/94 03:43:04	1:11:46	60											Switch to omni antennas						
03/27/94 03:44:04	1:12:46	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/27/94 03:46:04	1:14:46	120											UV & HR cameras ON						
03/27/94 03:46:34	1:15:16		-80.0	181.7	2079.5							S80D							
03/27/94 03:50:04	1:18:46	240											Initialize filters (DHU SEQT 27); Record in SDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 1
03/27/94 03:50:34	1:19:16	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/27/94 03:50:44	1:19:26	10											Perform NIR imaging (DHU SEQT 31)						
03/27/94 03:50:59	1:19:41	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 168 Timeline - Type A Orbit

03/27/94 03:55:59	1:24:41	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85			
03/27/94 03:56:29	1:25:11	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
03/27/94 03:56:59	1:25:41	30	-90.0	98.4	1836.9				South Pole	Set SA step rate to LO			
03/27/94 03:58:07	1:26:49		-88.8	3.7	1808.9				LDAWN				
03/27/94 04:06:06	1:34:48	547	-80.0	1.9	1603.7				S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Select DHU SEQT 14			Stop HiRes imaging
03/27/94 04:14:04	1:42:46	478	-70.0	1.7	1388.1				S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Select DHU SEQT 13			
03/27/94 04:21:03	1:49:45	419	-60.0	1.6	1194.3				S60A	Load exposure table LUNARZ55S; Select DHU SEQT 12			
03/27/94 04:27:13	1:55:55	370	-50.0	1.6	1024.2				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11			
03/27/94 04:32:14	2:00:56	301								Laser Power ON			
03/27/94 04:32:44	2:01:26	30	-40.0	1.5	878.0				S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10			
03/27/94 04:33:44	2:02:26	60								Record in SSSR Segment 2			SSDR Segment 2
03/27/94 04:37:41	2:06:23	237	-30.0	1.4	755.2				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9			
03/27/94 04:42:14	2:10:56	273	-20.0	1.4	654.6				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser ranging
03/27/94 04:46:27	2:15:09	253	-10.0	1.3	574.9				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			
03/27/94 04:50:25	2:19:07	238	0.0	1.3	515.1				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6			
03/27/94 04:54:12	2:22:54	227	10.0	1.3	474.2				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
03/27/94 04:55:12	2:23:54	60								Record in SSSR Segment 3			SSDR Segment 3
03/27/94 04:57:53	2:26:35	161	20.0	1.2	451.4				N20A	Load exposure table LUNARZ25N			
03/27/94 05:00:45	2:29:27		27.8	1.2	446.0				Periselene				
03/27/94 05:01:32	2:30:14	219	30.0	1.2	446.4				N30A	Load exposure table LUNARZ35N			
03/27/94 05:05:11	2:33:53	219	40.0	1.1	459.1				N40A	Load exposure table LUNARZ45N			
03/27/94 05:08:54	2:37:36	223	50.0	1.1	489.7				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6			
03/27/94 05:09:16	2:37:58		50.7	1.1	492.2			MAD	LOS				
03/27/94 05:12:00	2:40:42									Schedule xmtr OFF and ON times			Ground Command - for power savings during occultation
03/27/94 05:12:46	2:41:28	232	60.0	1.0	538.7				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 4			
03/27/94 05:13:46	2:42:28	60								Record in SSSR Segment 4			SSDR Segment 4
03/27/94 05:16:50	2:45:32	184	70.0	1.0	607.0				N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Select DHU SEQT 3			

Orbit 168 Timeline - Type A Orbit

03/27/94 05:21:11	2:49:53	261	80.0	0.8	695.6					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9	Resume HiRes imaging Stop laser ranging
03/27/94 05:21:41	2:50:23	30									Laser power OFF	
Err:508												
03/27/94 05:25:53	2:54:35		90.0	289.7	805.5					North Pole		
03/27/94 05:26:28	2:55:10		88.8	183.0	820.0					LDUSK		
Standard LM Post Script												
03/27/94 05:26:53	2:55:35	0									Stop Imaging - select ST-B	
03/27/94 05:26:58	2:55:40	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)
03/27/94 05:29:58	2:58:40	180									Park opaque filter on HiRes (DHU SEQT 27)	
03/27/94 05:31:04	2:59:46		80.0	181.2	938.5					N80D		
03/27/94 05:30:13	2:58:55	15									Select ST-B; Activate waitwhileslew for 400 sec	
03/27/94 05:33:04	3:01:46	171									Perform LWIR imaging (DHU SEQT 25)	Start dark field imaging
03/27/94 05:33:16	3:01:58	12									Perform NIR imaging (DHU SEQT 31)	
03/27/94 05:33:22	3:02:04	6									Load exposure table LUNIRDKS1	
03/27/94 05:33:28	3:02:10	6									Load exposure table LUNIRDKS2	
03/27/94 05:33:34	3:02:16	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec	Slew HGA to Earth with active waitwhileslew
03/27/94 05:35:30	3:04:12	116									Switch to HGA	READY FOR DATA DUMP - Time approximate
End Post Script												
03/27/94 05:36:00	3:04:42										Switch to DHU mode @ 128 kbps	Ground Command
03/27/94 05:36:51	3:05:33		70.0	181.0	1095.1					N70D		
03/27/94 05:37:00	3:05:42										Resume downlink SDR Segment 7 (orbit 167)	Ground Command
03/27/94 05:43:21	3:12:03		60.0	180.9	1275.6					N60D		
03/27/94 05:50:45	3:19:27		50.0	180.8	1479.3					N50D		
03/27/94 05:58:00	3:26:42										Downlink SDR Segment 1	Ground Command
03/27/94 05:59:11	3:27:53		40.0	180.7	1703.2					N40D		
03/27/94 06:08:51	3:37:33		30.0	180.6	1941.7					N30D		
03/27/94 06:12:25	3:41:07		26.6	180.6	2024.2					INPM		Enter penumbra
03/27/94 06:13:00	3:41:42										SSDR to IDLE - pause for occultation	Ground Command
03/27/94 06:13:08	3:41:50		26.0	180.6	2040.3					INUM		Enter umbra

Orbit 168 Timeline - Type A Orbit

03/27/94 06:17:43	3:46:25										GDS	MLOSM									
03/27/94 06:18:10	3:46:52										PMK	MLOSM									Enter occultation
03/27/94 06:19:52	3:48:34		20.0	180.5	2185.2							N20D									
03/27/94 06:20:00	3:48:42													Transmitter OFF							Scheduled Command
03/27/94 06:32:19	4:01:01		10.0	180.4	2420.0							N10D									
03/27/94 06:46:11	4:14:53		0.0	180.2	2628.4							Equator - D									
03/27/94 07:01:17	4:29:59		-10.0	180.1	2791.1							S10D									
03/27/94 07:17:18	4:46:00		-20.0	179.9	2889.9							S20D									
03/27/94 07:22:01	4:50:43		-22.9	179.9	2904.6							OUTUM									Exit umbra
03/27/94 07:22:53	4:51:35		-23.4	179.9	2906.6							OUTPM									Exit penumbra
03/27/94 07:25:00	4:53:42													Transmitter and ranging B ON							Scheduled Command
03/27/94 07:29:19	4:58:01										GDS	MAOSM									Exit occultation
03/27/94 07:29:19	4:58:01										PMK	MAOSM									
03/27/94 07:30:15	4:58:57		-27.9	179.8	2914.6							Aposelene									

Orbit 169 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/27/94 07:30:15	0:00:00		-27.9	179.8	2914.6							Aposelene							Data dump paused for occultation
03/27/94 07:32:00	0:01:45												Ranging B OFF						Ground Command
03/27/94 07:33:00	0:02:45												Downlink SSSR Segment 2						Ground Command
03/27/94 07:33:45	0:03:30		-30.0	179.8	2912.8							S30D							
03/27/94 07:50:04	0:19:49		-40.0	179.6	2856.7							S40D							
03/27/94 07:58:00	0:27:45												Downlink SSSR Segment 3						Ground Command
03/27/94 07:59:00	0:28:45												Uplink and schedule L169 scripts						Ground Command
03/27/94 08:05:45	0:35:30		-50.0	179.5	2728.9							S50D							
																			Standard Prep1 Script
03/27/94 08:04:40	0:34:25	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/27/94 08:20:22	0:50:07		-60.0	179.3	2544.2							S60D							
03/27/94 08:27:04	0:56:49		-64.9	179.2	2439.1						CAN	AOS							
																			Standard Prep2 Script
03/27/94 08:29:30	0:59:15	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/27/94 08:30:00	0:59:45												Downlink SSSR Segment 4						Ground Command
03/27/94 08:33:39	1:03:24		-70.0	179.1	2322.0							S70D							
																			Err:508
03/27/94 08:40:30	1:10:15	0											Msg "WARNING: 2k in 1 min.."						
03/27/94 08:41:30	1:11:15	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
03/27/94 08:42:30	1:12:15	60											Msg "WARNING: Omni in 1 min.."						
03/27/94 08:43:30	1:13:15	60											Switch to omni antennas						
03/27/94 08:44:30	1:14:15	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/27/94 08:45:29	1:15:14		-80.0	178.9	2081.3							S80D							
03/27/94 08:46:30	1:16:15	120											UV & HR cameras ON						
03/27/94 08:50:00	1:19:45	210											Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/27/94 08:50:30	1:20:15	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/27/94 08:50:40	1:20:25	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 169 Timeline - Type B Orbit

03/27/94 10:20:04	2:49:49	260							N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16					Resume HiRes imaging Stop laser ranging
03/27/94 10:20:05	2:49:50		80.0	358.1	693.6				N80A						
03/27/94 10:20:34	2:50:19	30								Laser power OFF					
Err:508															
03/27/94 10:24:46	2:54:31		90.0	289.1	803.4				North Pole						
03/27/94 10:25:21	2:55:06		88.8	180.3	817.8				LDUSK						
Standard LM Post Script															
03/27/94 10:25:46	2:55:31	0								Stop Imaging - select ST-B					
03/27/94 10:25:51	2:55:36	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)					Slew to Vega (inertial pointing)
03/27/94 10:28:51	2:58:36	180								Park opaque filter on HiRes (DHU SEQT 27)					
03/27/94 10:29:06	2:58:51	15								Select ST-B; Activate waitwhileslew for 400 sec					
03/27/94 10:29:58	2:59:43		80.0	178.4	936.3				N80D						
03/27/94 10:32:00	3:01:45	174								Perform LWIR imaging (DHU SEQT 25)					Start dark field imaging
03/27/94 10:32:11	3:01:57	12								Perform NIR imaging (DHU SEQT 31)					
03/27/94 10:32:18	3:02:03	6								Load exposure table LUNIRDKS1					
03/27/94 10:32:24	3:02:09	6								Load exposure table LUNIRDKS2					
03/27/94 10:32:29	3:02:14	6								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/27/94 10:35:44	3:05:29		70.0	178.3	1092.8				N70D						
03/27/94 10:38:30	3:08:15	360								Switch to HGA					READY FOR DATA DUMP - Time approximate
End Post Script															
03/27/94 10:39:00	3:08:45									Switch to DHU mode @ 128 kbps					Ground Command
03/27/94 10:42:00	3:11:45									Downlink SSSDR Segment 4					Ground Command
03/27/94 10:42:13	3:11:58		60.0	178.2	1273.3				N60D						
03/27/94 10:43:00	3:12:45									Ranging B ON					Ground Command
03/27/94 10:49:36	3:19:21		50.0	178.1	1477.0				N50D						
03/27/94 10:54:00	3:23:45									Auxiliary oscillator B OFF					Ground Command
03/27/94 10:55:00	3:24:45									Downlink SSSDR Segment 6					Ground Command
03/27/94 10:58:00	3:27:45									Schedule xmtr OFF and ON times					Ground Command
03/27/94 10:58:02	3:27:47		40.0	178.0	1701.0				N40D						
03/27/94 11:07:41	3:37:26		30.0	177.9	1939.7				N30D						
03/27/94 11:11:14	3:40:59		26.6	177.8	2021.7				INPM						Enter penumbra

Orbit 169 Timeline - Type B Orbit

03/27/94	11:11:57	3:41:42	26.0	177.8	2037.9					INUM									Enter umbra
03/27/94	11:12:00	3:41:45																	SSDR to IDLE - pause for occultation
03/27/94	11:14:26	3:44:11	22.8	177.8	2114.5					CAN	MLOSM								Ground Command
03/27/94	11:15:00	3:44:45																	Transmitter OFF
03/27/94	11:16:37	3:46:22	20.9	177.8	2160.9					GDS	MLOSM								Scheduled Command
03/27/94	11:18:42	3:48:27	20.0	177.8	2183.5						N20D								Enter occultation
03/27/94	11:31:08	4:00:53	10.0	177.7	2418.8						N10D								
03/27/94	11:45:00	4:14:45	0.0	177.5	2627.9						Equator - D								
03/27/94	12:00:06	4:29:51	-10.0	177.4	2791.2						S10D								
03/27/94	12:16:07	4:45:52	-20.0	177.2	2890.7						S20D								
03/27/94	12:20:50	4:50:35	-22.9	177.2	2905.6						OUTUM								Exit umbra
03/27/94	12:21:41	4:51:26	-23.4	177.2	2907.6						OUTPM								Exit penumbra
03/27/94	12:22:00	4:51:45																	Transmitter and ranging B ON
03/27/94	12:25:46	4:55:31	-26.5	177.1	2915.3					CAN	MAOSM								Scheduled Command
03/27/94	12:28:16	4:58:01								GDS	MAOSM								Exit occultation
03/27/94	12:29:00	4:58:45																	Resume downlink SDR Segment 6
03/27/94	12:29:12	4:58:57	-28.0	177.1	2915.9						Aposelene								Ground Command

Orbit 170 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/27/94 12:29:12	0:00:00		-28.0	177.1	2915.9							Aposelene							Downlinking SSSR Segment 6 (orbit 169)
03/27/94 12:32:35	0:03:23		-30.0	177.1	2914.2							S30D							
03/27/94 12:48:55	0:19:43		-40.0	176.9	2858.6							S40D							
03/27/94 13:00:12	0:31:00		-47.1	176.8	2774.6						GDS	LOS							
03/27/94 13:03:00	0:33:47												Uplink and schedule L170 scripts						Ground Command
																			Standard Prep1 Script
03/27/94 13:03:35	0:34:23	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/27/94 13:04:37	0:35:24		-50.0	176.7	2731.0							S50D							
03/27/94 13:11:00	0:41:48												Downlink SSSR Segment 5						Ground Command
03/27/94 13:21:00	0:51:48												Uplink time SW patch (TM_PATCH_DB)						Ground Command - was deleted for BSR experiment
03/27/94 13:19:15	0:50:03		-60.0	176.6	2546.4							S60D							
																			Standard Prep2 Script
03/27/94 13:28:25	0:59:13	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/27/94 13:32:33	1:03:21		-70.0	176.4	2324.0							S70D							
03/27/94 13:36:00	1:06:48												Downlink SSSR Segment 0						Ground Command
03/27/94 13:38:00	1:08:48												Ranging A ON						Ground Command
																			Err:508
03/27/94 13:38:55	1:09:43	0											Msg "WARNING: 2k in 1 min.."						
03/27/94 13:39:55	1:10:43	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/27/94 13:40:55	1:11:43	60											Switch to omni antennas						
03/27/94 13:41:55	1:12:43	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/27/94 13:43:55	1:14:43	120											UV & HR cameras ON						
03/27/94 13:44:24	1:15:12		-80.0	176.2	2083.0							S80D							
03/27/94 13:47:55	1:18:43	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
03/27/94 13:48:25	1:19:13	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/27/94 13:48:35	1:19:23	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 170 Timeline - Type A Orbit

03/27/94 13:48:50	1:19:38	15																		Err:508	Slew to nadir (inertial pointing)
Err:508																					
Err:508																					
03/27/94 13:53:50	1:24:38	0																			Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85
03/27/94 13:54:20	1:25:08	30																			Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 15)
03/27/94 13:54:50	1:25:38	30	-90.0	85.9	1839.5																South Pole Set SA step rate to LO
03/27/94 13:55:57	1:26:45		-88.8	358.4	1811.7																LDAWN
03/27/94 14:03:58	1:34:46	548	-80.0	356.5	1605.7																S80A Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Select DHU SEQT 14
03/27/94 14:11:56	1:42:43	478	-70.0	356.3	1389.4																S70A Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Select DHU SEQT 13
03/27/94 14:18:56	1:49:44	420	-60.0	356.2	1194.9																S60A Load exposure table LUNARZ55S; Select DHU SEQT 12
03/27/94 14:19:56	1:50:44	60																			Record in SSSR Segment 2
03/27/94 14:25:06	1:55:54	310	-50.0	356.1	1024.2																S50A Load exposure table LUNARZ45S; Select DHU SEQT 11
03/27/94 14:30:07	2:00:55	301																			Laser Power ON
03/27/94 14:30:36	2:01:24	29	-40.0	356.0	877.6																S40A Load exposure table LUNARZ35S; Select DHU SEQT 10
03/27/94 14:35:34	2:06:22	298	-30.0	356.0	754.3																S30A Load exposure table LUNARZ25S; Select DHU SEQT 9
03/27/94 14:40:07	2:10:55	273	-20.0	355.9	653.3																S20A Load exposure table LUNARZ15S; Select DHU SEQT 8
03/27/94 14:44:19	2:15:07	252	-10.0	355.9	573.3																S10A Load exposure table LUNARZ05S; Select DHU SEQT 7
03/27/94 14:48:17	2:19:04	238	0.0	355.8	513.2																Equator - A Load exposure table LUNARZ05N; Select DHU SEQT 6
03/27/94 14:52:04	2:22:52	227	10.0	355.8	472.0																N10A Load exposure table LUNARZ15N; Select DHU SEQT 5
03/27/94 14:53:04	2:23:52	60																			Record in SSSR Segment 3
03/27/94 14:55:45	2:26:33	161	20.0	355.8	448.9																N20A Load exposure table LUNARZ25N
03/27/94 14:58:39	2:29:27		28.0	355.7	443.3																Periselene
03/27/94 14:59:23	2:30:11	218	30.0	355.7	443.7																N30A Load exposure table LUNARZ35N
03/27/94 15:03:01	2:33:49	218	40.0	355.7	456.1																N40A Load exposure table LUNARZ45N
03/27/94 15:06:00	2:36:48																				Read dosimeter latch values
03/27/94 15:06:44	2:37:32	223	50.0	355.6	486.4																N50A Load exposure table LUNARZ55N; Select DHU SEQT 6
03/27/94 15:10:35	2:41:23	231	60.0	355.6	535.2																N60A Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 4
03/27/94 15:11:00	2:41:48																				Expose dosimeter
03/27/94 15:11:35	2:42:23	60																			Record in SSSR Segment 4

Orbit 170 Timeline - Type A Orbit

03/27/94 15:14:38	2:45:26	183	70.0	355.5	603.2					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Select DHU SEQT 3				
03/27/94 15:18:58	2:49:46	260	80.0	355.3	691.6					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Select DHU SEQT 9				Stop laser ranging
03/27/94 15:19:28	2:50:16	30									Laser power OFF				
Err:508															
03/27/94 15:23:40	2:54:28		90.0	269.5	801.4					North Pole					
03/27/94 15:24:15	2:55:03		88.8	177.6	815.6					LDUSK					
Standard LM Post Script															
03/27/94 15:24:40	2:55:28	0									Stop Imaging - select ST-B				
03/27/94 15:24:45	2:55:33	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)				Slew to Vega (inertial pointing)
03/27/94 15:27:45	2:58:33	180									Park opaque filter on HiRes (DHU SEQT 27)				
03/27/94 15:28:00	2:58:48	15									Select ST-B; Activate waitwhileslew for 400 sec				
03/27/94 15:28:51	2:59:38		80.0	175.7	934.1					N80D					
03/27/94 15:30:45	3:01:33	165									Perform LWIR imaging (DHU SEQT 25)				Start dark field imaging
03/27/94 15:30:57	3:01:44	12									Perform NIR imaging (DHU SEQT 31)				
03/27/94 15:31:03	3:01:51	6									Load exposure table LUNIRDKS1				
03/27/94 15:31:09	3:01:57	6									Load exposure table LUNIRDKS2				
03/27/94 15:31:15	3:02:03	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec				Slew HGA to Earth with active waitwhileslew
03/27/94 15:33:30	3:04:18	135									Switch to HGA				READY FOR DATA DUMP - Time approximate
End Post Script															
03/27/94 15:34:00	3:04:47										Switch to DHU mode @ 128 kbps				Ground Command
03/27/94 15:34:36	3:05:24		70.0	175.5	1090.5					N70D					
03/27/94 15:36:00	3:06:48										Downlink SSSR Segment 7				Ground Command
03/27/94 15:40:00	3:10:48										Schedule xmtr OFF and ON times				Ground Command - for power savings during occultation
03/27/94 15:41:05	3:11:52		60.0	175.4	1270.9					N60D					
03/27/94 15:48:28	3:19:16		50.0	175.3	1474.6					N50D					
03/27/94 15:49:00	3:19:48										Uplink and schedule L171 scripts				Ground Command
03/27/94 15:55:00	3:25:48										Downlink SSSR Segment 2				Ground Command
03/27/94 15:56:53	3:27:41		40.0	175.2	1698.7					N40D					

Orbit 170 Timeline - Type A Orbit

03/27/94	16:06:31	3:37:19		30.0	175.1	1937.6								N30D					
03/27/94	15:55:00	3:25:48												SSDR to IDLE - pause for occultation					Ground Command
03/27/94	16:10:03	3:40:51		26.7	175.1	2019.3								INPM					Enter penumbra
03/27/94	16:10:45	3:41:32		26.0	175.1	2035.5								INUM					Enter umbra
03/27/94	16:11:00	3:41:48												Transmitter OFF					Ground Command
03/27/94	16:13:00	3:43:48												Transmitter OFF					Scheduled Command
03/27/94	16:13:42	3:44:30		22.4	175.1	2122.3								CAN	MLOSM				Enter occultation
03/27/94	16:17:31	3:48:19		20.0	175.0	2181.8									N20D				
03/27/94	16:29:57	4:00:45		10.0	174.9	2417.6									N10D				
03/27/94	16:43:49	4:14:37		0.0	174.8	2627.3									Equator - D				
03/27/94	16:58:55	4:29:43		-10.0	174.6	2791.3									S10D				
03/27/94	17:14:57	4:45:45		-20.0	174.5	2891.6									S20D				
03/27/94	17:19:38	4:50:26		-22.9	174.4	2906.6									OUTUM				Exit umbra
03/27/94	17:20:29	4:51:17		-23.4	174.4	2908.6									OUTPM				Exit penumbra
03/27/94	17:21:00	4:51:48													Transmitter and ranging B ON				Scheduled Command
03/27/94	17:24:26	4:55:14		-26.4	174.4	2916.5								CAN	MAOSM				Exit occultation
03/27/94	17:26:00	4:56:48													Transmitter and ranging B ON				Ground Command
03/27/94	17:28:00	4:58:48													Resume downlink SSDR Segment 2				Ground Command
03/27/94	17:28:09	4:58:57		-28.0	174.4	2917.3								Aposelene					

Orbit 171 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/27/94 17:28:09	0:00:00		-28.0	174.4	2917.3							Aposelene							Downlinking SDDR Segment 2 (orbit 170)
03/27/94 17:31:25	0:03:16		-30.0	174.3	2915.7							S30D							
03/27/94 17:47:46	0:19:37		-40.0	174.2	2860.6							S40D							
03/27/94 17:51:00	0:22:51												Downlink SDDR Segment 3						Ground Command
03/27/94 18:00:00	0:31:51												Sensor door CLOSE						Scheduled Command
03/27/94 18:03:29	0:35:20		-50.0	174.0	2733.2							S50D							
																			DV Prep Script
03/27/94 18:06:59	0:38:50	0											Msg "WARNING: 8k in 1 min.."						
03/27/94 18:08:00	0:39:50	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
03/27/94 18:08:01	0:39:52	1											Set downlink rate to 8 kbps						
03/27/94 18:08:02	0:39:53	1											Switch to RCSALL format						
03/27/94 18:09:02	0:40:52	60											Switch to omni antennas						
03/27/94 18:10:02	0:41:53	60											Set SA mode to AUTO; Slew to burn attitude (LROTAP2CRW); NIR camera & cryocooler ON						Slew to burn attitude (inertial pointing) Prepare for orbit 171 mapping
																			End DV Prep Script
03/27/94 18:18:08	0:49:58		-60.0	173.9	2548.6							S60D							
03/27/94 18:20:00	0:51:51												ST doors CLOSE						Scheduled Command
																			DV Burn Script
03/27/94 18:29:19	1:01:10	0											Velocity jets ENABLE; GNC diagnostics OFF; Start IDC format 03						
03/27/94 18:29:20	1:01:11	1											Process IDC						
03/27/94 18:29:55	1:01:46	35											Start ROTAP2C burn with tight jets (LROTAP2CJT)						
03/27/94 18:30:00	1:01:51	5											Start of burn						Rotation trim burn (ROTAP2C) @ 18:30:00
03/27/94 18:30:03	1:01:54	3																	End of burn (duration=2.619 sec)
																			End DV Burn Script
																			DV BurnPost Script
03/27/94 18:30:04	1:01:55	0											Keep burn attitude with loose jets (LROTAPCJL); Velocity jets DISABLE						
03/27/94 18:31:04	1:02:55	60											IDC processing STOP; GNC diagnostics ON; Keep attitude with RW (LROTAP2CRW)						
																			End DV BurnPost Script
03/27/94 18:31:44	1:03:35		-70.0	173.7	2326.0							S70D							
03/27/94 18:42:00	1:13:51												Use format FMT02						Ground Command
03/27/94 18:43:19	1:15:10		-80.0	173.4	2087.6							S80D							

Orbit 171 Timeline - Type B Orbit

03/27/94 18:53:46	1:25:36		-89.9	88.1	1845.9						South Pole								
03/27/94 18:54:54	1:26:45		-88.8	356.6	1818.3						LDAWN								
03/27/94 18:55:00	1:26:51											Update state vector (GNC53_27MAR1830)							Ground Command
																			Err:508
03/27/94 18:57:52	1:29:43	0										LWIR camera & cryocooler ON; ST doors OPEN; Select ST-B							
03/27/94 19:02:56	1:34:47		-80.0	353.9	1613.1						S80A								
03/27/94 19:07:52	1:39:43	600										Sensor door OPEN; UV & HR cameras ON							
03/27/94 19:08:52	1:40:43	60										Slew s/c sensors to nadir (ACSMODE=LunarMapping); Activate waitwhileslew for 400 sec							Slew to nadir
03/27/94 19:10:57	1:42:48		-70.0	353.7	1397.3						S70A								
03/27/94 19:15:32	1:47:23	400										waitwhileslew timed out							No significance
																			Err:508
																			Err:508
03/27/94 19:16:52	1:48:43	0										Record in SDR Segment 5; Initialize filters (DHU SEQT 28); Load exposure table LUNARZ55S							Start SDR in Segment 5
03/27/94 19:17:52	1:49:43	60									S60A	Set SA step rate to LO; Select DHU SEQT 11							START MAPPING
03/27/94 19:17:58	1:49:48		-60.0	353.5	1203.0						S60A								
03/27/94 19:24:03	1:55:54	371									S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10							
03/27/94 19:24:11	1:56:02		-50.0	353.4	1032.2						S50A								
03/27/94 19:29:03	2:00:54	300										Laser Power ON							
03/27/94 19:29:33	2:01:24	30									S40A	Load exposure table LUNARZ35S							
03/27/94 19:29:43	2:01:34		-40.0	353.4	885.3						S40A								
03/27/94 19:34:31	2:06:22	298									S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9							
03/27/94 19:34:43	2:06:34		-30.0	353.3	761.7						S30A								
03/27/94 19:35:23	2:07:14		-28.6	353.3	745.8						MAD	AOS							
03/27/94 19:35:31	2:07:22	60										Record in SDR Segment 6							SSDR Segment 6
03/27/94 19:38:45	2:10:36	192									S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8							Start laser ranging
03/27/94 19:39:17	2:11:08		-20.0	353.3	660.3						S20A								
03/27/94 19:42:58	2:14:49	253									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7							
03/27/94 19:43:30	2:15:21		-10.0	353.2	579.8						S10A								
03/27/94 19:46:56	2:18:47	238									MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6							
03/27/94 19:47:29	2:19:20		0.0	353.2	519.2						Equator - A								
03/27/94 19:50:43	2:22:34	227									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5							
03/27/94 19:51:18	2:23:09		10.0	353.1	477.5						N10A								
03/27/94 19:54:24	2:26:15	221									N20A	Load exposure table LUNARZ25N							
03/27/94 19:54:59	2:26:50		20.0	353.1	453.9						N20A								

Orbit 171 Timeline - Type B Orbit

03/27/94 19:58:01	2:29:52		28.3	353.0	447.8					Periselene			
03/27/94 19:58:02	2:29:53	218								N30A	Load exposure table LUNARZ35N		
03/27/94 19:58:38	2:30:29		30.0	353.0	448.0					N30A			
03/27/94 20:01:41	2:33:32	219								N40A	Load exposure table LUNARZ45N		
03/27/94 20:02:18	2:34:09		40.0	353.0	459.8					N40A			
03/27/94 20:05:24	2:37:15	223								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6		
03/27/94 20:06:01	2:37:51		50.0	352.9	489.5					N50A			
03/27/94 20:09:16	2:41:07	232								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 4		
03/27/94 20:09:53	2:41:44		60.0	352.8	537.6					N60A			
03/27/94 20:10:16	2:42:07	60									Record in SDDR Segment 7		SSDR Segment 7
03/27/94 20:12:19	2:44:10	183								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 17		
03/27/94 20:13:56	2:45:47		70.0	352.8	604.8					N70A			
03/27/94 20:15:46	2:47:37		74.3	352.8	639.5				CAN	LOS			
03/27/94 20:16:39	2:48:30	260								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16		Resume HiRes imaging Stop laser ranging
03/27/94 20:17:09	2:49:00	30									Laser power OFF		
													Err:508
03/27/94 20:18:16	2:50:07		80.0	352.5	692.2					N80A			
03/27/94 20:22:58	2:54:49		89.9	265.6	801.0					North Pole			
03/27/94 20:23:32	2:55:23		88.8	175.8	815.0					LDUSK			
													Standard LM Post Script
03/27/94 20:23:34	2:55:25	0									Stop Imaging - select ST-B		
03/27/94 20:23:39	2:55:30	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)		Slew to Vega (inertial pointing)
03/27/94 20:26:39	2:58:30	180									Park opaque filter on HiRes (DHU SEQT 27)		
03/27/94 20:26:54	2:58:44	15									Select ST-B; Activate waitwhileslew for 400 sec		
03/27/94 20:28:08	2:59:59		80.0	173.1	932.5					N80D			
03/27/94 20:29:39	3:01:30	165									Perform LWIR imaging (DHU SEQT 25)		Start dark field imaging
03/27/94 20:29:51		12									Perform NIR imaging (DHU SEQT 31)		
03/27/94 20:29:57	3:01:48	6									Load exposure table LUNIRDKS1		
03/27/94 20:30:03	3:01:54	6									Load exposure table LUNIRDKS2		

Orbit 171 Timeline - Type B Orbit

03/27/94	20:30:09	3:02:00	6													Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec			Slew HGA to Earth with active waitwhileslew
03/27/94	20:33:00	3:04:51	171													Switch to HGA			READY FOR DATA DUMP - Time approximate
End Post Script																			
03/27/94	20:33:53	3:05:44		70.0	172.9	1087.4										N70D			
03/27/94	20:34:00	3:05:51															Switch to DHU mode @ 128 kbps		Ground Command
03/27/94	20:36:00	3:07:50															Downlink SSSDR Segment 3		Ground Command
03/27/94	20:40:21	3:12:11		60.0	172.8	1266.3											N60D		
03/27/94	20:45:00	3:16:51																Uplink and schedule L172 scripts	Ground Command
03/27/94	20:47:41	3:19:32		50.0	172.7	1468.2											N50D		
03/27/94	20:50:00	3:21:51																Schedule xmtr OFF and ON times	Ground Command
03/27/94	20:54:00	3:25:51																Downlink SSSDR Segment 1	Ground Command
03/27/94	20:56:04	3:27:55		40.0	172.6	1690.4												N40D	
03/27/94	21:02:00	3:33:51																Downlink SSSDR Segment 4	Ground Command
03/27/94	21:05:39	3:37:30		30.0	172.5	1927.3												N30D	
03/27/94	21:09:02	3:40:52		26.8	172.4	2005.6												INPM	Enter penumbra
03/27/94	21:09:45	3:41:35		26.1	172.4	2021.7												INUM	Enter umbra
03/27/94	21:11:00	3:42:51																SSDR to IDLE - pause for occultation	Ground Command
03/27/94	21:13:00	3:44:51																Transmitter OFF	Scheduled Command
03/27/94	21:14:31	3:46:22		20.9	172.4	2147.1										MAD	MLOSM		Enter occultation
03/27/94	21:16:35	3:48:26		20.0	172.4	2169.6												N20D	
03/27/94	21:28:56	4:00:46		10.0	172.2	2403.9												N10D	
03/27/94	21:42:42	4:14:33		0.0	172.1	2612.9												Equator - D	
03/27/94	21:57:42	4:29:33		-10.0	172.0	2777.1												S10D	
03/27/94	22:13:38	4:45:29		-20.0	171.8	2878.6												S20D	
03/27/94	22:17:00	4:48:51																Transmitter and ranging B ON	Scheduled Command
03/27/94	22:18:22	4:50:13		-22.9	171.8	2894.4												OUTUM	Exit umbra
03/27/94	22:19:13	4:51:04		-23.4	171.7	2896.5												OUTPM	Exit penumbra
03/27/94	22:21:59	4:53:50		-25.7	171.7	2903.7										MAD	MAOSM		Exit occultation
03/27/94	22:23:00	4:54:51																Switch to HGA	Ground Command
03/27/94	22:26:00	4:57:51																Resume downlink SSSDR Segment 4	Ground Command
03/27/94	22:27:19	4:59:10		-28.4	171.7	2906.2												Aposelene	

Orbit 172 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/27/94 22:27:19	0:00:00		-28.4	171.7	2906.2							Aposelene							Downlinking SSSR Segment 4 (orbit 170)
03/27/94 22:30:01	0:02:42		-30.0	171.6	2905.1							S30D							
03/27/94 22:40:00	0:12:41												Downlink SSSR Segment 6						Ground Command
03/27/94 22:46:18	0:18:59		-40.0	171.5	2853.1							S40D							
																			Standard Prep1 Script
03/27/94 23:01:25	0:34:06	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
03/27/94 23:01:58	0:34:39		-50.0	171.3	2729.1							S50D							
03/27/94 23:16:36	0:49:17		-60.0	171.1	2547.9							S60D							
																			Standard Prep2 Script
03/27/94 23:26:15	0:58:56	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/27/94 23:27:00	0:59:41												Downlink SSSR Segment 5						Ground Command
03/27/94 23:29:55	1:02:36		-70.0	171.0	2328.3							S70D							
																			Err:508
03/27/94 23:36:45	1:09:26	0											Msg "WARNING: Omni/2k in 1 min."						
03/27/94 23:37:45	1:10:26	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/27/94 23:38:45	1:11:26	60											Switch to omni antennas						
03/27/94 23:39:45	1:12:26	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/27/94 23:41:45	1:14:26	120											UV & HR cameras ON						
03/27/94 23:41:47	1:14:28		-80.0	170.7	2089.3							S80D							
03/27/94 23:45:45	1:18:26	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
03/27/94 23:46:15	1:18:56	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/27/94 23:46:25	1:19:06	10											Perform NIR imaging (DHU SEQT 31)						
03/27/94 23:46:40	1:19:21	15																	Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 172 Timeline - Type A Orbit

03/27/94 23:51:40	1:24:21	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85			
03/27/94 23:52:10	1:24:51	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
03/27/94 23:52:16	1:24:57		-89.9	76.5	1847.1						South Pole			
03/27/94 23:52:40	1:25:21	30									MAXS	Set SA step rate to LO		
03/27/94 23:53:23	1:26:04		-88.8	353.5	1819.7						LDAWN			
03/28/94 00:01:26	1:34:07		-80.0	351.1	1614.0						S80A			
03/28/94 00:01:49	1:34:30	549									S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Select DHU SEQT 14		Stop HiRes imaging
03/28/94 00:09:27	1:42:08		-70.0	350.9	1397.9						S70A			
03/28/94 00:09:48	1:42:29	479									S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Select DHU SEQT 13		
03/28/94 00:16:29	1:49:10		-60.0	350.8	1203.3						S60A			
03/28/94 00:16:48	1:49:29	420									S60A	Load exposure table LUNARZ55S; Select DHU SEQT 12		
03/28/94 00:17:48	1:50:29	60										Record in SSSR Segment 2		SSSR Segment 2
03/28/94 00:21:00	1:53:41											Ranging A ON		Ground Command
03/28/94 00:22:41	1:55:22		-50.0	350.7	1032.3						S50A			
03/28/94 00:22:59	1:55:40	311									S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11		
03/28/94 00:27:59	2:00:40	300										Laser Power ON		
03/28/94 00:28:13	2:00:54		-40.0	350.6	885.1						S40A			
03/28/94 00:28:29	2:01:10	30									S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10		
03/28/94 00:33:13	2:05:54		-30.0	350.6	761.3						S30A			
03/28/94 00:33:27	2:06:08	298									S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9		
03/28/94 00:37:47	2:10:28		-20.0	350.5	659.6						S20A			
03/28/94 00:37:59	2:10:40	272									S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8		Start laser ranging
03/28/94 00:38:53	2:11:34		-17.4	350.5	636.9					PMK	AOS			
03/28/94 00:42:01	2:14:42		-10.0	350.5	579.0						S10A			
03/28/94 00:42:11	2:14:52	252									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7		
03/28/94 00:45:59	2:18:40		0.0	350.4	518.2						Equator - A			
03/28/94 00:46:09	2:18:50	238									MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6		
03/28/94 00:49:47	2:22:28		10.0	350.4	476.3						N10A			
03/28/94 00:49:56	2:22:37	227									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5		
03/28/94 00:50:56	2:23:37	60										Record in SSSR Segment 3		SSSR Segment 3
03/28/94 00:53:29	2:26:10		20.0	350.3	452.6						N20A			
03/28/94 00:53:36	2:26:17	160									N20A	Load exposure table LUNARZ25N		
03/28/94 00:56:32	2:29:13		28.4	350.3	446.4						Periselene			

Orbit 172 Timeline - Type A Orbit

03/28/94 00:57:08	2:29:49		30.0	350.3	446.7				N30A			
03/28/94 00:57:14	2:29:55	218							N30A	Load exposure table LUNARZ35N		
03/28/94 01:00:47	2:33:28		40.0	350.2	458.4				N40A			
03/28/94 01:00:52	2:33:33	218							N40A	Load exposure table LUNARZ45N		
03/28/94 01:04:30	2:37:11		50.0	350.2	487.9				N50A			
03/28/94 01:04:34	2:37:15	222							N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6		
03/28/94 01:08:21	2:41:02		60.0	350.1	535.8				N60A			
03/28/94 01:08:24	2:41:05	230							N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 4		
03/28/94 01:09:24	2:42:05	60								Record in SSDR Segment 4		SSDR Segment 4
03/28/94 01:12:24	2:45:05		70.0	350.0	602.9				N70A			
03/28/94 01:12:27	2:45:08	183							N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Select DHU SEQT 3		
03/28/94 01:16:44	2:49:25		80.0	349.8	690.2				N80A			
03/28/94 01:16:46	2:49:27	259							N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Select DHU SEQT 9		Stop laser ranging
03/28/94 01:17:16	2:49:57	30								Laser power OFF		
Err:508												
03/28/94 01:21:25	2:54:06		89.9	276.1	798.8				North Pole			
03/28/94 01:21:59	2:54:40		88.8	172.7	812.9				LDUSK			
Standard LM Post Script												
03/28/94 01:22:27	2:55:08	0								Stop Imaging - select ST-B		
03/28/94 01:22:32	2:55:13	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)		Slew to Vega (inertial pointing)
03/28/94 01:25:32	2:58:13	180								Park opaque filter on HiRes (DHU SEQT 27)		
03/28/94 01:25:47	2:58:28	15								Select ST-B; Activate waitwhileslew for 400 sec		
03/28/94 01:26:35	2:59:16		80.0	170.3	930.3				N80D			
03/28/94 01:28:32	3:01:13	165								Perform LWIR imaging (DHU SEQT 25)		Start dark field imaging
03/28/94 01:28:44	3:01:25	12								Perform NIR imaging (DHU SEQT 31)		
03/28/94 01:28:50	3:01:31	6								Load exposure table LUNIRDKS1		
03/28/94 01:28:56	3:01:37	6								Load exposure table LUNIRDKS2		

Orbit 172 Timeline - Type A Orbit

03/28/94 01:29:02	3:01:43	6																		Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec											Slew HGA to Earth with active waitwhileslew						
03/28/94 01:31:02	3:03:43	120																		Switch to HGA															READY FOR DATA DUMP - Time approximate		
End Post Script																																					
03/28/94 01:32:19	3:05:00		70.0	170.1	1085.1															N70D																	
03/28/94 01:33:00	3:05:41																			Switch to DHU mode @ 128 kbps															Ground Command		
03/28/94 01:37:00	3:09:41																			Downlink SSSR Segment 7															Ground Command		
03/28/94 01:38:47	3:11:28		60.0	170.0	1263.9																N60D																
03/28/94 01:41:00	3:13:41																			Ranging A OFF Ranging B OFF															Ground Command		
03/28/94 01:42:00	3:14:41																			Uplink and schedule L173 scripts															Ground Command		
03/28/94 01:46:07	3:18:48		50.0	169.9	1465.9																N50D																
03/28/94 01:49:00	3:21:41																			Schedule xmtr OFF and ON times															Ground Command - for power savings during occultation		
03/28/94 01:54:29	3:27:10		40.0	169.8	1688.1																N40D																
03/28/94 02:01:00	3:33:41																			Downlink SSSR Segment 2															Ground Command		
03/28/94 02:04:03	3:36:44		30.0	169.7	1925.2																N30D																
03/28/94 02:07:25	3:40:06		26.8	169.7	2003.3																INPM															Enter penumbra	
03/28/94 02:08:08	3:40:49		26.1	169.7	2019.4																INUM															Enter umbra	
03/28/94 02:14:30	3:47:11																			SSDR to IDLE - pause for occultation																Ground Command	
03/28/94 02:14:59	3:47:40		20.0	169.6	2167.9																N20D																
03/28/94 02:14:03	3:46:44		19.9	169.6	2169.5																PMK	MLOSM															
03/28/94 02:14:12	3:46:53		19.8	169.6	2172.6																MAD	MLOSM														Enter occultation	
03/28/94 02:15:30	3:48:11																			Transmitter OFF																Scheduled Command	
03/28/94 02:27:19	4:00:00		10.0	169.5	2402.7																N10D																
03/28/94 02:41:05	4:13:46		0.0	169.4	2612.3																Equator - D																
03/28/94 02:56:05	4:28:46		-10.0	169.2	2777.2																S10D																
03/28/94 03:12:01	4:44:42		-20.0	169.1	2879.4																S20D																
03/28/94 03:16:44	4:49:25		-22.9	169.0	2895.3																OUTUM																Exit umbra
03/28/94 03:17:35	4:50:16		-23.4	169.0	2897.5																OUTPM																Exit penumbra
03/28/94 03:18:00	4:50:41																			Transmitter and ranging B ON																	Scheduled Command
03/28/94 03:17:34	4:50:15		-24.0	169.0	2900.1																PMK	MAOSM														Exit occultation	
03/28/94 03:19:00	4:51:41																			Resume downlink SSSR Segment 2																Ground Command	
03/28/94 03:18:57	4:51:38		-24.9	169.0	2902.8																MAD	MAOSM															
03/28/94 03:20:42	4:53:23		-25.3	169.0	2904.0																GDS	AOS															
03/28/94 03:25:50	4:58:31		-28.4	168.9	2907.5																Aposelene																

Orbit 173 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/28/94 03:25:49	0:00:00		-28.4	168.9	2907.5							Aposelene							Downlinking SSSR Segment 2 (orbit 172)
03/28/94 03:28:25	0:02:35		-30.0	168.9	2906.5							S30D							
03/28/94 03:38:00	0:12:10												Downlink SSSR Segment 3						Ground Command
03/28/94 03:44:42	0:18:52		-40.0	168.8	2855.0							S40D							
																			Standard Prep1 Script
03/28/94 04:00:21	0:34:31	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/28/94 04:00:23	0:34:33		-50.0	168.6	2731.3							S50D							
03/28/94 04:06:00	0:40:10												Downlink SSSR Segment 1						Ground Command
03/28/94 04:13:00	0:47:10												Downlink SSSR Segment 4						Ground Command
03/28/94 04:15:02	0:49:12		-60.0	168.4	2550.0							S60D							
																			Standard Prep2 Script
03/28/94 04:25:11	0:59:21	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/28/94 04:28:21	1:02:31		-70.0	168.3	2330.2							S70D							
03/28/94 04:34:00	1:08:10												SSDR to IDLE - downlink complete						Ground Command
																			Err:508
03/28/94 04:36:11	1:10:21	0											Msg "WARNING: 2kbps in 1 min."						
03/28/94 04:37:11	1:11:21	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/28/94 04:38:11	1:12:21	60											Switch to omni antennas						
03/28/94 04:39:11	1:13:21	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/28/94 04:40:15	1:14:25		-80.0	168.0	2091.0							S80D							
03/28/94 04:41:11	1:15:21	120											UV & HR cameras ON						
03/28/94 04:44:41	1:18:51	210											Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/28/94 04:45:11	1:19:21	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/28/94 04:45:21	1:19:31	10											Perform NIR imaging (DHU SEQT 31)						
03/28/94 04:45:36	1:19:46	15																Err:508	Slew to nadir (inertial pointing)
																			Err:508

Orbit 173 Timeline - Type B Orbit

											Err:508	
03/28/94 04:49:36	1:23:46	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S	
03/28/94 04:50:36	1:24:46	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)	START MAPPING
03/28/94 04:50:44	1:24:54		-90.0	73.8	1848.4					South Pole		
03/28/94 04:51:36	1:25:46	60								MAXS	Set SA step rate to LO	
03/28/94 04:51:51	1:26:01		-88.9	350.3	1821.1					LDAWN		
03/28/94 04:59:54	1:34:04		-80.0	348.3	1615.0					S80A		
03/28/94 05:00:45	1:34:55	549								S80A	Load exposure table LUNARZ75S; Select DHU SEQT 20	
03/28/94 05:07:56	1:42:06		-70.0	348.1	1398.5					S70A		
03/28/94 05:08:44	1:42:54	479								S70A	Load exposure table LUNARZ65S; Select DHU SEQT 19	
03/28/94 05:11:00	1:45:10										Ranging B OFF	Ground Command
03/28/94 05:12:56	1:47:06	252									Err:508	Slew to South Pole for oblique viewing
03/28/94 05:14:58	1:49:08		-60.0	348.0	1203.6					S60A		
03/28/94 05:15:44	1:49:54	168								S60A	Load exposure table LUNARZ55S; Select DHU SEQT 11	
03/28/94 05:21:10	1:55:20		-50.0	348.0	1032.3					S50A		
03/28/94 05:21:55	1:56:05	371								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10	
03/28/94 05:26:43	2:00:53		-40.0	347.9	884.9					S40A		
03/28/94 05:26:55	2:01:05	300									Laser Power ON	
03/28/94 05:27:25	2:01:35	30								S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S	Return to nadir mapping
03/28/94 05:31:43	2:05:53		-30.0	347.8	760.8					S30A		
03/28/94 05:32:23	2:06:33	298								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
03/28/94 05:33:23	2:07:33	60									Record in SSSR Segment 6	SSDR Segment 6
03/28/94 05:36:16	2:10:26		-20.0	347.8	659.0					S20A		
03/28/94 05:36:55	2:11:05	212								S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
03/28/94 05:39:39	2:13:49	164								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
03/28/94 05:40:29	2:14:39		-10.0	347.7	578.2					S10A		
03/28/94 05:43:50	2:18:00									MAD	LOS	
03/28/94 05:44:28	2:18:38		0.0	347.7	517.3					Equator - A		
03/28/94 05:45:05	2:19:15	326								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6	
03/28/94 05:48:16	2:22:26		10.0	347.6	475.2					N10A		
03/28/94 05:48:51	2:23:01	226								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
03/28/94 05:51:58	2:26:08		20.0	347.6	451.4					N20A		
03/28/94 05:52:32	2:26:42	221								N20A	Load exposure table LUNARZ25N	
03/28/94 05:55:03	2:29:13		28.5	347.6	445.1					Periselene		

Orbit 173 Timeline - Type B Orbit

03/28/94 05:55:36	2:29:46		30.0	347.6	445.3					N30A				
03/28/94 05:56:09	2:30:19	217								N30A	Load exposure table LUNARZ35N			
03/28/94 05:59:15	2:33:25		40.0	347.5	456.9					N40A				
03/28/94 05:59:47	2:33:57	218								N40A	Load exposure table LUNARZ45N			
03/28/94 06:02:58	2:37:08		50.0	347.5	486.3					N50A				
03/28/94 06:03:29	2:37:39	222								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6			
03/28/94 06:06:49	2:40:59		60.0	347.4	534.1					N60A				
03/28/94 06:07:19	2:41:29	230								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 4			
03/28/94 06:08:19	2:42:29	60									Record in SDDR Segment 7			SSDR Segment 7
03/28/94 06:10:52	2:45:02		70.0	347.3	601.1					N70A				
03/28/94 06:11:21	2:45:31	182								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 17			
03/28/94 06:15:11	2:49:21		80.0	347.2	688.2					N80A				
03/28/94 06:15:40	2:49:50	259								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16			Resume HiRes imaging Stop laser ranging
03/28/94 06:16:10	2:50:20	30									Laser power OFF			
Err:508														
03/28/94 06:19:52	2:54:02		90.0	238.6	797.0					North Pole				
03/28/94 06:20:25	2:54:36		88.9	169.4	810.7					LDUSK				
Standard LM Post Script														
03/28/94 06:21:20	2:55:30	0									Stop Imaging - select ST-B			
03/28/94 06:21:25	2:55:35	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)			Slew to Vega (inertial pointing)
03/28/94 06:24:25	2:58:35	180									Park opaque filter on HiRes (DHU SEQT 27)			
03/28/94 06:24:40	2:58:50	15									Select ST-B; Activate waitwhileslew for 400 sec			
03/28/94 06:25:01	2:59:11		80.0	167.6	928.1					N80D				
03/28/94 06:27:33	3:01:43	173									Perform LWIR imaging (DHU SEQT 25)			Start dark field imaging
03/28/94 06:27:44	3:01:55	12									Perform NIR imaging (DHU SEQT 31)			
03/28/94 06:27:51	3:02:01	6									Load exposure table LUNIRDKS1			
03/28/94 06:27:57	3:02:07	6									Load exposure table LUNIRDKS2			
03/28/94 06:28:02	3:02:13	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec			Slew HGA to Earth with active waitwhileslew
03/28/94 06:30:44	3:04:54		70.0	167.4	1082.9					N70D				

Orbit 173 Timeline - Type B Orbit

03/28/94 06:31:00	3:05:10	177														Switch to HGA	READY FOR DATA DUMP - Time approximate
																	End Post Script
03/28/94 06:32:00	3:06:10															Switch to DHU mode @ 128 kbps	Ground Command
03/28/94 06:33:00	3:07:10															Downlink SSSDR Segment 6	Ground Command
03/28/94 06:37:11	3:11:21		60.0	167.3	1261.6										N60D		
03/28/94 06:39:00	3:13:10															Uplink and schedule L174 scripts	Ground Command
03/28/94 06:43:00	3:17:10															Schedule xmtr OFF and ON times	Ground Command
03/28/94 06:44:31	3:18:41		50.0	167.2	1463.5										N50D		
03/28/94 06:52:52	3:27:02		40.0	167.1	1685.9										N40D		
03/28/94 07:02:26	3:36:36		30.0	167.0	1923.2										N30D		
03/28/94 07:05:47	3:39:57		26.8	167.0	2001.0										INPM		Enter penumbra
03/28/94 07:06:29	3:40:39		26.1	167.0	2017.1										INUM		Enter umbra
03/28/94 07:13:21	3:47:31		20.0	166.9	2166.3										N20D		
03/28/94 07:14:19	3:48:29														PMK	MLOSM	
03/28/94 07:14:21	3:48:31														GDS	MLOSM	Enter occultation
03/28/94 07:14:30	3:48:40															SSDR to IDLE - pause for occultation	Ground Command
03/28/94 07:16:00	3:50:10															Transmitter OFF	Scheduled Command
03/28/94 07:25:41	3:59:51		10.0	166.8	2401.5										N10D		
03/28/94 07:39:27	4:13:37		0.0	166.6	2611.7										Equator - D		
03/28/94 07:54:27	4:28:37		-10.0	166.5	2777.3										S10D		
03/28/94 08:10:23	4:44:33		-20.0	166.3	2880.2										S20D		
03/28/94 08:12:53	4:47:03														GDS	MAOSM	Exit occultation
03/28/94 08:13:00	4:47:10															Transmitter and ranging B ON	Scheduled Command
03/28/94 08:13:49	4:47:59														PMK	MAOSM	
03/28/94 08:15:04	4:49:14		-22.9	166.3	2896.2										OUTUM		Exit umbra
03/28/94 08:15:56	4:50:06		-23.4	166.3	2898.4										OUTPM		Exit penumbra
03/28/94 08:16:00	4:50:10															Resume downlink SSSDR Segment 6	Ground Command
03/28/94 08:24:19	4:58:29		-28.5	166.2	2908.8										Aposelene		

Orbit 174 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/28/94 08:24:19	0:00:00		-28.5	166.2	2908.8							Aposelene							Downlinking SSSR Segment 6 (orbit 173)
03/28/94 08:25:00	0:00:40												Ranging B OFF						Ground Command
03/28/94 08:26:00	0:01:40												Downlink SSSR Segment 5						Ground Command
03/28/94 08:26:47	0:02:28		-30.0	166.2	2907.9							S30D							
03/28/94 08:43:06	0:18:47		-40.0	166.0	2856.8							S40D							
03/28/94 08:52:00	0:27:40												Downlink SSSR Segment 7						Ground Command
03/28/94 08:58:49	0:34:30		-50.0	165.9	2733.3							S50D							
																			Standard Prep1 Script
03/28/94 08:59:15	0:34:55	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/28/94 09:08:00	0:43:40												SSDR to IDLE - downlink complete						Ground Command
03/28/94 09:09:15	0:44:55										CAN	AOS							
03/28/94 09:13:28	0:49:09		-60.0	165.7	2552.1							S60D							
																			Standard Prep2 Script
03/28/94 09:24:05	0:59:45	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/28/94 09:26:49	1:02:30		-70.0	165.6	2332.2							S70D							
																			Err:508
03/28/94 09:34:35	1:10:15	0											Msg "WARNING: Omni/2k in 1 min.."						
03/28/94 09:35:35	1:11:15	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/28/94 09:36:35	1:12:15	60											Switch to omni antennas						
03/28/94 09:37:35	1:13:15	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/28/94 09:38:43	1:14:24		-80.0	165.4	2092.6							S80D							
03/28/94 09:39:35	1:15:15	120											UV & HR cameras ON						
03/28/94 09:43:35	1:19:15	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
03/28/94 09:44:05	1:19:45	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/28/94 09:44:15	1:19:55	10											Perform NIR imaging (DHU SEQT 31)						
03/28/94 09:44:30	1:20:10	15																	Err:508
																			Slew to nadir (inertial pointing)

Orbit 174 Timeline - Type A Orbit

												Err:508	
03/28/94 09:49:13	1:24:54		-90.0	64.4	1849.7				South Pole				
												Err:508	
03/28/94 09:49:30	1:25:10	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85		NOTE: Predicted orbit times used for the script were over a minute late	
03/28/94 09:50:00	1:25:40	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)		START MAPPING	
03/28/94 09:50:19	1:26:00		-88.9	346.9	1822.5				LDAWN				
03/28/94 09:50:30	1:26:10	30							MAXS	Set SA step rate to LO			
03/28/94 09:58:24	1:34:05		-80.0	345.5	1616.0				S80A				
03/28/94 09:59:40	1:35:20	550							S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Select DHU SEQT 14		Stop HiRes imaging	
03/28/94 10:06:25	1:42:06		-70.0	345.4	1399.2				S70A				
03/28/94 10:07:40	1:43:20	480							S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Select DHU SEQT 13			
03/28/94 10:13:29	1:49:09		-60.0	345.3	1203.9				S60A				
03/28/94 10:14:40	1:50:20	420							S60A	Load exposure table LUNARZ55S; Select DHU SEQT 12			
03/28/94 10:15:40	1:51:20	60								Record in SDR Segment 2		SSDR Segment 2	
03/28/94 10:19:40	1:55:21		-50.0	345.2	1032.3				S50A				
03/28/94 10:20:51	1:56:31	311							S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11			
03/28/94 10:25:12	2:00:53		-40.0	345.1	884.7				S40A				
03/28/94 10:25:51	2:01:31	300								Laser Power ON			
03/28/94 10:26:21	2:02:01	30							S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10			
03/28/94 10:30:12	2:05:53		-30.0	345.1	760.4				S30A				
03/28/94 10:31:19	2:06:59	298							S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9			
03/28/94 10:34:46	2:10:27		-20.0	345.0	658.4				S20A				
03/28/94 10:35:51	2:11:31	272							S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8		Start laser ranging	
03/28/94 10:39:00	2:14:40		-10.0	345.0	577.4				S10A				
03/28/94 10:40:03	2:15:43	252							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			
03/28/94 10:42:59	2:18:39		0.0	345.0	516.3				Equator - A				
03/28/94 10:44:00	2:19:40	237							MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6			
03/28/94 10:46:45	2:22:26		10.0	344.9	474.2				N10A				
03/28/94 10:47:47	2:23:27	227							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
03/28/94 10:48:47	2:24:27	60								Record in SDR Segment 3		SSDR Segment 3	
03/28/94 10:50:27	2:26:08		20.0	344.9	450.2				N20A				
03/28/94 10:51:27	2:27:07	160							N20A	Load exposure table LUNARZ25N			
03/28/94 10:53:33	2:29:14		28.5	344.8	443.8				Periselene				

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03/28/94 10:54:05	2:29:46		30.0	344.8	444.0					N30A				
03/28/94 10:54:18	2:29:58									PMK	LOS			
03/28/94 10:55:04	2:30:44	217								N30A	Load exposure table LUNARZ35N			
03/28/94 10:57:43	2:33:24		40.0	344.8	455.4					N40A				
03/28/94 10:58:41	2:34:21	217								N40A	Load exposure table LUNARZ45N			
03/28/94 11:01:26	2:37:07		50.0	344.8	484.7					N50A				
03/28/94 11:02:23	2:38:03	222								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6			
03/28/94 11:05:17	2:40:57		60.0	344.7	532.4					N60A				
03/28/94 11:06:13	2:41:53	230								N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 4			
03/28/94 11:07:13	2:42:53	60									Record in SSDR Segment 4			SSDR Segment 4
03/28/94 11:09:19	2:45:00		70.0	344.6	599.2					N70A				
03/28/94 11:10:15	2:45:55	182								N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Select DHU SEQT 3			
03/28/94 11:13:39	2:49:19		80.0	344.5	686.3					N80A				
03/28/94 11:14:33	2:50:13	258								N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Select DHU SEQT 9			Stop laser ranging
03/28/94 11:15:03	2:50:43	30									Laser power OFF			
Err:508														
03/28/94 11:18:19	2:54:00		90.0	236.1	794.9					North Pole				
03/28/94 11:18:52	2:54:33		88.9	165.9	808.6					LDUSK				
Standard LM Post Script														
03/28/94 11:20:14	2:55:54	0									Stop Imaging - select ST-B			
03/28/94 11:20:19	2:55:59	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)			Slew to Vega (inertial pointing)
03/28/94 11:23:19	2:58:59	180									Park opaque filter on HiRes (DHU SEQT 27)			
03/28/94 11:23:27	2:59:08		80.0	164.7	925.9					N80D				
03/28/94 11:23:34	2:59:14	15									Select ST-B; Activate waitwhileslew for 400 sec			
03/28/94 11:26:26	3:02:06	172									Perform LWIR imaging (DHU SEQT 25)			Start dark field imaging
03/28/94 11:26:38	3:02:18	12									Perform NIR imaging (DHU SEQT 31)			
03/28/94 11:26:44	3:02:24	6									Load exposure table LUNIRDKS1			
03/28/94 11:26:50	3:02:30	6									Load exposure table LUNIRDKS2			

Orbit 174 Timeline - Type A Orbit

03/28/94 11:26:56	3:02:36	6								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/28/94 11:29:12	3:04:52		70.0	164.6	1080.6					N70D					
03/28/94 11:31:00	3:06:40	244									Switch to HGA				READY FOR DATA DUMP - Time approximate
															End Post Script
03/28/94 11:32:00	3:07:40										Switch to DHU mode @ 128 kbps				Ground Command
03/28/94 11:34:00	3:09:40										Downlink SSSR Segment 2				Ground Command
03/28/94 11:35:38	3:11:18		60.0	164.5	1259.3					N60D					
03/28/94 11:41:00	3:16:40										Schedule xmtr OFF and ON times				Ground Command - for power savings during occultation
03/28/94 11:42:56	3:18:37		50.0	164.4	1461.3					N50D					
03/28/94 11:46:00	3:21:40										Uplink and schedule L175 scripts				Ground Command
03/28/94 11:51:17	3:26:58		40.0	164.4	1683.7					N40D					
03/28/94 12:00:50	3:36:31		30.0	164.3	1921.3					N30D					
03/28/94 12:04:11	3:39:51		26.8	164.2	1998.8					INPM					Enter penumbra
03/28/94 12:04:53	3:40:33		26.1	164.2	2014.9					INUM					Enter umbra
03/28/94 12:07:00	3:42:40										Downlink SSSR Segment 3				Ground Command
03/28/94 12:11:44	3:47:25		20.0	164.2	2164.6					N20D					
03/28/94 12:12:49	3:48:29									N20D					
03/28/94 12:13:00	3:48:40										SSDR to IDLE - pause for occultation				Ground Command
03/28/94 12:13:27	3:49:07								CAN	MLOSM					
03/28/94 12:14:00	3:49:40										Transmitter OFF				Scheduled Command
03/28/94 12:15:04	3:50:44								GDS	MLOSM					Enter occultation
03/28/94 12:24:04	3:59:45		10.0	164.0	2400.3					N10D					
03/28/94 12:37:49	4:13:30		0.0	163.9	2611.1					Equator - D					
03/28/94 12:52:50	4:28:30		-10.0	163.8	2777.4					S10D					
03/28/94 13:04:34	4:40:14								CAN	MAOSM					Exit occultation
03/28/94 13:05:00	4:40:40										Transmitter and ranging B ON				Scheduled Command
03/28/94 13:07:00	4:42:40										Ranging B OFF; Resume downlink SSSR Segment 3				Ground Command
03/28/94 13:07:58	4:43:38								GDS	MAOSM					
03/28/94 13:11:00	4:46:40										Update state vector (GNC53_28MAR1200)				Ground Command
03/28/94 13:13:25	4:49:06		-22.8	163.6	2897.1					OUTUM					Exit umbra
03/28/94 13:14:17	4:49:58		-23.4	163.6	2899.3					OUTPM					Exit penumbra
03/28/94 13:22:50	4:58:31		-28.6	163.5	2910.1					Aposelene					

Orbit 175 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/28/94 13:22:50	0:00:00		-28.6	163.5	2910.1							Aposelene							Downlinking SSSR Segment 3 (orbit 174)
03/28/94 13:25:11	0:02:20		-30.0	163.5	2909.3							S30D							
03/28/94 13:36:00	0:13:09												Downlink SSSR Segment 1						Ground Command
03/28/94 13:40:16	0:17:25										GDS	LOS							
03/28/94 13:41:31	0:18:40		-40.0	163.3	2858.6							S40D							
03/28/94 13:43:00	0:20:09												Downlink SSSR Segment 4						Ground Command
03/28/94 13:57:14	0:34:24		-50.0	163.2	2735.4							S50D							
																			Standard Prep1 Script
03/28/94 13:58:10	0:35:19	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/28/94 14:07:00	0:44:09												SSDR to IDLE - downlink complete						Ground Command
03/28/94 14:11:55	0:49:04		-60.0	163.0	2554.2							S60D							
																			Standard Prep2 Script
03/28/94 14:23:00	1:00:09	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/28/94 14:25:17	1:02:26		-70.0	162.9	2334.1							S70D							
																			Err:508
03/28/94 14:34:00	1:11:09	0											Msg "WARNING: 2kbps in 1 min."						
03/28/94 14:35:00	1:12:09	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/28/94 14:36:00	1:13:09	60											Switch to omni antennas						
03/28/94 14:37:00	1:14:09	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/28/94 14:37:11	1:14:20		-80.0	162.8	2094.3							S80D							
03/28/94 14:39:00	1:16:09	120											UV & HR cameras ON						
03/28/94 14:42:30	1:19:39	210											Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/28/94 14:43:00	1:20:09	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/28/94 14:43:10	1:20:19	10											Perform NIR imaging (DHU SEQT 31)						
03/28/94 14:43:25	1:20:34	15																Err:508	Slew to nadir (inertial pointing)
																			Err:508

Orbit 175 Timeline - Type B Orbit

													Err:508		
03/28/94 14:47:25	1:24:34	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S		
03/28/94 14:47:41	1:24:50		-90.0	99.2	1851.2								South Pole		
03/28/94 14:48:25	1:25:34	60											Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)	START MAPPING	
03/28/94 14:48:49	1:25:58		-88.9	343.1	1823.9								LDAWN		
03/28/94 14:49:25	1:26:34	60											MAXS	Set SA step rate to LO	
03/28/94 14:56:53	1:34:03		-80.0	342.7	1616.9								S80A		
03/28/94 14:58:35	1:35:44	550											S80A	Load exposure table LUNARZ75S; Select DHU SEQT 20	
03/28/94 15:04:55	1:42:05		-70.0	342.6	1399.8								S70A		
03/28/94 15:06:35	1:43:44	480											S70A	Load exposure table LUNARZ65S; Select DHU SEQT 19	
03/28/94 15:10:47	1:47:56	253												Err:508	Slew to South Pole for oblique viewing
03/28/94 15:11:57	1:49:06		-60.0	342.5	1204.3								S60A		
03/28/94 15:13:36	1:50:45	168											S60A	Load exposure table LUNARZ55S; Select DHU SEQT 11	
03/28/94 15:18:10	1:55:20		-50.0	342.4	1032.4								S50A		
03/28/94 15:19:47	1:56:56	371											S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10	
03/28/94 15:23:42	2:00:52		-40.0	342.4	884.5								S40A		
03/28/94 15:24:47	2:01:56	300												Laser Power ON	
03/28/94 15:25:17	2:02:26	30											S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S	Return to nadir mapping
03/28/94 15:28:42	2:05:52		-30.0	342.3	760.0								S30A		
03/28/94 15:30:15	2:07:24	298											S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
03/28/94 15:31:15	2:08:24	60												Record in SSSR Segment 6	SSDR Segment 6
03/28/94 15:33:15	2:10:24		-20.0	342.3	657.8								S20A		
03/28/94 15:34:47	2:11:56	212											S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
03/28/94 15:37:29	2:14:38		-10.0	342.3	576.6								S10A		
03/28/94 15:38:59	2:16:08	252											S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
03/28/94 15:41:28	2:18:37		0.0	342.2	515.4								Equator - A		
03/28/94 15:42:56	2:20:05	237											MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6	
03/28/94 15:45:15	2:22:24		10.0	342.2	473.1								N10A		
03/28/94 15:46:42	2:23:51	226											N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
03/28/94 15:48:56	2:26:05		20.0	342.2	449.0								N20A		
03/28/94 15:50:22	2:27:31	220											N20A	Load exposure table LUNARZ25N	
03/28/94 15:52:03	2:29:13		28.6	342.1	442.5								Periselene		
03/28/94 15:52:33	2:29:43		30.0	342.1	442.7								N30A		
03/28/94 15:53:59	2:31:08	217											N30A	Load exposure table LUNARZ35N	

Orbit 175 Timeline - Type B Orbit

03/28/94 15:56:12	2:33:21		40.0	342.1	454.0					N40A				
03/28/94 15:57:36	2:34:45	217								N40A	Load exposure table LUNARZ45N			
03/28/94 15:59:55	2:37:04		50.0	342.0	483.2					N50A				
03/28/94 16:01:18	2:38:27	222								N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6			
03/28/94 16:03:45	2:40:55		60.0	342.0	530.7					N60A				
03/28/94 16:05:07	2:42:16	229								N60A	Load exposure table LUNARZ65N; Select DHU SEQT 4			
03/28/94 16:06:07	2:43:16	60									Record in SSSR Segment 7			SSDR Segment 7
03/28/94 16:07:47	2:44:57		70.0	342.0	597.5					N70A				
03/28/94 16:09:08	2:46:17	181								N70A	Load exposure table LUNARZ75N; Select DHU SEQT 17			
03/28/94 16:12:05	2:49:14		80.0	341.9	684.4					N80A				
03/28/94 16:13:27	2:50:36	259								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16			Resume HiRes imaging Stop laser ranging
03/28/94 16:13:57	2:51:06	30									Laser power OFF			
Err:508														
03/28/94 16:16:46	2:53:55		90.0	191.0	792.9					North Pole				
03/28/94 16:17:20	2:54:29		88.9	162.1	806.5					LDUSK				
Standard LM Post Script														
03/28/94 16:19:06	2:56:15	0									Stop Imaging - select ST-B			
03/28/94 16:19:11	2:56:20	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)			Slew to Vega (inertial pointing)
03/28/94 16:21:54	2:59:03		80.0	161.9	923.8					N80D				
03/28/94 16:22:11	2:59:20	180									Park opaque filter on HiRes (DHU SEQT 27)			
03/28/94 16:22:26	2:59:35	15									Select ST-B; Activate waitwhileslew for 400 sec			
03/28/94 16:25:19	3:02:28	188									Perform LWIR imaging (DHU SEQT 25)			Start dark field imaging
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)			
Err:508	Err:508	6									Load exposure table LUNIRDKS1			
Err:508	Err:508	6									Load exposure table LUNIRDKS2			
Err:508	Err:508	6									Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec			Slew HGA to Earth with active waitwhileslew
03/28/94 16:27:37	3:04:46		70.0	161.8	1078.4					N70D				
03/28/94 16:30:00	3:07:09	Err:508									Switch to HGA			READY FOR DATA DUMP - Time approximate

Orbit 175 Timeline - Type B Orbit

													End Post Script	
03/28/94	16:31:00	3:08:09											Switch to DHU mode @ 128 kbps	Ground Command
03/28/94	16:32:00	3:09:09											Downlink SSDR Segment 6	Ground Command
03/28/94	16:34:03	3:11:12	60.0	161.7	1257.1							N60D		
03/28/94	16:38:00	3:15:09											Uplink and schedule L176 scripts	Ground Command
03/28/94	16:41:21	3:18:31	50.0	161.7	1459.1							N50D		
03/28/94	16:44:00	3:21:09											Schedule xmtr OFF and ON times	Ground Command
03/28/94	16:49:41	3:26:50	40.0	161.6	1681.6							N40D		
03/28/94	16:59:15	3:36:24	30.0	161.5	1919.3							N30D		
03/28/94	17:02:32	3:39:41	26.8	161.5	1996.7							INPM		Enter penumbra
03/28/94	17:03:15	3:40:24	26.2	161.5	2012.9							INUM		Enter umbra
03/28/94	17:10:08	3:47:17	20.0	161.4	2163.0							N20D		
03/28/94	17:15:00	3:52:09											SSDR to IDLE - pause for occultation	Ground Command
03/28/94	17:15:17	3:52:26									CAN	MLOSM		Enter occultation
03/28/94	17:16:45	3:53:54											Transmitter OFF	Scheduled Command
03/28/94	17:22:27	3:59:36	10.0	161.3	2399.2							N10D		
03/28/94	17:36:13	4:13:22	0.0	161.2	2610.5							Equator - D		
03/28/94	17:51:12	4:28:21	-10.0	161.0	2777.4							S10D		
03/28/94	17:58:41	4:35:50									CAN	MAOSM		Exit occultation
03/28/94	17:59:00	4:36:09											Transmitter and ranging B ON	Scheduled Command
03/28/94	18:02:00	4:39:09											Resume downlink SSDR Segment 6	Ground Command
03/28/94	18:07:09	4:44:18	-20.0	160.9	2881.7							S20D		
03/28/94	18:11:46	4:48:55	-22.8	160.9	2897.9							OUTUM		Exit umbra
03/28/94	18:12:38	4:49:48	-23.3	160.8	2900.2							OUTPM		Exit penumbra
03/28/94	18:15:00	4:52:09											Downlink SSDR Segment 5	Ground Command
03/28/94	18:21:20	4:58:29	-28.6	160.8	2911.4							Aposelene		

Orbit 176 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/28/94 18:21:20	0:00:00		-28.6	160.8	2911.4							Aposelene							Downlinking SSDR Segment 5 (orbit 175)
03/28/94 18:23:35	0:02:15		-30.0	160.7	2910.6							S30D							
03/28/94 18:39:55	0:18:35		-40.0	160.6	2860.4							S40D							
03/28/94 18:45:00	0:23:39												Downlink SSDR data patches						Ground Command
																			Standard Prep1 Script
03/28/94 18:54:56	0:33:35	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/28/94 18:55:39	0:34:19		-50.0	160.5	2737.3							S50D							
03/28/94 19:05:00	0:43:39												Downlink SSDR Segment 7						Ground Command
03/28/94 19:10:21	0:49:01		-60.0	160.3	2556.2							S60D							
																			Standard Prep2 Script
03/28/94 19:19:46	0:58:25	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/28/94 19:23:43	1:02:23		-70.0	160.2	2335.9							S70D							
																			Err:508
03/28/94 19:30:16	1:08:55	0											Msg "WARNING: Omni/2k in 1 min.."						
03/28/94 19:31:16	1:09:55	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/28/94 19:32:16	1:10:55	60											Switch to omni antennas						
03/28/94 19:33:16	1:11:55	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/28/94 19:35:16	1:13:55	120											UV & HR cameras ON						
03/28/94 19:35:39	1:14:19		-80.0	160.1	2095.8							S80D							
03/28/94 19:39:16	1:17:55	240											Initialize filters (DHU SEQT 27); Record in SSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSDR in Segment 1
03/28/94 19:39:46	1:18:25	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/28/94 19:39:56	1:18:35	10											Perform NIR imaging (DHU SEQT 31)						
03/28/94 19:40:11	1:18:50	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 176 Timeline - Type A Orbit

03/28/94 19:45:11	1:23:50	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85				
03/28/94 19:45:41	1:24:20	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)				START MAPPING
03/28/94 19:46:10	1:24:50		-90.0	273.3	1852.2						South Pole Set SA step rate to LO				
03/28/94 19:47:16	1:25:56		-88.9	339.4	1825.1						LDAWN				
03/28/94 19:55:22	1:34:01	551									S80A Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Select DHU SEQT 14				Stop HiRes imaging
03/28/94 19:55:22	1:34:02		-80.0	339.8	1617.8						S80A				
03/28/94 20:02:00	1:40:39											Read dosimeter latch values			Ground Command
03/28/94 20:03:22	1:42:01	480									S70A Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Select DHU SEQT 13				
03/28/94 20:03:24	1:42:04		-70.0	339.8	1400.3						S70A				
03/28/94 20:07:00	1:45:39											Expose dosimeter			Scheduled Command
03/28/94 20:10:23	1:49:02	421									S60A Load exposure table LUNARZ55S; Select DHU SEQT 12				
03/28/94 20:10:26	1:49:06		-60.0	339.7	1204.5						S60A				
03/28/94 20:11:23	1:50:02	60										Record in SDDR Segment 2			SSDR Segment 2
03/28/94 20:16:34	1:55:13	311									S50A Load exposure table LUNARZ45S; Select DHU SEQT 11				
03/28/94 20:16:39	1:55:19		-50.0	339.7	1032.3						S50A				
03/28/94 20:21:34	2:00:13	300										Laser Power ON			
03/28/94 20:22:04	2:00:43	30									S40A Load exposure table LUNARZ35S; Select DHU SEQT 10				
03/28/94 20:22:12	2:00:52		-40.0	339.6	884.2						S40A				
03/28/94 20:27:02	2:05:41	298									S30A Load exposure table LUNARZ25S; Select DHU SEQT 9				
03/28/94 20:27:11	2:05:51		-30.0	339.6	759.5						S30A				
03/28/94 20:31:34	2:10:13	272									S20A Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
03/28/94 20:31:45	2:10:25		-20.0	339.6	657.2						S20A				
03/28/94 20:35:46	2:14:25	252									S10A Load EEQ_07U.UMI into SEQT 07; Load exposure table LUNARZ05S; Select DHU SEQT 7				IR and UV uncompressed
03/28/94 20:35:58	2:14:38		-10.0	339.5	575.9						S10A				
03/28/94 20:39:43	2:18:22	237									MEQA Load exposure table LUNARZ05N; Select DHU SEQT 6				Resume compression
03/28/94 20:39:56	2:18:36		0.0	339.5	514.5						Equator - A				
03/28/94 20:43:29	2:22:08	226									N10A Load exposure table LUNARZ15N; Select DHU SEQT 5				
03/28/94 20:43:44	2:22:24		10.0	339.5	472.1						N10A				
03/28/94 20:44:29	2:23:08	60										Record in SDDR Segment 3			SSDR Segment 3
03/28/94 20:47:09	2:25:48	160									N20A Load exposure table LUNARZ25N				
03/28/94 20:47:24	2:26:04		20.0	339.4	447.9						N20A				
03/28/94 20:50:33	2:29:13		28.7	339.4	441.3						Periselene				

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03/28/94 20:50:45	2:29:24	216								N30A	Load exposure table LUNARZ35N				
03/28/94 20:51:02	2:29:42		30.0	339.4	441.4					N30A					
03/28/94 20:51:39	2:30:18									MAD	AOS				
03/28/94 20:54:22	2:33:01	217									N40A	Load exposure table LUNARZ45N			
03/28/94 20:54:40	2:33:20		40.0	339.4	452.6						N40A				
03/28/94 20:58:04	2:36:43	222									N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6			
03/28/94 20:58:22	2:37:02		50.0	339.3	481.7						N50A				
03/28/94 21:01:53	2:40:32	229									N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 4			
03/28/94 21:02:12	2:40:52		60.0	339.3	529.1						N60A				
03/28/94 21:02:53	2:41:32	60										Record in SDDR Segment 4			SDDR Segment 4
03/28/94 21:05:54	2:44:33	181									N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Select DHU SEQT 3			
03/28/94 21:06:14	2:44:54		70.0	339.3	595.7						N70A				
03/28/94 21:10:32	2:49:12		80.0	339.3	682.6						N80A				
03/28/94 21:10:52	2:49:31	258									N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85 Select DHU SEQT 9			Stop laser ranging
03/28/94 21:11:22	2:50:01	30										Laser power OFF			
03/28/94 21:11:52	2:50:31	30										Load EEQ_07.UMI into SEQT 07			Restore original SEQT 7
Err:508															
03/28/94 21:15:12	2:53:52		90.0	36.2	790.7						North Pole				
03/28/94 21:15:46	2:54:26		88.9	158.3	804.5						LDUSK				
Standard LM Post Script															
03/28/94 21:16:13	2:54:52	0										Stop Imaging - select ST-B			
03/28/94 21:16:18	2:54:57	5										Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)			Slew to Vega (inertial pointing)
03/28/94 21:17:18	2:55:57	180										Park opaque filter on HiRes (DHU SEQT 27)			
03/28/94 21:17:33	2:56:12	15										Select ST-B; Activate waitwhileslew for 400 sec			
03/28/94 21:20:20	2:59:00		80.0	159.0	921.8						N80D				
03/28/94 21:22:18	3:00:57	285										Perform LWIR imaging (DHU SEQT 25)			Start dark field imaging
03/28/94 21:22:30	3:01:09	12										Perform NIR imaging (DHU SEQT 31)			
03/28/94 21:22:36	3:01:15	6										Load exposure table LUNIRDKS1			
03/28/94 21:22:42	3:01:21	6										Load exposure table LUNIRDKS2			

Orbit 176 Timeline - Type A Orbit

03/28/94 21:22:48	3:01:27	6								Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/28/94 21:26:02	3:04:42		70.0	159.0	1076.4					N70D					
03/28/94 21:27:42	3:06:21									CAN LOS					
03/28/94 21:28:48	3:07:27	360									Switch to HGA				READY FOR DATA DUMP - Time approximate
End Post Script															
03/28/94 21:30:00	3:08:39										Switch to DHU mode @ 128 kbps				Ground Comamnd
03/28/94 21:32:00	3:10:39										Downlink SSSR Segment 7 patches				Ground Comamnd
03/28/94 21:32:28	3:11:08		60.0	159.0	1255.0					N60D					
03/28/94 21:37:00	3:15:39										Downlink SSSR Segment 2				Ground Comamnd
03/28/94 21:39:45	3:18:25		50.0	158.9	1457.0					N50D					
03/28/94 21:48:05	3:26:45		40.0	158.8	1679.6					N40D					
03/28/94 21:57:38	3:36:18		30.0	158.8	1917.5					N30D					
03/28/94 22:00:56	3:39:36		26.8	158.7	1994.8					INPM					Enter penumbra
03/28/94 22:01:39	3:40:18		26.2	158.7	2011.0					INUM					Enter umbra
03/28/94 22:08:32	3:47:11		20.0	158.7	2161.5					N20D					
03/28/94 22:09:00	3:47:39										Uplink and schedule L177 scripts				Ground Comamnd
03/28/94 22:20:50	3:59:30		10.0	158.6	2398.1					N10D					
03/28/94 22:25:00	4:03:39										Downlink SSSR Segment 4				Ground Comamnd
03/28/94 22:32:38	4:11:17									MAD	MLOSM				Enter occultation
03/28/94 22:34:35	4:13:15		0.0	158.4	2610.0						Equator - D				
03/28/94 22:36:34	4:15:13									MAD	MAOSM				Exit occultation
03/28/94 22:49:35	4:28:15		-10.0	158.3	2777.6						S10D				
03/28/94 22:52:00	4:30:39										Downlink SSSR Segment 3				Ground Comamnd
03/28/94 23:05:33	4:44:12		-20.0	158.2	2882.5						S20D				
03/28/94 23:10:07	4:48:47		-22.8	158.1	2898.7						OUTUM				Exit umbra
03/28/94 23:10:59	4:49:39		-23.3	158.1	2901.0						OUTPM				Exit penumbra
03/28/94 23:19:49	4:58:29		-28.7	158.0	2912.6						Aposelene				

Orbit 177 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/28/94 23:19:49	0:00:00		-28.7	158.0	2912.6							Aposelene							Downlinking SDR Segment 3 (orbit 176)
03/28/94 23:21:58	0:02:09		-30.0	158.0	2911.9							S30D							
03/28/94 23:24:00	0:04:10												Downlink SDR Segment 1						Ground Command
03/28/94 23:31:00	0:11:10												SSDR to IDLE - downlink complete						Ground Command
03/28/94 23:38:20	0:18:31		-40.0	157.9	2862.0							S40D							
																			Standard Prep1 Script
03/28/94 23:53:24	0:33:34	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/28/94 23:54:05	0:34:16		-50.0	157.7	2739.2							S50D							
03/29/94 00:08:47	0:48:58		-60.0	157.6	2558.0							S60D							
																			Standard Prep2 Script
03/29/94 00:18:14	0:58:24	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/29/94 00:22:10	1:02:20		-70.0	157.5	2337.6							S70D							
																			Err:508
03/29/94 00:29:14	1:09:24	0											Msg "WARNING: 2kbps in 1 min."						
03/29/94 00:30:14	1:10:24	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/29/94 00:31:14	1:11:24	60											Switch to omni antennas						
03/29/94 00:32:14	1:12:24	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/29/94 00:34:08	1:14:18		-80.0	157.5	2097.2							S80D							
03/29/94 00:34:14	1:14:24	120											UV & HR cameras ON						
03/29/94 00:37:44	1:17:54	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
03/29/94 00:38:14	1:18:24	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/29/94 00:38:24	1:18:34	10											Perform NIR imaging (DHU SEQT 31)						
03/29/94 00:38:39	1:18:49	15																Err:508	Slew to nadir (inertial pointing)
																			Err:508
03/29/94 00:41:00	1:21:10												Ranging B OFF						Ground Command
																			Err:508

Orbit 177 Timeline - Type B Orbit

03/29/94 00:42:39	1:22:49	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85							
03/29/94 00:43:39	1:23:49	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)							START MAPPING
03/29/94 00:44:37	1:24:48		-90.0	234.8	1853.7					South Pole								
03/29/94 00:44:39	1:24:49	60								MAXS	Set SA step rate to LO							
03/29/94 00:45:44	1:25:55		-88.9	335.4	1826.3					LDAWN								
03/29/94 00:53:50	1:34:01		-80.0	337.0	1618.6					S80A								
03/29/94 00:54:31	1:34:41	552								S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75; Select DHU SEQT 20							
03/29/94 01:01:53	1:42:04		-70.0	337.0	1400.8					S70A								
03/29/94 01:02:34	1:42:44	483								S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65; Select DHU SEQT 19							
03/29/94 01:05:23	1:45:33	169									Err:508							Slew to South Pole for oblique viewing
03/29/94 01:08:55	1:49:06		-60.0	337.0	1204.7					S60A								
03/29/94 01:09:36	1:49:46	253								S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 11							
03/29/94 01:15:09	1:55:19		-50.0	336.9	1032.3					S50A								
03/29/94 01:15:50	1:56:00	374								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10							Stop HiRes imaging
03/29/94 01:20:41	2:00:52		-40.0	336.9	884.0					S40A								
03/29/94 01:20:55	2:01:05	305									Laser Power ON							
03/29/94 01:21:22	2:01:32	27								S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load EEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35S; Select DHU SEQT 10							Resume nadir mapping UV and IR uncompressed
03/29/94 01:25:40	2:05:51		-30.0	336.8	759.1					S30A								
03/29/94 01:26:21	2:06:31	299								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9							Resume compression
03/29/94 01:27:21	2:07:31	60									Record in SSSR Segment 6							SSDR Segment 6
03/29/94 01:30:14	2:10:25		-20.0	336.8	656.5					S20A								
03/29/94 01:30:55	2:11:05	214								S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8							Start laser ranging
03/29/94 01:34:27	2:14:38		-10.0	336.8	575.1					S10A								
03/29/94 01:35:08	2:15:18	253								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7							
03/29/94 01:38:25	2:18:36		0.0	336.8	513.6					Equator - A								
03/29/94 01:39:06	2:19:16	238								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6							
03/29/94 01:42:13	2:22:23		10.0	336.7	471.1					N10A								
03/29/94 01:42:53	2:23:03	227								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5							
03/29/94 01:45:53	2:26:04		20.0	336.7	446.7					N20A								

Orbit 177 Timeline - Type B Orbit

03/29/94 01:46:34	2:26:44	221								N20A	Load exposure table LUNARZ25N						
03/29/94 01:49:02	2:29:13		28.7	336.7	440.0					Periselene							
03/29/94 01:49:30	2:29:41		30.0	336.7	440.2					N30A							
03/29/94 01:50:11	2:30:21	217								N30A	Load exposure table LUNARZ35N						
03/29/94 01:53:47	2:33:57									PMK	AOS						
03/29/94 01:53:00	2:33:10											Set SA step rate to HI					Ground Command
03/29/94 01:53:08	2:33:18		40.0	336.6	451.3					N40A							
03/29/94 01:53:49	2:33:59	218								N40A	Load exposure table LUNARZ45N						
03/29/94 01:56:50	2:37:01		50.0	336.6	480.3					N50A							
03/29/94 01:57:31	2:37:41	222								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6						Resume HiRes imaging
03/29/94 02:00:40	2:40:51		60.0	336.6	527.6					N60A							
03/29/94 02:01:21	2:41:31	230								N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65; Select DHU SEQT 4						
03/29/94 02:02:21	2:42:31	60									Record in SSSR Segment 7						SSDR Segment 7
03/29/94 02:04:41	2:44:52		70.0	336.6	594.1					N70A							
03/29/94 02:05:22	2:45:32	181								N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75; Select DHU SEQT 17						
03/29/94 02:08:59	2:49:10		80.0	336.7	680.9					N80A							
03/29/94 02:09:40	2:49:50	258								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16						Stop laser ranging
03/29/94 02:10:10	2:50:20	30									Laser power OFF						
03/29/94 02:10:10	2:50:20	0									Load EEQ_10.UMI into SEQT 10						WAIT was for 30 tics instead of 30 seconds due to script error Restore original SEQT 10
Err:508																	
03/29/94 02:13:39	2:53:50		90.0	76.5	789.1					North Pole							
03/29/94 02:14:12	2:54:23		88.9	154.3	802.7					LDUSK							
Standard LM Post Script																	
03/29/94 02:14:40	2:54:50	0									Stop Imaging - select ST-B						
03/29/94 02:14:45	2:54:55	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)						Slew to Vega (inertial pointing)
03/29/94 02:15:45	2:55:55	60									Park opaque filter on HiRes (DHU SEQT 27)						
03/29/94 02:16:00	2:56:10	15									Select ST-B; Activate waitwhileslew for 400 sec						
03/29/94 02:18:46	2:58:57		80.0	156.1	919.9					N80D							
03/29/94 02:20:53	3:01:03	293									Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
Err:508	Err:508	6									Perform NIR imaging (DHU SEQT 31)						

Orbit 177 Timeline - Type B Orbit

Err:508	Err:508	6										Load exposure table LUNIRDKS1				
Err:508	Err:508	6										Load exposure table LUNIRDKS2				
Err:508	Err:508	30										Open ST-B door if closed; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec				Slew HGA to Earth with active waitwhileslew
03/29/94 02:24:28	3:04:39		70.0	156.2	1074.4						N70D					
03/29/94 02:24:30	3:04:40	Err:508										Switch to HGA				READY FOR DATA DUMP - Time approximate
																End Post Script
03/29/94 02:25:00	3:05:10											Switch to DHU mode @ 128 kbps				Ground Command
03/29/94 02:27:00	3:07:10											Downlink SDR Segment 6				Ground Command
03/29/94 02:30:53	3:11:04		60.0	156.2	1253.0						N60D					
03/29/94 02:38:10	3:18:21		50.0	156.2	1455.0						N50D					
03/29/94 02:40:00	3:20:10											Uplink and schedule L178 scripts				Ground Command
03/29/94 02:46:30	3:26:41		40.0	156.1	1677.8						N40D					
03/29/94 02:56:01	3:36:12		30.0	156.0	1915.8						N30D					
03/29/94 02:59:19	3:39:30		26.8	156.0	1993.1						INPM					Enter penumbra
03/29/94 03:00:02	3:40:13		26.2	156.0	2009.4						INUM					Enter umbra
03/29/94 03:06:54	3:47:05		20.0	155.9	2160.1						N20D					
03/29/94 03:17:00	3:57:10											Redownload SDR Segment 6				Ground Command
03/29/94 03:19:13	3:59:24		10.0	155.8	2397.2						N10D					
03/29/94 03:22:00	4:02:10											Downlink SDR Segment 5				Ground Command
03/29/94 03:32:57	4:13:08		0.0	155.7	2609.6						Equator - D					
03/29/94 03:47:58	4:28:09		-10.0	155.6	2777.7						S10D					
03/29/94 03:53:00	4:33:10											Downlink SDR Segment 7				Ground Command
03/29/94 04:03:56	4:44:07		-20.0	155.4	2883.2						S20D					
03/29/94 04:08:28	4:48:39		-22.8	155.4	2899.5						OUTUM					Exit umbra
03/29/94 04:09:19	4:49:30		-23.3	155.4	2901.8						OUTPM					Exit penumbra
03/29/94 04:12:00	4:52:10											SSDR to IDLE - downlink complete				Ground Command
03/29/94 04:18:19	4:58:30		-28.8	155.3	2913.8						Aposelene					

Orbit 178 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/29/94 04:18:19	0:00:00		-28.8	155.3	2913.8							Aposelene							Orbit 177 dump completed
03/29/94 04:20:22	0:02:02		-30.0	155.3	2913.1							S30D							
03/29/94 04:31:00	0:12:40												ST-A OFF						Ground Command - to save power for battery charge
03/29/94 04:33:41	0:15:21										GDS	AOS							
03/29/94 04:36:45	0:18:25		-40.0	155.2	2863.6							S40D							
03/29/94 04:38:00	0:19:40												ST-A ON						Ground Command
03/29/94 04:39:00	0:20:40												Transmitter OFF						Ground Command - to save power for battery charge
																			Standard Prep1 Script
03/29/94 04:51:52	0:33:32	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/29/94 04:52:30	0:34:10		-50.0	155.0	2740.9							S50D							
03/29/94 05:02:00	0:43:40												Transmitter ON						Ground Command
03/29/94 05:07:13	0:48:53		-60.0	154.9	2559.7							S60D							
																			Standard Prep2 Script
03/29/94 05:16:42	0:58:22	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/29/94 05:20:37	1:02:18		-70.0	154.9	2339.1							S70D							
																			Err:508
03/29/94 05:27:12	1:08:52	0											Msg "WARNING: Omni/2k in 1 min.."						
03/29/94 05:28:12	1:09:52	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/29/94 05:29:12	1:10:52	60											Switch to omni antennas						
03/29/94 05:30:12	1:11:52	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/29/94 05:32:12	1:13:52	120											UV & HR cameras ON						
03/29/94 05:32:34	1:14:15		-80.0	155.0	2098.5							S80D							
03/29/94 05:36:12	1:17:52	240											Initialize filters (DHU SEQT 27); Record in SSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSDR in Segment 1
03/29/94 05:36:42	1:18:22	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/29/94 05:36:52	1:18:32	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 178 Timeline - Type A Orbit

03/29/94 05:37:07	1:18:47	15																		Err:508	Slew to nadir (inertial pointing)			
Err:508																								
Err:508																								
03/29/94 05:42:07	1:23:47	0																			Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85			
03/29/94 05:42:37	1:24:17	30																			Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 15)	START MAPPING		
03/29/94 05:43:06	1:24:46		-89.9	244.3	1854.5																South Pole	Set SA step rate to LO		
03/29/94 05:44:12	1:25:52		-88.9	331.3	1827.3																LDAWN			
03/29/94 05:52:20	1:34:00	553	-80.0	334.1	1619.3																S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 14		
03/29/94 06:00:22	1:42:02	482	-70.0	334.2	1401.2																S70A	Load EEQ_19U.UMI into SEQT 19 Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 19	UV and IR uncompressed	
03/29/94 06:07:25	1:49:05	423	-60.0	334.2	1204.8																S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 12	Resume compression	
03/29/94 06:08:25	1:50:05	60																					Record in SSSR Segment 2	SSDR Segment 2
03/29/94 06:13:38	1:55:18	313	-50.0	334.2	1032.2																S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11	Stop HiRes imaging	
03/29/94 06:18:43	2:00:23	305																					Laser Power ON	
03/29/94 06:19:11	2:00:51	28	-40.0	334.1	883.7																S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10		
03/29/94 06:24:00	2:05:40																						Read dosimeter latch values	Ground Command
03/29/94 06:24:10	2:05:50	299	-30.0	334.1	758.6																S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9		
03/29/94 06:26:35	2:08:15																					MAD	LOS	
03/29/94 06:28:43	2:10:23	273	-20.0	334.1	655.9																S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging	
03/29/94 06:29:00	2:10:40																						Expose dosimeter	Scheduled Command
03/29/94 06:32:56	2:14:36	253	-10.0	334.0	574.4																S10A	Load exposure table LUNARZ05S; Load exposure table LUNARH05; Select DHU SEQT 7	SPECIAL OBSERVATION: HiRes on over Apollo 14 Saturn IVB impact crater (8.17°S,25.95°W)	
03/29/94 06:36:54	2:18:34	238	0.0	334.0	512.8																	Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6	
03/29/94 06:40:41	2:22:21	227	10.0	334.0	470.1																N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5		
03/29/94 06:41:41	2:23:21	60																					Record in SSSR Segment 3	SSDR Segment 3
03/29/94 06:44:22	2:26:02	161	20.0	334.0	445.7																	N20A	Load exposure table LUNARZ25N	
03/29/94 06:47:31	2:29:11		28.8	334.0	438.9																	Periselene		
03/29/94 06:47:59	2:29:39	217	30.0	334.0	439.0																	N30A	Load exposure table LUNARZ35N	

Orbit 178 Timeline - Type A Orbit

03/29/94 06:51:37	2:33:17	218	40.0	333.9	450.0					N40A	Load exposure table LUNARZ45N				
03/29/94 06:55:19	2:36:59	222	50.0	333.9	478.9					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6				Resume HiRes imaging
03/29/94 06:59:08	2:40:48	229	60.0	333.9	526.1					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 4				
03/29/94 07:00:08	2:41:48	60									Record in SSSR Segment 4				SSDR Segment 4
03/29/94 07:03:09	2:44:49	181	70.0	334.0	592.6					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 3				
03/29/94 07:07:27	2:49:07	258	80.0	334.1	679.2					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9				Stop laser ranging
03/29/94 07:07:57	2:49:37	30									Laser power OFF				
03/29/94 07:08:27	2:50:07	30									Load EEQ_19.UMI into SEQT 19				Restore original SEQT 19
Err:508															
03/29/94 07:12:05	2:53:46		89.9	59.8	787.3					North Pole					
03/29/94 07:12:38	2:54:18		88.9	150.1	800.9					LDUSK					
Standard LM Post Script															
03/29/94 07:13:06	2:54:46	0									Stop Imaging - select ST-B				
03/29/94 07:13:11	2:54:51	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)				Slew to Vega (inertial pointing)
03/29/94 07:16:11	2:57:51	180									Park opaque filter on HiRes (DHU SEQT 27)				
03/29/94 07:16:26	2:58:06	15									Select ST-B				
03/29/94 07:17:12	2:58:52		80.0	153.2	918.1					N80D					
03/29/94 07:22:54	3:04:35		70.0	153.4	1072.6					N70D					
03/29/94 07:23:05	3:04:46	400									Perform UV0 imaging (DHU SEQT 29)				Start calibration imaging
03/29/94 07:23:18	3:04:58	12									Perform LWIR imaging (DHU SEQT 25)				
03/29/94 07:23:30	3:05:10	12									Perform NIR imaging (DHU SEQT 31)				
03/29/94 07:23:36	3:05:16	6									Load exposure table LUNIRDKS1				
03/29/94 07:23:42	3:05:22	6									Load exposure table LUNIRDKS2				
03/29/94 07:23:48	3:05:28	6									Perform HIRES imaging (DHU SEQT 30)				

Orbit 178 Timeline - Type A Orbit

03/29/94 07:24:12	3:05:52	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec						Slew HGA to Earth with active waitwhileslew
03/29/94 07:29:18	3:10:58		60.0	153.4	1251.2				N60D							
03/29/94 07:30:12	3:11:52	360								Switch to HGA						READY FOR DATA DUMP - Time approximate
																End Post Script
03/29/94 07:34:00	3:15:40									Update state vector (GNC53_29MAR0730)						Ground Command
03/29/94 07:36:00	3:17:40									Switch to DHU mode @ 128 kbps						Ground Command
03/29/94 07:36:35	3:18:16		50.0	153.4	1453.2				N50D							
03/29/94 07:37:00	3:18:40									Downlink SDR Segment 1						Ground Command
03/29/94 07:40:00	3:21:40									Uplink and schedule L179 scripts						Ground Command
03/29/94 07:44:55	3:26:35		40.0	153.3	1676.1				N40D							
03/29/94 07:54:26	3:36:06		30.0	153.3	1914.4				N30D							
03/29/94 07:57:00	3:38:40									Downlink SDR Segment 2						Ground Command
03/29/94 07:57:43	3:39:23		26.8	153.2	1991.7				INPM							Enter penumbra
03/29/94 07:58:25	3:40:05		26.2	153.2	2008.1				INUM							Enter umbra
03/29/94 08:05:17	3:46:57		20.0	153.2	2158.9				N20D							
03/29/94 08:17:36	3:59:17		10.0	153.1	2396.4				N10D							
03/29/94 08:30:00	4:11:40									Downlink SDR Segment 3						Ground Command
03/29/94 08:31:21	4:13:02		0.0	153.0	2609.2				Equator - D							
03/29/94 08:46:21	4:28:02		-10.0	152.8	2777.9				S10D							
03/29/94 09:01:00	4:42:40									Downlink SDR Segment 4						Ground Command
03/29/94 09:02:19	4:43:59		-20.0	152.7	2884.0				S20D							
03/29/94 09:06:49	4:48:29		-22.7	152.7	2900.2				OUTUM							Exit umbra
03/29/94 09:07:40	4:49:21		-23.3	152.7	2902.6				OUTPM							Exit penumbra
03/29/94 09:16:47	4:58:27		-28.8	152.6	2914.9				Aposelene							

Orbit 179 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/29/94 09:16:47	0:00:00		-28.8	152.6	2914.9							Aposelene							Downlinking SDR Segment 4 (orbit 178)
03/29/94 09:18:46	0:01:58		-30.0	152.6	2914.3							S30D							
03/29/94 09:31:00	0:14:12												SSDR to IDLE - downlink complete						Ground Command
03/29/94 09:35:10	0:18:22		-40.0	152.5	2865.1							S40D							
																			Standard Prep1 Script
03/29/94 09:50:20	0:33:32	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/29/94 09:50:56	0:34:09		-50.0	152.3	2742.5							S50D							
03/29/94 09:52:10	0:35:22										CAN	AOS							
03/29/94 10:05:40	0:48:53		-60.0	152.3	2561.2							S60D							
																			Standard Prep2 Script
03/29/94 10:15:10	0:58:22	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/29/94 10:19:04	1:02:16		-70.0	152.2	2340.5							S70D							
																			Err:508
03/29/94 10:26:10	1:09:22	0											Msg "WARNING: 2kbps in 1 min."						
03/29/94 10:27:10	1:10:22	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/29/94 10:28:10	1:11:22	60											Switch to omni antennas						
03/29/94 10:29:10	1:12:22	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/29/94 10:31:02	1:14:15		-80.0	152.4	2099.6							S80D							
03/29/94 10:31:10	1:14:22	120											UV & HR cameras ON						
03/29/94 10:34:40	1:17:52	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
03/29/94 10:35:10	1:18:22	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/29/94 10:35:20	1:18:32	10											Perform NIR imaging (DHU SEQT 31)						
03/29/94 10:35:35	1:18:47	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 179 Timeline - Type B Orbit

03/29/94 10:39:35	1:22:47	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85				
03/29/94 10:40:35	1:23:47	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
03/29/94 10:41:35	1:24:47	60	-89.9	242.5	1855.3					South Pole	Set SA step rate to LO				
03/29/94 10:42:40	1:25:52		-88.9	327.1	1828.2					LDAWN					
03/29/94 10:50:48	1:34:00	553	-80.0	331.2	1619.9					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75; Select DHU SEQT 20				
03/29/94 10:58:51	1:42:03	483	-70.0	331.4	1401.5					S70A	Load EEQ_19U.UMI into SEQT 19; Load exposure table LUNARZ65S; Load exposure table LUNARH65; Select DHU SEQT 19				IR and UV uncompressed
03/29/94 11:03:04	1:46:16	254									Err:508				Slew to South Pole for oblique viewing Resume compression
03/29/94 11:05:54	1:49:06	169	-60.0	331.4	1204.9					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 11				
03/29/94 11:12:07	1:55:19	373	-50.0	331.4	1032.0					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10				Stop HiRes imaging
03/29/94 11:17:12	2:00:24	305									Laser Power ON				
03/29/94 11:17:39	2:00:51	27	-40.0	331.4	883.3					S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping
03/29/94 11:22:38	2:05:50	299	-30.0	331.3	758.1					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
03/29/94 11:23:38	2:06:50	60									Record in SSSR Segment 6				SSSR Segment 6
03/29/94 11:27:12	2:10:24	214	-20.0	331.3	655.3					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
03/29/94 11:31:25	2:14:37	253	-10.0	331.3	573.6					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
03/29/94 11:35:11	2:18:23									PMK	LOS				
03/29/94 11:35:22	2:18:34	237	0.0	331.3	511.9					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
03/29/94 11:39:09	2:22:21	227	10.0	331.3	469.1					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
03/29/94 11:42:50	2:26:02	221	20.0	331.2	444.6					N20A	Load exposure table LUNARZ25N				
03/29/94 11:46:00	2:29:13		28.8	331.2	437.8					Periselene					
03/29/94 11:46:27	2:29:39	217	30.0	331.2	437.9					N30A	Load exposure table LUNARZ35N				
03/29/94 11:50:04	2:33:16	217	40.0	331.2	448.8					N40A	Load exposure table LUNARZ45N				
03/29/94 11:53:46	2:36:58	222	50.0	331.2	477.6					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6				Resume HiRes imaging
03/29/94 11:57:35	2:40:47	229	60.0	331.2	524.8					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65; Select DHU SEQT 4				
03/29/94 11:58:35	2:41:47	60									Record in SSSR Segment 7				SSSR Segment 7

Orbit 179 Timeline - Type B Orbit

03/29/94 12:01:36	2:44:48	181	70.0	331.3	591.2				N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75; Select DHU SEQT 17			
03/29/94 12:05:53	2:49:05	257	80.0	331.6	677.8				N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16			Stop laser ranging
03/29/94 12:06:23	2:49:35	30								Laser power OFF			
03/29/94 12:06:53	2:50:05	0								Load EEQ_19.UMI into SEQT 19			WAIT was for 30 tics instead of 30 seconds due to script error Restore original SEQT 19
													Err:508
													Standard LM Post Script
03/29/94 12:06:53	2:50:05	0								Stop Imaging - select ST-B			
03/29/94 12:06:58	2:50:10	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)			Slew to Vega (inertial pointing)
03/29/94 12:09:58	2:53:10	180								Park opaque filter on HiRes (DHU SEQT 27)			
03/29/94 12:10:13	2:53:25	15								Select ST-B			
03/29/94 12:10:31	2:53:44		89.9	57.3	785.7				North Pole				
03/29/94 12:11:04	2:54:17		88.9	145.8	799.3				LDUSK				
03/29/94 12:15:38	2:58:51		80.0	150.3	916.5				N80D				
03/29/94 12:16:53	3:00:05	400								Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
03/29/94 12:17:05	3:00:17	12								Perform LWIR imaging (DHU SEQT 25)			
03/29/94 12:17:17	3:00:29	12								Perform NIR imaging (DHU SEQT 31)			
03/29/94 12:17:23	3:00:35	6								Load exposure table LUNIRDKS1			
03/29/94 12:17:29	3:00:41	6								Load exposure table LUNIRDKS2			
03/29/94 12:17:35	3:00:47	6								Perform HIRES imaging (DHU SEQT 30)			
03/29/94 12:17:59	3:01:11	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec			Slew HGA to Earth with active waitwhileslew
03/29/94 12:21:19	3:04:32		70.0	150.6	1071.0				N70D				
03/29/94 12:22:00	3:05:12	241								Switch to HGA			READY FOR DATA DUMP - Time approximate
													End Post Script
03/29/94 12:23:00	3:06:12									Switch to DHU mode @ 128 kbps			Ground Command
03/29/94 12:26:00	3:09:12									Downlink SSDR Segment 5			Ground Command
03/29/94 12:27:43	3:10:56		60.0	150.6	1249.6				N60D				
03/29/94 12:28:00	3:11:12									Uplink and schedule L180 scripts			Ground Command

Orbit 179 Timeline - Type B Orbit

03/29/94 12:34:59	3:18:12		50.0	150.6	1451.6					N50D							
03/29/94 12:43:18	3:26:31		40.0	150.6	1674.6					N40D							
03/29/94 12:52:49	3:36:02		30.0	150.5	1913.1					N30D							
03/29/94 12:56:07	3:39:19		26.8	150.5	1990.6					INPM							Enter penumbra
03/29/94 12:56:50	3:40:03		26.2	150.5	2007.0					INUM							Enter umbra
03/29/94 13:01:00	3:44:12																Ground Command
03/29/94 13:03:41	3:46:54		20.0	150.4	2157.9					N20D							
03/29/94 13:15:59	3:59:11		10.0	150.3	2395.7					N10D							
03/29/94 13:29:44	4:12:56		0.0	150.2	2609.0					Equator - D							
03/29/94 13:44:45	4:27:58		-10.0	150.1	2778.2					S10D							
03/29/94 13:51:00	4:34:12																Ground Command - replay due to DSN comm problems
03/29/94 14:00:43	4:43:55		-20.0	150.0	2884.7					S20D							
03/29/94 14:05:10	4:48:22		-22.7	149.9	2900.9					OUTUM							Exit umbra
03/29/94 14:06:01	4:49:14		-23.2	149.9	2903.4					OUTPM							Exit penumbra
03/29/94 14:15:16	4:58:29		-28.8	149.9	2916.0					Aposelene							

Orbit 180 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/29/94 14:15:16	0:00:00		-28.8	149.9	2916.0							Aposelene							Downlinking SSSR Segment 6 (orbit 179)
03/29/94 14:17:11	0:01:54		-30.0	149.9	2915.4							S30D							
03/29/94 14:23:41	0:08:24										GDS	LOS							
03/29/94 14:33:34	0:18:17		-40.0	149.7	2866.4							S40D							
Standard Prep1 Script																			
03/29/94 14:48:48	0:33:31	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
End Prep1 Script																			
03/29/94 14:49:21	0:34:05		-50.0	149.6	2743.9							S50D							
03/29/94 14:53:00	0:37:43												Downlink SSSR Segment 5 patches						Ground Command
03/29/94 15:02:00	0:46:43												Downlink SSSR Segment 7						Ground Command
03/29/94 15:04:07	0:48:50		-60.0	149.6	2562.6							S60D							
Standard Prep2 Script																			
03/29/94 15:13:38	0:58:21	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
End Prep2 Script																			
03/29/94 15:17:31	1:02:15		-70.0	149.6	2341.7							S70D							
Err:508																			
03/29/94 15:24:08	1:08:51	0											Msg "WARNING: Omni/2k in 1 min.."						
03/29/94 15:25:08	1:09:51	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/29/94 15:26:08	1:10:51	60											Switch to omni antennas						
03/29/94 15:27:08	1:11:51	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/29/94 15:29:08	1:13:51	120											UV & HR cameras ON						
03/29/94 15:29:29	1:14:13		-80.0	149.8	2100.6							S80D							
03/29/94 15:33:08	1:17:51	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
03/29/94 15:33:38	1:18:21	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/29/94 15:33:48	1:18:31	10											Perform NIR imaging (DHU SEQT 31)						
03/29/94 15:34:03	1:18:46	15																Err:508	Slew to nadir (inertial pointing)
Err:508																			
Err:508																			

Orbit 180 Timeline - Type A Orbit

03/29/94 15:39:03	1:23:46	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85			
03/29/94 15:39:33	1:24:16	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
03/29/94 15:40:03	1:24:46	30	-89.9	241.7	1855.8				South Pole	Set SA step rate to LO			
03/29/94 15:41:07	1:25:51		-88.9	322.7	1828.9				LDAWN				
03/29/94 15:49:16	1:33:59	553	-80.0	328.2	1620.3				S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 14			
03/29/94 15:57:19	1:42:02	483	-70.0	328.5	1401.7				S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 13			
03/29/94 16:04:22	1:49:05	423	-60.0	328.6	1204.8				S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 12			
03/29/94 16:05:22	1:50:05	60								Record in SSSR Segment 2			SSDR Segment 2
03/29/94 16:10:35	1:55:18	313	-50.0	328.6	1031.8				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11			Stop HiRes imaging
03/29/94 16:13:00	1:57:43									Read dosimeter latch values			Ground Command
03/29/94 16:15:40	2:00:23	305								Laser Power ON			
03/29/94 16:16:07	2:00:50	27	-40.0	328.6	882.9				S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10			
03/29/94 16:18:00	2:02:43									Expose dosimeter			Scheduled Command
03/29/94 16:21:05	2:05:49		-30.0	328.6	757.6				S30A				
03/29/94 16:21:07	2:05:50	300							S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9			
03/29/94 16:25:40	2:10:23	273	-20.0	328.6	654.6				S20A	Load EEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser ranging UV and IR uncompressed
03/29/94 16:29:51	2:14:35		-10.0	328.5	572.9				S10A				
03/29/94 16:29:53	2:14:36	253							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			Resume compression
03/29/94 16:33:50	2:18:33	237	0.0	328.5	511.1				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6			
03/29/94 16:37:37	2:22:20	227	10.0	328.5	468.2				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
03/29/94 16:38:37	2:23:20	60								Record in SSSR Segment 3			SSDR Segment 3
03/29/94 16:41:17	2:26:00	160	20.0	328.5	443.6				N20A	Load exposure table LUNARZ25N			
03/29/94 16:44:28	2:29:11		28.8	328.5	436.7				Periselene				
03/29/94 16:44:54	2:29:37	217	30.0	328.5	436.8				N30A	Load exposure table LUNARZ35N			
03/29/94 16:48:31	2:33:14	217	40.0	328.5	447.7				N40A	Load exposure table LUNARZ45N			
03/29/94 16:52:13	2:36:56	222	50.0	328.5	476.4				N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6			Resume HiRes imaging

Orbit 180 Timeline - Type A Orbit

03/29/94 16:56:02	2:40:45	229	60.0	328.6	523.5					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 4							
03/29/94 16:57:02	2:41:45	60									Record in SSSR Segment 4							SSDR Segment 4
03/29/94 17:00:02	2:44:45	180	70.0	328.7	589.9					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 3							
03/29/94 17:04:20	2:49:03	258	80.0	329.0	676.4					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9							Stop laser ranging
03/29/94 17:04:50	2:49:33	30									Laser power OFF							
03/29/94 17:05:20	2:50:03	30									Load EEQ_8.UMI into SEQT 8							Restore original SEQT 8
Err:508																		
03/29/94 17:08:57	2:53:40		89.9	56.7	784.4					North Pole								
03/29/94 17:09:30	2:54:14		88.9	141.4	797.9					LDUSK								
Standard LM Post Script																		
03/29/94 17:09:58	2:54:41	0									Stop Imaging - select ST-B							
03/29/94 17:10:03	2:54:46	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)							Slew to Vega (inertial pointing)
03/29/94 17:13:03	2:57:46	180									Park opaque filter on HiRes (DHU SEQT 27)							
03/29/94 17:13:18	2:58:01	15									Select ST-B							
03/29/94 17:14:03	2:58:47		80.0	147.4	915.1					N80D								
03/29/94 17:19:44	3:04:28		70.0	147.7	1069.5					N70D								
03/29/94 17:19:58	3:04:41	400									Perform UV0 imaging (DHU SEQT 29)							Start calibration imaging
03/29/94 17:20:10	3:04:53	12									Perform LWIR imaging (DHU SEQT 25)							
03/29/94 17:20:22	3:05:05	12									Perform NIR imaging (DHU SEQT 31)							
03/29/94 17:20:28	3:05:11	6									Load exposure table LUNIRDKS1							
03/29/94 17:20:34	3:05:17	6									Load exposure table LUNIRDKS2							
03/29/94 17:20:40	3:05:23	6									Perform HIRES imaging (DHU SEQT 30)							
03/29/94 17:21:10	3:05:53	30									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec							Slew HGA to Earth with active waitwhileslew
03/29/94 17:26:08	3:10:52		60.0	147.8	1248.1					N60D								
03/29/94 17:27:10	3:11:53	360									Switch to HGA							READY FOR DATA DUMP - Time approximate

Orbit 180 Timeline - Type A Orbit

													End Post Script
03/29/94	17:33:24	3:18:08	50.0	147.8	1450.3						N50D		
03/29/94	17:37:00	3:21:43										Uplink and schedule L181 scripts	Ground Command - dump delayed due to comm problems
03/29/94	17:41:42	3:26:26	40.0	147.8	1673.3						N40D		
03/29/94	17:44:00	3:28:43										Update state vector (GNC53_29MAR1700)	Ground Command
03/29/94	17:51:13	3:35:57	30.0	147.7	1912.0						N30D		
03/29/94	17:54:31	3:39:15	26.8	147.7	1989.9						INPM		Enter penumbra
03/29/94	17:55:14	3:39:57	26.1	147.7	2006.3						INUM		Enter umbra
03/29/94	18:02:05	3:46:49	20.0	147.7	2157.1						N20D		
03/29/94	18:14:24	3:59:07	10.0	147.6	2395.2						N10D		
03/29/94	18:17:00	4:01:43										Switch to DHU mode @ 128 kbps	Ground Command
03/29/94	18:20:00	4:04:43										Downlink SSSDR Segment 2	Ground Command Multiple comm problems
03/29/94	18:28:07	4:12:51	0.0	147.5	2608.9						Equator - D		
03/29/94	18:40:00	4:24:43										Deselect ST (DHUSELNO)	Ground Command
03/29/94	18:43:00	4:27:43										Uplink file for IMU test	Ground Command
03/29/94	18:43:08	4:27:51	-10.0	147.4	2778.5						S10D		
03/29/94	18:47:00	4:31:43										Select ST-B; Uplink files for IMU test	IMU TEST Ground Command
03/29/94	18:51:00	4:35:43										Deselect ST (DHUSELNO); Uplink files for IMU test	Ground Command
03/29/94	18:55:00	4:39:43										Select ST-B	END IMU TEST Ground Command
03/29/94	18:59:07	4:43:51	-20.0	147.3	2885.4						S20D		
03/29/94	19:03:31	4:48:14	-22.7	147.2	2901.6						OUTUM		Exit umbra
03/29/94	19:04:23	4:49:07	-23.2	147.2	2904.1						OUTPM		Exit penumbra
03/29/94	19:13:43	4:58:27	-28.9	147.2	2917.0						Aposelene		

Orbit 181 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/29/94 19:13:43	0:00:00		-28.9	147.2	2917.0							Aposelene							Downlinking SSSR Segment 2 (orbit 180)
03/29/94 19:15:36	0:01:52		-30.0	147.1	2916.5							S30D							
03/29/94 19:31:59	0:18:15		-40.0	147.0	2867.6							S40D							
03/29/94 19:41:00	0:27:16												Downlink SSSR Segment 3						Ground Command Multiple DSN comm problems
03/29/94 19:42:00	0:28:16												Deselect ST (DHUSELNO); Uplink files to end IMU test						Ground Command
03/29/94 19:44:00	0:30:16												Select ST-B						Ground Command
																			Standard Prep1 Script
03/29/94 19:47:15	0:33:31	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/29/94 19:47:47	0:34:03		-50.0	146.9	2745.1							S50D							
03/29/94 20:02:32	0:48:48		-60.0	146.9	2563.7							S60D							
																			Standard Prep2 Script
03/29/94 20:12:05	0:58:21	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/29/94 20:15:58	1:02:14		-70.0	146.9	2342.6							S70D							
03/29/94 20:17:00	1:03:16												Downlink SSSR Segment 1						Ground Command Multiple DSN comm problems
																			Err:508
03/29/94 20:23:05	1:09:21	0											Msg "WARNING: 2kbps in 1 min."						
03/29/94 20:24:05	1:10:21	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
03/29/94 20:25:05	1:11:21	60											Switch to omni antennas						
03/29/94 20:26:05	1:12:21	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/29/94 20:27:57	1:14:13		-80.0	147.3	2101.3							S80D							
03/29/94 20:28:05	1:14:21	120											UV & HR cameras ON						
03/29/94 20:31:35	1:17:51	210											Initialize filters (DHU SEQT 27); Record in SSSR Segment 5; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 5
03/29/94 20:32:05	1:18:21	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/29/94 20:32:15	1:18:31	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 181 Timeline - Type B Orbit

03/29/94 20:32:30	1:18:46	15																		Err:508	Slew to nadir (inertial pointing)			
																					Err:508			
																					Err:508			
03/29/94 20:36:30	1:22:46	0																			Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85			
03/29/94 20:37:30	1:23:46	60																			Switch to lunar mapping mode (ACSMMode=LunarMapping); Start Imaging (DHU SEQT 21)	START MAPPING		
03/29/94 20:38:30	1:24:46	60	-89.8	237.2	1856.4																Load EEQ_21U.UMI into SEQT 21; Set SA step rate to LO; Select DHU SEQT 21	UV and IR uncompressed		
03/29/94 20:39:35	1:25:51		-88.9	318.3	1829.4																LDAWN			
03/29/94 20:47:42	1:33:59		-80.0	325.3	1620.5																S80A			
03/29/94 20:47:44	1:34:00	554																			S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75; Select DHU SEQT 20	Resume compression	
03/29/94 20:55:47	1:42:03	483	-70.0	325.7	1401.7																S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65; Select DHU SEQT 19		
03/29/94 21:00:00	1:46:16	254																					Err:508	Slew to South Pole for oblique viewing
03/29/94 21:02:50	1:49:06	169	-60.0	325.8	1204.7																S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 11		
03/29/94 21:09:03	1:55:19	373	-50.0	325.8	1031.5																S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10	Stop HiRes imaging	
03/29/94 21:14:07	2:00:23	304																					Laser Power ON	
03/29/94 21:14:35	2:00:51	28	-40.0	325.8	882.5																S40A	Switch to lunar mapping mode (ACSMMode=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10	Resume nadir mapping	
03/29/94 21:19:34	2:05:50	299	-30.0	325.8	757.0																S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9		
03/29/94 21:20:34	2:06:50	60																					Record in SSDR Segment 6	SSDR Segment 6
03/29/94 21:24:07	2:10:23	213	-20.0	325.8	654.0																S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging	
03/29/94 21:28:20	2:14:36	253	-10.0	325.8	572.1																S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7		
03/29/94 21:32:16	2:18:32		0.0	325.8	510.2																	Equator - A		
03/29/94 21:32:18	2:18:34	238																				MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6	
03/29/94 21:36:04	2:22:20	226	10.0	325.8	467.3																	N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
03/29/94 21:39:44	2:26:00	220	20.0	325.8	442.7																	N20A	Load exposure table LUNARZ25N	
03/29/94 21:42:56	2:29:12		28.9	325.8	435.7																	Periselene		
03/29/94 21:43:21	2:29:37	217	30.0	325.8	435.8																	N30A	Load exposure table LUNARZ35N	
03/29/94 21:46:58	2:33:14	217	40.0	325.8	446.6																	N40A	Load exposure table LUNARZ45N	

Orbit 181 Timeline - Type B Orbit

03/29/94 21:50:39	2:36:55	221	50.0	325.8	475.3					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6					Resume HiRes imaging
03/29/94 21:54:28	2:40:44	229	60.0	325.9	522.4					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65; Select DHU SEQT 4					
03/29/94 21:55:28	2:41:44	60									Record in SDR Segment 7					SSDR Segment 7
03/29/94 21:58:29	2:44:45	181	70.0	326.0	588.7					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75; Select DHU SEQT 17					
03/29/94 22:02:45	2:49:01	256	80.0	326.5	675.2					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16					Stop laser ranging
03/29/94 22:03:15	2:49:31	30									Laser power OFF					
03/29/94 22:03:15	2:49:31	0									Load EEQ_21.UMI into SEQT 21					WAIT was for 30 tics instead of 30 seconds due to script error Restore original SEQT 21
Err:508																
Standard LM Post Script																
03/29/94 22:03:45	2:50:01	0									Stop Imaging - select ST-B					
03/29/94 22:03:50	2:50:06	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)					Slew to Vega (inertial pointing)
03/29/94 22:06:07	2:52:23									MAD	AOS					
03/29/94 22:06:50	2:53:06	180									Park opaque filter on HiRes (DHU SEQT 27)					
03/29/94 22:07:05	2:53:21	15									Select ST-B					
03/29/94 22:07:23	2:53:39		89.8	58.2	783.3						North Pole					
03/29/94 22:07:57	2:54:13		88.9	137.0	796.6						LDUSK					
03/29/94 22:12:29	2:58:45		80.0	144.5	913.8						N80D					
03/29/94 22:13:45	3:00:01	400									Perform UV0 imaging (DHU SEQT 29)					Start calibration imaging
03/29/94 22:13:57	3:00:13	12									Perform LWIR imaging (DHU SEQT 25)					
03/29/94 22:14:09	3:00:25	12									Perform NIR imaging (DHU SEQT 31)					
03/29/94 22:14:15	3:00:31	6									Load exposure table LUNIRDKS1					
03/29/94 22:14:21	3:00:37	6									Load exposure table LUNIRDKS2					
03/29/94 22:14:27	3:00:43	6									Perform HIRES imaging (DHU SEQT 30)					
Err:508	Err:508	30									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/29/94 22:18:09	3:04:26		70.0	144.9	1068.3						N70D					

Orbit 181 Timeline - Type B Orbit

03/29/94 22:20:30	3:06:46	Err:508								Switch to HGA				READY FOR DATA DUMP - Time approximate
														End Post Script
03/29/94 22:21:00	3:07:16									Switch to DHU mode @ 128 kbps				Ground Command
03/29/94 22:24:33	3:10:49		60.0	145.0	1246.9					N60D				
03/29/94 22:26:51	3:13:07									CAN LOS				
03/29/94 22:31:49	3:18:05		50.0	145.0	1449.1					N50D				
03/29/94 22:37:00	3:23:16									Resume downlink SSSR Segment 1				Ground Command
03/29/94 22:40:07	3:26:23		40.0	145.0	1672.3					N40D				
03/29/94 22:42:00	3:28:16									Downlink SSSR Segment 4 (orb 180)				Ground Command
03/29/94 22:49:37	3:35:53		30.0	145.0	1911.1					N30D				
03/29/94 22:52:57	3:39:13		26.8	145.0	1989.5					INPM				Enter penumbra
03/29/94 22:53:39	3:39:55		26.1	145.0	2005.9					INUM				Enter umbra
03/29/94 23:00:29	3:46:45		20.0	144.9	2156.5					N20D				
03/29/94 23:12:47	3:59:03		10.0	144.8	2394.9					N10D				
03/29/94 23:26:31	4:12:47		0.0	144.7	2609.0					Equator - D				
03/29/94 23:29:00	4:15:16									Downlink SSSR Segment 5 (orb 181)				Ground Command
03/29/94 23:30:00	4:16:16									Uplink and schedule L182 scripts				Ground Command
03/29/94 23:41:33	4:27:49		-10.0	144.6	2779.0					S10D				
03/29/94 23:57:31	4:43:47		-20.0	144.5	2886.2					S20D				
03/30/94 00:01:52	4:48:08		-22.7	144.5	2902.2					OUTUM				Exit umbra
03/30/94 00:02:44	4:49:00		-23.2	144.5	2904.7					OUTPM				Exit penumbra
03/30/94 00:08:00	4:54:16									Downlink SSSR Segment 6				Ground Command
03/30/94 00:12:11	4:58:27		-28.9	144.4	2917.9					Aposelene				

Orbit 182 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/30/94 00:12:11	0:00:00		-28.9	144.4	2917.9							Aposelene							Downlinking SDDR Segment 6 (orbit 181)
03/30/94 00:14:01	0:01:49		-30.0	144.4	2917.4							S30D							
03/30/94 00:30:25	0:18:13		-40.0	144.3	2868.7							S40D							
Standard Prep1 Script																			
03/30/94 00:45:43	0:33:31	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
End Prep1 Script																			
03/30/94 00:46:13	0:34:01		-50.0	144.2	2746.2							S50D							
03/30/94 00:58:00	0:45:48												Downlink SDDR Segment 7						Ground Command
03/30/94 01:00:59	0:48:48		-60.0	144.2	2564.7							S60D							
Standard Prep2 Script																			
03/30/94 01:10:33	0:58:21	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
End Prep2 Script																			
03/30/94 01:14:25	1:02:14		-70.0	144.3	2343.3							S70D							
03/30/94 01:17:00	1:04:48												SSDR to IDLE - downlink complete						Ground Command
Err:508																			
03/30/94 01:21:03	1:08:51	0											Msg "WARNING: Omni/2k in 1 min.."						
03/30/94 01:22:03	1:09:51	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/30/94 01:23:03	1:10:51	60											Switch to omni antennas						
03/30/94 01:24:03	1:11:51	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/30/94 01:26:03	1:13:51	120											UV & HR cameras ON						
03/30/94 01:26:24	1:14:12		-80.0	144.7	2101.8							S80D							
03/30/94 01:30:03	1:17:51	240											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
03/30/94 01:30:33	1:18:21	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/30/94 01:30:43	1:18:31	10											Perform NIR imaging (DHU SEQT 31)						
03/30/94 01:30:58	1:18:46	15											Err:508						Slew to nadir (inertial pointing)
Err:508																			
Err:508																			

Orbit 182 Timeline - Type A Orbit

03/30/94 01:35:58	1:23:46	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85			
03/30/94 01:36:28	1:24:16	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
03/30/94 01:36:58	1:24:46	30	-89.8	234.8	1856.6						South Pole Set SA step rate to LO			
03/30/94 01:38:02	1:25:50		-88.9	313.8	1829.7						LDAWN			
03/30/94 01:46:11	1:33:59	553	-80.0	322.4	1620.6						S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 14		
03/30/94 01:54:14	1:42:02	483	-70.0	322.9	1401.6						S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 13		
03/30/94 02:01:17	1:49:05	423	-60.0	323.0	1204.4						S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 12		
03/30/94 02:02:17	1:50:05	60										Record in SSSR Segment 2		SSDR Segment 2
03/30/94 02:07:29	1:55:17		-50.0	323.0	1031.0						S50A			
03/30/94 02:07:31	1:55:19	314									S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11		Stop HiRes imaging
03/30/94 02:12:35	2:00:23	304										Laser Power ON		
03/30/94 02:13:03	2:00:51	28	-40.0	323.1	881.9						S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10		
03/30/94 02:18:02	2:05:50	299	-30.0	323.1	756.4						S30A	Load EEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25S; Select DHU SEQT 9		UV and IR uncompressed
03/30/94 02:22:33	2:10:21		-20.0	323.1	653.3						S20A			
03/30/94 02:22:35	2:10:23	273									S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8		Start laser ranging Resume compression
03/30/94 02:26:47	2:14:35	252	-10.0	323.1	571.4						S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7		
03/30/94 02:30:43	2:18:31		0.0	323.1	509.4						Equator - A			
03/30/94 02:30:45	2:18:33	238									MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6		
03/30/94 02:34:31	2:22:19	226	10.0	323.1	466.5						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5		
03/30/94 02:35:31	2:23:19	60										Record in SSSR Segment 3		SSDR Segment 3
03/30/94 02:38:11	2:25:59	160	20.0	323.1	441.8						N20A	Load exposure table LUNARZ25N		
03/30/94 02:41:23	2:29:11		28.9	323.1	434.8						Periselene			
03/30/94 02:41:46	2:29:34		30.0	323.1	434.9						N30A			
03/30/94 02:41:48	2:29:36	217									N30A	Load exposure table LUNARZ35N		
03/30/94 02:45:23	2:33:12		40.0	323.1	445.7						N40A			
03/30/94 02:45:25	2:33:13	217									N40A	Load exposure table LUNARZ45N		
03/30/94 02:49:05	2:36:53	220	50.0	323.1	474.4						N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6		Resume HiRes imaging

Orbit 182 Timeline - Type A Orbit

03/30/94 02:52:54	2:40:42	229	60.0	323.2	521.4						N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 4						
03/30/94 02:53:54	2:41:42	60										Record in SDDR Segment 4						SDDR Segment 4
03/30/94 02:56:53	2:44:42		70.0	323.4	587.6						N70A							
03/30/94 02:56:55	2:44:43	181									N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 3						
03/30/94 03:01:11	2:48:59	256	80.0	323.9	674.1						N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9						Stop laser ranging
03/30/94 03:01:41	2:49:29	30										Laser power OFF						
03/30/94 03:02:11	2:49:59	30										Load EEQ_9.UMI into SEQT 9						Restore original SEQT 9
Err:508																		
03/30/94 03:05:48	2:53:36		89.8	50.6	782.0						North Pole							
03/30/94 03:06:22	2:54:10		88.9	132.4	795.5						LDUSK							
03/30/94 03:06:39	2:54:27										PMK	AOS						
Standard LM Post Script																		
03/30/94 03:06:49	2:54:37	0										Stop Imaging - select ST-B						
03/30/94 03:06:54	2:54:42	5										Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)						Slew to Vega (inertial pointing)
03/30/94 03:09:54	2:57:42	180										Park opaque filter on HiRes (DHU SEQT 27)						
03/30/94 03:10:09	2:57:57	15										Select ST-B						
03/30/94 03:10:54	2:58:43		80.0	141.5	912.7						N80D							
03/30/94 03:16:34	3:04:23		70.0	142.1	1067.2						N70D							
03/30/94 03:16:48	3:04:37	400										Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
03/30/94 03:17:01	3:04:49	12										Perform LWIR imaging (DHU SEQT 25)						
03/30/94 03:17:13	3:05:01	12										Perform NIR imaging (DHU SEQT 31)						
03/30/94 03:17:19	3:05:07	6										Load exposure table LUNIRDKS1						
03/30/94 03:17:25	3:05:13	6										Load exposure table LUNIRDKS2						
03/30/94 03:17:31	3:05:19	6										Perform HIRES imaging (DHU SEQT 30)						
03/30/94 03:18:01	3:05:43	30										Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec						Slew HGA to Earth with active waitwhileslew
03/30/94 03:22:58	3:10:46		60.0	142.2	1245.9						N60D							

Orbit 182 Timeline - Type A Orbit

03/30/94 03:24:01	3:11:43	360									Switch to HGA	READY FOR DATA DUMP - Time approximate
												End Post Script
03/30/94 03:25:00	3:12:48										Switch to DHU mode @ 128 kbps	Ground Command
03/30/94 03:28:00	3:15:48										Downlink SSSDR Segment 1	Ground Command
03/30/94 03:30:13	3:18:01		50.0	142.3	1448.2					N50D		
03/30/94 03:32:00	3:19:48										Uplink and schedule L183 scripts	Ground Command
03/30/94 03:37:00	3:24:48										Downlink SSSDR Segment 2	Ground Command
03/30/94 03:38:31	3:26:19		40.0	142.3	1671.5					N40D		
03/30/94 03:48:01	3:35:49		30.0	142.2	1910.5					N30D		
03/30/94 03:51:22	3:39:10		26.8	142.2	1989.4					INPM		Enter penumbra
03/30/94 03:52:05	3:39:53		26.1	142.2	2005.9					INUM		Enter umbra
03/30/94 03:58:53	3:46:41		20.0	142.2	2156.1					N20D		
03/30/94 04:03:00	3:50:48										Uplink DHU SEQT: EEQ_09X.UMI EEQ_03X.UMI EEQ_07X.UMI EEQ_06X.UMI	Ground Command These sequence tables take images more rapidly to assist in recovery orbits
03/30/94 04:11:11	3:58:59		10.0	142.1	2394.8					N10D		
03/30/94 04:21:00	4:08:48										Downlink SSSDR Segment 3	Ground Command
03/30/94 04:24:55	4:12:43		0.0	142.0	2609.2					Equator - D		
03/30/94 04:39:58	4:27:46		-10.0	141.9	2779.5					S10D		
03/30/94 04:53:00	4:40:48										Downlink SSSDR Segment 4	Ground Command
03/30/94 04:55:56	4:43:44		-20.0	141.8	2886.9					S20D		
03/30/94 05:00:14	4:48:02		-22.6	141.8	2902.8					OUTUM		Exit umbra
03/30/94 05:01:07	4:48:55		-23.1	141.8	2905.4					OUTPM		Exit penumbra
03/30/94 05:10:37	4:58:25		-28.9	141.7	2918.8					Aposelene		

Orbit 183 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/30/94 05:10:37	0:00:00		-28.9	141.7	2918.8							Aposelene							Downlinking SDR Segment 4 (orbit 182)
03/30/94 05:12:25	0:01:48		-30.0	141.7	2918.3							S30D							
03/30/94 05:25:00	0:14:22												SSDR to IDLE - downlink complete						Ground Command
03/30/94 05:28:51	0:18:14		-40.0	141.6	2869.6							S40D							
																			Standard Prep1 Script
03/30/94 05:44:10	0:33:32	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/30/94 05:44:40	0:34:03		-50.0	141.5	2747.1							S50D							
03/30/94 05:46:09	0:35:31										GDS	AOS							
03/30/94 05:59:26	0:48:49		-60.0	141.5	2565.4							S60D							
																			Standard Prep2 Script
03/30/94 06:09:00	0:58:22	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/30/94 06:12:52	1:02:15		-70.0	141.6	2343.8							S70D							
																			Err:508
03/30/94 06:20:00	1:09:22	0											Msg "WARNING: 2kbps in 1 min."						
03/30/94 06:21:00	1:10:22	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
03/30/94 06:22:00	1:11:22	60											Switch to omni antennas						
03/30/94 06:23:00	1:12:22	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/30/94 06:24:51	1:14:14		-80.0	142.2	2102.0							S80D							
03/30/94 06:25:00	1:14:22	120											UV & HR cameras ON						
03/30/94 06:28:30	1:17:52	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load EEQ_32.UMI into SEQT 25; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
03/30/94 06:29:00	1:18:22	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/30/94 06:29:10	1:18:32	10											Perform NIR imaging (DHU SEQT 31)						
03/30/94 06:29:25	1:18:47	15																Err:508	Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 183 Timeline - Type B Orbit

03/30/94 06:33:25	1:22:47	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85								
03/30/94 06:34:25	1:23:47	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)								START MAPPING
03/30/94 06:35:25	1:24:47	60	-89.8	230.4	1856.8					South Pole Set SA step rate to LO								
03/30/94 06:36:31	1:25:53		-88.9	309.2	1829.7					LDAWN								
03/30/94 06:44:37	1:34:00		-80.0	319.4	1620.5					S80A								
03/30/94 06:44:39	1:34:01	554								S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75; Select DHU SEQT 20							
03/30/94 06:52:42	1:42:04	483	-70.0	320.0	1401.3					S70A	Load exposure table LUNARZ65S; Select DHU SEQT 19							Stop HiRes imaging
03/30/94 06:55:58	1:45:20	196									Laser Power ON							
03/30/94 06:59:45	1:49:07	227	-60.0	320.2	1204.0					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 12							
03/30/94 07:04:58	1:54:20	313									Record in SSSR Segment 6							SSDR Segment 6
03/30/94 07:05:58	1:55:20	60	-50.0	320.3	1030.5					S50A	Load exposure table LUNARZ45S; Inertial pointing using quaternion table ORB51_RECOV1000; Select DHU SEQT 8							START OF ORBIT 51 DATA RECOVERY PROCEDURE
03/30/94 07:07:45	1:57:07	107									Load exposure table LUNARZ35S; Select DHU SEQT 7							
03/30/94 07:09:20	1:58:42	95									Use QTable ORB51_RECOV1001; Load exposure table LUNARZ25S; Select DHU SEQT 0							EEQ_09X.UMI is loaded into SEQT 0
03/30/94 07:11:00	2:00:22																	Start transition slew #1
03/30/94 07:11:29	2:00:52		-40.0	320.3	881.3					S40A								
03/30/94 07:12:40	2:02:02	200									Use Qtable ORB51_RECOV1002							
03/30/94 07:13:01	2:02:23									MAD	LOS							
03/30/94 07:14:00	2:03:22	80									Load exposure table LUNARZ35S							
03/30/94 07:15:00	2:04:22	60									Select DHU SEQT 7							End transition slew #1 Start imaging Orbit 51 track
03/30/94 07:16:00	2:05:22	60									Use ORB51_RECOV1003; Load exposure table LUNARZ25S; Select DHU SEQT 0							
03/30/94 07:16:28	2:05:51		-30.0	320.3	755.7					S30A								
03/30/94 07:19:00	2:08:22	180									Load exposure table LUNARZ15S; Select DHU SEQT 22							EEQ_03X.UMI is loaded into SEQT 22
03/30/94 07:19:20	2:08:42	20									Use QTable ORB51_RECOV1004							
03/30/94 07:21:00	2:10:23		-20.0	320.3	652.6					S20A								
03/30/94 07:22:00	2:11:22	160									Select DHU SEQT 8							Start transition slew #2
03/30/94 07:22:40	2:12:02	40									Use QTable ORB51_RECOV1005							
03/30/94 07:25:14	2:14:36	154	-10.0	320.3	570.6					S10A	Load exposure table LUNARZ25S							
03/30/94 07:26:00	2:15:22	46									Use QTable ORB51_RECOV1006; Select DHU SEQT 0							End transition slew #2 Start imaging Orbit 183 track
03/30/94 07:26:30	2:15:52	30									Load exposure table LUNARZ15S; Select DHU SEQT 22							
03/30/94 07:28:20	2:17:42	110									Load exposure table LUNARZ05S; Select DHU SEQT 23							EEQ_07X.UMI is loaded into SEQT 23

Orbit 183 Timeline - Type B Orbit

03/30/94 07:29:10	2:18:33		0.0	320.3	508.7					Equator - A			
03/30/94 07:29:20	2:18:42	60									Use QTable ORB51_RECOV1007		
03/30/94 07:30:00	2:19:22	40									Load exposure table LUNARZ05N; Select DHU SEQT 24	EEQ_06X.UMI is loaded into SEQT 24	
03/30/94 07:31:00	2:20:22	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Select DHU SEQT 6	END ORBIT 51 RECOVERY PROCEDURES Return to nadir mapping	
03/30/94 07:32:00	2:21:22	60									Record in SSSR Segment 7	SSDR Segment 7	
03/30/94 07:32:58	2:22:20	58	10.0	320.3	465.7					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5		
03/30/94 07:36:37	2:25:59	219	20.0	320.3	441.0					N20A	Load exposure table LUNARZ25N		
03/30/94 07:39:50	2:29:12		28.9	320.3	434.0					Periselene			
03/30/94 07:40:14	2:29:36	217	30.0	320.3	434.1					N30A	Load exposure table LUNARZ35N		
03/30/94 07:43:51	2:33:13	217	40.0	320.4	444.8					N40A	Load exposure table LUNARZ45N		
03/30/94 07:47:31	2:36:53	220	50.0	320.4	473.5					N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6		
03/30/94 07:51:20	2:40:42	229	60.0	320.5	520.5					N60A	Load exposure table LUNARZ65N; Select DHU SEQT 4		
03/30/94 07:55:20	2:44:42	240	70.0	320.7	586.8					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75; Select DHU SEQT 17	Resume HiRes imaging	
03/30/94 07:59:37	2:48:59	257	80.0	321.4	673.3					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16	Stop laser ranging	
03/30/94 08:00:07	2:49:29	30									Laser power OFF; Load EEQ_32.UMI into SEQT 25	Restore original SEQT 25	
													Err:508
03/30/94 08:04:13	2:53:36		89.8	46.1	781.0					North Pole			
03/30/94 08:04:47	2:54:09		88.9	127.9	794.6					LDUSK			
													Standard LM Post Script
03/30/94 08:05:15	2:54:37	0									Stop Imaging - select ST-B		
03/30/94 08:05:20	2:54:42	5									Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)	
03/30/94 08:08:20	2:57:42	180									Park opaque filter on HiRes (DHU SEQT 27)		
03/30/94 08:08:35	2:57:57	15									Select ST-B		
03/30/94 08:09:19	2:58:42		80.0	138.6	911.9					N80D			
03/30/94 08:15:00	3:04:22		70.0	139.2	1066.4					N70D			
03/30/94 08:15:15	3:04:37	400									Perform UV0 imaging (DHU SEQT 29)	Start calibration imaging	
03/30/94 08:15:27	3:04:49	12									Perform LWIR imaging (DHU SEQT 25)		
03/30/94 08:15:39	3:05:01	12									Perform NIR imaging (DHU SEQT 31)		
03/30/94 08:15:45	3:05:07	6									Load exposure table LUNIRDKS1		

Orbit 183 Timeline - Type B Orbit

03/30/94 08:15:51	3:05:13	6																Load exposure table LUNIRDKS2							
03/30/94 08:15:57	3:05:19	6																Perform HIRES imaging (DHU SEQT 30)							
03/30/94 08:16:21	3:05:43	30																Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMode=EarthPointing, Center); Activate waitwhile slew for 360 sec					Slew HGA to Earth with active waitwhileslew		
03/30/94 08:20:00	3:09:22	219																Switch to HGA						READY FOR DATA DUMP - Time approximate	
End Post Script																									
03/30/94 08:20:30	3:09:52																	Switch to DHU mode @ 128 kbps						Ground Command	
03/30/94 08:21:22	3:10:45		60.0	139.4	1245.1													N60D							
03/30/94 08:23:00	3:12:22																	Downlink SDDR Segment 6							Ground Command
03/30/94 08:28:39	3:18:01		50.0	139.5	1447.0													N50D							
03/30/94 08:36:55	3:26:18		40.0	139.5	1670.9													N40D							
03/30/94 08:46:26	3:35:48		30.0	139.5	1910.1													N30D							
03/30/94 08:47:00	3:36:22																	Uplink and schedule L184 scripts							Ground Command
03/30/94 08:49:48	3:39:11		26.8	139.5	1989.7													INPM							Enter penumbra
03/30/94 08:50:31	3:39:54		26.1	139.5	2006.2													INUM							Enter umbra
03/30/94 08:57:18	3:46:40		20.0	139.4	2155.9													N20D							
03/30/94 09:10:00	3:59:22																	Downlink SDDR Segment 5							Ground Command
03/30/94 09:09:35	3:58:58		10.0	139.4	2394.9													N10D							
03/30/94 09:24:00	4:13:22																	Downlink SDDR Segment 7							Ground Command
03/30/94 09:23:20	4:12:43		0.0	139.3	2609.5													Equator - D							
03/30/94 09:38:23	4:27:45		-10.0	139.2	2780.0													S10D							
03/30/94 09:54:21	4:43:44		-20.0	139.1	2887.6													S20D							
03/30/94 09:58:36	4:47:59		-22.6	139.1	2903.4													OUTUM							Exit umbra
03/30/94 09:59:28	4:48:51		-23.1	139.0	2906.0													OUTPM							Exit penumbra
03/30/94 10:09:03	4:58:26		-28.9	139.0	2919.6													Aposelene							

Orbit 184 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/30/94 10:09:03	0:00:00		-28.9	139.0	2919.6							Aposelene							Downlinking SDR Segment 7 (orbit 183)
03/30/94 10:10:51	0:01:48		-30.0	139.0	2919.1							S30D							
03/30/94 10:19:00	0:09:56												SSDR to IDLE - downlink complete						Ground Command
03/30/94 10:27:18	0:18:14		-40.0	138.9	2870.4							S40D							
03/30/94 10:41:38	0:32:34										CAN	AOS							
																			Standard Prep1 Script
03/30/94 10:42:37	0:33:33	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/30/94 10:43:07	0:34:03		-50.0	138.8	2747.7							S50D							
03/30/94 10:57:54	0:48:50		-60.0	138.9	2565.8							S60D							
																			Standard Prep2 Script
03/30/94 11:07:27	0:58:23	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/30/94 11:11:19	1:02:16		-70.0	139.0	2344.1							S70D							
																			Err:508
03/30/94 11:17:57	1:08:53	0											Msg "WARNING: Omni/2k in 1 min.."						
03/30/94 11:18:57	1:09:53	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Stop data dump
03/30/94 11:19:57	1:10:53	60											Switch to omni antennas						
03/30/94 11:20:57	1:11:53	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/30/94 11:22:57	1:13:53	120											UV & HR cameras ON						
03/30/94 11:23:18	1:14:15		-80.0	139.7	2102.1							S80D							
03/30/94 11:26:57	1:17:53	240											Initialize filters (DHU SEQT 27); Record in SDR Segment 1; Load Crux exposure table (LUNCRUX); Load EEQ_32.UMI into SEQT 25						Start SDR in Segment 1
03/30/94 11:27:27	1:18:23	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/30/94 11:27:37	1:18:33	10											Perform NIR imaging (DHU SEQT 31)						
03/30/94 11:27:52	1:18:48	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508

Orbit 184 Timeline - Type A Orbit

											Err:508	
03/30/94 11:32:52	1:23:48	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85	
03/30/94 11:33:22	1:24:18	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)	START MAPPING
03/30/94 11:33:52	1:24:48	30	-89.7	227.0	1856.8					South Pole	Set SA step rate to LO	
03/30/94 11:34:57	1:25:54		-88.9	304.7	1829.6					LDAWN		
03/30/94 11:43:06	1:34:02	554	-80.0	316.5	1620.2					S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 14	
03/30/94 11:51:09	1:42:05	483	-70.0	317.2	1400.9					S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 13	
03/30/94 11:58:12	1:49:08	423	-60.0	317.4	1203.5					S60A	Load exposure table LUNARZ55S; Select DHU SEQT 12	Stop HiRes imaging
03/30/94 11:59:12	1:50:08	60									Record in SDR Segment 2	SSDR Segment 2
03/30/94 12:04:25	1:55:21	313	-50.0	317.5	1030.0					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11	
03/30/94 12:09:28	2:00:24	303									Laser Power ON	
03/30/94 12:09:55	2:00:52		-40.0	317.5	880.7					S40A		
03/30/94 12:09:57	2:00:53	29								S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10	
03/30/94 12:14:55	2:05:51	298	-30.0	317.5	755.0					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
03/30/94 12:16:34	2:07:30	99									Inertial pointing using quaternion table ORB51_RECOV2000; Select DHU SEQT 0	START OF ORBIT 51 DATA RECOVERY PROCEDURE EEQ_09X.UMI is loaded into SEQT 0
03/30/94 12:17:50	2:08:46	76									Load exposure table LUNARZ15S; Select DHU SEQT 22	EEQ_03X.UMI is loaded into SEQT 22
03/30/94 12:19:27	2:10:24		-20.0	317.6	651.8					S20A		
03/30/94 12:19:54	2:10:50	124									Use Qtable ORB51_RECOV2001; Load exposure table LUNARZ05S; Select DHU SEQT 23	EEQ_07X.UMI is loaded into SEQT 23
03/30/94 12:21:21	2:12:17									PMK	LOS	
03/30/94 12:22:05	2:13:01	131									Select DHU SEQT 7	Start transition slew #1
03/30/94 12:23:14	2:14:10	69									Use QTable ORB51_RECOV2002	
03/30/94 12:23:39	2:14:35		-10.0	317.6	569.9					S10A		
03/30/94 12:25:35	2:16:31	141									Select DHU SEQT 23	End transition slew #1 Start imaging Orbit 51 track EEQ_07X.UMI is loaded into SEQT 23
03/30/94 12:26:34	2:17:30	59									Use QTable ORB51_RECOV2003	
03/30/94 12:27:36	2:18:33		0.0	317.6	507.9					Equator - A		
03/30/94 12:27:38	2:18:34	64								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 24	EEQ_06X.UMI is loaded into SEQT 24

Orbit 184 Timeline - Type A Orbit

03/30/94 12:29:35	2:20:31	117								Select DHU SEQT 6	Start transition slew #2
03/30/94 12:29:54	2:20:50	19								Use QTable ORB51_RECOV2004	
03/30/94 12:31:23	2:22:20		10.0	317.6	464.9				N10A		
03/30/94 12:32:24	2:23:20	150								Record in SSSR Segment 3	SSDR Segment 3
03/30/94 12:33:14	2:24:10	50								Use QTable ORB51_RECOV2005	
03/30/94 12:33:35	2:24:31	21								Select DHU SEQT 24	End transition slew #2 Start Orbit 184 imaging
03/30/94 12:35:02	2:25:58		20.0	317.6	440.2				N20A		
03/30/94 12:35:15	2:26:11	100								Load exposure table LUNARZ15N; Load EEQ_05X.UMI into SEQT 25; Select DHU SEQT 25	EEQ_05X.UMI is loaded into SEQT 25
03/30/94 12:36:34	2:27:30	79								Use QTable ORB51_RECOV2006	
03/30/94 12:37:00	2:27:56	26								Load exposure table LUNARZ25N	
03/30/94 12:38:15	2:29:11		28.9	317.6	433.2				Periselene		
03/30/94 12:38:35	2:29:31	95								Switch to lunar mapping mode (ACSMODE=LunarMapping); Select DHU SEQT 5	END ORBIT 51 RECOVERY PROCEDURES Return to nadir mapping
03/30/94 12:38:40	2:29:36	5	30.0	317.6	433.3				N30A	Load exposure table LUNARZ35N	
03/30/94 12:42:16	2:33:12	216	40.0	317.7	444.1				N40A	Load exposure table LUNARZ45N	
03/30/94 12:45:57	2:36:53	221	50.0	317.7	472.7				N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6	
03/30/94 12:49:45	2:40:41	228	60.0	317.8	519.7				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Select DHU SEQT 4	
03/30/94 12:50:45	2:41:41	60								Record in SSSR Segment 4	SSDR Segment 4
03/30/94 12:53:45	2:44:41	180	70.0	318.1	586.0				N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 3	Resume HiRes imaging
03/30/94 12:58:02	2:48:58	257	80.0	318.8	672.5				N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85 Select DHU SEQT 9	Stop laser ranging
03/30/94 12:58:32	2:49:28	30								Laser power OFF; Load EEQ_32.UMI into SEQT25	Restore original SEQT 25
Err:508											
03/30/94 13:02:39	2:53:36		89.7	49.3	780.6				North Pole		
03/30/94 13:03:11	2:54:07		88.9	123.4	793.9				LDUSK		
Standard LM Post Script											
03/30/94 13:03:39	2:54:35	0								Stop Imaging - select ST-B	
03/30/94 13:03:44	2:54:40	5								Set SA step rate to HI; Slew s/c sensors to Vega (GNC12VEGA); Laser power OFF; Load Vega exposure tables (LUNVEGA)	Slew to Vega (inertial pointing)
03/30/94 13:04:44	2:55:40	60								Park opaque filter on HiRes (DHU SEQT 27)	
03/30/94 13:04:59	2:55:55	15								Select ST-B	

Orbit 184 Timeline - Type A Orbit

03/30/94 13:07:44	2:58:41		80.0	135.6	911.2				N80D										
03/30/94 13:09:44	3:00:40	285								Perform LWIR imaging (DHU SEQT 25)									Extended LWIR dark field test
03/30/94 13:13:25	3:04:21		70.0	136.4	1065.7				N70D										
Err:508	Err:508	297								Perform NIR imaging (DHU SEQT 31)									
Err:508	Err:508	6								Load exposure table LUNIRDKS1									
Err:508	Err:508	6								Load exposure table LUNIRDKS2									
Err:508	Err:508	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhile slew for 360 sec									Slew HGA to Earth with active waitwhileslew
03/30/94 13:19:00	3:09:56	Err:508								Switch to HGA									READY FOR DATA DUMP - Time approximate
																			End Post Script
03/30/94 13:19:47	3:10:44		60.0	136.6	1244.6				N60D										
03/30/94 13:20:00	3:10:56									Switch to DHU mode @ 128 kbps									Ground Command
03/30/94 13:22:00	3:12:56									Downlink SSSR Segment 5									Ground Command
03/30/94 13:23:00	3:13:56									Uplink and schedule L185 scripts									Ground Command
03/30/94 13:27:02	3:17:58		50.0	136.7	1447.0				N50D										
03/30/94 13:35:20	3:26:16		40.0	136.7	1670.6				N40D										
03/30/94 13:36:00	3:26:56									Downlink SSSR Segment 2									Ground Command
03/30/94 13:37:00	3:27:56									Deselect ST (DHUSELNO); Uplink files for IMU test									IMU TEST Ground Command
03/30/94 13:40:00	3:30:56									Select ST-B									Ground Command - IMU test
03/30/94 13:43:00	3:33:56									Deselect ST (DHUSELNO)									Ground Command - IMU test
03/30/94 13:44:51	3:35:47		30.0	136.7	1910.0				N30D										
03/30/94 13:45:00	3:35:56									Select ST-B									Ground Command - IMU test
03/30/94 13:48:14	3:39:11		26.7	136.7	1990.3				INPM										Enter penumbra
03/30/94 13:48:58	3:39:54		26.1	136.7	2006.9				INUM										Enter umbra
03/30/94 13:55:41	3:46:38		20.0	136.7	2155.9				N20D										
03/30/94 14:08:00	3:58:57		10.0	136.6	2395.1				N10D										
03/30/94 14:15:00	4:05:56									Downlink SSSR Segment 3									Ground Command
03/30/94 14:21:45	4:12:41		0.0	136.5	2610.0				Equator - D										
03/30/94 14:36:47	4:27:43		-10.0	136.4	2780.6				S10D										
03/30/94 14:52:48	4:43:44		-20.0	136.3	2888.3				S20D										
03/30/94 14:56:00	4:46:56									Downlink SSSR Segment 4									Ground Command
03/30/94 14:56:58	4:47:54		-22.5	136.3	2903.9				OUTUM										Exit umbra
03/30/94 14:57:50	4:48:47		-23.1	136.3	2906.5				OUTPM										Exit penumbra
03/30/94 14:58:00	4:48:56									Load EEQ_23.UMI into SEQT 23									Ground Command
03/30/94 15:07:29	4:58:26		-28.9	136.3	2920.3				Aposelene										

Orbit 185 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/30/94 15:07:29	0:00:00		-28.9	136.3	2920.3							Aposelene							Downlinking SDR Segment 4 (orbit 184)
03/30/94 15:09:17	0:01:48		-30.0	136.3	2919.8							S30D							
03/30/94 15:11:37	0:04:07										GDS	LOS							
03/30/94 15:25:43	0:18:13		-40.0	136.2	2871.0							S40D							
03/30/94 15:27:00	0:19:30												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
03/30/94 15:41:05	0:33:35	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/30/94 15:41:33	0:34:03		-50.0	136.1	2748.2							S50D							
03/30/94 15:50:00	0:42:30												Deselect ST (DHUSELNO); Uplink files for IMU test						Ground Command - IMU test
03/30/94 15:55:00	0:47:30												Select ST-B						Ground Command - IMU test
03/30/94 15:56:19	0:48:49		-60.0	136.2	2566.1							S60D							
03/30/94 15:59:00	0:51:30												Deselect ST (DHUSELNO)						Ground Command - IMU test
03/30/94 16:02:00	0:54:30												Select ST-B						Ground Command - IMU test
																			Standard Prep2 Script
03/30/94 16:05:55	0:58:25	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/30/94 16:09:46	1:02:16		-70.0	136.4	2344.1							S70D							
																			Err:508
03/30/94 16:16:55	1:09:25	0											Msg "WARNING: 2kbps in 1 min."						
03/30/94 16:17:55	1:10:25	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/30/94 16:18:55	1:11:25	60											Switch to omni antennas						
03/30/94 16:19:55	1:12:25	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/30/94 16:21:46	1:14:16		-80.0	137.1	2101.9							S80D							
03/30/94 16:21:55	1:14:25	120											UV & HR cameras ON						
03/30/94 16:25:25	1:17:55	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
03/30/94 16:25:55	1:18:25	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/30/94 16:26:05	1:18:35	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 185 Timeline - Type B Orbit

03/30/94 16:26:20	1:18:50	15															Err:508			Slew to nadir (inertial pointing)
																				Err:508
																				Err:508
03/30/94 16:30:20	1:22:50	0																		Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85
03/30/94 16:31:20	1:23:50	60																		Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 21)
03/30/94 16:32:19	1:24:49		-89.7	224.3	1856.5															South Pole
03/30/94 16:32:20	1:24:50	60																		Set SA step rate to LO; Select DHU SEQT 21
03/30/94 16:33:24	1:25:54		-88.8	300.3	1829.3															SEQT command is redundant
03/30/94 16:41:31	1:34:01		-80.0	313.5	1619.8															S80A
03/30/94 16:41:33	1:34:03	553																		S80A Load exposure table LUNARZ75S; Load exposure table LUNARH75; Select DHU SEQT 20
03/30/94 16:49:36	1:42:06	483	-70.0	314.3	1400.4															S70A Load exposure table LUNARZ65S; Load exposure table LUNARH65; Select DHU SEQT 19
03/30/94 16:52:25	1:44:55	169																		Err:508
03/30/94 16:56:37	1:49:07		-60.0	314.6	1202.9															S60A
03/30/94 16:56:39	1:49:09	254																		S60A Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 11
03/30/94 17:02:51	1:55:21	372	-50.0	314.7	1029.3															S50A Load exposure table LUNARZ45S; Select DHU SEQT 10
03/30/94 17:07:54	2:00:24	303																		Laser Power ON
03/30/94 17:08:23	2:00:53	29	-40.0	314.7	880.0															S40A Switch to lunar mapping mode (ACSMoDe=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10
03/30/94 17:13:22	2:05:52	299	-30.0	314.8	754.3															S30A Load exposure table LUNARZ25S; Select DHU SEQT 9
03/30/94 17:14:22	2:06:52	60																		Record in SSSR Segment 6
03/30/94 17:17:54	2:10:24	212	-20.0	314.8	651.1															S20A Load exposure table LUNARZ15S; Select DHU SEQT 8
03/30/94 17:22:06	2:14:36	252	-10.0	314.8	569.2															S10A Load EEQ_07U into SEQT 07; Load exposure table LUNARZ05S; Select DHU SEQT 7
03/30/94 17:26:03	2:18:33	237	0.0	314.8	507.2															S10A Load exposure table LUNARZ05N; Select DHU SEQT 6
03/30/94 17:29:48	2:22:18		10.0	314.9	464.2															N10A
03/30/94 17:29:50	2:22:20	227																		N10A Load exposure table LUNARZ15N; Select DHU SEQT 5
03/30/94 17:33:29	2:25:59	219	20.0	314.9	439.5															N20A Load exposure table LUNARZ25N
03/30/94 17:36:40	2:29:10		28.9	314.9	432.5															Periselene

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03/30/94 17:37:05	2:29:35	216	30.0	314.9	432.6					N30A	Load exposure table LUNARZ35N				
03/30/94 17:40:42	2:33:12	217	40.0	315.0	443.4					N40A	Load exposure table LUNARZ45N				
03/30/94 17:44:22	2:36:52	220	50.0	315.0	472.0					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6				Resume HiRes imaging
03/30/94 17:48:09	2:40:40		60.0	315.2	519.1					N60A					
03/30/94 17:48:11	2:40:41	229								N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65; Select DHU SEQT 4				
03/30/94 17:49:11	2:41:41	60									Record in SSDR Segment 7				SSDR Segment 7
03/30/94 17:52:09	2:44:39		70.0	315.4	585.4					N70A					
03/30/94 17:52:11	2:44:41	180								N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75; Select DHU SEQT 17				
03/30/94 17:56:27	2:48:57	256	80.0	316.3	671.9					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16				Stop laser ranging
03/30/94 17:56:57	2:49:27	30									Laser power OFF				
03/30/94 17:56:57	2:49:27	0									Load EEQ_07.UMI into SEQT 07				WAIT was for 30 tics instead of 30 seconds due to script error Restore original SEQT 7
Err:508															
03/30/94 18:01:03	2:53:34		89.7	42.1	779.8					North Pole					
03/30/94 18:01:36	2:54:06		88.8	119.0	793.4					LDUSK					
Err:508															
03/30/94 18:02:05	2:54:35	0									Stop Imaging - select ST-B				
03/30/94 18:02:10	2:54:40	5									Err:508				Slew sensors to Earth (inertial pointing) with waitwhileslew
03/30/94 18:05:10	2:57:40	180									Select DHU SEQT 23				Earth imaging w/color HiRes
Err:508	Err:508	45									Slew s/c sensors to Vega (GNC12VEGA)				Slew to Vega (inertial pointing)
Err:508	Err:508	5									Select ST-B				
03/30/94 18:06:09	2:58:40		80.0	132.7	910.7					N80D					
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)				
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 360 sec				
03/30/94 18:09:24	3:01:54	Err:508									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)				Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)				
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)				
Err:508	Err:508	6									Load exposure table LUNIRDKS1				

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Err:508	Err:508	6									Load exposure table LUNIRDKS2					
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)					
Err:508	Err:508	24									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
03/30/94 18:11:49	3:04:19		70.0	133.6	1065.3					N70D						
03/30/94 18:16:00	3:08:30										Deselect ST (DHUSELNO); Uplink GNC files for IMU test					Ground Command - IMU test
03/30/94 18:16:30	3:09:00	Err:508									Switch to HGA					READY FOR DATA DUMP - Time approximate
Err:508																
03/30/94 18:18:00	3:10:30										Select ST-B					Ground Command END IMU TEST
03/30/94 18:18:13	3:10:43		60.0	133.8	1244.2					N60D						
03/30/94 18:19:30	3:12:00										Switch to DHU mode @ 128 kbps					Ground Command
03/30/94 18:24:00	3:16:30										Downlink SDR Segment 5					Ground Command
03/30/94 18:25:27	3:17:57		50.0	133.9	1446.8					N50D						
03/30/94 18:33:45	3:26:15		40.0	134.0	1670.5					N40D						
03/30/94 18:39:00	3:31:30										Update state vector (GNC53_30MAR1600)					Ground Command
03/30/94 18:43:16	3:35:46		30.0	133.9	1910.0					N30D						
03/30/94 18:46:41	3:39:11		26.7	133.9	1991.3					INPM						Enter penumbra
03/30/94 18:47:24	3:39:54		26.0	133.9	2007.9					INUM						Enter umbra
03/30/94 18:50:00	3:42:30										Uplink and schedule L186 scripts					Ground Command
03/30/94 18:52:00	3:44:30										Downlink SDR Segment 6					Ground Command
03/30/94 18:54:06	3:46:37		20.0	133.9	2156.2					N20D						
03/30/94 19:06:25	3:58:55		10.0	133.9	2395.6					N10D						
03/30/94 19:20:10	4:12:40		0.0	133.8	2610.6					Equator - D						
03/30/94 19:35:12	4:27:42		-10.0	133.7	2781.3					S10D						
03/30/94 19:51:13	4:43:43		-20.0	133.6	2889.0					S20D						
03/30/94 19:55:20	4:47:50		-22.5	133.6	2904.4					OUTUM						Exit umbra
03/30/94 19:56:12	4:48:43		-23.0	133.6	2907.0					OUTPM						Exit penumbra
03/30/94 20:05:54	4:58:25		-28.9	133.6	2921.0					Aposelene						

Orbit 186 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/30/94 20:05:54	0:00:00		-28.9	133.6	2921.0							Aposelene							Downlinking SSDR Segment 6 (orbit 185)
03/30/94 20:07:44	0:01:49		-30.0	133.5	2920.5							S30D							
03/30/94 20:09:00	0:03:05												Downlink SSDR Segment 7						Ground Command
03/30/94 20:14:00	0:08:05												Uplink E-series DHU sequence tables (SEQ_LUNAR_E)						Ground Command
03/30/94 20:24:00	0:18:05												Uplink patch to SAM software						Ground Command
03/30/94 20:24:10	0:18:16		-40.0	133.5	2871.5							S40D							
03/30/94 20:36:00	0:30:05												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
03/30/94 20:39:31	0:33:36	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/30/94 20:40:00	0:34:05		-50.0	133.5	2748.5							S50D							
03/30/94 20:54:46	0:48:52		-60.0	133.5	2566.2							S60D							
																			Standard Prep2 Script
03/30/94 21:04:21	0:58:26	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/30/94 21:08:13	1:02:18		-70.0	133.7	2344.0							S70D							
																			Err:508
03/30/94 21:13:51	1:07:56	0											Msg "WARNING: Omni/2k in 1 min.."						
03/30/94 21:14:51	1:08:56	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/30/94 21:15:51	1:09:56	60											Switch to omni antennas						
03/30/94 21:16:51	1:10:56	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/30/94 21:18:51	1:12:56	120											UV & HR cameras ON						
03/30/94 21:20:13	1:14:19		-80.0	134.6	2101.5							S80D							
03/30/94 21:22:51	1:16:56	240											Initialize filters (DHU SEQT 27); Record in SSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSDR in Segment 1
03/30/94 21:23:21	1:17:26	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/30/94 21:23:31	1:17:36	10											Perform NIR imaging (DHU SEQT 31)						
03/30/94 21:23:46	1:17:51	15												Err:508					Slew to nadir (inertial pointing)

Orbit 186 Timeline - Type A Orbit

											Err:508	
											Err:508	
03/30/94	21:29:46	1:23:51	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85	
03/30/94	21:30:16	1:24:21	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)	START MAPPING
03/30/94	21:30:46	1:24:51	30							South Pole	Set SA step rate to LO	
03/30/94	21:31:51	1:25:57		-88.8	295.8	1828.8				LDAWN		
03/30/94	21:39:59	1:34:04	553	-80.0	310.6	1619.2				S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 14	
03/30/94	21:48:02	1:42:07	483	-70.0	311.5	1399.7				S70A	LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 13	UV and IR uncompressed
03/30/94	21:55:05	1:49:10	423	-60.0	311.8	1202.1				S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 12	Resume compression
03/30/94	21:56:05	1:50:10	60								Record in SSSR Segment 2	SSDR Segment 2
03/30/94	22:01:17	1:55:22	312	-50.0	311.9	1028.6				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11	Stop HiRes imaging
03/30/94	22:06:20	2:00:25	303								Laser Power ON	
03/30/94	22:06:49	2:00:54	29	-40.0	312.0	879.3				S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10	
03/30/94	22:11:48	2:05:53	299	-30.0	312.0	753.6				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
03/30/94	22:16:20	2:10:25	272	-20.0	312.0	650.4				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
03/30/94	22:20:32	2:14:37	252	-10.0	312.1	568.4				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
03/30/94	22:24:29	2:18:34	237	0.0	312.1	506.5				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6	
03/30/94	22:28:15	2:22:20	226	10.0	312.1	463.5				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
03/30/94	22:29:15	2:23:20	60								Record in SSSR Segment 3	SSDR Segment 3
03/30/94	22:31:54	2:25:59	159	20.0	312.2	438.9				N20A	Load exposure table LUNARZ25N	
03/30/94	22:35:05	2:29:10		28.9	312.2	431.9				Periselene		
03/30/94	22:35:30	2:29:35	216	30.0	312.2	432.0				N30A	Load exposure table LUNARZ35N	
03/30/94	22:39:07	2:33:12	217	40.0	312.2	442.8				N40A	Load exposure table LUNARZ45N	
03/30/94	22:42:47	2:36:52	220	50.0	312.3	471.5				N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6	Resume HiRes imaging
03/30/94	22:46:35	2:40:40	228	60.0	312.5	518.6				N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65; Select DHU SEQT 4	

Orbit 186 Timeline - Type A Orbit

03/30/94 22:47:35	2:41:40	60								Record in SSSR Segment 4				SSDR Segment 4
										Load exposure table LUNNIR75N; Load exposure table LUNNIR75; Load exposure table LUNARH75;				
03/30/94 22:50:35	2:44:40	180	70.0	312.8	584.9					N70A Select DHU SEQT 3				
										Load exposure table LUNNIR85N; Load exposure table LUNNIR85; Load exposure table LUNARH85;				
03/30/94 22:54:52	2:48:57	257	80.0	313.8	671.5					N80A Select DHU SEQT 9				Stop laser ranging
03/30/94 22:55:22	2:49:27	30								Laser power OFF				
03/30/94 22:55:52	2:49:57	30								Load EEQ_13.UMI into SEQT 13				Restore original SEQT 13
														Err:508
03/30/94 22:59:28	2:53:33		89.7	41.4	779.5					North Pole				
03/30/94 23:00:01	2:54:06		88.8	114.6	793.0					LDUSK				
														Err:508
03/30/94 23:00:29	2:54:34	0												Stop Imaging - select ST-B
03/30/94 23:00:34	2:54:39	5												Slew sensors to Earth (inertial pointing) with waitwhileslew
03/30/94 23:03:40	2:57:45	320												Earth imaging w/color HiRes
Err:508	Err:508	45												Slew s/c sensors to Vega (GNC12VEGA)
Err:508	Err:508	5												Slew to Vega (inertial pointing)
03/30/94 23:04:33	2:58:39		80.0	129.8	910.3					N80D				
Err:508	Err:508	25												Park opaque filter on HiRes (DHU SEQT 27)
Err:508	Err:508	15												Select ST-B; Activate waitwhileslew for 320 sec
03/30/94 23:07:12	3:01:17	Err:508												Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)
Err:508	Err:508	12												Perform LWIR imaging (DHU SEQT 25)
Err:508	Err:508	12												Perform NIR imaging (DHU SEQT 31)
Err:508	Err:508	6												Load exposure table LUNIRDKS1
Err:508	Err:508	6												Load exposure table LUNIRDKS2
Err:508	Err:508	6												Perform HIRES imaging (DHU SEQT 30)
Err:508	Err:508	30												Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec
03/30/94 23:10:13	3:04:19		70.0	130.7	1065.1					N70D				Slew HGA to Earth with active waitwhileslew

Orbit 186 Timeline - Type A Orbit

03/30/94 23:13:00	3:07:05	Err:508									Switch to HGA				READY FOR DATA DUMP - Time approximate
															Err:508
03/30/94 23:14:00	3:08:05										Switch to DHU mode @ 128 kbps				Ground Command
03/30/94 23:16:36	3:10:41		60.0	131.0	1244.1					N60D					
03/30/94 23:16:49	3:10:54									MAD	AOS				
03/30/94 23:23:51	3:17:57		50.0	131.1	1446.8						N50D				
03/30/94 23:32:10	3:26:15		40.0	131.2	1670.6						N40D				
03/30/94 23:33:00	3:27:05											Downlink SSSR Segment 1			Ground Command
03/30/94 23:38:00	3:32:05											Uplink and schedule L187 scripts			Ground Command
03/30/94 23:41:39	3:35:45		30.0	131.2	1910.3						N30D				
03/30/94 23:42:50	3:36:55									CAN	LOS				
03/30/94 23:45:09	3:39:14		26.7	131.2	1992.6						INPM				Enter penumbra
03/30/94 23:45:51	3:39:56		26.0	131.2	2009.2						INUM				Enter umbra
03/30/94 23:52:00	3:46:05											Downlink SSSR Segment 2			Ground Command
03/30/94 23:52:31	3:46:37		20.0	131.2	2156.6						N20D				
03/31/94 00:04:50	3:58:55		10.0	131.1	2396.1						N10D				
03/31/94 00:05:00	3:59:05											Ranging B ON			Ground Command
03/31/94 00:18:35	4:12:40		0.0	131.1	2611.2						Equator - D				
03/31/94 00:24:00	4:18:05											Downlink SSSR Segment 3			Ground Command
03/31/94 00:33:38	4:27:43		-10.0	131.0	2782.0						S10D				
03/31/94 00:49:39	4:43:44		-20.0	130.9	2889.7						S20D				
03/31/94 00:53:42	4:47:47		-22.5	130.9	2904.9						OUTUM				Exit umbra
03/31/94 00:54:34	4:48:39		-23.0	130.9	2907.5						OUTPM				Exit penumbra
03/31/94 00:57:00	4:51:05											Downlink SSSR Segment 4			Ground Command
03/31/94 01:04:18	4:58:23		-28.9	130.8	2921.6						Aposelene				

Orbit 187 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/31/94 01:04:18	0:00:00		-28.9	130.8	2921.6							Aposelene							Downlinking SDR Segment 4 (orbit 186)
03/31/94 01:06:10	0:01:52		-30.0	130.8	2921.0							S30D							
03/31/94 01:22:36	0:18:17		-40.0	130.8	2871.9							S40D							
03/31/94 01:28:00	0:23:41												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
03/31/94 01:37:58	0:33:39	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/31/94 01:38:27	0:34:09		-50.0	130.8	2748.6							S50D							
03/31/94 01:53:14	0:48:56		-60.0	130.8	2566.0							S60D							
																			Standard Prep2 Script
03/31/94 02:02:48	0:58:29	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/31/94 02:06:40	1:02:22		-70.0	131.1	2343.6							S70D							
																			Err:508
03/31/94 02:13:48	1:09:29	0											Msg "WARNING: 2kbps in 1 min."						
03/31/94 02:14:48	1:10:29	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/31/94 02:15:48	1:11:29	60											Switch to omni antennas						
03/31/94 02:16:48	1:12:29	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/31/94 02:18:40	1:14:21		-80.0	132.0	2101.0							S80D							
03/31/94 02:18:48	1:14:29	120											UV & HR cameras ON						
03/31/94 02:19:00	1:14:41												Ranging B OFF Ranging A ON						Ground Command
03/31/94 02:22:18	1:17:59	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
03/31/94 02:22:48	1:18:29	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/31/94 02:22:58	1:18:39	10											Perform NIR imaging (DHU SEQT 31)						
03/31/94 02:23:13	1:18:54	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 187 Timeline - Type B Orbit

03/31/94 02:27:13	1:22:54	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85					
03/31/94 02:28:13	1:23:54	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)					START MAPPING
03/31/94 02:29:13	1:24:54	60	-89.6	220.0	1855.2					South Pole	Set SA step rate to LO					
03/31/94 02:30:18	1:25:59		-88.8	291.5	1828.1					LDAWN						
03/31/94 02:38:26	1:34:07	553	-80.0	307.7	1618.5					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75; Select DHU SEQT 20					
03/31/94 02:46:27	1:42:09		-70.0	308.7	1398.9					S70A						
03/31/94 02:46:29	1:42:10	483								S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65; Select DHU SEQT 19					
03/31/94 02:49:17	1:44:58	169									Err:508					Slew to South Pole for oblique viewing
03/31/94 02:53:31	1:49:12	253	-60.0	309.0	1201.4					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 11					
03/31/94 02:59:43	1:55:24	372	-50.0	309.1	1027.8					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10					Stop HiRes imaging
03/31/94 03:04:45	2:00:26	302									Laser Power ON					
03/31/94 03:05:15	2:00:56	30	-40.0	309.2	878.5					S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10					Resume nadir mapping
03/31/94 03:10:13	2:05:54	298	-30.0	309.3	752.8					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9					
03/31/94 03:11:13	2:06:54	60									Record in SDR Segment 6					SSDR Segment 6
03/31/94 03:14:45	2:10:26	212	-20.0	309.3	649.7					S20A	Load EEQ_08U into SEQT 08; Load exposure table LUNARZ15S; Select DHU SEQT 8					IR and UV uncompressed Start laser ranging
03/31/94 03:18:57	2:14:38	252	-10.0	309.3	567.8					S10A	Load EEQ_07U; Load exposure table LUNARZ05S; Select DHU SEQT 7					
03/31/94 03:22:54	2:18:35	237	0.0	309.4	505.8					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6					Resume compression
03/31/94 03:26:40	2:22:21	226	10.0	309.4	462.9					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5					
03/31/94 03:30:19	2:26:00	219	20.0	309.4	438.3					N20A	Load exposure table LUNARZ25N					
03/31/94 03:33:30	2:29:11		28.9	309.5	431.3					Periselene						
03/31/94 03:33:55	2:29:36	216	30.0	309.5	431.4					N30A	Load exposure table LUNARZ35N					
03/31/94 03:37:32	2:33:13	217	40.0	309.5	442.3					N40A	Load exposure table LUNARZ45N					
03/31/94 03:41:12	2:36:53	220	50.0	309.6	471.0					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6					Resume HiRes imaging
03/31/94 03:45:00	2:40:41	228	60.0	309.8	518.2					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65; Select DHU SEQT 4					

Orbit 187 Timeline - Type B Orbit

03/31/94 03:46:00	2:41:41	60									Record in SSSR Segment 7			SSDR Segment 7
03/31/94 03:49:00	2:44:41	180	70.0	310.2	584.6					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75; Select DHU SEQT 17			
03/31/94 03:53:16	2:48:57	256	80.0	311.2	671.2					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16			Stop laser ranging
03/31/94 03:53:46	2:49:27	30									Laser power OFF			
03/31/94 03:53:46	2:49:27	0									Load EEQ_08.UMI into SEQT 08			WAIT was for 30 tics instead of 30 seconds due to script error Restore original SEQT 8
Err:508														
03/31/94 03:57:53	2:53:35		89.6	41.1	779.5					North Pole				
03/31/94 03:58:26	2:54:07		88.8	110.3	792.8					LDUSK				
Err:508														
03/31/94 03:58:54	2:54:35	0									Stop Imaging - select ST-B			
03/31/94 03:58:59	2:54:40	5									Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
03/31/94 04:02:04	2:57:45	185									Select DHU SEQT 23			Earth imaging w/color HiRes
03/31/94 04:02:34	2:58:15	30									Stop imaging - select ST-B			
03/31/94 04:02:39	2:58:20	5									Slew s/c sensors to Vega (GNC12VEGA)			Slew to Vega (inertial pointing)
03/31/94 04:02:58	2:58:40		80.0	126.8	910.2					N80D				
03/31/94 04:03:09	2:58:50	30									Park opaque filter on HiRes (DHU SEQT 27)			
03/31/94 04:03:24	2:59:05	15									Select ST-B; Activate waitwhileslew for 320 sec			
03/31/94 04:05:39	3:01:20	135									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
03/31/94 04:05:51	3:01:32	12									Perform LWIR imaging (DHU SEQT 25)			
03/31/94 04:06:03	3:01:44	12									Perform NIR imaging (DHU SEQT 31)			
03/31/94 04:06:09	3:01:50	6									Load exposure table LUNIRDKS1			
03/31/94 04:06:15	3:01:56	6									Load exposure table LUNIRDKS2			
03/31/94 04:06:21	3:02:02	6									Perform HIRES imaging (DHU SEQT 30)			
03/31/94 04:06:51	3:02:32	30									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec			Slew HGA to Earth with active waitwhileslew
03/31/94 04:08:38	3:04:20		70.0	127.9	1065.0					N70D				

Orbit 187 Timeline - Type B Orbit

03/31/94 04:12:51	3:08:32	360									Switch to HGA				READY FOR DATA DUMP - Time approximate
Err:508															
03/31/94 04:15:01	3:10:42		60.0	128.2	1244.1					N60D					
03/31/94 04:15:33	3:10:42									PMK AOS					
03/31/94 04:16:00	3:11:41										Switch to DHU mode @ 128 kbps				Ground Command
03/31/94 04:17:00	3:12:41										Downlink SSSDR Segment 5				Ground Command
03/31/94 04:22:17	3:17:58		50.0	128.4	1447.0					N50D					
03/31/94 04:30:34	3:26:15		40.0	128.4	1671.0					N40D					
03/31/94 04:40:04	3:35:46		30.0	128.4	1910.8					N30D					
03/31/94 04:43:36	3:39:18		26.6	128.4	1994.1					INPM					Enter penumbra
03/31/94 04:44:20	3:40:01		25.9	128.4	2010.8					INUM					Enter umbra
03/31/94 04:46:00	3:41:41										Downlink SSSDR Segment 6				Ground Command
03/31/94 04:50:56	3:46:38		20.0	128.4	2157.2					N20D					
03/31/94 04:51:00	3:46:41										Uplink and schedule L188 scripts				Ground Command
03/31/94 05:03:15	3:58:57		10.0	128.4	2396.9					N10D					
03/31/94 05:17:01	4:12:43		0.0	128.3	2612.0					Equator - D					
03/31/94 05:32:04	4:27:46		-10.0	128.2	2782.8					S10D					
03/31/94 05:33:00	4:28:41										Read dosimeter latch values				Ground Command
03/31/94 05:38:00	4:33:41										Expose dosimeter				Scheduled Command
03/31/94 05:48:06	4:43:47		-20.0	128.2	2890.4					S20D					
03/31/94 05:52:04	4:47:46		-22.4	128.2	2905.3					OUTUM					Exit umbra
03/31/94 05:52:57	4:48:39		-23.0	128.1	2907.9					OUTPM					Exit penumbra
03/31/94 06:02:42	4:58:23		-28.9	128.1	2922.1					Aposelene					

Orbit 188 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/31/94 06:02:42	0:00:00		-28.9	128.1	2922.1							Aposelene							Downlinking SDDR Segment 6 (orbit 187)
03/31/94 06:04:38	0:01:55		-30.0	128.1	2921.5							S30D							
03/31/94 06:10:00	0:07:17												Downlink SDDR Segment 7						Ground Command
03/31/94 06:21:05	0:18:22		-40.0	128.1	2872.1							S40D							
03/31/94 06:35:00	0:32:17												SDDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
03/31/94 06:36:24	0:33:41	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/31/94 06:36:54	0:34:12		-50.0	128.1	2748.5							S50D							
03/31/94 06:51:41	0:48:59		-60.0	128.1	2565.7							S60D							
03/31/94 06:55:22	0:52:39										GDS	AOS							
																			Standard Prep2 Script
03/31/94 07:01:14	0:58:31	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/31/94 07:05:07	1:02:25		-70.0	128.4	2343.1							S70D							
																			Err:508
03/31/94 07:11:44	1:09:01	0											Msg "WARNING: Omni/2k in 1 min.."						
03/31/94 07:12:44	1:10:01	60											SDDR to IDLE; Switch to 2 kbps bypass mode						
03/31/94 07:13:44	1:11:01	60											Switch to omni antennas						
03/31/94 07:14:44	1:12:01	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/31/94 07:16:44	1:14:01	120											UV & HR cameras ON						
03/31/94 07:17:06	1:14:24		-80.0	129.5	2100.2							S80D							
03/31/94 07:20:44	1:18:01	240											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
03/31/94 07:21:14	1:18:31	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/31/94 07:21:24	1:18:41	10											Perform NIR imaging (DHU SEQT 31)						
03/31/94 07:21:39	1:18:56	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 188 Timeline - Type A Orbit

03/31/94 07:26:39	1:23:56	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85					
03/31/94 07:27:09	1:24:26	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)					START MAPPING
03/31/94 07:27:39	1:24:56	30								MAXS	Set SA step rate to LO					
03/31/94 07:27:39	1:24:57		-89.6	218.2	1854.2					South Pole						
03/31/94 07:28:44	1:26:02		-88.8	287.3	1827.3					LDAWN						
03/31/94 07:36:52	1:34:09	553	-80.0	304.7	1617.7					S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 14					
03/31/94 07:44:55	1:42:12	483	-70.0	305.8	1398.1					S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 13					
03/31/94 07:51:57	1:49:14	422	-60.0	306.2	1200.5					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 12					
03/31/94 07:52:57	1:50:14	60									Record in SDDR Segment 2					SDDR Segment 2
03/31/94 07:58:09	1:55:26	312	-50.0	306.4	1026.9					S50A	Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45S; Select DHU SEQT 11					Stop HiRes imaging UV and IR uncompressed
03/31/94 08:03:11	2:00:28	302									Laser Power ON					
03/31/94 08:03:17	2:00:34								MAD	LOS						
03/31/94 08:03:40	2:00:57	29	-40.0	306.4	877.7					S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10					Resume compression
03/31/94 08:08:39	2:05:56	299	-30.0	306.5	752.1					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9					
03/31/94 08:13:11	2:10:28	272	-20.0	306.5	649.0					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8					Start laser ranging
03/31/94 08:17:22	2:14:39	251	-10.0	306.6	567.1					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7					EEQ_07U.UMI still loaded into SEQT 7 from previous orbit
03/31/94 08:21:19	2:18:36	237	0.0	306.6	505.2					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6					Resume compression
03/31/94 08:25:05	2:22:22	226	10.0	306.7	462.4					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5					
03/31/94 08:26:05	2:23:22	60									Record in SDDR Segment 3					SDDR Segment 3
03/31/94 08:28:44	2:26:01	159	20.0	306.7	437.7					N20A	Load exposure table LUNARZ25N					
03/31/94 08:31:54	2:29:11		28.8	306.7	430.8					Periselene						
03/31/94 08:32:20	2:29:37	216	30.0	306.8	431.0					N30A	Load exposure table LUNARZ35N					
03/31/94 08:35:56	2:33:13	216	40.0	306.8	441.9					N40A	Load exposure table LUNARZ45N					
03/31/94 08:39:37	2:36:54	221	50.0	306.9	470.7					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6					Resume HiRes imaging
03/31/94 08:43:25	2:40:42	228	60.0	307.1	517.9					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 4					

Orbit 188 Timeline - Type A Orbit

03/31/94 08:44:25	2:41:42	60								Record in SDDR Segment 4										SSDR Segment 4
03/31/94 08:47:24	2:44:41	179	70.0	307.5	584.3					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 3									
03/31/94 08:51:41	2:48:58	257	80.0	308.7	671.1					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9									Stop laser ranging
03/31/94 08:52:11	2:49:28	30									Laser power OFF									
03/31/94 08:52:41	2:49:58	30									Load EEQ_11.UMI into SEQT 11									Restore original SEQT 11
Err:508																				
03/31/94 08:56:17	2:53:35		89.6	36.5	779.3					North Pole										
03/31/94 08:56:51	2:54:08		88.8	106.1	792.7					LDUSK										
Err:508																				
03/31/94 08:57:18	2:54:35	0									Stop Imaging - select ST-B									
03/31/94 08:57:23	2:54:40	5									Err:508									Slew sensors to Earth (inertial pointing) with waitwhileslew
03/31/94 09:00:23	2:57:40	180									Select DHU SEQT 23									Earth imaging w/color HiRes
03/31/94 09:00:53	2:58:10	30									Stop imaging - select ST-B									
03/31/94 09:00:58	2:58:15	5									Slew s/c sensors to Vega (GNC12VEGA)									Slew to Vega (inertial pointing)
03/31/94 09:01:22	2:58:40		80.0	123.9	910.2					N80D										
03/31/94 09:01:28	2:58:45	30									Park opaque filter on HiRes (DHU SEQT 27)									
03/31/94 09:01:43	2:59:00	15									Select ST-B; Activate waitwhileslew for 320 sec									
03/31/94 09:04:44	3:02:01	181									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)									Start calibration imaging
03/31/94 09:04:56	3:02:13	12									Perform LWIR imaging (DHU SEQT 25)									
03/31/94 09:05:08	3:02:25	12									Perform NIR imaging (DHU SEQT 31)									
03/31/94 09:05:14	3:02:31	6									Load exposure table LUNIRDKS1									
03/31/94 09:05:20	3:02:37	6									Load exposure table LUNIRDKS2									
03/31/94 09:05:26	3:02:43	6									Perform HIRES imaging (DHU SEQT 30)									
03/31/94 09:05:56	3:03:13	30									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec									Slew HGA to Earth with active waitwhileslew
03/31/94 09:07:02	3:04:20		70.0	125.1	1065.1					N70D										

Orbit 188 Timeline - Type A Orbit

03/31/94 09:11:00	3:08:17	237													Switch to HGA			READY FOR DATA DUMP - Time approximate
Err:508																		
03/31/94 09:12:00	3:09:17														Switch to DHU mode @ 128 kbps			Ground Command
03/31/94 09:13:26	3:10:43		60.0	125.4	1244.4									N60D				
03/31/94 09:15:00	3:12:17														Downlink SSSR Segment 1			Ground Command
03/31/94 09:20:42	3:17:59		50.0	125.6	1447.3									N50D				
03/31/94 09:24:00	3:21:17														Downlink SSSR Segment 2			Ground Command
03/31/94 09:28:58	3:26:16		40.0	125.7	1671.5									N40D				
03/31/94 09:32:00	3:29:17														DHU reset occurred			DHU Reset
03/31/94 09:33:00	3:30:17														SSDR to IDLE; Reset and start reload of DHU			Ground Command
03/31/94 09:38:29	3:35:47		30.0	125.7	1911.4									N30D				
03/31/94 09:40:00	3:37:17														Uplink Series-D DHU sequence tables (SEQ_LUNAR_D)			Ground Command - incorrect sequence tables loaded
03/31/94 09:42:04	3:39:22		26.6	125.7	1996.0									INPM				Enter penumbra
03/31/94 09:42:47	3:40:05		25.9	125.7	2012.7									INUM				Enter umbra
03/31/94 09:45:00	3:42:17														Uplink ST exposure tables; Deselect ST (DHUSELNO); Uplink compression tables; Select ST-B			Ground Command
03/31/94 09:49:00	3:46:17														Resume downlink SSSR Segment 2			Ground Command
03/31/94 09:49:22	3:46:39		20.0	125.7	2158.0									N20D				
03/31/94 10:00:00	3:57:17														Uplink and schedule L189 scripts			Ground Command
03/31/94 10:01:41	3:58:59		10.0	125.6	2397.7									N10D				
03/31/94 10:15:27	4:12:45		0.0	125.6	2612.9									Equator - D				
03/31/94 10:30:31	4:27:49		-10.0	125.5	2783.6									S10D				
03/31/94 10:46:32	4:43:50		-20.0	125.4	2891.1									S20D				
03/31/94 10:50:27	4:47:45		-22.4	125.4	2905.7									OUTUM				Exit umbra
03/31/94 10:51:20	4:48:37		-22.9	125.4	2908.3									OUTPM				Exit penumbra
03/31/94 10:54:00	4:51:17														Downlink SSSR Segment 3			Ground Command
03/31/94 11:01:07	4:58:24		-28.8	125.4	2922.5									Aposelene				

Orbit 189 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/31/94 11:01:07	0:00:00		-28.8	125.4	2922.5							Aposelene							Downlinking SDR Segment 3 (orbit 188)
03/31/94 11:03:04	0:01:57		-30.0	125.4	2921.9							S30D							
03/31/94 11:19:31	0:18:24		-40.0	125.3	2872.2							S40D							
Standard Prep1 Script																			
03/31/94 11:34:51	0:33:44	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
End Prep1 Script																			
03/31/94 11:35:21	0:34:14		-50.0	125.4	2748.3							S50D							
03/31/94 11:38:00	0:36:53												Downlink SDR Segment 4						Ground Command
03/31/94 11:38:27	3:10:42										CAN	AOS							
03/31/94 11:50:08	0:49:01		-60.0	125.4	2565.2							S60D							
Standard Prep2 Script																			
03/31/94 11:59:41	0:58:34	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
End Prep2 Script																			
03/31/94 12:03:34	1:02:27		-70.0	125.8	2342.3							S70D							
Err:508																			
03/31/94 12:10:41	1:09:34	0											Msg "WARNING: 2kbps in 1 min."						
03/31/94 12:11:41	1:10:34	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
03/31/94 12:12:41	1:11:34	60											Switch to omni antennas						
03/31/94 12:13:00	1:11:53												Ranging A OFF						Ground Command
03/31/94 12:13:41	1:12:34	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/31/94 12:15:33	1:14:26		-80.0	126.9	2099.3							S80D							
03/31/94 12:15:41	1:14:34	120											UV & HR cameras ON						
03/31/94 12:19:11	1:18:04	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
03/31/94 12:19:41	1:18:34	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/31/94 12:19:51	1:18:44	10											Perform NIR imaging (DHU SEQT 31)						
03/31/94 12:20:06	1:18:59	15												Err:508					Slew to nadir (inertial pointing)
Err:508																			
Err:508																			

Orbit 189 Timeline - Type B Orbit

03/31/94 12:24:06	1:22:59	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85				NOTE: This orbit was imaged using the D-series (uses ST-A) sequence tables instead of the E-series (uses ST-B)
03/31/94 12:25:06	1:23:59	60									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
03/31/94 12:26:06	1:24:59	60	-89.6	214.4	1853.4					South Pole	Set SA step rate to LO				
03/31/94 12:27:10	1:26:03		-88.8	283.2	1826.3					LDAWN					
03/31/94 12:35:18	1:34:11	552	-80.0	301.8	1616.7					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75; Select DHU SEQT 20				
03/31/94 12:43:20	1:42:13	482	-70.0	303.0	1397.1					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65; Select DHU SEQT 19				
03/31/94 12:46:09	1:45:02	169									Err:508				Slew to South Pole for oblique viewing
03/31/94 12:50:23	1:49:16	254	-60.0	303.4	1199.5					S60A	Load EEQ_11U into SEQT 11; Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 11				UV anr IR uncompressed
03/31/94 12:56:35	1:55:28	372	-50.0	303.6	1026.0					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10				Stop HiRes imaging Resume compression
03/31/94 13:01:36	2:00:29	301									Laser Power ON				
03/31/94 13:02:06	2:00:59	30	-40.0	303.7	876.8					S40A	Switch to lunar mapping mode (ACSMoDe=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping
03/31/94 13:07:04	2:05:57	298	-30.0	303.7	751.3					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
03/31/94 13:08:04	2:06:57	60									Record in SSSR Segment 6				SSDR Segment 6
03/31/94 13:11:34	2:10:27		-20.0	303.8	648.2					S20A					
03/31/94 13:11:36	2:10:29	212								S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
03/31/94 13:13:39	3:10:42								PMK	LOS					
03/31/94 13:15:47	2:14:40	251	-10.0	303.8	566.4					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
03/31/94 13:19:44	2:18:37	237	0.0	303.9	504.6					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
03/31/94 13:23:28	2:22:21		10.0	303.9	461.8					N10A					
03/31/94 13:23:30	2:22:23	226								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
03/31/94 13:27:08	2:26:01	218	20.0	304.0	437.3					N20A	Load exposure table LUNARZ25N				
03/31/94 13:30:17	2:29:10		28.8	304.0	430.4					Periselene					
03/31/94 13:30:44	2:29:37	216	30.0	304.0	430.6					N30A	Load exposure table LUNARZ35N				
03/31/94 13:34:21	2:33:14	217	40.0	304.1	441.5					N40A	Load exposure table LUNARZ45N				
03/31/94 13:38:01	2:36:54	220	50.0	304.2	470.4					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6				Resume HiRes imaging

Orbit 189 Timeline - Type B Orbit

03/31/94 13:41:49	2:40:42	228	60.0	304.4	517.7					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65; Select DHU SEQT 4				
03/31/94 13:42:49	2:41:42	60									Record in SDR Segment 7				SSDR Segment 7
03/31/94 13:45:49	2:44:42	180	70.0	304.9	584.2					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75; Select DHU SEQT 17				
03/31/94 13:50:05	2:48:58	256	80.0	306.1	671.1					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16				Stop laser ranging
03/31/94 13:50:35	2:49:28	30									Laser power OFF				
03/31/94 13:51:05	2:49:58	30									Load EEQ_11.UMI into SEQT 11				Restore original (EEQ) SEQT 11
Err:508															
03/31/94 13:54:41	2:53:34		89.6	32.8	779.2					North Pole					
03/31/94 13:55:14	2:54:07		88.8	102.0	792.8					LDUSK					
Err:508															
03/31/94 13:55:42	2:54:35	0									Stop Imaging - select ST-B				
03/31/94 13:55:47	2:54:40	5									Err:508				Slew sensors to Earth (inertial pointing) with waitwhileslew
03/31/94 13:58:53	2:57:46	186									Select DHU SEQT 23				Earth imaging w/color HiRes
03/31/94 13:59:23	2:58:30	30									Stop imaging - select ST-B				
03/31/94 13:59:28	2:58:35	5									Slew s/c sensors to Vega (GNC12VEGA)				Slew to Vega (inertial pointing)
03/31/94 13:59:46	2:58:39		80.0	121.0	910.3					N80D					
03/31/94 13:59:58	2:59:01	30									Park opaque filter on HiRes (DHU SEQT 27)				
03/31/94 14:00:13	2:59:15	15									Select ST-B; Activate waitwhileslew for 320 sec				
03/31/94 14:03:05	3:01:57	172									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)				Start calibration imaging
03/31/94 14:03:17	3:02:10	12									Perform LWIR imaging (DHU SEQT 25)				
03/31/94 14:03:29	3:02:22	12									Perform NIR imaging (DHU SEQT 31)				
03/31/94 14:03:35	3:02:28	6									Load exposure table LUNIRDKS1				
03/31/94 14:03:41	3:02:34	6									Load exposure table LUNIRDKS2				
03/31/94 14:03:47	3:02:40	6									Perform HIRES imaging (DHU SEQT 30)				
03/31/94 14:04:17	3:03:10	30									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec				Slew HGA to Earth with active waitwhileslew

Orbit 189 Timeline - Type B Orbit

03/31/94 14:05:26	3:04:19		70.0	122.2	1065.4				N70D										
03/31/94 14:10:00	3:05:10	343								Switch to HGA									READY FOR DATA DUMP - Time approximate
Err:508																			
03/31/94 14:11:00	3:09:53									Switch to DHU mode @ 128 kbps									Ground Command
03/31/94 14:11:51	3:10:44		60.0	122.6	1244.8				N60D										
03/31/94 14:16:00	3:14:53									Resume downlink SSSR Segment 4									Ground Command
03/31/94 14:19:05	3:17:58		50.0	122.8	1447.9				N50D										
03/31/94 14:22:00	3:20:53									DHU reset occurred									DHU Reset
03/31/94 14:27:23	3:26:16		40.0	122.9	1672.1				N40D										
03/31/94 14:30:00	3:28:53									Switch to bypass mode @ 2 kbps; Reset and start reload of DHU									Ground Command
03/31/94 14:36:54	3:35:47		30.0	122.9	1912.2				N30D										
03/31/94 14:38:00	3:36:53									Switch to DHU mode @ 128 kbps									Ground Command
03/31/94 14:40:32	3:39:25									Uplink E-series DHU sequence tables (SEQ_LUNAR_E)									Ground Command
03/31/94 14:40:32	3:39:25		26.5	122.9	1998.1				INPM										Enter penumbra
03/31/94 14:41:16	3:40:09		25.8	122.9	2014.8				INUM										Enter umbra
03/31/94 14:47:00	3:45:53									Downlink SSSR Segment 5; Uplink DHU tables									Ground Command
03/31/94 14:47:47	3:46:40		20.0	122.9	2158.9				N20D										
03/31/94 14:59:00	3:57:53									Uplink LHG189 scripts									Ground Command LHG scripts uploaded but not scheduled. LHG observation canceled because of DHU reset
03/31/94 15:00:00	3:58:53									Uplink and schedule L190 scripts									Ground Command
03/31/94 15:00:07	3:59:00		10.0	122.9	2398.7				N10D										
03/31/94 15:13:53	4:12:46		0.0	122.8	2613.9				Equator - D										
03/31/94 15:28:57	4:27:50		-10.0	122.8	2784.5				S10D										
03/31/94 15:31:00	4:29:53									Downlink SSSR Segment 6									Ground Command
03/31/94 15:45:00	4:43:53		-20.0	122.7	2891.7				S20D										
03/31/94 15:48:50	4:47:43		-22.3	122.7	2906.0				OUTUM										Exit umbra
03/31/94 15:49:42	4:48:35		-22.9	122.7	2908.7				OUTPM										Exit penumbra
03/31/94 15:59:29	4:58:22		-28.8	122.7	2922.9				Aposelene										

Orbit 190 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/31/94 15:59:29	0:00:00		-28.8	122.7	2922.9							Aposelene							Downlinking SDR Segment 6 (orbit 189)
03/31/94 16:01:31	0:02:01		-30.0	122.7	2922.3							S30D							
03/31/94 16:04:38	0:05:08										GDS	LOS							
03/31/94 16:17:58	0:18:28		-40.0	122.6	2872.2							S40D							
03/31/94 16:33:00	0:33:30												Downlink SDR Segment 7						Ground Command
																			Standard Prep1 Script
03/31/94 16:33:17	0:33:47	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/31/94 16:33:48	0:34:18		-50.0	122.6	2748.0							S50D							
03/31/94 16:41:00	0:41:30												Read dosimeter latch values						Ground Command
03/31/94 16:46:00	0:46:30												Expose dosimeter						Scheduled Command
03/31/94 16:48:35	0:49:05		-60.0	122.8	2564.6							S60D							
03/31/94 16:57:00	0:57:30												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep2 Script
03/31/94 16:58:07	0:58:37	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/31/94 17:02:01	1:02:31		-70.0	123.1	2341.5							S70D							
03/31/94 17:07:00	1:07:30												Ranging A ON Ranging B ON						Ground Command
																			Err:508
03/31/94 17:08:37	1:09:07	0											Msg "WARNING: Omni/2k in 1 min.."						
03/31/94 17:09:37	1:10:07	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/31/94 17:10:37	1:11:07	60											Switch to omni antennas						
03/31/94 17:11:37	1:12:07	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
03/31/94 17:13:37	1:14:07	120											UV & HR cameras ON						
03/31/94 17:14:00	1:14:31		-80.0	124.3	2098.3							S80D							
03/31/94 17:17:37	1:18:07	240											Initialize filters (DHU SEQT 27); Record in SDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 1
03/31/94 17:18:07	1:18:37	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/31/94 17:18:17	1:18:47	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 190 Timeline - Type A Orbit

03/31/94 17:18:32	1:19:02	15												Err:508	Slew to nadir (inertial pointing)
Err:508															
Err:508															
03/31/94 17:23:32	1:24:02	0													Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85
03/31/94 17:24:02	1:24:32	30													Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)
03/31/94 17:24:32	1:25:02	30	-89.5	211.0	1852.5					South Pole					Load EEQ_15U.UMI into SEQT 15; Set SA step rate to LO; Select DHU SEQT 15
03/31/94 17:25:37	1:26:07		-88.8	279.2	1825.3					LDAWN					UV and IR uncompressed
03/31/94 17:33:44	1:34:14	552	-80.0	298.9	1615.7					S80A					Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 14
03/31/94 17:41:46	1:42:16	482	-70.0	300.2	1396.0					S70A					Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 13
03/31/94 17:48:48	1:49:18	422	-60.0	300.6	1198.5					S60A					Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 12
03/31/94 17:49:48	1:50:18	60													Record in SSDR Segment 2
03/31/94 17:55:00	1:55:30	312	-50.0	300.8	1025.1					S50A					Load exposure table LUNARZ45S; Select DHU SEQT 11
03/31/94 18:00:00	2:00:30	300													Laser Power ON
03/31/94 18:00:29	2:01:00		-40.0	300.9	876.0					S40A					
03/31/94 18:00:31	2:01:01	31								S40A					Load exposure table LUNARZ35S; Select DHU SEQT 10
03/31/94 18:05:28	2:05:58	297	-30.0	301.0	750.5					S30A					Load exposure table LUNARZ25S; Select DHU SEQT 9
03/31/94 18:10:00	2:10:30	272	-20.0	301.1	647.5					S20A					Load exposure table LUNARZ15S; Select DHU SEQT 8
03/31/94 18:14:12	2:14:42	252	-10.0	301.1	565.8					S10A					Load exposure table LUNARZ05S; Select DHU SEQT 7
03/31/94 18:18:08	2:18:38	236	0.0	301.1	504.1					Equator - A					Load exposure table LUNARZ05N; Select DHU SEQT 6
03/31/94 18:21:54	2:22:24	226	10.0	301.2	461.3					N10A					Load exposure table LUNARZ15N; Select DHU SEQT 5
03/31/94 18:22:54	2:23:24	60													Record in SSDR Segment 3
03/31/94 18:25:33	2:26:03	159	20.0	301.2	436.9					N20A					Load exposure table LUNARZ25N
03/31/94 18:28:41	2:29:11		28.8	301.3	430.1					Periselenes					
03/31/94 18:29:08	2:29:38	215	30.0	301.3	430.2					N30A					Load exposure table LUNARZ35N
03/31/94 18:32:44	2:33:14	216								N40A					Load exposure table LUNARZ45N
03/31/94 18:32:44	2:33:14		40.0	301.4	441.3					N40A					

Orbit 190 Timeline - Type A Orbit

03/31/94 18:36:24	2:36:54	220								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6			
03/31/94 18:36:24	2:36:54		50.0	301.5	470.2					N50A				
03/31/94 18:40:12	2:40:42	228								N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 4			Resume HiRes imaging
03/31/94 18:40:12	2:40:43		60.0	301.8	517.6					N60A				
03/31/94 18:41:12	2:41:42	60									Record in SDR Segment 4			SSDR Segment 4
03/31/94 18:44:12	2:44:42	180								N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 3			
03/31/94 18:44:12	2:44:43		70.0	302.2	584.2					N70A				
03/31/94 18:48:28	2:48:58	256								N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9			Stop laser ranging
03/31/94 18:48:28	2:48:58		80.0	303.5	671.1					N80A				
03/31/94 18:48:58	2:49:28	30									Laser power OFF			
03/31/94 18:49:28	2:49:58	30									Load EEQ_15.UMI into SEQT 15			Restore original SEQT 15
														Err:508
03/31/94 18:53:06	2:53:36		89.5	29.7	779.4					North Pole				
03/31/94 18:53:38	2:54:09		88.8	98.0	793.0					LDUSK				
														Err:508
03/31/94 18:54:06	2:54:36	0									Stop Imaging - select ST-B			
03/31/94 18:54:11	2:54:41	5												Slew sensors to Earth (inertial pointing) with waitwhileslew
03/31/94 18:57:15	2:57:45	184									Select DHU SEQT 23			Earth imaging w/color HiRes
03/31/94 18:57:45	2:58:15	30									Stop imaging - select ST-B			
03/31/94 18:57:50	2:58:20	5									Slew s/c sensors to Vega (GNC12VEGA)			Slew to Vega (inertial pointing)
03/31/94 18:58:11	2:58:41		80.0	118.1	910.6					N80D				
03/31/94 18:58:20	2:58:50	30									Park opaque filter on HiRes (DHU SEQT 27)			
03/31/94 18:58:35	2:59:05	15									Select ST-B; Activate waitwhileslew for 320 sec			
03/31/94 19:01:40	3:02:10	185									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
03/31/94 19:01:52	3:02:22	12									Perform LWIR imaging (DHU SEQT 25)			
03/31/94 19:02:04	3:02:34	12									Perform NIR imaging (DHU SEQT 31)			

Orbit 190 Timeline - Type A Orbit

03/31/94 19:02:10	3:02:40	6								Load exposure table LUNIRDKS1			
03/31/94 19:02:16	3:02:46	6								Load exposure table LUNIRDKS2			
03/31/94 19:02:22	3:02:52	6								Perform HIRES imaging (DHU SEQT 30)			
03/31/94 19:02:52	3:03:22	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMode=EarthPointing, Center); Activate waitwhileslew for 360 sec			Slew HGA to Earth with active waitwhileslew
03/31/94 19:03:51	3:04:22		70.0	119.4	1065.8				N70D				
03/31/94 19:08:52	3:09:22	360								Switch to HGA			READY FOR DATA DUMP - Time approximate
													Err:508
03/31/94 19:10:14	3:10:45		60.0	119.9	1245.3				N60D				
03/31/94 19:17:00	3:17:30									Switch to DHU mode @ 128 kbps			Ground Command
03/31/94 19:17:30	3:18:01		50.0	120.0	1448.6				N50D				
03/31/94 19:19:00	3:19:30									Downlink SSSR Segment 1			Ground Command
03/31/94 19:25:48	3:26:19		40.0	120.1	1673.0				N40D				
03/31/94 19:28:00	3:28:30									Ranging A OFF Ranging B OFF			Ground Command
03/31/94 19:29:00	3:29:30									Load LHGSTB_22.UMI into SEQT 22			Ground Command
03/31/94 19:35:00	3:35:30									Downlink SSSR Segment 2			Ground Command
03/31/94 19:35:19	3:35:50		30.0	120.2	1913.2				N30D				
03/31/94 19:39:01	3:39:32		26.5	120.2	2000.4				INPM				Enter penumbra
03/31/94 19:39:44	3:40:15		25.8	120.2	2017.2				INUM				Enter umbra
03/31/94 19:42:00	3:42:30									Uplink and schedule L191 scripts			Ground Command
03/31/94 19:46:12	3:46:42		20.0	120.2	2160.0				N20D				
03/31/94 19:58:33	3:59:03		10.0	120.1	2399.8				N10D				
03/31/94 20:08:00	4:08:30									Downlink SSSR Segment 3			Ground Command
03/31/94 20:12:20	4:12:51		0.0	120.1	2614.9				Equator - D				
03/31/94 20:27:24	4:27:54		-10.0	120.0	2785.3				S10D				
03/31/94 20:30:00	4:30:30									Update state vector (GNC53_31MAR2000)			Ground Command
03/31/94 20:43:27	4:43:58		-20.0	120.0	2892.3				S20D				
03/31/94 20:47:12	4:47:42		-22.3	120.0	2906.3				OUTUM				Exit umbra
03/31/94 20:44:00	4:44:30									Downlink SSSR Segment 4			Ground Command
03/31/94 20:48:05	4:48:36		-22.8	120.0	2909.0				OUTPM				Exit penumbra
03/31/94 20:57:52	4:58:22		-28.7	119.9	2923.2				Aposelene				

Orbit 191 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
03/31/94 20:57:52	0:00:00		-28.7	119.9	2923.2							Aposelene							Downlinking SDR Segment 4 (orbit 190)
03/31/94 20:59:58	0:02:06		-30.0	119.9	2922.5							S30D							
03/31/94 21:16:26	0:18:34		-40.0	119.9	2872.1							S40D							
03/31/94 21:18:00	0:20:07												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
03/31/94 21:31:44	0:33:51	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
03/31/94 21:32:16	0:34:24		-50.0	119.9	2747.5							S50D							
03/31/94 21:47:02	0:49:10		-60.0	120.1	2563.8							S60D							
																			Standard Prep2 Script
03/31/94 21:56:34	0:58:41	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
03/31/94 22:00:28	1:02:36		-70.0	120.4	2340.5							S70D							
																			Err:508
03/31/94 22:07:34	1:09:41	0											Msg "WARNING: 2kbps in 1 min."						
03/31/94 22:08:34	1:10:41	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
03/31/94 22:09:34	1:11:41	60											Switch to omni antennas						
03/31/94 22:10:34	1:12:41	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
03/31/94 22:12:27	1:14:35		-80.0	121.8	2097.2							S80D							
03/31/94 22:12:34	1:14:41	120											UV & HR cameras ON						
03/31/94 22:16:04	1:18:11	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
03/31/94 22:16:34	1:18:41	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
03/31/94 22:16:44	1:18:51	10											Perform NIR imaging (DHU SEQT 31)						
03/31/94 22:16:59	1:19:06	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 191 Timeline - Type B Orbit

03/31/94 22:20:59	1:23:06	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85						
03/31/94 22:21:59	1:24:06	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)						START MAPPING
03/31/94 22:22:57	1:25:05		-89.5	207.9	1851.4					South Pole							
03/31/94 22:22:59	1:25:06	60								MAXS	Set SA step rate to LO						
03/31/94 22:24:03	1:26:11		-88.8	275.3	1824.1					LDAWN							
03/31/94 22:32:10	1:34:17	551	-80.0	296.0	1614.5					S80A	Load EEQ_20U into SEQT 20; Load exposure table LUNARZ75S; Load exposure table LUNARH75; Select DHU SEQT 20						UV and IR uncompressed
03/31/94 22:40:12	1:42:19	482	-70.0	297.4	1394.9					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65; Select DHU SEQT 19						Resume compression
03/31/94 22:43:00	1:45:07	168									Err:508						Slew to South Pole for oblique viewing
03/31/94 22:47:13	1:49:20	253	-60.0	297.8	1197.5					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 11						
03/31/94 22:53:25	1:55:32	372	-50.0	298.0	1024.1					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10						Stop HiRes imaging
03/31/94 22:58:25	2:00:32	300									Laser Power ON						
03/31/94 22:58:55	2:01:02	30	-40.0	298.2	875.1					S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10						Resume nadir mapping
03/31/94 23:03:53	2:06:00	298	-30.0	298.2	749.7					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9						
03/31/94 23:04:53	2:07:00	60									Record in SSSR Segment 6						SSSR Segment 6
03/31/94 23:08:25	2:10:32	212	-20.0	298.3	646.8					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8						Start laser ranging
03/31/94 23:12:36	2:14:43	251	-10.0	298.4	565.2					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
03/31/94 23:16:32	2:18:39	236	0.0	298.4	503.5					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6						
03/31/94 23:20:18	2:22:25	226	10.0	298.5	460.9					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
03/31/94 23:23:57	2:26:04	219	20.0	298.5	436.5					N20A	Load exposure table LUNARZ25N						
03/31/94 23:27:05	2:29:12		28.7	298.6	429.8					Periselene							
03/31/94 23:27:32	2:29:39	215	30.0	298.6	429.9					N30A	Load exposure table LUNARZ35N						
03/31/94 23:31:08	2:33:16		40.0	298.7	441.1					N40A							
03/31/94 23:31:09	2:33:16	217								N40A	Load exposure table LUNARZ45N						
03/31/94 23:34:49	2:36:56	220	50.0	298.8	470.1					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6						Resume HiRes imaging
03/31/94 23:38:37	2:40:44	228	60.0	299.1	517.5					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65; Select DHU SEQT 4						

Orbit 191 Timeline - Type B Orbit

03/31/94 23:39:37	2:41:44	60								Record in SDR Segment 7			SSDR Segment 7
03/31/94 23:42:37	2:44:44	180	70.0	299.5	584.3				N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75; Select DHU SEQT 17			
03/31/94 23:46:53	2:49:00	256	80.0	300.9	671.3				N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85; Select DHU SEQT 16			Stop laser ranging
03/31/94 23:47:23	2:49:30	30								Laser power OFF			
03/31/94 23:47:23	2:49:30	0								Load EEQ_20.UMI into SEQT 20			WAIT was for 30 tics instead of 30 seconds due to script error Restore original SEQT 20
Err:508													
03/31/94 23:51:29	2:53:37		89.5	27.1	779.7				North Pole				
03/31/94 23:52:02	2:54:10		88.8	94.2	793.3				LDUSK				
Err:508													
03/31/94 23:52:30	2:54:37	0								Stop Imaging - select ST-B			
03/31/94 23:52:35	2:54:42	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
03/31/94 23:55:35	2:57:42	180								Select DHU SEQT 23			Earth imaging w/color HiRes
03/31/94 23:56:05	2:58:12	30								Stop imaging - select ST-B			
03/31/94 23:56:10	2:58:17	5								Slew s/c sensors to Vega (GNC12VEGA)			Slew to Vega (inertial pointing)
03/31/94 23:56:34	2:58:42		80.0	115.2	911.0				N80D				
03/31/94 23:56:40	2:58:47	30								Park opaque filter on HiRes (DHU SEQT 27)			
03/31/94 23:56:55	2:59:02	15								Select ST-B; Activate waitwhileslew for 320 sec			
04/01/94 00:00:05	3:02:12	190								Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
04/01/94 00:00:17	3:02:24	12								Perform LWIR imaging (DHU SEQT 25)			
04/01/94 00:00:29	3:02:36	12								Perform NIR imaging (DHU SEQT 31)			
04/01/94 00:00:35	3:02:42	6								Load exposure table LUNIRDKS1			
04/01/94 00:00:41	3:02:48	6								Load exposure table LUNIRDKS2			
04/01/94 00:00:47	3:02:54	6								Perform HIRES imaging (DHU SEQT 30)			
04/01/94 00:01:17	3:03:24	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec			Slew HGA to Earth with active waitwhileslew
04/01/94 00:02:15	3:04:23		70.0	116.6	1066.3				N70D				

Orbit 191 Timeline - Type B Orbit

04/01/94 00:06:00	3:08:07	283								Switch to HGA				READY FOR DATA DUMP - Time approximate
Err:508														
04/01/94 00:08:38	3:10:46		60.0	117.1	1246.0					N60D				
04/01/94 00:10:00	3:12:07									Switch to DHU mode @ 128 kbps				Ground Command
04/01/94 00:15:54	3:18:02		50.0	117.3	1449.4					N50D				
04/01/94 00:21:30	3:23:37									MAD AOS				
04/01/94 00:24:14	3:26:21		40.0	117.4	1673.9					N40D				
04/01/94 00:33:45	3:35:53		30.0	117.4	1914.2					N30D				
04/01/94 00:37:00	3:39:07													Ground Command - slew around X-axis to get sun on SA & keep HGA toward Earth
04/01/94 00:38:00	3:40:07									IMU-B OFF; Laser heater OFF; SA mode to MANUAL; Park opaque filter on HiRes (DHUSEL27); Rotate SA towards sun				Ground Command Battery pressure was low, so these steps were taken to reduce power consumption and reposition SA to sun
04/01/94 00:37:30	3:39:38		26.4	117.4	2002.9					INPM				Enter penumbra
04/01/94 00:38:15	3:40:22		25.7	117.4	2019.7					INUM				Enter umbra
04/01/94 00:41:00	3:43:07													Downlink SSSR Segment 5
04/01/94 00:41:56	3:44:03									CAN LOS				Ground Command
04/01/94 00:42:00	3:44:07													ST-A camera OFF
04/01/94 00:44:38	3:46:46		20.0	117.4	2161.1					N20D				Ground Command - save power
04/01/94 00:45:00	3:47:07													Cancel LHG_191 script; Select ST-B
04/01/94 00:49:00	3:51:07													Ground Command - LHG observation canceled because of low battery pressure
04/01/94 00:49:00	3:51:07									SA-A mode to AUTO; Charged particle telescope (CPT) OFF				Ground Command - save power
04/01/94 00:56:59	3:59:07		10.0	117.4	2400.9					N10D				
04/01/94 01:10:47	4:12:54		0.0	117.4	2616.0					Equator -D				
04/01/94 01:14:00	4:16:07													Downlink SSSR Segment 6
04/01/94 01:25:51	4:27:59		-10.0	117.3	2786.2					S10D				Ground Command
04/01/94 01:41:54	4:44:02		-20.0	117.3	2892.9					S20D				
04/01/94 01:45:35	4:47:43		-22.2	117.2	2906.5					OUTUM				Exit umbra
04/01/94 01:46:28	4:48:36		-22.8	117.2	2909.2					OUTPM				Exit penumbra
04/01/94 01:52:00	4:54:07									SA-B mode to AUTO; IMU-B ON; Laser heater ON; ST-A camera ON; CPT ON				Ground Command Battery pressure had dropped to 167 psia
04/01/94 01:56:15	4:58:23		-28.7	117.2	2923.4					Aposelene				

Orbit 192 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/01/94 01:56:15	0:00:00		-28.7	117.2	2923.4							Aposelene							Downlinking SSSR Segment 6 (orbit 191)
04/01/94 01:58:26	0:02:11		-30.0	117.2	2922.7							S30D							
04/01/94 02:01:00	0:04:44												Uplink and schedule L192 scripts						Ground Command
04/01/94 02:06:00	0:09:44												Downlink SSSR Segment 7						Ground Command
04/01/94 02:14:53	0:18:37		-40.0	117.2	2871.9							S40D							
04/01/94 02:25:00	0:28:44												Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center)						Ground Command - battery hot Slew around X-axis
																			Standard Prep1 Script
04/01/94 02:30:10	0:33:54	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/01/94 02:30:43	0:34:28		-50.0	117.2	2746.9							S50D							
04/01/94 02:32:00	0:35:44												SSDR to IDLE - downlink complete						Ground Command
04/01/94 02:45:30	0:49:15		-60.0	117.4	2562.9							S60D							
																			Standard Prep2 Script
04/01/94 02:55:00	0:58:44	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/01/94 02:58:55	1:02:39		-70.0	117.8	2339.3							S70D							
																			Err:508
04/01/94 03:05:30	1:09:14	0											Msg "WARNING: Omni/2k in 1 min.."						
04/01/94 03:06:30	1:10:14	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/01/94 03:07:30	1:11:14	60											Switch to omni antennas						
04/01/94 03:08:30	1:12:14	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/01/94 03:10:30	1:14:14	120											UV & HR cameras ON						
04/01/94 03:10:53	1:14:38		-80.0	119.2	2095.9							S80D							
04/01/94 03:14:30	1:18:14	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/01/94 03:15:00	1:18:44	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/01/94 03:15:10	1:18:54	10											Perform NIR imaging (DHU SEQT 31)						
04/01/94 03:15:25	1:19:09	15																	Err:508 Slew to nadir (inertial pointing)

Orbit 192 Timeline - Type A Orbit

											Err:508	
											Err:508	
04/01/94 03:20:25	1:24:09	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85	
04/01/94 03:20:55	1:24:39	30									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 15)	START MAPPING
04/01/94 03:21:25	1:25:09	30	-89.5	207.0	1849.7					South Pole	Set SA step rate to LO	
04/01/94 03:22:30	1:26:14		-88.8	271.6	1822.8					LDAWN		
04/01/94 03:30:35	1:34:19	550	-80.0	293.2	1613.3					S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 14	
04/01/94 03:38:37	1:42:21	482	-70.0	294.6	1393.7					S70A	Load EEQ_13U.UMI into SEQT 13; Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 13	UV and IR uncompressed
04/01/94 03:45:38	1:49:22	421	-60.0	295.1	1196.4					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 12	Resume compression
04/01/94 03:46:38	1:50:22	60									Record in SSSR Segment 2	SSDR Segment 2
04/01/94 03:51:49	1:55:33	311	-50.0	295.3	1023.1					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11	Stop HiRes imaging
04/01/94 03:56:49	2:00:33	300									Laser Power ON	
04/01/94 03:57:20	2:01:04	31	-40.0	295.4	874.2					S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10	
04/01/94 04:02:17	2:06:01	297	-30.0	295.5	748.9					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/01/94 04:06:49	2:10:33	272	-20.0	295.6	646.1					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
04/01/94 04:11:00	2:14:44	251	-10.0	295.6	564.6					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/01/94 04:14:56	2:18:40	236	0.0	295.7	503.0					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/01/94 04:18:42	2:22:26	226	10.0	295.7	460.5					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/01/94 04:19:42	2:23:26	60									Record in SSSR Segment 3	SSDR Segment 3
04/01/94 04:22:19	2:26:04		20.0	295.8	436.2					N20A		
04/01/94 04:22:21	2:26:05	159								N20A	Load exposure table LUNARZ25N	
04/01/94 04:25:26	2:29:10		28.6	295.9	429.5					Periselene		
04/01/94 04:25:56	2:29:40	215	30.0	295.9	429.7					N30A	Load exposure table LUNARZ35N	
04/01/94 04:29:32	2:33:16	216	40.0	296.0	440.9					N40A	Load exposure table LUNARZ45N	
04/01/94 04:33:11	2:36:56		50.0	296.1	470.0					N50A		
04/01/94 04:33:13	2:36:57	221								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55; Select DHU SEQT 6	Resume HiRes imaging
04/01/94 04:36:59	2:40:44		60.0	296.4	517.6					N60A		

Orbit 192 Timeline - Type A Orbit

04/01/94 04:37:01	2:40:45	228								N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65; Select DHU SEQT 4						
04/01/94 04:38:01	2:41:45	60									Record in SSDR Segment 4						SSDR Segment 4
04/01/94 04:40:59	2:44:43		70.0	296.9	584.4					N70A							
04/01/94 04:41:00	2:44:44	179								N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75; Select DHU SEQT 3						
04/01/94 04:45:17	2:49:01	257	80.0	298.3	671.6					N80A	Load exposure table LUNARZ75N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9						Stop laser ranging
04/01/94 04:45:47	2:49:31	30									Laser power OFF						
04/01/94 04:46:17	2:50:01	30									Load EEQ_13.UMI into SEQT 13						Restore original SEQT 13
																	Err:508
04/01/94 04:49:53	2:53:38		89.5	24.8	780.1					North Pole							
04/01/94 04:50:26	2:54:10		88.8	90.5	793.7					LDUSK							
																	Err:508
04/01/94 04:50:54	2:54:38	0									Stop Imaging - select ST-B						
04/01/94 04:50:59	2:54:43	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
04/01/94 04:54:10	2:57:54	191									Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	30									Stop imaging - select ST-B						
Err:508	Err:508	5									Slew s/c sensors to Vega (GNC12VEGA)						Slew to Vega (inertial pointing)
04/01/94 04:54:58	2:58:43		80.0	112.4	911.5					N80D							
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec						
04/01/94 04:58:27	3:02:11	Err:508									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)						
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6									Load exposure table LUNIRDKS1						
Err:508	Err:508	6									Load exposure table LUNIRDKS2						
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)						

Orbit 192 Timeline - Type A Orbit

Err:508	Err:508	30																Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec								Slew HGA to Earth with active waitwhileslew												
04/01/94 05:00:40	3:04:24		70.0	113.8	1066.9													N70D																				
04/01/94 05:02:00	3:05:44	120																	Switch to HGA																			READY FOR DATA DUMP - Time approximate
																																					Err:508	
04/01/94 05:03:00	3:06:44																		Set SA-B mode to MANUAL; Rotate SA-B; Set SA-B mode to AUTO																		Ground Command - SA against stops in bad position for sun	
04/01/94 05:07:00	3:10:44																		Switch to DHU mode @ 128 kbps																		Ground Command	
04/01/94 05:07:03	3:10:48		60.0	114.3	1246.8														N60D																			
04/01/94 05:11:00	3:14:44																		Set SA-B mode to MANUAL; Start repositioning of SA-B to sun																		Ground Command - SA still in bad position for sun	
04/01/94 05:14:19	3:18:04		50.0	114.5	1450.3														N50D																			
04/01/94 05:18:23	3:22:07																		PMK	AOS																		
04/01/94 05:22:39	3:26:23		40.0	114.6	1675.0															N40D																		
04/01/94 05:28:00	3:31:44																																					Ground Command
04/01/94 05:32:10	3:35:54		30.0	114.7	1915.4															N30D																		
04/01/94 05:35:00	3:38:44																																					Ground Command Battery pressure was low, so these steps were taken to reduce power consumption and reposition SA to sun
04/01/94 05:35:59	3:39:44		26.3	114.7	2005.6															INPM																		Enter penumbra
04/01/94 05:36:43	3:40:27		25.7	114.7	2022.5															INUM																		Enter umbra
04/01/94 05:43:04	3:46:49		20.0	114.7	2162.4															N20D																		
04/01/94 05:44:00	3:47:44																																					Ground Command
04/01/94 05:55:25	3:59:10		10.0	114.7	2402.2															N10D																		
04/01/94 06:09:13	4:12:58		0.0	114.6	2617.1															Equator - D																		
04/01/94 06:17:00	4:20:44																																					Ground Command
04/01/94 06:22:00	4:25:44																																					Ground Command
04/01/94 06:24:19	4:28:03		-10.0	114.6	2787.1															S10D																		
04/01/94 06:40:22	4:44:06		-20.0	114.5	2893.5															S20D																		
04/01/94 06:43:57	4:47:42		-22.2	114.5	2906.8															OUTUM																		Exit umbra
04/01/94 06:44:50	4:48:35		-22.7	114.5	2909.5															OUTPM																		Exit penumbra
04/01/94 06:49:00	4:52:44																																				Ground Command	
04/01/94 06:54:38	4:58:22		-28.6	114.5	2923.7															Aposelene																		

Orbit 193 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment	
04/01/94 06:54:38	0:00:00		-28.6	114.5	2923.7							Aposelene							Downlinking SDDR Segment 4 (orbit 192)	
04/01/94 06:56:54	0:02:16		-30.0	114.5	2922.9							S30D								
04/01/94 07:13:21	0:18:43		-40.0	114.5	2871.6							S40D								
04/01/94 07:20:00	0:25:21												SSDR to IDLE - downlink complete						Ground Command	
04/01/94 07:21:00	0:26:21												ST-A camera ON; CPT ON; Laser heater ON						Ground Command Battery pressure had dropped to 225 psia at end of shadow	
																			Standard Prep1 Script	
04/01/94 07:28:36	0:33:57	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO							
																			End Prep1 Script	
04/01/94 07:29:11	0:34:33		-50.0	114.5	2746.2							S50D								
04/01/94 07:43:57	0:49:19		-60.0	114.7	2561.9							S60D								
																			Standard Prep2 Script	
04/01/94 07:53:26	0:58:47	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed							
																			End Prep2 Script	
04/01/94 07:57:23	1:02:44		-70.0	115.1	2338.1							S70D								
04/01/94 07:58:21	1:03:42										GDS	AOS								
																			Err:508	
04/01/94 08:04:26	1:09:47	0											Msg "WARNING: 2kbps in 1 min."							
04/01/94 08:05:26	1:10:47	60											SSDR to IDLE; Switch to 2 kbps bypass mode							
04/01/94 08:06:26	1:11:47	60											Switch to omni antennas							
04/01/94 08:07:26	1:12:47	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux	
04/01/94 08:09:20	1:14:42		-80.0	116.5	2094.6							S80D								
04/01/94 08:09:26	1:14:47	120											UV & HR cameras ON							
04/01/94 08:12:56	1:18:17	210											Initialize filters (DHU SEQT 27); Record in SDDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 5	
04/01/94 08:13:26	1:18:47	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging	
04/01/94 08:13:36	1:18:57	10											Perform NIR imaging (DHU SEQT 31)							
04/01/94 08:13:51	1:19:12	15																	Err:508	Slew to nadir (inertial pointing)

Orbit 193 Timeline - Type B Orbit

											Err:508		
											Err:508		
04/01/94 08:17:51	1:23:12	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S		
04/01/94 08:18:51	1:24:12	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)	START MAPPING	
04/01/94 08:19:51	1:25:12	60	-89.5	204.2	1848.4					South Pole	Set SA step rate to LO		
04/01/94 08:20:55	1:26:17		-88.8	268.0	1821.4					LDAWN			
04/01/94 08:29:01	1:34:22	550	-80.0	290.3	1612.0					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20		
04/01/94 08:37:02	1:42:23	481	-70.0	291.8	1392.5					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19		
04/01/94 08:39:50	1:45:11	168									Err:508	Slew to South Pole for oblique viewing	
04/01/94 08:44:03	1:49:24	253	-60.0	292.3	1195.3					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11		
04/01/94 08:50:14	1:55:35	371	-50.0	292.5	1022.1					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10	Stop HiRes imaging	
04/01/94 08:55:13	2:00:34	299									Laser Power ON		
04/01/94 08:55:44	2:01:05	31	-40.0	292.7	873.3					S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10	Resume nadir mapping	
04/01/94 08:59:37	2:04:58									MAD	LOS		
04/01/94 09:00:40	2:06:02		-30.0	292.7	748.1						S30A		
04/01/94 09:00:42	2:06:03	298									S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/01/94 09:01:42	2:07:03	60										Record in SDR Segment 6	SSDR Segment 6
04/01/94 09:05:13	2:10:34	211	-20.0	292.8	645.5						S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	
04/01/94 09:09:24	2:14:45	251	-10.0	292.9	564.0						S10A	Load EEQ_07U into SEQT 07; Load exposure table LUNARZ05S; Select DHU SEQT 7	UV and IR uncompressed
04/01/94 09:13:20	2:18:41	236	0.0	292.9	502.6					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6	Start laser ranging Resume compression	
04/01/94 09:17:04	2:22:26		10.0	293.0	460.1						N10A		
04/01/94 09:17:06	2:22:27	226									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/01/94 09:20:44	2:26:05	218	20.0	293.1	435.9						N20A	Load exposure table LUNARZ25N	
04/01/94 09:23:49	2:29:11		28.6	293.1	429.3						Periselene		
04/01/94 09:24:20	2:29:41	216	30.0	293.1	429.5						N30A	Load exposure table LUNARZ35N	
04/01/94 09:27:56	2:33:17	216	40.0	293.3	440.8						N40A	Load exposure table LUNARZ45N	
04/01/94 09:31:36	2:36:57	220	50.0	293.4	470.0						N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6	Resume HiRes imaging

Orbit 193 Timeline - Type B Orbit

04/01/94 09:35:24	2:40:45	228	60.0	293.7	517.7					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/01/94 09:36:24	2:41:45	60									Record in SDR Segment 7						SSDR Segment 7
04/01/94 09:39:24	2:44:45	180	70.0	294.2	584.6					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17						
04/01/94 09:43:39	2:49:01		80.0	295.7	671.9					N80A							
04/01/94 09:43:41	2:49:02	257								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N Select DHU SEQT 16						Stop laser ranging
04/01/94 09:44:11	2:49:32	30									Laser power OFF						
04/01/94 09:44:41	2:50:02	30									Load EEQ_07.UMI into SEQT 07						Restore original SEQT 7
																	Err:508
04/01/94 09:48:17	2:53:39		89.5	22.8	780.6					North Pole							
04/01/94 09:48:50	2:54:12		88.8	87.0	794.2					LDUSK							
																	Err:508
04/01/94 09:49:18	2:54:39	0									Stop Imaging - select ST-B						
04/01/94 09:49:23	2:54:44	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
04/01/94 09:52:36	2:57:57	193									Wait						End of slew - wait before imaging to allow s/c to settle
04/01/94 09:52:51	2:58:12	15									Select DHU SEQT 23						Earth imaging w/color HiRes
04/01/94 09:53:06	2:58:27	15									Stop imaging - select ST-B						
04/01/94 09:53:11	2:58:32	5									Slew s/c sensors to Vega (GNC12VEGA)						Slew to Vega (inertial pointing)
04/01/94 09:53:22	2:58:44		80.0	109.5	912.0					N80D							
04/01/94 09:53:41	2:59:02	30									Park opaque filter on HiRes (DHU SEQT 27)						
04/01/94 09:53:56	2:59:17	15									Select ST-B; Activate waitwhileslew for 320 sec						
04/01/94 09:56:11	3:01:32	135									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
04/01/94 09:56:23	3:01:44	12									Perform LWIR imaging (DHU SEQT 25)						
04/01/94 09:56:35	3:01:56	12									Perform NIR imaging (DHU SEQT 31)						
04/01/94 09:56:41	3:02:02	6									Load exposure table LUNIRDKS1						
04/01/94 09:56:47	3:02:08	6									Load exposure table LUNIRDKS2						
04/01/94 09:56:53	3:02:14	6									Perform HIRES imaging (DHU SEQT 30)						

Orbit 193 Timeline - Type B Orbit

04/01/94 09:57:23	3:02:44	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/01/94 09:59:03	3:04:25		70.0	111.0	1067.7				N70D						
04/01/94 10:01:00	3:06:21	217								Switch to HGA					READY FOR DATA DUMP - Time approximate
															Err:508
04/01/94 10:02:00	3:07:21									Switch to DHU mode @ 128 kbps					Ground Command
04/01/94 10:05:00	3:10:21									Downlink SSSR Segment 5					Ground Command
04/01/94 10:05:27	3:10:49		60.0	111.5	1247.6				N60D						
04/01/94 10:12:44	3:18:06		50.0	111.8	1451.3				N50D						
04/01/94 10:21:04	3:26:25		40.0	111.9	1676.2				N40D						
04/01/94 10:30:35	3:35:57		30.0	111.9	1916.7				N30D						
04/01/94 10:34:00	3:39:21									Downlink SSSR Segment 6					Ground Command
04/01/94 10:34:30	3:39:51		26.3	111.9	2008.5				INPM						Enter penumbra
04/01/94 10:35:13	3:40:35		25.6	111.9	2025.4				INUM						Enter umbra
04/01/94 10:41:30	3:46:52		20.0	111.9	2163.7				N20D						
04/01/94 10:53:51	3:59:13		10.0	111.9	2403.5				N10D						
04/01/94 11:07:40	4:13:02		0.0	111.9	2618.3				Equator -D						
															Err:508
04/01/94 11:18:31	4:23:52	0								SSDR to IDLE; Switch to 2 kbps bypass mode					Data dump stopped
04/01/94 11:19:31	4:24:52	60								Switch to omni antennas; Record in SSSR Segment 4					SSDR Segment 4
04/01/94 11:20:31	4:25:52	60								Err:508					Slew using Inertial pointing (LGH not LHG used in name)
04/01/94 11:22:46	4:28:08		-10.0	111.8	2788.1				S10D						
04/01/94 11:26:31	4:31:52	360								Execute STB_Images					Star Tracker B Images
04/01/94 11:28:11	4:33:32	100								Execute STB_Images					Note: Time between events includes script duration (90 sec) and WAIT between script calls (10 sec)
04/01/94 11:29:51	4:35:12	100								Execute STB_Images					
04/01/94 11:31:31	4:36:52	100								Execute STB_Images					
04/01/94 11:33:11	4:38:32	100								Execute STB_Images					
04/01/94 11:34:51	4:40:12	100								Execute STB_Images					
04/01/94 11:36:31	4:41:52	100								Execute STB_Images					
04/01/94 11:38:01	4:43:22	90								Execute STB_Images					No 10 sec wait
04/01/94 11:38:49	4:44:11		-20.0	111.8	2894.0				S20D						
04/01/94 11:39:41	4:45:02	100								Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					STOP IMAGING Slew HGA back to Earth
04/01/94 11:42:00	4:47:21	139								Switch to HGA					READY FOR DATA DUMP - Time approximate

Orbit 193 Timeline - Type B Orbit

													Err:508
04/01/94 11:42:20	4:47:42		-22.1	111.8	2907.0						OUTUM		Exit umbra
04/01/94 11:43:00	4:48:21											Switch to DHU mode @ 128 kbps	Ground Command
04/01/94 11:43:13	4:48:35		-22.7	111.8	2909.7						OUTPM		Exit penumbra
04/01/94 11:44:00	4:49:21											Resume downlink SDDR Segment 6	Ground Command
04/01/94 11:45:00	4:50:21											Uplink and schedule L194 scripts	Ground Command
04/01/94 11:53:00	4:58:22		-28.6	111.8	2923.9						Aposelene		
													STB_Images Subscript
												Load exposure table STBGLOW700; Select DHU SEQT 22	ST-B imaging at 700 msec LHGSTB_22.UMI loaded into SEQT 22
		0										Stop imaging - select ST-A	Update attitude
		10										Load exposure table STBGLOW400; Select DHU SEQT 22	ST-B imaging at 400 msec
		10										Stop imaging - select ST-A	Update attitude only
		10										Load exposure table STBGLOW200; Select DHU SEQT 22	ST-B imaging at 200 msec
		10										Stop imaging - select ST-A	Update attitude only
		10										Load exposure table STBGLOW100; Select DHU SEQT 22	ST-B imaging at 100 msec
		10										Stop imaging - select ST-A	Update attitude only
		10										Load exposure table STBGLOW050; Select DHU SEQT 22	ST-B imaging at 50 msec
		10										Stop imaging - select ST-A	END STB_Images

Orbit 194 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/01/94 11:53:00	0:00:00		-28.6	111.8	2923.9							Aposelene							Downlinking SSSR Segment 6 (orbit 193)
04/01/94 11:55:22	0:02:21		-30.0	111.8	2923.0							S30D							
04/01/94 12:10:00	0:16:59												Downlink SSSR Segment 7						Ground Command
04/01/94 12:11:49	0:18:48		-40.0	111.8	2871.3							S40D							
																			Standard Prep1 Script
04/01/94 12:27:02	0:34:01	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/01/94 12:27:39	0:34:39		-50.0	111.8	2745.5							S50D							
04/01/94 12:36:57	0:43:56										CAN	AOS							
04/01/94 12:37:00	0:43:59												Downlink SSSR Segment 4						Ground Command
04/01/94 12:42:24	0:49:24		-60.0	112.0	2560.8							S60D							
04/01/94 12:47:00	0:53:59												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep2 Script
04/01/94 12:51:52	0:58:51	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/01/94 12:55:49	1:02:49		-70.0	112.4	2336.8							S70D							
																			Err:508
04/01/94 13:02:22	1:09:21	0											Msg "WARNING: Omni/2k in 1 min.."						
04/01/94 13:03:22	1:10:21	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/01/94 13:04:22	1:11:21	60											Switch to omni antennas						
04/01/94 13:05:22	1:12:21	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/01/94 13:07:22	1:14:21	120											UV & HR cameras ON						
04/01/94 13:07:46	1:14:46		-80.0	113.9	2093.2							S80D							
04/01/94 13:11:22	1:18:21	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/01/94 13:11:52	1:18:51	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/01/94 13:12:02	1:19:01	10											Perform NIR imaging (DHU SEQT 31)						
04/01/94 13:12:17	1:19:16	15																Err:508	Slew to nadir (inertial pointing)
																			Err:508

Orbit 194 Timeline - Type A Orbit

											Err:508	
04/01/94 13:17:17	1:24:16	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S	
04/01/94 13:17:47	1:24:46	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)	START MAPPING
04/01/94 13:18:17	1:25:16	30	-89.5	200.0	1847.3					South Pole	Set SA step rate to LO	
04/01/94 13:19:21	1:26:21		-88.8	264.5	1820.0					LDAWN		
04/01/94 13:27:26	1:34:25	549	-80.0	287.5	1610.7					S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75S; Select DHU SEQT 14	
04/01/94 13:35:27	1:42:26	481	-70.0	289.0	1391.3					S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65S; Select DHU SEQT 13	
04/01/94 13:42:28	1:49:27	421	-60.0	289.5	1194.1					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12	
04/01/94 13:43:28	1:50:27	60									Record in SSSR Segment 2	SSDR Segment 2
04/01/94 13:48:37	1:55:37		-50.0	289.8	1021.1					S50A		
04/01/94 13:48:39	1:55:38	311								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11	Stop HiRes imaging
04/01/94 13:53:37	2:00:36	298									Laser Power ON	
04/01/94 13:54:07	2:01:07		-40.0	289.9	872.4					S40A		
04/01/94 13:54:09	2:01:08	32								S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10	
04/01/94 13:59:04	2:06:04		-30.0	290.0	747.3					S30A		
04/01/94 13:59:06	2:06:05	297								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/01/94 14:03:37	2:10:36	271	-20.0	290.1	644.8					S20A	Load EEQ_08U.UMI into SEQT 08; Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging UV and IR uncompressed
04/01/94 14:07:48	2:14:47	251	-10.0	290.1	563.5					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	Resume compression
04/01/94 14:11:44	2:18:43	236	0.0	290.2	502.1					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/01/94 14:11:47	2:18:46									PMK	LOS	
04/01/94 14:15:29	2:22:28	225	10.0	290.3	459.8					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/01/94 14:16:29	2:23:28	60									Record in SSSR Segment 3	SSDR Segment 3
04/01/94 14:19:08	2:26:07	159	20.0	290.3	435.6					N20A	Load exposure table LUNARZ25N	
04/01/94 14:22:12	2:29:11		28.5	290.4	429.2					Periselene		
04/01/94 14:22:43	2:29:42	215	30.0	290.4	429.4					N30A	Load exposure table LUNARZ35N	
04/01/94 14:26:19	2:33:18		40.0	290.5	440.8					N40A		
04/01/94 14:26:20	2:33:19	217								N40A	Load exposure table LUNARZ45N	
04/01/94 14:30:00	2:36:59	220	50.0	290.7	470.1					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6	Resume HiRes imaging

Last Update: 02/01/2021 21:22:35
By:tcs

Orbit 194
Actual Timeline

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Orbit 194 Timeline - Type A Orbit

04/01/94 14:33:48	2:40:47	228	60.0	291.0	517.8				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/01/94 14:34:48	2:41:47	60	70.0	291.5	584.9					Record in SSDR Segment 4						SSDR Segment 4
04/01/94 14:37:48	2:44:47	180							N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3						
04/01/94 14:42:04	2:49:03	256	80.0	293.1	672.3				N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85; Select DHU SEQT 9						Stop laser ranging
04/01/94 14:42:34	2:49:33	30								Laser power OFF						
04/01/94 14:43:04	2:50:03	30								Load EEQ_08.UMI into SEQT 08						Restore original SEQT 8
Err:508																
04/01/94 14:46:41	2:53:40		89.4	21.0	781.2				North Pole							
04/01/94 14:47:13	2:54:13		88.8	83.5	794.7				LDUSK							
Err:508																
04/01/94 14:47:42	2:54:41	0								Stop Imaging - select ST-B						
04/01/94 14:47:47	2:54:46	5								Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508								Wait						End of slew - wait before imaging to allow s/c to settle
04/01/94 14:51:16	2:58:15	15								Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B						
Err:508	Err:508	5								Slew s/c sensors to Vega (GNC12VEGA)						Slew to Vega (inertial pointing)
04/01/94 14:51:46	2:58:45		80.0	106.7	912.7				N80D							
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec						
04/01/94 14:54:36	3:01:35	Err:508								Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)						
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6								Load exposure table LUNIRDKS1						
Err:508	Err:508	6								Load exposure table LUNIRDKS2						
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)						

Orbit 194 Timeline - Type A Orbit

Err:508	Err:508	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/01/94 14:57:27	3:04:27		70.0	108.3	1068.4					N70D					
Err:508	Err:508	360									Switch to HGA				READY FOR DATA DUMP - Time approximate
															Err:508
04/01/94 15:03:51	3:10:50		60.0	108.8	1248.6					N60D					
04/01/94 15:06:00	3:12:59										Switch to DHU mode @ 128 kbps				Ground Command
04/01/94 15:11:08	3:18:08		50.0	109.0	1452.4					N50D					
04/01/94 15:14:00	3:20:59										Downlink SSSDR Segment 1				Ground Command
04/01/94 15:18:00	3:24:59										Uplink and schedule L195 scripts				Ground Command
04/01/94 15:19:28	3:26:27		40.0	109.1	1677.4					N40D					
04/01/94 15:24:00	3:30:59										Downlink SSSDR Segment 2				Ground Command
04/01/94 15:29:01	3:36:01		30.0	109.2	1918.0					N30D					
04/01/94 15:32:58	3:39:57		26.2	109.2	2011.4					INPM					Enter penumbra
04/01/94 15:33:43	3:40:43		25.5	109.2	2028.3					INUM					Enter umbra
04/01/94 15:39:55	3:46:54		20.0	109.2	2165.1					N20D					
04/01/94 15:52:18	3:59:18		10.0	109.2	2404.8					N10D					
04/01/94 16:06:07	4:13:07		0.0	109.2	2619.5					Equator - D					
04/01/94 16:14:00	4:20:59										Downlink SSSDR Segment 3				Ground Command
04/01/94 16:21:13	4:28:13		-10.0	109.1	2789.0					S10D					
04/01/94 16:37:17	4:44:17		-20.0	109.1	2894.5					S20D					
04/01/94 16:40:42	4:47:42		-22.1	109.1	2907.1					OUTUM					Exit umbra
04/01/94 16:41:36	4:48:36		-22.6	109.1	2909.8					OUTPM					Exit penumbra
04/01/94 16:44:00	4:50:59										Slew s/c to inertial position				Ground Command - slew around X-axis to keep HGA to Earth
04/01/94 16:47:00	4:53:59										Update state vector (GNC53_01APR1600)				Ground Command
04/01/94 16:47:30	4:54:29										Downlink SSSDR Segment 4				Ground Command
04/01/94 16:48:00	4:54:59										Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)				Ground Command Slew around X-axis
04/01/94 16:51:22	4:58:22		-28.5	109.0	2924.0					Aposelene					

Orbit 195 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/01/94 16:51:22	0:00:00		-28.5	109.0	2924.0							Aposelene							Downlinking SDR Segment 4 (orbit 194)
04/01/94 16:53:49	0:02:27		-30.0	109.0	2923.1							S30D							
04/01/94 17:02:19	0:10:56										GDS	LOS							
04/01/94 17:10:17	0:18:55		-40.0	109.0	2870.9							S40D							
04/01/94 17:16:00	0:24:37												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
04/01/94 17:25:27	0:34:04	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/01/94 17:26:06	0:34:44		-50.0	109.1	2744.7							S50D							
04/01/94 17:40:51	0:49:28		-60.0	109.3	2559.7							S60D							
																			Standard Prep2 Script
04/01/94 17:50:17	0:58:54	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/01/94 17:54:17	1:02:54		-70.0	109.7	2335.5							S70D							
																			Err:508
04/01/94 18:01:17	1:09:54	0											Msg "WARNING: 2kbps in 1 min."						
04/01/94 18:02:17	1:10:54	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/01/94 18:03:17	1:11:54	60											Switch to omni antennas						
04/01/94 18:04:17	1:12:54	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/01/94 18:06:12	1:14:50		-80.0	111.3	2091.7							S80D							
04/01/94 18:06:17	1:14:54	120											UV & HR cameras ON						
04/01/94 18:09:47	1:18:24	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
04/01/94 18:10:17	1:18:54	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/01/94 18:10:27	1:19:04	10											Perform NIR imaging (DHU SEQT 31)						
04/01/94 18:10:42	1:19:19	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 195 Timeline - Type B Orbit

04/01/94 18:14:41	1:23:19	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S					
04/01/94 18:15:42	1:24:19	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)					START MAPPING
04/01/94 18:16:42	1:25:19	60								MAXS	Set SA step rate to LO					
04/01/94 18:16:43	1:25:20		-89.4	198.6	1845.6					South Pole						
04/01/94 18:17:47	1:26:25		-88.7	261.2	1818.6					LDAWN						
04/01/94 18:25:52	1:34:29	550	-80.0	284.7	1609.3					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20					
04/01/94 18:33:52	1:42:29	480	-70.0	286.3	1390.0					S70A	Load EEQ_19U into SEQT 19; Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19					UV and IR uncompressed
04/01/94 18:36:40	1:45:17	168									Err:508					Slew to South Pole for oblique viewing Resume compression
04/01/94 18:40:51	1:49:29		-60.0	286.8	1193.0					S60A						
04/01/94 18:40:53	1:49:30	253								S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55; Select DHU SEQT 11					
04/01/94 18:47:03	1:55:40	370	-50.0	287.0	1020.0					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10					Stop HiRes imaging
04/01/94 18:52:01	2:00:38	298									Laser Power ON					
04/01/94 18:52:31	2:01:08		-40.0	287.2	871.5					S40A						
04/01/94 18:52:33	2:01:10	32								S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10					Resume nadir mapping
04/01/94 18:57:28	2:06:05		-30.0	287.3	746.6					S30A						
04/01/94 18:57:30	2:06:07	297								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9					
04/01/94 18:58:30	2:07:07	60									Record in SSSR Segment 6					SSDR Segment 6
04/01/94 19:01:59	2:10:36		-20.0	287.3	644.1					S20A						
04/01/94 19:02:01	2:10:38	211								S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8					Start laser ranging
04/01/94 19:06:10	2:14:47		-10.0	287.4	562.9					S10A						
04/01/94 19:06:12	2:14:49	251								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7					
04/01/94 19:10:07	2:18:44	235	0.0	287.5	501.7					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6					
04/01/94 19:13:52	2:22:29		10.0	287.5	459.4					N10A						
04/01/94 19:13:53	2:22:30	226								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5					
04/01/94 19:17:31	2:26:08	218	20.0	287.6	435.4					N20A	Load exposure table LUNARZ25N					
04/01/94 19:20:33	2:29:10		28.5	287.7	429.0					Periselene						
04/01/94 19:21:07	2:29:44	216	30.0	287.7	429.2					N30A	Load exposure table LUNARZ35N					
04/01/94 19:24:43	2:33:20	216	40.0	287.8	440.7					N40A	Load exposure table LUNARZ45N					

Orbit 195 Timeline - Type B Orbit

04/01/94 19:28:23	2:37:00	220	50.0	288.0	470.2					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6					Resume HiRes imaging
04/01/94 19:32:11	2:40:48	228	60.0	288.3	518.0					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4					
04/01/94 19:33:11	2:41:48	60									Record in SSSR Segment 7					SSDR Segment 7
04/01/94 19:36:11	2:44:48	180	70.0	288.8	585.2					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17					
04/01/94 19:40:28	2:49:05	257	80.0	290.4	672.8					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16					Stop laser ranging
04/01/94 19:40:58	2:49:35	30									Laser power OFF					
04/01/94 19:41:28	2:50:05	30									Load EEQ_19.UMI into SEQT 19					Restore original SEQT 19
Err:508																
04/01/94 19:45:04	2:53:42		89.4	15.8	781.5					North Pole						
04/01/94 19:45:37	2:54:14		88.7	80.3	795.3					LDUSK						
Err:508																
04/01/94 19:46:06	2:54:43	0									Stop Imaging - select ST-B					
04/01/94 19:46:11	2:54:48	5									Err:508					Slew sensors to Earth (inertial pointing) with waitwhileslew
04/01/94 19:49:26	2:58:03	195									Wait					End of slew - wait before imaging to allow s/c to settle
04/01/94 19:49:41	2:58:18	15									Select DHU SEQT 23					Earth imaging w/color HiRes
04/01/94 19:49:56	2:58:33	15									Stop imaging - select ST-B					
04/01/94 19:50:01	2:58:38	5									Slew s/c sensors to Vega (GNC12VEGA)					Slew to Vega (inertial pointing)
04/01/94 19:50:11	2:58:48		80.0	103.9	913.3					N80D						
04/01/94 19:50:31	2:59:08	30									Park opaque filter on HiRes (DHU SEQT 27)					
04/01/94 19:50:46	2:59:23	15									Select ST-B; Activate waitwhileslew for 320 sec					
04/01/94 19:53:51	3:02:28	185									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)					Start calibration imaging
04/01/94 19:54:03	3:02:40	12									Perform LWIR imaging (DHU SEQT 25)					
04/01/94 19:54:15	3:02:52	12									Perform NIR imaging (DHU SEQT 31)					
04/01/94 19:54:21	3:02:58	6									Load exposure table LUNIRDKS1					
04/01/94 19:54:27	3:03:04	6									Load exposure table LUNIRDKS2					
04/01/94 19:54:33	3:03:10	6									Perform HIRES imaging (DHU SEQT 30)					

Orbit 196 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/01/94 21:49:44	0:00:00		-28.5	106.3	2924.1							Aposelene							Downlinking SDR Segment 6 (orbit 195)
04/01/94 21:52:17	0:02:32		-30.0	106.3	2923.2							S30D							
04/01/94 22:08:45	0:19:00		-40.0	106.3	2870.5							S40D							
04/01/94 22:13:00	0:23:15												Downlink SDR Segment 7						Ground Command
																			Standard Prep1 Script
04/01/94 22:23:53	0:34:08	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/01/94 22:24:34	0:34:49		-50.0	106.4	2743.9							S50D							
04/01/94 22:36:00	0:46:15												SSDR to IDLE - downlink complete						Ground Command
04/01/94 22:39:19	0:49:34		-60.0	106.6	2558.6							S60D							
																			Standard Prep2 Script
04/01/94 22:48:43	0:58:58	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/01/94 22:52:42	1:02:57		-70.0	107.0	2334.2							S70D							
																			Err:508
04/01/94 22:59:13	1:09:28	0											Msg "WARNING: Omni/2k in 1 min.."						
04/01/94 23:00:13	1:10:28	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/01/94 23:01:13	1:11:28	60											Switch to omni antennas						
04/01/94 23:02:13	1:12:28	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/01/94 23:04:13	1:14:28	120											UV & HR cameras ON						
04/01/94 23:04:39	1:14:54		-80.0	108.6	2090.3							S80D							
04/01/94 23:08:13	1:18:28	240											Initialize filters (DHU SEQT 27); Record in SDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 1
04/01/94 23:08:43	1:18:58	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/01/94 23:08:53	1:19:08	10											Perform NIR imaging (DHU SEQT 31)						
04/01/94 23:09:08	1:19:23	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 196 Timeline - Type A Orbit

04/01/94 23:14:08	1:24:23	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S			
04/01/94 23:14:38	1:24:53	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
04/01/94 23:15:08	1:25:23	30	-89.4	195.3	1844.3				South Pole	Set SA step rate to LO			
04/01/94 23:16:12	1:26:28		-88.7	258.0	1817.1				LDAWN				
04/01/94 23:24:17	1:34:32	549	-80.0	281.9	1608.0				S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75S; Select DHU SEQT 14			
04/01/94 23:32:17	1:42:32	480	-70.0	283.5	1388.7				S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65S; Select DHU SEQT 13			
04/01/94 23:39:17	1:49:32	420	-60.0	284.0	1191.8				S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12			
04/01/94 23:40:17	1:50:32	60								Record in SSSR Segment 2			SSDR Segment 2
04/01/94 23:45:27	1:55:42	310	-50.0	284.3	1019.0				S50A	Load EEQ_11.UMI into SEQT 11; Load exposure table LUNARZ45S; Select DHU SEQT 11			Stop HiRes imaging UV and IR uncompressed
04/01/94 23:50:24	2:00:39	297								Laser Power ON			
04/01/94 23:50:57	2:01:12	33	-40.0	284.4	870.6				S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10			Resume compression
04/01/94 23:55:52	2:06:08		-30.0	284.5	745.8				S30A				
04/01/94 23:55:54	2:06:09	297							S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9			
04/02/94 00:00:24	2:10:39	270	-20.0	284.6	643.5				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser ranging
04/02/94 00:04:35	2:14:50	251	-10.0	284.7	562.4				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			
04/02/94 00:08:31	2:18:46	236	0.0	284.7	501.3				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6			
04/02/94 00:12:16	2:22:31	225	10.0	284.8	459.1				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
04/02/94 00:13:16	2:23:31	60								Record in SSSR Segment 3			SSDR Segment 3
04/02/94 00:15:53	2:26:08		20.0	284.9	435.2				N20A				
04/02/94 00:15:55	2:26:10	159							N20A	Load exposure table LUNARZ25N			
04/02/94 00:18:55	2:29:10		28.4	285.0	428.9				Periselene				
04/02/94 00:19:30	2:29:45	215	30.0	285.0	429.1				N30A	Load exposure table LUNARZ35N			
04/02/94 00:23:06	2:33:21	216	40.0	285.1	440.8				N40A	Load exposure table LUNARZ45N			
04/02/94 00:26:45	2:37:00		50.0	285.3	470.3				N50A				
04/02/94 00:26:47	2:37:02	221							N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6			Resume HiRes imaging
04/02/94 00:30:33	2:40:48		60.0	285.5	518.3				N60A				

Orbit 196 Timeline - Type A Orbit

04/02/94 00:30:35	2:40:50	228								N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4							
04/02/94 00:31:35	2:41:50	60									Record in SSSR Segment 4							SSDR Segment 4
04/02/94 00:34:35	2:44:50	180	70.0	286.1	585.5					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3							
04/02/94 00:38:50	2:49:05		80.0	287.7	673.2					N80A								
04/02/94 00:38:52	2:49:07	257								N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9							Stop laser ranging
04/02/94 00:39:22	2:49:37	30									Laser power OFF							
04/02/94 00:39:52	2:50:07	30									Load EEQ_11.UMI into SEQT 11							Restore original SEQT 11
																		Err:508
04/02/94 00:43:28	2:53:43		89.4	14.2	782.2					North Pole								
04/02/94 00:44:02	2:54:17		88.7	77.1	795.9					LDUSK								
																		Err:508
04/02/94 00:44:29	2:54:44	0									Stop Imaging - select ST-B							
04/02/94 00:44:34	2:54:49	5									Err:508							Slew sensors to Earth (inertial pointing) with waitwhileslew
04/02/94 00:47:42	2:57:57	188									Wait							End of slew - wait before imaging to allow s/c to settle
04/02/94 00:47:57	2:58:12	15									Select DHU SEQT 23							Earth imaging w/color HiRes
04/02/94 00:48:12	2:58:27	15									Stop imaging - select ST-B							
04/02/94 00:48:17	2:58:32	5									Slew s/c sensors to Vega (VEGAGNC12)							Slew to Vega (inertial pointing)
04/02/94 00:48:34	2:58:49		80.0	101.1	914.1					N80D								
04/02/94 00:48:47	2:59:02	30									Park opaque filter on HiRes (DHU SEQT 27)							
04/02/94 00:49:01	2:59:17	15									Select ST-B; Activate waitwhileslew for 310 sec							
04/02/94 00:52:12	3:02:27	190									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)							Start calibration imaging
04/02/94 00:52:24	3:02:39	12									Perform LWIR imaging (DHU SEQT 25)							
04/02/94 00:52:36	3:02:51	12									Perform NIR imaging (DHU SEQT 31)							
04/02/94 00:52:42	3:02:57	6									Load exposure table LUNIRDKS1							
04/02/94 00:52:48	3:03:03	6									Load exposure table LUNIRDKS2							
04/02/94 00:52:54	3:03:09	6									Perform HIRES imaging (DHU SEQT 30)							

Orbit 196 Timeline - Type A Orbit

04/02/94 00:53:24	3:03:39	30													Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/02/94 00:54:15	3:04:30		70.0	102.7	1070.2										N70D					
04/02/94 00:58:00	3:08:15	276														Switch to HGA				READY FOR DATA DUMP - Time approximate
																			Err:508	
04/02/94 00:59:00	3:09:15															Switch to DHU mode @ 128 kbps				Ground Command
04/02/94 01:00:41	3:10:56		60.0	103.3	1250.6										N60D					
04/02/94 01:01:00	3:11:15															Downlink SSSR Segment 1				Ground Command
04/02/94 01:07:57	3:18:12		50.0	103.5	1454.8										N50D					
04/02/94 01:12:00	3:22:15															Downlink SSSR Segment 2				Ground Command
04/02/94 01:16:00	3:26:15															Uplink and schedule L197 scripts				Ground Command
04/02/94 01:16:18	3:26:33		40.0	103.6	1680.0										N40D					
04/02/94 01:18:11	3:28:26														MAD	AOS				
04/02/94 01:25:52	3:36:08		30.0	103.7	1920.8										N30D					
04/02/94 01:29:58	3:40:13		26.1	103.7	2017.6										INPM					Enter penumbra
04/02/94 01:30:43	3:40:58		25.4	103.7	2034.6										INUM					Enter umbra
04/02/94 01:36:47	3:47:02		20.0	103.7	2167.9										N20D					
04/02/94 01:39:41	3:49:56														CAN	LOS				
04/02/94 01:49:11	3:59:26		10.0	103.7	2407.6										N10D					
04/02/94 02:02:00	4:12:15															Downlink SSSR Segment 3				Ground Command
04/02/94 02:03:01	4:13:17		0.0	103.7	2621.9										Equator - D					
04/02/94 02:18:09	4:28:24		-10.0	103.7	2790.8										S10D					
04/02/94 02:34:13	4:44:28		-20.0	103.6	2895.6										S20D					
04/02/94 02:35:00	4:45:15															Downlink SSSR Segment 4				Ground Command
04/02/94 02:37:26	4:47:41		-22.0	103.6	2907.3										OUTUM					Exit umbra
04/02/94 02:38:20	4:48:35		-22.5	103.6	2910.1										OUTPM					Exit penumbra
04/02/94 02:48:06	4:58:21		-28.4	103.6	2924.2										Aposelene					

Orbit 197 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/02/94 02:48:06	0:00:00		-28.4	103.6	2924.2							Aposelene							Downlinking SDR Segment 4 (orbit 196)
04/02/94 02:50:45	0:02:39		-30.0	103.6	2923.2							S30D							
04/02/94 03:05:00	0:16:53												SSDR to IDLE - downlink complete						Ground Command
04/02/94 03:07:13	0:19:07		-40.0	103.6	2870.0							S40D							
																			Standard Prep1 Script
04/02/94 03:22:18	0:34:11	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/02/94 03:23:02	0:34:56		-50.0	103.7	2743.0							S50D							
04/02/94 03:37:46	0:49:40		-60.0	103.8	2557.4							S60D							
																			Standard Prep2 Script
04/02/94 03:47:08	0:59:01	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/02/94 03:51:09	1:03:03		-70.0	104.3	2332.8							S70D							
																			Err:508
04/02/94 03:58:08	1:10:01	0											Msg "WARNING: 2kbps in 1 min."						
04/02/94 03:59:08	1:11:01	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/02/94 04:00:08	1:12:01	60											Switch to omni antennas						
04/02/94 04:01:08	1:13:01	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/02/94 04:03:05	1:14:59		-80.0	105.9	2088.8							S80D							
04/02/94 04:03:08	1:15:01	120											UV & HR cameras ON						
04/02/94 04:06:38	1:18:31	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 5; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 5
04/02/94 04:07:08	1:19:01	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/02/94 04:07:18	1:19:11	10											Perform NIR imaging (DHU SEQT 31)						
04/02/94 04:07:33	1:19:26	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 197 Timeline - Type B Orbit

04/02/94 04:11:33	1:23:26	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S					
04/02/94 04:12:33	1:24:26	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)					START MAPPING
04/02/94 04:13:33	1:25:26	60								MAXS	Set SA step rate to LO					
04/02/94 04:13:33	1:25:27			-89.4	193.0	1842.7				South Pole						
04/02/94 04:14:38	1:26:32			-88.7	254.9	1815.7				LDAWN						
04/02/94 04:22:42	1:34:35	549		-80.0	279.1	1606.6				S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20					
04/02/94 04:30:42	1:42:35	480		-70.0	280.7	1387.4				S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19					
04/02/94 04:33:30	1:45:23	168									Err:508					Slew to South Pole for oblique viewing
04/02/94 04:37:40	1:49:34			-60.0	281.3	1190.6				S60A						
04/02/94 04:37:42	1:49:35	252								S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11					
04/02/94 04:43:50	1:55:44			-50.0	281.5	1018.0				S50A						
04/02/94 04:43:52	1:55:45	370								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10					Stop HiRes imaging
04/02/94 04:48:48	2:00:41	296									Laser Power ON					
04/02/94 04:49:21	2:01:14	33		-40.0	281.7	869.7				S40A	Load EEQ_10U into SEQT 10; Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10					Resume nadir mapping UV and IR uncompressed
04/02/94 04:54:17	2:06:10	296		-30.0	281.8	745.1				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9					Resume compression
04/02/94 04:55:17	2:07:10	60									Record in SSSR Segment 6					SSDR Segment 6
04/02/94 04:58:48	2:10:41	211		-20.0	281.9	642.9				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8					Start laser ranging
04/02/94 05:02:57	2:14:51			-10.0	281.9	561.9				S10A						
04/02/94 05:02:59	2:14:52	251								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7					
04/02/94 05:06:54	2:18:47	235		0.0	282.0	500.9				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6					
04/02/94 05:10:39	2:22:32	225		10.0	282.1	458.8				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5					
04/02/94 05:14:18	2:26:11	219		20.0	282.2	435.1				N20A	Load exposure table LUNARZ25N					
04/02/94 05:17:19	2:29:12			28.4	282.2	428.8				Periselene						
04/02/94 05:17:52	2:29:46			30.0	282.2	429.1				N30A						
04/02/94 05:17:54	2:29:47	216								N30A	Load exposure table LUNARZ35N					
04/02/94 05:21:28	2:33:22			40.0	282.4	440.8				N40A						
04/02/94 05:21:30	2:33:23	216								N40A	Load exposure table LUNARZ45N					

Orbit 197 Timeline - Type B Orbit

04/02/94 05:25:10	2:37:03	220	50.0	282.5	470.4					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6					Resume HiRes imaging
04/02/94 05:28:58	2:40:51	228	60.0	282.8	518.5					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4					
04/02/94 05:29:58	2:41:51	60									Record in SSSR Segment 7					SSDR Segment 7
04/02/94 05:32:58	2:44:51	180	70.0	283.4	585.9					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17					
04/02/94 05:37:15	2:49:08	257	80.0	285.1	673.7					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16					Stop laser ranging
04/02/94 05:37:45	2:49:38	30									Laser power OFF					
04/02/94 05:38:15	2:50:08	30									Load EEQ_10.UMI into SEQT 10					Restore original SEQT 10
Err:508																
04/02/94 05:41:52	2:53:46		89.4	12.5	783.0					North Pole						
04/02/94 05:42:25	2:54:19		88.7	74.0	796.5					LDUSK						
Err:508																
04/02/94 05:42:53	2:54:46	0									Stop Imaging - select ST-B					
04/02/94 05:42:58	2:54:51	5									Err:508					Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait					End of slew - wait before imaging to allow s/c to settle
04/02/94 05:46:25	2:58:18	15									Select DHU SEQT 23					Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B					
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)					Slew to Vega (inertial pointing)
04/02/94 05:46:58	2:58:52		80.0	98.3	914.9					N80D						
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)					
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec					
04/02/94 05:50:35	3:02:28	Err:508									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)					Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)					
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)					
Err:508	Err:508	6									Load exposure table LUNIRDKS1					
Err:508	Err:508	6									Load exposure table LUNIRDKS2					
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)					

Orbit 197 Timeline - Type B Orbit

Err:508	Err:508	30																Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew			
04/02/94 05:52:40	3:04:33		70.0	100.0	1071.1													N70D									
04/02/94 05:57:47	3:09:40	Err:508																Switch to HGA									READY FOR DATA DUMP - Time approximate
																											Err:508
04/02/94 05:59:00	3:10:53																	Switch to DHU mode @ 128 kbps									Ground Command
04/02/94 05:59:04	3:10:58		60.0	100.5	1251.7													N60D									
04/02/94 06:01:00	3:12:53																	Downlink SSSDR Segment 5									Ground Command
04/02/94 06:02:00	3:13:53																	No response									DHU CRASH!
04/02/94 06:06:22	3:18:16		50.0	100.8	1456.0													N50D									
04/02/94 06:10:00	3:21:53																	Execute DHU Reset; Switch to bypass mode @ 2 kbps									Ground Command
04/02/94 06:13:32	3:25:25																	PMK	AOS								
04/02/94 06:14:43	3:26:37		40.0	100.9	1681.4														N40D								
04/02/94 06:17:00	3:28:53																										Ground Command LHG observation canceled
04/02/94 06:18:00	3:29:53																										Ground Command
04/02/94 06:24:18	3:36:11		30.0	101.0	1922.3														N30D								
04/02/94 06:28:29	3:40:23		26.0	101.0	2020.8														INPM								Enter penumbra
04/02/94 06:29:15	3:41:08		25.3	101.0	2037.9														INUM								Enter umbra
04/02/94 06:33:00	3:44:53																										Ground Command
04/02/94 06:35:14	3:47:08		20.0	101.0	2169.4														N20D								
04/02/94 06:38:00	3:49:53																										Ground Command
04/02/94 06:46:00	3:57:53																										Ground Command
04/02/94 06:47:38	3:59:31		10.0	101.0	2409.0														N10D								
04/02/94 07:01:28	4:13:22		0.0	101.0	2623.1														Equator -D								
04/02/94 07:13:00	4:24:53																										Ground Command
04/02/94 07:16:36	4:28:30		-10.0	100.9	2791.7														S10D								
04/02/94 07:32:42	4:44:35		-20.0	100.9	2896.1														S20D								
04/02/94 07:35:48	4:47:42		-21.9	100.9	2907.4														OUTUM								Exit umbra
04/02/94 07:36:42	4:48:36		-22.4	100.9	2910.1														OUTPM								Exit penumbra
04/02/94 07:46:28	4:58:22		-28.3	100.9	2924.3														Aposelene								

Orbit 198 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/02/94 07:46:28	0:00:00		-28.3	100.9	2924.3							Aposelene							Downlinking SDDR Segment 6 (orbit 197)
04/02/94 07:49:13	0:02:44		-30.0	100.9	2923.2							S30D							
04/02/94 08:05:41	0:19:12		-40.0	100.9	2869.6							S40D							
04/02/94 08:18:00	0:31:31												Downlink SDDR Segment 7						Ground Command
																			Standard Prep1 Script
04/02/94 08:20:45	0:34:16	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/02/94 08:21:29	0:35:00		-50.0	100.9	2742.1							S50D							
04/02/94 08:36:13	0:49:44		-60.0	101.1	2556.2							S60D							
04/02/94 08:43:00	0:56:31												Downlink SDDR Segment 6						Ground Command
																			Standard Prep2 Script
04/02/94 08:45:35	0:59:06	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/02/94 08:49:36	1:03:08		-70.0	101.6	2331.4							S70D							
04/02/94 08:53:28	1:06:59										GDS	AOS							
																			Err:508
04/02/94 08:56:05	1:09:36	0											Msg "WARNING: Omni/2k in 1 min.."						
04/02/94 08:57:05	1:10:36	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/02/94 08:58:05	1:11:36	60											Switch to omni antennas						
04/02/94 08:59:05	1:12:36	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/02/94 09:01:05	1:14:36	120											UV & HR cameras ON						
04/02/94 09:01:31	1:15:03		-80.0	103.2	2087.3							S80D							
04/02/94 09:05:05	1:18:36	240											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
04/02/94 09:05:35	1:19:06	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/02/94 09:05:45	1:19:16	10											Perform NIR imaging (DHU SEQT 31)						
04/02/94 09:06:00	1:19:31	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 198 Timeline - Type A Orbit

04/02/94 09:11:00	1:24:31	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S			
04/02/94 09:11:30	1:25:01	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
04/02/94 09:11:58	1:25:30		-89.4	189.1	1841.5					South Pole			
04/02/94 09:12:00	1:25:31	30								MAXS	Set SA step rate to LO		
04/02/94 09:13:04	1:26:36		-88.7	252.0	1814.2					LDAWN			
04/02/94 09:21:06	1:34:38		-80.0	276.3	1605.2					S80A			
04/02/94 09:21:08	1:34:39	548								S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75S; Select DHU SEQT 14		
04/02/94 09:29:07	1:42:38	479	-70.0	278.0	1386.2					S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65S; Select DHU SEQT 13		
04/02/94 09:36:06	1:49:37	419	-60.0	278.5	1189.5					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12		
04/02/94 09:37:06	1:50:37	60									Record in SSSR Segment 2		SSDR Segment 2
04/02/94 09:42:16	1:55:47	310	-50.0	278.8	1017.0					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11		Stop HiRes imaging
04/02/94 09:47:12	2:00:43	296									Laser Power ON		
04/02/94 09:47:45	2:01:16	33	-40.0	278.9	868.8					S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10		
04/02/94 09:52:41	2:06:12	296	-30.0	279.1	744.3					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9		
04/02/94 09:57:10	2:10:42		-20.0	279.1	642.3					S20A			
04/02/94 09:57:12	2:10:43	271								S20A	Load EEQ_08.UMI into SEQT 08; Load exposure table LUNARZ15S; Select DHU SEQT 8		Start laser ranging UV and IR uncompressed
04/02/94 10:01:22	2:14:53	250	-10.0	279.2	561.4					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7		Resume compression
04/02/94 10:02:15	2:15:46								MAD	LOS			
04/02/94 10:05:18	2:18:49	236	0.0	279.3	500.5					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6		
04/02/94 10:09:03	2:22:34	225	10.0	279.3	458.6					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5		
04/02/94 10:10:03	2:23:34	60									Record in SSSR Segment 3		SSDR Segment 3
04/02/94 10:12:41	2:26:12	158	20.0	279.4	434.9					N20A	Load exposure table LUNARZ25N		
04/02/94 10:15:40	2:29:11		28.3	279.5	428.8					Periselene			
04/02/94 10:16:17	2:29:48	216	30.0	279.5	429.0					N30A	Load exposure table LUNARZ35N		
04/02/94 10:19:53	2:33:24	216	40.0	279.6	440.8					N40A	Load exposure table LUNARZ45N		
04/02/94 10:23:33	2:37:04	220	50.0	279.8	470.6					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6		Resume HiRes imaging

Orbit 198 Timeline - Type A Orbit

04/02/94 10:27:21	2:40:52	228	60.0	280.1	518.8					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/02/94 10:28:21	2:41:52	60									Record in SSDR Segment 4						SSDR Segment 4
04/02/94 10:31:21	2:44:52		70.0	280.7	586.3					N70A							
04/02/94 10:31:22	2:44:53	181								N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3						
04/02/94 10:35:37	2:49:09		80.0	282.4	674.3					N80A							
04/02/94 10:35:39	2:49:10	257								N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9						Stop laser ranging
04/02/94 10:36:09	2:49:40	30									Laser power OFF						
04/02/94 10:36:39	2:50:10	30									Load EEQ_08.UMI into SEQT 8						Restore original SEQT 8
																	Err:508
04/02/94 10:40:15	2:53:47		89.4	7.3	783.3					North Pole							
04/02/94 10:40:48	2:54:19		88.7	71.1	797.2					LDUSK							
																	Err:508
04/02/94 10:41:17	2:54:48	0									Stop Imaging - select ST-B						
04/02/94 10:41:22	2:54:53	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait						End of slew - wait before imaging to allow s/c to settle
04/02/94 10:44:52	2:58:23	15									Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B						
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)						Slew to Vega (inertial pointing)
04/02/94 10:45:22	2:58:53		80.0	95.6	915.6					N80D							
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec						
04/02/94 10:49:02	3:02:33	Err:508									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)						
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6									Load exposure table LUNIRDKS1						
Err:508	Err:508	6									Load exposure table LUNIRDKS2						

Orbit 198 Timeline - Type A Orbit

Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)							
Err:508	Err:508	30									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec							Slew HGA to Earth with active waitwhileslew
04/02/94 10:51:03	3:04:35		70.0	97.2	1072.1						N70D							
Err:508	Err:508	360									Switch to HGA							READY FOR DATA DUMP - Time approximate
																		Err:508
04/02/94 10:57:29	3:11:01		60.0	97.8	1252.8						N60D							
04/02/94 10:58:00	3:11:31																	Ground Command
04/02/94 11:02:00	3:15:31																	Ground Command
04/02/94 11:04:47	3:18:18		50.0	98.0	1457.2						N50D							
04/02/94 11:13:08	3:26:39		40.0	98.2	1682.7						N40D							
04/02/94 11:22:43	3:36:14		30.0	98.2	1923.7						N30D							
04/02/94 11:26:59	3:40:31																	Ground Command
04/02/94 11:26:59	3:40:31		25.9	98.2	2024.1						INPM							Enter penumbra
04/02/94 11:27:44	3:41:15		25.2	98.2	2041.2						INUM							Enter umbra
04/02/94 11:30:00	3:43:31																	Ground Command
04/02/94 11:33:40	3:47:12		20.0	98.3	2170.9						N20D							
04/02/94 11:46:04	3:59:36		10.0	98.2	2410.4						N10D							
04/02/94 11:59:56	4:13:27		0.0	98.2	2624.3						MEQD							
04/02/94 12:15:03	4:28:35		-10.0	98.2	2792.6						S10D							
04/02/94 12:18:00	4:31:31																	Ground Command
04/02/94 12:31:08	4:44:40		-20.0	98.2	2896.5						S20D							
04/02/94 12:34:10	4:47:42		-21.8	98.1	2907.5						OUTUM							Exit umbra
04/02/94 12:35:04	4:48:36		-22.4	98.1	2910.2						OUTPM							Exit penumbra
04/02/94 12:44:50	4:58:22		-28.3	98.1	2924.4						Aposelene							

Orbit 199 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/02/94 12:44:50	0:00:00		-28.3	98.1	2924.4							Aposelene							Downlinking SDDR Segment 3 (orbit 198)
04/02/94 12:47:42	0:02:51		-30.0	98.1	2923.2							S30D							
04/02/94 12:53:00	0:08:09												Downlink SDDR Segment 4						Ground Command
04/02/94 13:04:08	0:19:18		-40.0	98.1	2869.1							S40D							
																			Standard Prep1 Script
04/02/94 13:19:10	0:34:19	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/02/94 13:19:57	0:35:07		-50.0	98.2	2741.2							S50D							
04/02/94 13:22:00	0:37:09												SSDR to IDLE - downlink complete						Ground Command
04/02/94 13:35:33	0:50:42										CAN	AOS							
04/02/94 13:34:40	0:49:50		-60.0	98.4	2554.9							S60D							
																			Standard Prep2 Script
04/02/94 13:44:00	0:59:09	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/02/94 13:48:04	1:03:13		-70.0	98.9	2330.0							S70D							
																			Err:508
04/02/94 13:55:00	1:10:09	0											Msg "WARNING: 2kbps in 1 min."						
04/02/94 13:56:00	1:11:09	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/02/94 13:57:00	1:12:09	60											Switch to omni antennas						
04/02/94 13:58:00	1:13:09	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/02/94 13:59:57	1:15:06		-80.0	100.5	2085.8							S80D							
04/02/94 14:00:00	1:15:09	120											UV & HR cameras ON						
04/02/94 14:03:30	1:18:39	210											Initialize filters (DHU SEQT 27); Record in SDDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 4
04/02/94 14:04:00	1:19:09	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/02/94 14:04:10	1:19:19	10											Perform NIR imaging (DHU SEQT 31)						
04/02/94 14:04:25	1:19:34	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 199 Timeline - Type B Orbit

04/02/94 14:08:24	1:23:34	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S				
04/02/94 14:09:25	1:24:34	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
04/02/94 14:10:25	1:25:34	60	-89.4	187.0	1839.9				South Pole	Set SA step rate to LO				
04/02/94 14:11:29	1:26:38		-88.7	249.1	1812.8				LDAWN					
04/02/94 14:19:33	1:34:42	548	-80.0	273.6	1603.8				S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20				
04/02/94 14:27:30	1:42:40		-70.0	275.3	1384.9				S70A					
04/02/94 14:27:32	1:42:41	479							S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19				
04/02/94 14:30:19	1:45:28	168								Err:508				Slew to South Pole for oblique viewing
04/02/94 14:34:29	1:49:38		-60.0	275.8	1188.3				S60A					
04/02/94 14:34:31	1:49:40	251							S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11				
04/02/94 14:35:31	1:50:40	60								Record in SSSR Segment 5				SSDR Segment 5
04/02/94 14:40:40	1:55:49	309	-50.0	276.1	1016.0				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10				Stop HiRes imaging
04/02/94 14:45:35	2:00:44	295								Laser Power ON				
04/02/94 14:46:09	2:01:18	34	-40.0	276.2	868.0				S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping
04/02/94 14:51:05	2:06:14	296	-30.0	276.3	743.6				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/02/94 14:55:35	2:10:44	270	-20.0	276.4	641.7				S20A	Load EEQ_08U.UMI into SEQT 08: Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging UV and IR uncompressed
04/02/94 14:59:46	2:14:55	251	-10.0	276.5	560.9				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				Resume compression
04/02/94 15:03:41	2:18:50	235	0.0	276.5	500.1				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/02/94 15:07:26	2:22:35	225	10.0	276.6	458.3				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/02/94 15:11:05	2:26:14	219	20.0	276.7	434.8				N20A	Load exposure table LUNARZ25N				
04/02/94 15:13:36	2:28:45		30.0	276.8	429.0				PMK	LOS				
04/02/94 15:14:02	2:29:11		28.3	276.8	428.7				Periselene					
04/02/94 15:14:40	2:29:49	215	30.0	276.8	429.0				N30A	Load exposure table LUNARZ35N				
04/02/94 15:18:16	2:33:25	216	40.0	276.9	440.9				N40A	Load exposure table LUNARZ45N				
04/02/94 15:21:55	2:37:04		50.0	277.1	470.8				N50A					
04/02/94 15:21:57	2:37:06	221							N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6				Resume HiRes imaging

Orbit 199 Timeline - Type B Orbit

04/02/94 15:25:45	2:40:54	228	60.0	277.4	519.1					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/02/94 15:26:45	2:41:54	60									Record in SSDR Segment 6						SSDR Segment 6
04/02/94 15:29:45	2:44:54	180	70.0	277.9	586.7					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17						
04/02/94 15:34:02	2:49:11	257	80.0	279.6	674.8					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16						Stop laser ranging
04/02/94 15:34:32	2:49:41	30									Laser power OFF						
04/02/94 15:35:02	2:50:11	30									Load EEQ_08.UMI into SEQT 08						Restore original SEQT 8
Err:508																	
04/02/94 15:38:39	2:53:48		89.4	4.8	784.0					North Pole							
04/02/94 15:39:13	2:54:22		88.7	68.3	797.9					LDUSK							
Err:508																	
04/02/94 15:39:40	2:54:49	0									Stop Imaging - select ST-B						
04/02/94 15:39:45	2:54:54	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait						End of slew - wait before imaging to allow s/c to settle
04/02/94 15:43:17	2:58:26	15									Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B						
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)						Slew to Vega (inertial pointing)
04/02/94 15:43:45	2:58:55		80.0	92.8	916.5					N80D							
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec						
04/02/94 15:48:08	3:03:17	Err:508									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)						
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6									Load exposure table LUNIRDKS1						
Err:508	Err:508	6									Load exposure table LUNIRDKS2						
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)						

Orbit 199 Timeline - Type B Orbit

Err:508	Err:508	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/02/94 15:49:28	3:04:38		70.0	94.5	1073.0					N70D					
04/02/94 15:51:00	3:06:09	Err:508									Switch to HGA				READY FOR DATA DUMP - Time approximate
															Err:508
04/02/94 15:53:00	3:08:09										Switch to DHU mode @ 128 kbps				Ground Command
04/02/94 15:55:53	3:11:02		60.0	95.0	1253.9					N60D					
04/02/94 15:57:00	3:12:09										Downlink SSSR Segment 4				Ground Command
04/02/94 16:03:12	3:18:21		50.0	95.3	1458.5					N50D					
04/02/94 16:11:33	3:26:42		40.0	95.4	1684.1					N40D					
04/02/94 16:12:00	3:27:09										Downlink SSSR Segment 5				Ground Command
04/02/94 16:19:00	3:34:09										Update state vector (GNC53_02APR1600)				Ground Command
04/02/94 16:21:08	3:36:17		30.0	95.5	1925.2					N30D					
04/02/94 16:25:30	3:40:39		25.9	95.5	2027.4					INPM					Enter penumbra
04/02/94 16:26:15	3:41:25		25.2	95.5	2044.5					INUM					Enter umbra
04/02/94 16:32:07	3:47:16		20.0	95.5	2172.4					N20D					
04/02/94 16:44:32	3:59:41		10.0	95.5	2411.8					N10D					
04/02/94 16:58:23	4:13:33		0.0	95.5	2625.5					Equator -D					
															Err:508
04/02/94 17:08:42	4:23:52	0									SSDR to IDLE; Switch to 2 kbps bypass mode				Data dump stopped
04/02/94 17:09:42	4:24:52	60									Switch to omni antennas; Record in SSSR Segment 7				SSDR Segment 7
04/02/94 17:10:43	4:25:52	60									Err:508				Slew using Inertial pointing (LGH not LHG used in name)
04/02/94 17:13:31	4:28:40		-10.0	95.5	2793.5					S10D					
04/02/94 17:16:43	4:31:52	360									Execute STB_Images				No data- Note: Time between events includes script duration (90 sec) and WAIT between script calls (10 sec)
Err:508	Err:508	100									Execute STB_Images				No data, sequence table error
Err:508	Err:508	100									Execute STB_Images				No data, sequence table error
Err:508	Err:508	100									Execute STB_Images				No data, sequence table error
Err:508	Err:508	100									Execute STB_Images				No data, sequence table error
Err:508	Err:508	100									Execute STB_Images				No data, sequence table error
Err:508	Err:508	100									Execute STB_Images				No data, sequence table error
Err:508	Err:508	90									Execute STB_Images				No data, sequence table error
04/02/94 17:29:36	4:44:45		-20.0	95.4	2897.0					S20D					
Err:508	Err:508	100									Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec				STOP IMAGING Slew HGA back to Earth

Orbit 199 Timeline - Type B Orbit

04/02/94 17:32:33	4:47:42		-21.8	95.4	2907.5					OUTUM					Exit umbra
04/02/94 17:33:27	4:48:36		-22.3	95.4	2910.3					OUTPM					Exit penumbra
Err:508	Err:508	360									Switch to HGA				READY FOR DATA DUMP - Time approximate
															Err:508
04/02/94 17:43:13	4:58:22		-28.2	95.4	2924.5					Aposelene					
															STB_Images Subscript
		0									Load exposure table STBGLOW700; Select DHU SEQT 22				EEQ_22.UMI loaded into SEQT 22 instead of LHGSTB_22.UMI No images because cameras were turned off
		10									Stop imaging - select ST-A				Update attitude
		10									Load exposure table STBGLOW400; Select DHU SEQT 22				No imaging at 400 msec
		10									Stop imaging - select ST-A				Update attitude only
		10									Load exposure table STBGLOW200; Select DHU SEQT 22				No imaging at 200 msec
		10									Stop imaging - select ST-A				Update attitude only
		10									Load exposure table STBGLOW100; Select DHU SEQT 22				No imaging at 100 msec
		10									Stop imaging - select ST-A				Update attitude only
		10									Load exposure table STBGLOW050; Select DHU SEQT 22				No imaging at 50 msec
		10									Stop imaging - select ST-A				END STB_Images

Orbit 200 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/02/94 17:43:13	0:00:00		-28.2	95.4	2924.5							Aposelene							Preparing to resume data dump
04/02/94 17:46:09	0:02:56		-30.0	95.4	2923.2							S30D							
04/02/94 17:47:00	0:03:46												Switch to DHU mode @ 128 kbps						Ground Command
04/02/94 17:49:00	0:05:46												Downlink SSSR Segment 5						Ground Command
04/02/94 17:59:00	0:15:46												Uplink and schedule L200 scripts						Ground Command
04/02/94 18:02:36	0:19:23		-40.0	95.4	2868.6							S40D							
04/02/94 18:03:17	0:20:03										GDS	LOS							
																			Standard Prep1 Script
04/02/94 18:17:36	0:34:22	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/02/94 18:18:24	0:35:11		-50.0	95.5	2740.3							S50D							
04/02/94 18:26:00	0:42:46												Downlink SSSR Segment 6						Ground Command
04/02/94 18:33:08	0:49:55		-60.0	95.7	2553.7							S60D							
																			Standard Prep2 Script
04/02/94 18:42:26	0:59:12	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/02/94 18:46:29	1:03:16		-70.0	96.1	2328.6							S70D							
																			Err:508
04/02/94 18:52:56	1:09:42	0											Msg "WARNING: Omni/2k in 1 min.."						
04/02/94 18:53:56	1:10:42	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/02/94 18:54:56	1:11:42	60											Switch to omni antennas						
04/02/94 18:55:56	1:12:42	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/02/94 18:57:56	1:14:42	120											UV & HR cameras ON						
04/02/94 18:58:24	1:15:11		-80.0	97.8	2084.3							S80D							
04/02/94 19:01:56	1:18:42	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/02/94 19:02:26	1:19:12	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/02/94 19:02:36	1:19:22	10											Perform NIR imaging (DHU SEQT 31)						
04/02/94 19:02:51	1:19:37	15																	Err:508
																			Err:508

Orbit 200 Timeline - Type A Orbit

04/02/94 20:24:07	2:40:53		60.0	274.6	519.4				N60A				
04/02/94 20:24:10	2:40:56	229							N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4			
04/02/94 20:25:10	2:41:56	60								Record in SSSR Segment 3			SSDR Segment 3
04/02/94 20:28:08	2:44:55		70.0	275.2	587.1				N70A				
04/02/94 20:28:10	2:44:56	180							N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3			
04/02/94 20:32:25	2:49:12		80.0	276.9	675.3				N80A				
04/02/94 20:32:27	2:49:13	257							N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9			Stop laser ranging
04/02/94 20:32:57	2:49:43	30								Laser power OFF			
04/02/94 20:33:27	2:50:13	30								Load EEQ_08.UMI into SEQT 08			Restore original SEQT 8
													Err:508
04/02/94 20:37:03	2:53:50		89.4	3.1	784.8				North Pole				
04/02/94 20:37:36	2:54:23		88.7	65.6	798.6				LDUSK				
													Err:508
04/02/94 20:38:04	2:54:50	0								Stop Imaging - select ST-B			
04/02/94 20:38:09	2:54:55	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508								Wait			End of slew - wait before imaging to allow s/c to settle
04/02/94 20:41:32	2:58:18	15								Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B			
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
04/02/94 20:42:09	2:58:56		80.0	90.1	917.3				N80D				
Err:508	Err:508	30								Park opaque filter on HiRes (Select DHU SEQT 27)			
Err:508	Err:508	15								Select ST-B (Select DHU SEQT 2)			
04/02/94 20:45:47	3:02:33	Err:508								Load Vega exposure table (ldlunvega); Perform UV0 imaging (Select DHU SEQT 29)			
Err:508	Err:508	12								Perform LWIR imaging (Select DHU SEQT 25)			
Err:508	Err:508	12								Perform NIR imaging (Select DHU SEQT 31)			
Err:508	Err:508	6								Load LUNIRDKS1 (ldlunirdks1)			
Err:508	Err:508	6								Load LUNIRDKS2 (ldlunirdks2)			

Orbit 200 Timeline - Type A Orbit

Err:508	Err:508	6									Perform HiRes imaging (Select DHU SEQT 30)						
Err:508	Err:508	30									Select ST-B (Select DHU SEQT 2); UV & HiRes cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (GNC13EARTH)						STOP IMAGING; Slew HGA to Earth
04/02/94 20:47:52	3:04:39		70.0	91.8	1074.0					N70D							
Err:508	Err:508	360									Switch to HGA						READY FOR DATA DUMP
Err:508																	
04/02/94 20:53:30	3:10:16										Switch to DHU mode @ 128 kbps						Ground Command
04/02/94 20:54:18	3:11:05		60.0	92.3	1255.1					N60D							
04/02/94 20:56:00	3:12:46										Resume downlink SSSR Segment 6						Ground Command
04/02/94 21:01:36	3:18:22		50.0	92.6	1459.8					N50D							
04/02/94 21:09:00	3:25:46										Downlink SSSR Segment 7 (LHG)						Ground Command - no data
04/02/94 21:09:59	3:26:46		40.0	92.7	1685.5					N40D							
04/02/94 21:15:00	3:31:46										Downlink SSSR Segment 1 (orb 200)						Ground Command
04/02/94 21:17:00	3:33:46										Uplink and schedule L201 scripts						Ground Command
04/02/94 21:19:34	3:36:21		30.0	92.8	1926.7					N30D							
04/02/94 21:24:01	3:40:48		25.8	92.8	2030.7					INPM							Enter penumbra
04/02/94 21:24:46	3:41:33		25.1	92.8	2047.9					INUM							Enter umbra
04/02/94 21:26:00	3:42:46										Downlink SSSR Segment 2						Ground Command
04/02/94 21:30:32	3:47:19		20.0	92.8	2173.9					N20D							
04/02/94 21:39:00	3:55:46										Load LHGSTB_22.UMI into SEQT 22						Ground Command
04/02/94 21:42:58	3:59:45		10.0	92.8	2413.2					N10D							
04/02/94 21:49:00	4:05:46										Ranging B ON						Ground Command
04/02/94 21:56:50	4:13:37		0.0	92.8	2626.7					Equator - D							
04/02/94 22:12:00	4:28:46		-10.0	92.7	2794.4					S10D							
04/02/94 22:28:04	4:44:51		-20.0	92.7	2897.4					S20D							
04/02/94 22:30:54	4:47:40		-21.7	92.7	2907.5					OUTUM							Exit umbra
04/02/94 22:31:48	4:48:35		-22.3	92.7	2910.3					OUTPM							Exit penumbra
04/02/94 22:41:35	4:58:22		-28.2	92.7	2924.5					Aposelene							NOTE: HKP has to be reset by ground command at 23:45:00. No images are taken during Orbit 201.

Orbit 202 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/03/94 03:39:57	0:00:00		-28.1	89.9	2924.6							Aposelene							Recovering from HKP reset NOTE: New version (1250) ADAC code was loaded during recovery
04/03/94 03:40:00	0:00:02												Resume downlink SDR Segment 3 (orbit 200)						Ground Command
04/03/94 03:41:00	0:01:02												Uplink and schedule L202 scripts						Ground Command
04/03/94 03:43:06	0:03:09		-30.0	89.9	2923.1							S30D							
04/03/94 03:52:00	0:12:02												ST-B camera ON; SSDR to IDLE; Laser heater ON; Switch to DUPER mode						Ground Command
04/03/94 03:58:00	0:18:02												Uplink E-series DHU sequence tables (SEQ_LUNAR_E); Load LHGSTB_22.UMI into SEQT 22						Ground Command
04/03/94 03:59:33	0:19:35		-40.0	89.9	2867.6							S40D							
04/03/94 04:12:00	0:32:02												SSDR to IDLE - downlink complete; Select ST-B; Select ST-A						Ground Command
Standard Prep1 Script																			
04/03/94 04:14:28	0:34:30	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						NOTE: s/c time off by 3.75 sec, but not included here
End Prep1 Script																			
04/03/94 04:15:20	0:35:22		-50.0	90.0	2738.5							S50D							
04/03/94 04:30:02	0:50:05		-60.0	90.2	2551.4							S60D							
Standard Prep2 Script																			
04/03/94 04:39:18	0:59:20	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						NOTE: s/c time off by 3.75 sec, but not included here
End Prep2 Script																			
04/03/94 04:42:00	1:02:02												Select ST-B						Ground Command
04/03/94 04:43:23	1:03:25		-70.0	90.6	2325.8							S70D							
Err:508																			
04/03/94 04:49:48	1:09:50	0											Msg "WARNING: Omni/2k in 1 min.."						NOTE: s/c time off by 3.75 sec, but not reflected here
04/03/94 04:50:48	1:10:50	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/03/94 04:51:48	1:11:50	60											Switch to omni antennas						
04/03/94 04:52:48	1:12:50	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/03/94 04:54:48	1:14:50	120											UV & HR cameras ON						
04/03/94 04:55:16	1:15:18		-80.0	92.2	2081.5							S80D							

Orbit 202 Timeline - Type A Orbit

04/03/94 04:58:48	1:18:50	240									Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)							Start SSSR in Segment 1
04/03/94 04:59:18	1:19:20	30									Perform LWIR imaging (DHU SEQT 25)							Start dark field imaging
04/03/94 04:59:28	1:19:30	10									Perform NIR imaging (DHU SEQT 31)							
04/03/94 04:59:43	1:19:45	15																Err:508
																		Err:508
																		Err:508
04/03/94 05:04:43	1:24:45	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S							NOTE: s/c time off by 3.75 sec, but not included here
04/03/94 05:05:13	1:25:15	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)							START MAPPING SEQT 21 used instead of SEQT 15 to cover UV/Vis area lost on Orbit 201
04/03/94 05:05:43	1:25:45	30	-89.4	179.7	1835.4					South Pole	Set SA step rate to LO							
04/03/94 05:06:46	1:26:48		-88.7	241.3	1808.5					LDAWN								
04/03/94 05:14:49	1:34:51	546	-80.0	265.5	1599.7					S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 20							SEQT 20 used instead of SEQT 14 to cover UV/Vis area lost on Orbit 201
04/03/94 05:22:47	1:42:49	478	-70.0	267.1	1381.1					S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65S; Load exposure table LUNARH65S; Select DHU SEQT 19							SEQT 19 used instead of SEQT 13 to cover UV/Vis area lost on Orbit 201
04/03/94 05:29:45	1:49:47	418	-60.0	267.6	1185.0					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12							
04/03/94 05:30:45	1:50:47	60									Record in SSSR Segment 2							SSSR Segment 2
04/03/94 05:35:53	1:55:55	308	-50.0	267.9	1013.0					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11							Stop HiRes imaging
04/03/94 05:40:47	2:00:49	294									Laser Power ON							
04/03/94 05:41:21	2:01:23	34	-40.0	268.0	865.4					S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10							
04/03/94 05:46:17	2:06:19	296	-30.0	268.1	741.4					S30A	Load EEQ_09U.UMI into SEQT 09; Load exposure table LUNARZ25S; Select DHU SEQT 9							UV and IR uncompressed
04/03/94 05:50:47	2:10:49	270	-20.0	268.2	639.9					S20A	Load exposure table LUNARZ15S; Load exposure table LUNARH15S; Select DHU SEQT 8							Start laser ranging Resume compression
04/03/94 05:54:57	2:14:59	250	-10.0	268.3	559.5					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7							
04/03/94 05:58:52	2:18:54	235	0.0	268.4	499.1					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6							
04/03/94 06:02:37	2:22:39	225	10.0	268.4	457.6					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5							
04/03/94 06:06:14	2:26:16		20.0	268.5	434.3					N20A								

Orbit 202 Timeline - Type A Orbit

04/03/94 06:06:16	2:26:18	219								N20A	Load exposure table LUNARZ25N						
04/03/94 06:09:09	2:29:11		28.1	268.6	428.6					Periselene							
04/03/94 06:09:51	2:29:53	215	30.0	268.6	428.9					N30A	Load exposure table LUNARZ35N						
04/03/94 06:13:27	2:33:29	216	40.0	268.7	441.1					N40A	Load exposure table LUNARZ45N						
04/03/94 06:17:06	2:37:08		50.0	268.9	471.3					N50A							
04/03/94 06:17:08	2:37:10	221								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/03/94 06:20:56	2:40:58	228	60.0	269.2	519.9					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/03/94 06:21:56	2:41:58	60									Record in SSSDR Segment 3						SSDR Segment 3
04/03/94 06:24:56	2:44:58	180	70.0	269.7	587.9					N70A	Load EEQ_03H.UMI into SEQT 03; Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3						Multispectral (color) bursts with HiRes camera for 70N to 80N
04/03/94 06:29:14	2:49:16	258	80.0	271.4	676.4					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9						Stop laser ranging
04/03/94 06:29:44	2:49:46	30									Laser power OFF						
04/03/94 06:30:14	2:50:16	30									Load EEQ_03.UMI into SEQT 03; Load EEQ_09.UMI into SEQT 09						Restore original SEQT 3 and 9
Err:508																	
04/03/94 06:33:51	2:53:54		89.4	357.5	786.1					North Pole							
04/03/94 06:34:24	2:54:26		88.7	60.6	799.9					LDUSK							
Err:508																	
04/03/94 06:34:52	2:54:54	0									Stop Imaging - select ST-B						NOTE: s/c time off by 3.75 sec, but not included here
04/03/94 06:34:57	2:54:59	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait						End of slew - wait before imaging to allow s/c to settle
04/03/94 06:38:16	2:58:18	15									Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B						
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)						Slew to Vega (inertial pointing)
04/03/94 06:38:58	2:59:00		80.0	84.7	918.9					N80D							
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec						

Orbit 203 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/03/94 08:38:20	0:00:00		-28.1	87.2	2924.7							Aposelene							Downlinking SDR Segment 2 (orbit 202)
04/03/94 08:41:34	0:03:14		-30.0	87.2	2923.1							S30D							
04/03/94 08:47:00	0:08:39												Downlink SDR Segment 3						Ground Command
04/03/94 08:58:01	0:19:41		-40.0	87.2	2867.1							S40D							
																			Standard Prep1 Script
04/03/94 09:12:54	0:34:33	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/03/94 09:13:49	0:35:28		-50.0	87.3	2737.6							S50D							
04/03/94 09:21:00	0:42:39												SSDR to IDLE - downlink complete						Ground Command
04/03/94 09:28:30	0:50:10		-60.0	87.4	2550.2							S60D							
																			Standard Prep2 Script
04/03/94 09:37:44	0:59:23	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/03/94 09:40:44	1:02:23										GDS	AOS							
04/03/94 09:41:51	1:03:30		-70.0	87.9	2324.5							S70D							
																			Err:508
04/03/94 09:48:44	1:10:23	0											Msg "WARNING: 2kbps in 1 min."						
04/03/94 09:49:44	1:11:23	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/03/94 09:50:44	1:12:23	60											Switch to omni antennas						
04/03/94 09:51:44	1:13:23	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/03/94 09:53:43	1:15:23		-80.0	89.5	2080.1							S80D							
04/03/94 09:53:44	1:15:23	120											UV & HR cameras ON						
04/03/94 09:57:14	1:18:53	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 4
04/03/94 09:57:44	1:19:23	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/03/94 09:57:54	1:19:33	10											Perform NIR imaging (DHU SEQT 31)						
04/03/94 09:58:09	1:19:48	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 203 Timeline - Type B Orbit

04/03/94 10:02:09	1:23:48	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S						
04/03/94 10:03:09	1:24:48	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)						START MAPPING
04/03/94 10:04:09	1:25:48	60	-89.4	176.8	1834.0					South Pole	Set SA step rate to LO						
04/03/94 10:05:12	1:26:52		-88.7	239.0	1807.2					LDAWN							
04/03/94 10:13:13	1:34:53		-80.0	262.8	1598.3					S80A							
04/03/94 10:13:15	1:34:54	546								S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20						
04/03/94 10:21:12	1:42:51	477	-70.0	264.4	1379.9					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19						
04/03/94 10:23:59	1:45:38	167									Err:508						Slew to South Pole for oblique viewing
04/03/94 10:28:08	1:49:48		-60.0	264.9	1183.9					S60A							
04/03/94 10:28:10	1:49:49	251								S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11						
04/03/94 10:29:10	1:50:49	60									Record in SSSR Segment 5						SSDR Segment 5
04/03/94 10:34:18	1:55:57	308	-50.0	265.2	1012.1					S50A	Load EEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ45S; Select DHU SEQT 10						Stop HiRes imaging UV and IR uncompressed
04/03/94 10:39:11	2:00:50	293									Laser Power ON						
04/03/94 10:39:46	2:01:25	35	-40.0	265.3	864.6					S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10						Resume nadir mapping
04/03/94 10:44:41	2:06:20	295	-30.0	265.4	740.7					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9						Resume compression
04/03/94 10:49:11	2:10:50	270	-20.0	265.5	639.3					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8						Start laser ranging
04/03/94 10:53:21	2:15:00	250	-10.0	265.6	559.1					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
04/03/94 10:57:16	2:18:55	235	0.0	265.6	498.7					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6						
04/03/94 11:01:01	2:22:40	225	10.0	265.7	457.4					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/03/94 11:04:39	2:26:18	218	20.0	265.8	434.2					N20A	Load exposure table LUNARZ25N						
04/03/94 11:06:01	2:27:40									MAD	LOS						
04/03/94 11:07:31	2:29:11		28.0	265.8	428.5					Periselene							
04/03/94 11:08:15	2:29:54	216	30.0	265.9	428.8					N30A	Load exposure table LUNARZ35N						
04/03/94 11:11:51	2:33:30	216	40.0	266.0	441.2					N40A	Load exposure table LUNARZ45N						
04/03/94 11:15:31	2:37:10	220	50.0	266.1	471.4					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging

Orbit 203 Timeline - Type B Orbit

04/03/94 11:19:20	2:40:59	229	60.0	266.4	520.2					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4					
04/03/94 11:20:20	2:41:59	60									Record in SDR Segment 6					SSDR Segment 6
04/03/94 11:23:20	2:44:59	180	70.0	267.0	588.3					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17					
04/03/94 11:27:38	2:49:17	258	80.0	268.6	676.9					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16					Stop laser ranging
04/03/94 11:28:08	2:49:47	30									Laser power OFF					
04/03/94 11:28:38	2:50:17	30									Load EEQ_10.UMI into SEQT 10					Restore original SEQT 10
																Err:508
04/03/94 11:32:15	2:53:55		89.4	354.1	786.7					North Pole						
04/03/94 11:32:48	2:54:28		88.7	58.2	800.5					LDUSK						
																Err:508
04/03/94 11:33:16	2:54:55	0									Stop Imaging - select ST-B					
04/03/94 11:33:21	2:55:00	5									Err:508					Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait					End of slew - wait before imaging to allow s/c to settle
04/03/94 11:36:35	2:58:14	15									Select DHU SEQT 23					Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B					
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)					Slew to Vega (inertial pointing)
04/03/94 11:37:22	2:59:02		80.0	82.0	919.7					N80D						
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)					
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec					
04/03/94 11:40:50	3:02:29	Err:508									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)					Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)					
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)					
Err:508	Err:508	6									Load exposure table LUNIRDKS1					
Err:508	Err:508	6									Load exposure table LUNIRDKS2					
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)					

Orbit 203 Timeline - Type B Orbit

Err:508	Err:508	30																	Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec								Slew HGA to Earth with active waitwhileslew													
04/03/94 11:43:05	3:04:44		70.0	83.6	1076.8														N70D																					
04/03/94 11:45:00	3:06:39	Err:508																		Switch to HGA																		READY FOR DATA DUMP - Time approximate		
																																					Err:508			
04/03/94 11:49:32	3:11:12		60.0	84.2	1258.3															N60D																				
04/03/94 11:50:00	3:11:39																				Switch to DHU mode @ 128 kbps																	Ground Command		
04/03/94 11:51:00	3:12:39																				Select ST-A																	Ground Command ST-B blocked by Moon		
04/03/94 11:54:00	3:15:39																				Downlink SSSDR Segment 4																	Ground Command		
04/03/94 11:56:52	3:18:32		50.0	84.4	1463.4																N50D																			
04/03/94 12:05:15	3:26:55		40.0	84.5	1689.5																N40D																			
04/03/94 12:07:00	3:28:39																					Downlink SSSDR Segment 5																	Ground Command	
04/03/94 12:14:52	3:36:32		30.0	84.6	1930.9																N30D																			
04/03/94 12:19:34	3:41:14		25.6	84.6	2040.7																INPM																	Enter penumbra		
04/03/94 12:20:20	3:42:00		24.9	84.6	2058.0																INUM																	Enter umbra		
04/03/94 12:25:51	3:47:31		20.0	84.6	2178.1																N20D																			
04/03/94 12:38:19	3:59:58		10.0	84.6	2417.2																N10D																			
04/03/94 12:52:12	4:13:52		0.0	84.6	2630.2																Equator -D																			
																																						Err:508		
04/03/94 13:02:08	4:23:47	0																				SSDR to IDLE; Switch to 2 kbps bypass mode																Data dump stopped		
04/03/94 13:03:08	4:24:47	60																				Switch to omni antennas; Record in SSSDR Segment 7																	SSDR Segment 7	
04/03/94 13:04:08	4:25:47	60																				Err:508																Slew using Inertial pointing (LGH not LHG used in name)		
04/03/94 13:07:23	4:29:03		-10.0	84.5	2796.9																S10D																			
04/03/94 13:10:08	4:31:47	360																				Execute STB_Images																No data, STB_Images missing		
04/03/94 13:10:18	4:31:57	10																				Execute STB_Images																No data, STB_Images missing		
04/03/94 13:10:28	4:32:07	10																				Execute STB_Images																No data, STB_Images missing		
04/03/94 13:10:38	4:32:17	10																				Execute STB_Images																No data, STB_Images missing		
04/03/94 13:10:48	4:32:27	10																				Execute STB_Images																No data, STB_Images missing		
04/03/94 13:10:58	4:32:37	10																				Execute STB_Images																No data, STB_Images missing		
04/03/94 13:11:07	4:32:47	10																				Execute STB_Images																No data, STB_Images missing		
04/03/94 13:11:07	4:32:47	0																				Execute STB_Images																No data, STB_Images missing Wait missing		
04/03/94 13:11:17	4:32:57	10																				Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec																		STOP IMAGING Slew HGA back to Earth
04/03/94 13:17:17	4:38:57	360																				Switch to HGA															READY FOR DATA DUMP - Time approximate			

Orbit 203 Timeline - Type B Orbit

														Err:508	
04/03/94	13:18:00	4:39:39												Switch to DHU mode @ 128 kbps	Ground Command
04/03/94	13:19:00	4:40:39												Resume downlink SSSR Segment 5	Ground Command
04/03/94	13:23:29	4:45:09	-20.0	84.5	2898.8								S20D		
04/03/94	13:25:57	4:47:37	-21.5	84.5	2907.6								OUTUM		Exit umbra
04/03/94	13:26:52	4:48:32	-22.1	84.5	2910.4								OUTPM		Exit penumbra
04/03/94	13:31:00	4:52:39												Uplink STB_Images script	Ground Command
04/03/94	13:36:42	4:58:22	-28.0	84.5	2924.8								Aposelene		

Orbit 204 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/03/94 13:36:42	0:00:00		-28.0	84.5	2924.8							Aposelene							Downlinking SSSR Segment 5 (orbit 203)
04/03/94 13:37:00	0:00:17												Uplink and schedule L204 scripts						Ground Command
04/03/94 13:40:03	0:03:21		-30.0	84.5	2923.1							S30D							
04/03/94 13:56:29	0:19:46		-40.0	84.5	2866.7							S40D							
04/03/94 14:02:00	0:25:17												Downlink SSSR Segment 6						Ground Command
																			Standard Prep1 Script
04/03/94 14:11:20	0:34:37	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/03/94 14:12:16	0:35:34		-50.0	84.5	2736.8							S50D							
04/03/94 14:26:58	0:50:15		-60.0	84.7	2549.1							S60D							
04/03/94 14:27:00	0:50:17												Downlink SSSR Segment 7						Ground Command - no data
04/03/94 14:28:00	0:51:17												SSDR to IDLE - downlink complete						Ground Command
04/03/94 14:33:10	0:56:27										CAN	AOS							
																			Standard Prep2 Script
04/03/94 14:36:10	0:59:27	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/03/94 14:40:17	1:03:35		-70.0	85.1	2323.2							S70D							
																			Err:508
04/03/94 14:46:40	1:09:57	0											Msg "WARNING: Omni/2k in 1 min.."						
04/03/94 14:47:40	1:10:57	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/03/94 14:48:40	1:11:57	60											Switch to omni antennas						
04/03/94 14:49:40	1:12:57	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/03/94 14:51:40	1:14:57	120											UV & HR cameras ON						
04/03/94 14:52:10	1:15:27		-80.0	86.7	2078.7							S80D							
04/03/94 14:55:40	1:18:57	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/03/94 14:56:10	1:19:27	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/03/94 14:56:20	1:19:37	10											Perform NIR imaging (DHU SEQT 31)						
04/03/94 14:56:35	1:19:52	15												Err:508					Slew to nadir (inertial pointing)

Orbit 204 Timeline - Type A Orbit

04/03/94 16:16:28	2:39:45							PMK	LOS										
04/03/94 16:17:44	2:41:01	229	60.0	263.7	520.4				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4									
04/03/94 16:18:44	2:42:01	60								Record in SSSR Segment 3								SSDR Segment 3	
04/03/94 16:21:44	2:45:01	180	70.0	264.2	588.6				N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3									
04/03/94 16:26:02	2:49:19	258	80.0	265.8	677.3				N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N Select DHU SEQT 9								Stop laser ranging	
04/03/94 16:26:32	2:49:49	30								Laser power OFF									
04/03/94 16:27:02	2:50:19	30								Load EEQ_09.UMI into SEQT 9								Restore original SEQT 9	
Err:508																			
04/03/94 16:30:39	2:53:56		89.4	351.6	787.3				North Pole										
04/03/94 16:31:12	2:54:30		88.8	56.0	801.1				LDUSK										
Err:508																			
04/03/94 16:32:40	2:55:57	0								Stop Imaging - select ST-B									
04/03/94 16:32:45	2:56:02	5								Err:508								Slew sensors to Earth (inertial pointing) with waitwhileslew	
Err:508	Err:508	Err:508								Wait								End of slew - wait before imaging to allow s/c to settle	
04/03/94 16:35:47	2:59:04		80.0	79.4	920.4				N80D										
04/03/94 16:35:58	2:59:15	15								Select DHU SEQT 23								Earth imaging w/color HiRes	
Err:508	Err:508	15								Stop imaging - select ST-B									
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)								Slew to Vega (inertial pointing)	
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)									
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec									
04/03/94 16:40:13	3:03:30	Err:508								Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)								Start calibration imaging	
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)									
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)									
Err:508	Err:508	6								Load exposure table LUNIRDKS1									
Err:508	Err:508	6								Load exposure table LUNIRDKS2									
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)									

Orbit 204 Timeline - Type A Orbit

Err:508	Err:508	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/03/94 16:41:30	3:04:47		70.0	81.0	1077.7					N70D					
04/03/94 16:45:00	3:08:17	Err:508									Switch to HGA				READY FOR DATA DUMP - Time approximate
															Err:508
04/03/94 16:46:00	3:09:17										Switch to DHU mode @ 128 kbps				Ground Command
04/03/94 16:47:57	3:11:15		60.0	81.5	1259.3					N60D					
04/03/94 16:49:00	3:12:17										Downlink SSSR Segment 1				Ground Command
04/03/94 16:55:17	3:18:35		50.0	81.7	1464.6					N50D					
04/03/94 16:58:00	3:21:17										Downlink SSSR Segment 2				Ground Command
04/03/94 17:03:41	3:26:58		40.0	81.8	1690.8					N40D					
04/03/94 17:08:00	3:31:17										Update state vector (GNC53_03APR1600)				Ground Command
04/03/94 17:13:18	3:36:36		30.0	81.9	1932.3					N30D					
04/03/94 17:18:06	3:41:24		25.5	81.9	2044.0					INPM					Enter penumbra
04/03/94 17:18:52	3:42:09		24.8	81.9	2061.4					INUM					Enter umbra
04/03/94 17:19:00	3:42:17										Uplink and schedule L205 scripts				Ground Command
04/03/94 17:24:18	3:47:36		20.0	81.9	2179.5					N20D					
04/03/94 17:36:46	4:00:04		10.0	81.9	2418.5					N10D					
04/03/94 17:50:41	4:13:58		0.0	81.8	2631.3					Equator - D					
04/03/94 18:05:51	4:29:08		-10.0	81.8	2797.7					S10D					
04/03/94 18:21:00	4:44:17										Downlink SSSR Segment 3				Ground Command
04/03/94 18:21:57	4:45:15		-20.0	81.8	2899.2					S20D					
04/03/94 18:24:18	4:47:35		-21.4	81.8	2907.5					OUTUM					Exit umbra
04/03/94 18:25:13	4:48:31		-22.0	81.8	2910.4					OUTPM					Exit penumbra
04/03/94 18:35:06	4:58:23		-27.9	81.7	2924.9					Aposelene					

Orbit 205 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/03/94 18:35:06	0:00:00		-27.9	81.7	2924.9							Aposelene							Downlinking SDR Segment 3 (orbit 204)
04/03/94 18:38:31	0:03:25		-30.0	81.7	2923.1							S30D							
04/03/94 18:54:58	0:19:52		-40.0	81.7	2866.3							S40D							
04/03/94 19:02:00	0:26:54												SSDR to IDLE - downlink complete						Ground Command
04/03/94 19:05:38	0:30:32										GDS	LOS							
																			Standard Prep1 Script
04/03/94 19:09:46	0:34:40	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/03/94 19:10:44	0:35:38		-50.0	81.8	2736.0							S50D							
04/03/94 19:25:25	0:50:19		-60.0	81.9	2548.0							S60D							
																			Standard Prep2 Script
04/03/94 19:34:36	0:59:30	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/03/94 19:38:44	1:03:38		-70.0	82.4	2322.0							S70D							
																			Err:508
04/03/94 19:45:36	1:10:30	0											Msg "WARNING: 2kbps in 1 min."						
04/03/94 19:46:36	1:11:30	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/03/94 19:47:36	1:12:30	60											Switch to omni antennas						
04/03/94 19:48:36	1:13:30	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/03/94 19:50:36	1:15:30	120											UV & HR cameras ON						
04/03/94 19:50:36	1:15:30		-80.0	83.8	2077.4							S80D							
04/03/94 19:54:06	1:19:00	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 4
04/03/94 19:54:36	1:19:30	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/03/94 19:54:46	1:19:40	10											Perform NIR imaging (DHU SEQT 31)						
04/03/94 19:55:01	1:19:55	15																	Err:508
																			Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 205 Timeline - Type B Orbit

04/03/94 19:59:01	1:23:55	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S			
04/03/94 20:00:01	1:24:55	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)			START MAPPING
04/03/94 20:01:01	1:25:55	60	-89.5	170.3	1831.6				South Pole	Set SA step rate to LO			
04/03/94 20:02:04	1:26:58		-88.8	234.5	1804.6				LDAWN				
04/03/94 20:10:06	1:35:00	545	-80.0	257.5	1595.7				S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20			
04/03/94 20:18:03	1:42:57	477	-70.0	259.0	1377.5				S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19			
04/03/94 20:20:49	1:45:43	167								Err:508			Slew to South Pole for oblique viewing
04/03/94 20:25:00	1:49:54	250	-60.0	259.5	1181.7				S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11			
04/03/94 20:26:00	1:50:54	60								Record in SDR Segment 5			SSDR Segment 5
04/03/94 20:31:08	1:56:02	308	-50.0	259.7	1010.2				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10			Stop HiRes imaging
04/03/94 20:36:00	2:00:54	292								Laser Power ON			
04/03/94 20:36:35	2:01:29	35	-40.0	259.9	862.9				S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10			Resume nadir mapping
04/03/94 20:41:30	2:06:24	295	-30.0	260.0	739.3				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9			
04/03/94 20:46:00	2:10:54	270	-20.0	260.1	638.1				S20A	Load EEQ_08U.UMI into SEQT 08; Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser ranging UV and IR uncompressed
04/03/94 20:50:00	2:14:54									Read dosimeter latch values			Ground Command
04/03/94 20:50:10	2:15:04	250	-10.0	260.1	558.1				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			Resume compression
04/03/94 20:54:05	2:18:59	235	0.0	260.2	498.0				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6			
04/03/94 20:55:00	2:19:54									Expose dosimeter			Ground Command
04/03/94 20:57:49	2:22:43	224	10.0	260.2	456.8				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
04/03/94 21:01:27	2:26:21	218	20.0	260.3	433.8				N20A	Load exposure table LUNARZ25N			
04/03/94 21:04:17	2:29:11		27.9	260.4	428.3				Periselene				
04/03/94 21:05:03	2:29:57	216	30.0	260.4	428.6				N30A	Load exposure table LUNARZ35N			
04/03/94 21:08:39	2:33:33	216	40.0	260.5	441.2				N40A	Load exposure table LUNARZ45N			
04/03/94 21:12:19	2:37:13	220	50.0	260.7	471.7				N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6			Resume HiRes imaging
04/03/94 21:16:08	2:41:02	229	60.0	260.9	520.6				N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4			

Orbit 205 Timeline - Type B Orbit

04/03/94 21:17:08	2:42:02	60								Record in SDR Segment 6				SSDR Segment 6
04/03/94 21:20:08	2:45:02	180	70.0	261.4	588.9					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17			
04/03/94 21:24:26	2:49:20	258	80.0	263.0	677.7					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16			Stop laser ranging
04/03/94 21:24:56	2:49:50	30									Laser power OFF			
04/03/94 21:25:26	2:50:20	30									Load EEQ_08.UMI into SEQT 8			Restore original SEQT 8
														Err:508
04/03/94 21:29:04	2:53:58		89.5	349.4	787.9					MAXN				
04/03/94 21:29:37	2:54:31		88.8	53.8	801.5					LDUSK				
														Err:508
04/03/94 21:30:05	2:54:59	0									Stop Imaging - select ST-B			
04/03/94 21:30:10	2:55:04	5									Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait			End of slew - wait before imaging to allow s/c to settle
04/03/94 21:33:25	2:58:19	15									Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B			
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
04/03/94 21:34:12	2:59:06		80.0	76.7	921.0					N80D				
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)			
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec			
04/03/94 21:37:40	3:02:34	Err:508									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)			
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)			
Err:508	Err:508	6									Load exposure table LUNIRDKS1			
Err:508	Err:508	6									Load exposure table LUNIRDKS2			
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)			
Err:508	Err:508	30									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec			Slew HGA to Earth with active waitwhileslew
04/03/94 21:39:55	3:04:49		70.0	78.3	1078.4					N70D				

Orbit 205 Timeline - Type B Orbit

04/03/94 21:43:00	3:07:54	Err:508																Switch to HGA	READY FOR DATA DUMP - Time approximate
Err:508																			
04/03/94 21:45:00	3:09:54																	Switch to DHU mode @ 128 kbps	Ground Command
04/03/94 21:46:22	3:11:16		60.0	78.8	1260.2													N60D	
04/03/94 21:48:00	3:12:54																	Downlink SSSR Segment 4	Ground Command
04/03/94 21:50:00	3:14:54																	Ranging B ON	Ground Command
04/03/94 21:53:42	3:18:36		50.0	79.0	1465.6													N50D	
04/03/94 22:02:06	3:27:00		40.0	79.1	1691.9													N40D	
04/03/94 22:08:00	3:32:54																	Downlink SSSR Segment 5	Ground Command
04/03/94 22:11:44	3:36:38		30.0	79.2	1933.5													N30D	
04/03/94 22:16:37	3:41:31		25.4	79.2	2047.2													INPM	Enter penumbra
04/03/94 22:17:24	3:42:18		24.7	79.2	2064.6													INUM	Enter umbra
04/03/94 22:22:44	3:47:38		20.0	79.2	2180.8													N20D	
04/03/94 22:35:12	4:00:06		10.0	79.2	2419.7													N10D	
04/03/94 22:43:00	4:07:54																	Ranging A ON	Ground Command
04/03/94 22:49:07	4:14:01		0.0	79.1	2632.3													Equator -D	
Err:508																			
04/03/94 22:58:48	4:23:42	0																SSDR to IDLE; Switch to 2 kbps bypass mode	Data dump stopped
04/03/94 22:59:48	4:24:42	60																Switch to omni antennas; Record in SSSR Segment 7	SSDR Segment 7
04/03/94 23:00:48	4:25:42	60																Err:508	Slew using Inertial pointing (LGH not LHG used in name)
04/03/94 23:04:18	4:29:12		-10.0	79.1	2798.5													S10D	
04/03/94 23:06:48	4:31:42	360																Execute STB_Images	STB uncompressed - Note: Time between events includes script duration (90 sec) and WAIT between script calls (10 sec)
Err:508	Err:508	100																Execute STB_Images	ST-B uncompressed SCRIPT ERROR: The STB_Images calls were supposed to be 120 sec apart
Err:508	Err:508	100																Execute STB_Images	ST-B uncompressed
Err:508	Err:508	100																Execute STB_Images	ST-B uncompressed
Err:508	Err:508	100																Execute STB_Images	ST-B uncompressed
Err:508	Err:508	100																Execute STB_Images	ST-B uncompressed
Err:508	Err:508	100																Execute STB_Images	ST-B uncompressed
Err:508	Err:508	90																Execute STB_Images	ST-B uncompressed SCRIPT ERROR: no wait
Err:508	Err:508	100																Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec	STOP IMAGING Slew HGA back to Earth
04/03/94 23:20:25	4:45:19		-20.0	79.0	2899.7													S20D	
04/03/94 23:22:39	4:47:33		-21.3	79.0	2907.5													OUTUM	Exit umbra
04/03/94 23:23:33	4:48:27		-21.9	79.0	2910.4													OUTPM	Exit penumbra

Orbit 206 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/03/94 23:33:29	0:00:00		-27.9	79.0	2925.0							Aposelene							Downlinking SDDR Segment 5 (orbit 205)
04/03/94 23:36:59	0:03:29		-30.0	79.0	2923.2							S30D							
04/03/94 23:52:00	0:18:30												Uplink and schedule L206 scripts						Ground Command
04/03/94 23:53:25	0:19:56		-40.0	79.0	2865.9							S40D							
																			Standard Prep1 Script
04/04/94 00:08:12	0:34:42	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/04/94 00:09:12	0:35:42		-50.0	79.0	2735.3							S50D							
04/04/94 00:23:52	0:50:22		-60.0	79.2	2547.1							S60D							
																			Standard Prep2 Script
04/04/94 00:33:02	0:59:32	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/04/94 00:35:00	1:01:30												Downlink SDDR Segment 6						Ground Command
04/04/94 00:37:11	1:03:41		-70.0	79.6	2320.9							S70D							
																			Err:508
04/04/94 00:43:32	1:10:02	0											Msg "WARNING: Omni/2k in 1 min.."						
04/04/94 00:44:32	1:11:02	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/04/94 00:45:32	1:12:02	60											Switch to omni antennas						
04/04/94 00:46:32	1:13:02	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/04/94 00:48:32	1:15:02	120											UV & HR cameras ON						
04/04/94 00:49:03	1:15:33		-80.0	81.0	2076.2							S80D							
04/04/94 00:52:32	1:19:02	240											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
04/04/94 00:53:02	1:19:32	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/04/94 00:53:12	1:19:42	10											Perform NIR imaging (DHU SEQT 31)						
04/04/94 00:53:27	1:19:57	15																Err:508	Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 206 Timeline - Type A Orbit

04/04/94 00:58:27	1:24:57	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S			
04/04/94 00:58:57	1:25:27	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
04/04/94 00:59:27	1:25:57	30	-89.5	167.0	1830.5				South Pole	Set SA step rate to LO			
04/04/94 01:00:30	1:27:00		-88.8	232.5	1803.5				LDAWN				
04/04/94 01:08:32	1:35:02	545	-80.0	254.9	1594.6				S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75S; Select DHU SEQT 14			
04/04/94 01:15:00	1:41:30									Ranging A OFF Ranging B OFF			Ground Command
04/04/94 01:16:28	1:42:58	476	-70.0	256.3	1376.4				S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65S; Load exposure table LUNARH65S; Select DHU SEQT 13			
04/04/94 01:23:25	1:49:55	417	-60.0	256.8	1180.7				S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12			
04/04/94 01:24:25	1:50:55	60								Record in SDDR Segment 2			SDDR Segment 2
04/04/94 01:29:32	1:56:02	307							S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11			Stop HiRes imaging
04/04/94 01:29:33	1:56:03		-50.0	257.0	1009.3				S50A				
04/04/94 01:34:24	2:00:54	292								Laser Power ON			
04/04/94 01:35:00	2:01:30	36	-40.0	257.2	862.2				S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10			
04/04/94 01:39:55	2:06:25	295	-30.0	257.3	738.7				S30A	Load EEQ_09H.UMI into SEQT 9; Load exposure table LUNARZ25S; Load exposure table LUNARH25S; Select DHU SEQT 9			Multispectral (color) bursts with HiRes camera from 30S to 25S
04/04/94 01:42:09	2:08:39	134								Load exposure table LUNARZ25S; Load EEQ_09.UMI into SEQT 9 Select DHU SEQT 9			Restore original SEQT 9
04/04/94 01:44:24	2:10:54	135	-20.0	257.3	637.6				S20A	Load EEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser ranging UV and IR uncompressed
04/04/94 01:48:34	2:15:04	250	-10.0	257.4	557.6				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			Resume compression
04/04/94 01:52:29	2:18:59	235	0.0	257.5	497.6				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6			
04/04/94 01:56:13	2:22:43	224							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
04/04/94 01:56:14	2:22:44		10.0	257.5	456.5				N10A				
04/04/94 01:59:51	2:26:21	218							N20A	Load exposure table LUNARZ25N			
04/04/94 01:59:51	2:26:21		20.0	257.6	433.6				N20A				
04/04/94 02:02:40	2:29:10		27.9	257.6	428.1				Periselene				
04/04/94 02:03:27	2:29:57	216	30.0	257.7	428.5				N30A	Load exposure table LUNARZ35N			
04/04/94 02:07:03	2:33:33	216	40.0	257.8	441.1				N40A	Load exposure table LUNARZ45N			

Orbit 206 Timeline - Type A Orbit

04/04/94 02:10:43	2:37:13	220							N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/04/94 02:10:43	2:37:13		50.0	257.9	471.7				N50A							
04/04/94 02:14:32	2:41:02	229	60.0	258.2	520.7				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/04/94 02:15:32	2:42:02	60								Record in SSSR Segment 3						SSDR Segment 3
04/04/94 02:18:33	2:45:03	181	70.0	258.6	589.2				N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3						
04/04/94 02:22:50	2:49:20	257	80.0	260.1	678.0				N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9						Stop laser ranging
04/04/94 02:23:20	2:49:50	30								Laser power OFF						
04/04/94 02:23:50	2:50:20	30								Load EEQ_08.UMI into SEQT 8						Restore original SEQT 8
																Err:508
04/04/94 02:27:29	2:53:59		89.5	348.6	788.5				North Pole							
04/04/94 02:28:01	2:54:32		88.8	51.8	802.0				LDUSK							
																Err:508
04/04/94 02:29:28	2:55:59	0								Stop Imaging - select ST-B						
04/04/94 02:29:33	2:56:04	5								Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
04/04/94 02:32:37	2:59:07		80.0	74.1	921.6				N80D							
Err:508	Err:508	Err:508								Wait						End of slew - wait before imaging to allow s/c to settle
04/04/94 02:32:55	2:59:25	15								Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B						
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)						Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec						
04/04/94 02:37:01	3:03:31	Err:508								Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)						
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6								Load exposure table LUNIRDKS1						

Orbit 206 Timeline - Type A Orbit

Err:508	Err:508	6								Load exposure table LUNIRDKS2								
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)								
Err:508	Err:508	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec								Slew HGA to Earth with active waitwhileslew
04/04/94 02:38:20	3:04:50		70.0	75.6	1079.1					N70D								
Err:508	Err:508	360								Switch to HGA								READY FOR DATA DUMP - Time approximate
																		Err:508
04/04/94 02:44:47	3:11:17		60.0	76.1	1261.0					N60D								
04/04/94 02:47:28	3:13:58								MAD	AOS								
04/04/94 02:52:07	3:18:37		50.0	76.3	1466.6					N50D								
04/04/94 03:00:32	3:27:02		40.0	76.4	1693.0					N40D								
04/04/94 03:06:00	3:32:30																	Switch to DHU mode @ 128 kbps
04/04/94 03:09:50	3:36:20								CAN	LOS								Ground Command
04/04/94 03:10:10	3:36:40		30.0	76.4	1934.6					N30D								
04/04/94 03:15:08	3:41:38		25.3	76.4	2050.3					INPM								Enter penumbra
04/04/94 03:15:55	3:42:26		24.6	76.4	2067.7					INUM								Enter umbra
04/04/94 03:21:11	3:47:42		20.0	76.4	2181.9					N20D								
04/04/94 03:32:00	3:58:30																	Ground Command - late start due to comm problems
04/04/94 03:33:39	4:00:10		10.0	76.4	2420.8					N10D								
04/04/94 03:47:34	4:14:04		0.0	76.4	2633.3					Equator - D								
04/04/94 03:49:00	4:15:30																	Downlink SDR Segment 2 (orb 206)
04/04/94 03:52:00	4:18:30																	Uplink and schedule L207 scripts
04/04/94 04:03:00	4:29:30																	Update state vector (GNC53_04APR0400)
04/04/94 04:02:46	4:29:16		-10.0	76.3	2799.3					S10D								
04/04/94 04:18:53	4:45:23		-20.0	76.3	2900.1					S20D								
04/04/94 04:20:58	4:47:29		-21.3	76.3	2907.5					OUTUM								Exit umbra
04/04/94 04:21:54	4:48:24		-21.8	76.3	2910.4					OUTPM								Exit penumbra
04/04/94 04:31:52	4:58:22		-27.8	76.3	2925.1					Aposelene								

Orbit 207 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/04/94 04:31:52	0:00:00		-27.8	76.3	2925.1							Aposelene							Downlinking SDR Segment 2 (orbit 206)
04/04/94 04:35:28	0:03:35		-30.0	76.3	2923.2							S30D							
04/04/94 04:51:53	0:20:01		-40.0	76.2	2865.6							S40D							
Standard Prep1 Script																			
04/04/94 05:06:38	0:34:45	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
End Prep1 Script																			
04/04/94 05:07:40	0:35:47		-50.0	76.3	2734.7							S50D							
04/04/94 05:17:00	0:45:07												Downlink SDR Segment 7 (LHG)						Ground Command
04/04/94 05:22:20	0:50:28		-60.0	76.4	2546.2							S60D							
04/04/94 05:28:00	0:56:07												Downlink SDR Segment 1						Ground Command
Standard Prep2 Script																			
04/04/94 05:31:28	0:59:35	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
End Prep2 Script																			
04/04/94 05:35:39	1:03:47		-70.0	76.8	2319.9							S70D							
04/04/94 05:36:00	1:04:07												Downlink SDR Segment 3						Ground Command
Err:508																			
04/04/94 05:42:28	1:10:35	0											Msg "WARNING: 2kbps in 1 min."						
04/04/94 05:43:28	1:11:35	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/04/94 05:44:28	1:12:35	60											Switch to omni antennas						
04/04/94 05:45:28	1:13:35	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/04/94 05:47:28	1:15:35	120											UV & HR cameras ON						
04/04/94 05:47:29	1:15:37		-80.0	78.2	2075.2							S80D							
04/04/94 05:50:58	1:19:05	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 4
04/04/94 05:51:28	1:19:35	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/04/94 05:51:38	1:19:45	10											Perform NIR imaging (DHU SEQT 31)						
04/04/94 05:51:53	1:20:00	15											Err:508						Slew to nadir (inertial pointing)
Err:508																			
Err:508																			

Orbit 207 Timeline - Type B Orbit

04/04/94 05:55:52	1:24:00	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S				
04/04/94 05:56:53	1:25:00	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
04/04/94 05:57:53	1:26:00	60								MAXS	Set SA step rate to LO				
04/04/94 05:57:53	1:26:01		-89.5	165.5	1829.1					South Pole					
04/04/94 05:58:57	1:27:05		-88.8	230.5	1802.5					LDAWN					
04/04/94 06:06:58	1:35:05	545	-80.0	252.3	1593.4					S80A	Load EEQ_20U.UMI into SEQT 20; Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20				UV and IR uncompressed
04/04/94 06:14:54	1:43:01	476	-70.0	253.7	1375.4					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19				Resume compression
04/04/94 06:17:40	1:45:47	166									Err:508				Slew to South Pole for oblique viewing
04/04/94 06:21:50	1:49:57	250								S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11				
04/04/94 06:21:50	1:49:58		-60.0	254.1	1179.8					S60A					
04/04/94 06:22:50	1:50:57	60									Record in SSSR Segment 5				SSDR Segment 5
04/04/94 06:27:58	1:56:05	308	-50.0	254.3	1008.4					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10				Stop HiRes imaging
04/04/94 06:32:49	2:00:56	291									Laser Power ON				
04/04/94 06:33:25	2:01:32	36	-40.0	254.5	861.4					S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping
04/04/94 06:38:20	2:06:27	295	-30.0	254.6	738.0					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/04/94 06:42:49	2:10:56	269	-20.0	254.6	637.0					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
04/04/94 06:46:58	2:15:05	249								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
04/04/94 06:46:58	2:15:06		-10.0	254.7	557.2					S10A					
04/04/94 06:50:53	2:19:00	235								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/04/94 06:50:53	2:19:01		0.0	254.7	497.2					Equator - A					
04/04/94 06:54:38	2:22:45	225	10.0	254.8	456.2					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/04/94 06:58:16	2:26:23	218	20.0	254.8	433.4					N20A	Load exposure table LUNARZ25N				
04/04/94 07:01:04	2:29:11		27.8	254.9	428.0					Periselene					
04/04/94 07:01:51	2:29:58	215								N30A	Load exposure table LUNARZ35N				
04/04/94 07:01:51	2:29:59		30.0	254.9	428.4					N30A					
04/04/94 07:05:27	2:33:34	216								N40A	Load exposure table LUNARZ45N				
04/04/94 07:05:27	2:33:35		40.0	255.0	441.1					N40A					

Orbit 207 Timeline - Type B Orbit

04/04/94 07:09:08	2:37:15	221	50.0	255.2	471.7						N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6					Resume HiRes imaging
04/04/94 07:12:56	2:41:03	228									N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4					
04/04/94 07:12:56	2:41:04		60.0	255.4	520.8						N60A						
04/04/94 07:13:56	2:42:03	60										Record in SSDR Segment 6					SSDR Segment 6
04/04/94 07:16:57	2:45:04	181	70.0	255.9	589.3						N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17					
04/04/94 07:21:15	2:49:22	258	80.0	257.3	678.3						N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16					Stop laser ranging
04/04/94 07:21:45	2:49:52	30										Laser power OFF					
04/04/94 07:22:15	2:50:22	30										Load EEQ_20.UMI into SEQT 20					Restore original SEQT 20
04/04/94 07:25:53	2:54:01		89.5	343.5	788.6						North Pole						
04/04/94 07:26:26	2:54:34		88.8	49.9	802.3						LDUSK						
04/04/94 07:27:53	2:56:01	0										Stop Imaging - select ST-B					
04/04/94 07:27:58	2:56:06	5										Err:508					Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508										Wait					End of slew - wait before imaging to allow s/c to settle
04/04/94 07:31:02	2:59:09		80.0	71.5	922.1						N80D						
04/04/94 07:31:15	2:59:22	15										Select DHU SEQT 23					Earth imaging w/color HiRes
Err:508	Err:508	15										Stop imaging - select ST-B					
Err:508	Err:508	5										Slew s/c sensors to Vega (VEGAGNC12)					Slew to Vega (inertial pointing)
Err:508	Err:508	30										Park opaque filter on HiRes (DHU SEQT 27)					
Err:508	Err:508	15										Select ST-B; Activate waitwhileslew for 320 sec					
04/04/94 07:35:27	3:03:34	Err:508										Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)					Start calibration imaging
Err:508	Err:508	12										Perform LWIR imaging (DHU SEQT 25)					
Err:508	Err:508	12										Perform NIR imaging (DHU SEQT 31)					
Err:508	Err:508	6										Load exposure table LUNIRDKS1					
Err:508	Err:508	6										Load exposure table LUNIRDKS2					
Err:508	Err:508	6										Perform HIRES imaging (DHU SEQT 30)					

Orbit 207 Timeline - Type B Orbit

Err:508	Err:508	30																	Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec							Slew HGA to Earth with active waitwhileslew					
04/04/94 07:36:45	3:04:52		70.0	72.9	1079.7														N70D												
04/04/94 07:39:00	3:07:07	Err:508																	Switch to HGA											READY FOR DATA DUMP - Time approximate	
																														Err:508	
04/04/94 07:41:28	3:09:35																		PMK	AOS											
04/04/94 07:43:12	3:11:20		60.0	73.4	1261.7															N60D											
04/04/94 07:46:00	3:14:07																														Ground Command
04/04/94 07:48:00	3:16:07																														Ground Command
04/04/94 07:50:33	3:18:41		50.0	73.6	1467.4															N50D											
04/04/94 07:58:57	3:27:05		40.0	73.7	1693.9																N40D										
04/04/94 08:08:36	3:36:44		30.0	73.7	1935.6																N30D										
04/04/94 08:11:00	3:39:07																														Ground Command
04/04/94 08:13:00	3:41:07																														Ground Command
04/04/94 08:13:39	3:41:47		25.2	73.7	2053.3																INPM										Enter penumbra
04/04/94 08:14:26	3:42:34		24.5	73.7	2070.8																INUM										Enter umbra
04/04/94 08:19:38	3:47:45		20.0	73.7	2183.0																N20D										
04/04/94 08:32:06	4:00:14		10.0	73.7	2421.8																N10D										
04/04/94 08:46:01	4:14:09		0.0	73.7	2634.2																Equator -D										
																															Err:508
04/04/94 08:55:27	4:23:34	0																													Data dump stopped
04/04/94 08:56:27	4:24:34	60																													SSDR Segment 7
04/04/94 08:57:27	4:25:34	60																													Slew using Inertial pointing (LGH not LHG used in name)
04/04/94 09:01:13	4:29:20		-10.0	73.6	2800.0																S10D										
04/04/94 09:03:27	4:31:34	360																													STB uncompressed - Note: Time between events includes script duration (90 sec) and WAIT between script calls (30 sec)
04/04/94 09:05:27	4:33:34	120																													ST-B uncompressed images
04/04/94 09:07:27	4:35:34	120																													ST-B uncompressed images
04/04/94 09:09:26	4:37:34	120																													ST-B uncompressed images
04/04/94 09:11:26	4:39:34	120																													ST-B uncompressed images
04/04/94 09:13:26	4:41:34	120																													ST-B uncompressed images
04/04/94 09:15:26	4:43:34	120																													ST-B uncompressed images
04/04/94 09:17:16	4:45:24	110																													ST-B uncompressed images
04/04/94 09:17:21	4:45:28		-20.0	73.6	2900.6																S20D										

Orbit 207 Timeline - Type B Orbit

04/04/94 09:19:16	4:47:24	120								Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						STOP IMAGING Slew HGA back to Earth
04/04/94 09:19:17	4:47:25		-21.2	73.6	2907.4				OUTUM							Exit umbra
04/04/94 09:20:13	4:48:21		-21.7	73.6	2910.3				OUTPM							Exit penumbra
04/04/94 09:23:00	4:51:07	223								Switch to HGA						READY FOR DATA DUMP - Time approximate
Err:508																
04/04/94 09:26:00	4:54:07									Switch to DHU mode @ 128 kbps						Ground Command
04/04/94 09:27:00	4:55:07									Resume downlink SDDR Segment 5						Ground Command
04/04/94 09:30:16	4:58:23		-27.8	73.5	2925.3				Aposelene							
STB_Images Subscript																
		0								Load exposure table STBGLOW700; Select DHU SEQT 22						ST-B imaging at 700 msec LHGSTB_22.UMI loaded into SEQT 22
		10								Stop imaging - select ST-A						Update attitude
		10								Load exposure table STBGLOW400; Select DHU SEQT 22						ST-B imaging at 400 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW200; Select DHU SEQT 22						ST-B imaging at 200 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW100; Select DHU SEQT 22						ST-B imaging at 100 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW050; Select DHU SEQT 22						ST-B imaging at 50 msec
		10								Stop imaging - select ST-A						END STB_Images

Orbit 208 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/04/94 09:30:16	0:00:00		-27.8	73.5	2925.3							Aposelene							Downlinking SSSR Segment 5 (orbit 207)
04/04/94 09:33:54	0:03:38		-30.0	73.5	2923.4							S30D							
04/04/94 09:43:00	0:12:43												Uplink and schedule L208 scripts						Ground Command
04/04/94 09:50:21	0:20:05		-40.0	73.5	2865.4							S40D							
04/04/94 09:55:00	0:24:43												Downlink SSSR Segment 4						Ground Command
																			Standard Prep1 Script
04/04/94 10:05:05	0:34:48	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/04/94 10:06:07	0:35:51		-50.0	73.5	2734.2							S50D							
04/04/94 10:13:00	0:42:43												Downlink SSSR Segment 6						Ground Command
04/04/94 10:20:47	0:50:31		-60.0	73.6	2545.5							S60D							
04/04/94 10:21:21	0:51:04										GDS	AOS							
																			Standard Prep2 Script
04/04/94 10:29:55	0:59:38	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/04/94 10:34:07	1:03:50		-70.0	74.0	2319.0							S70D							
04/04/94 10:38:00	1:07:43												SSDR to IDLE - Segment 6 complete						Ground Command
																			Err:508
04/04/94 10:40:25	1:10:08	0											Msg "WARNING: Omni/2k in 1 min.."						
04/04/94 10:41:25	1:11:08	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/04/94 10:42:25	1:12:08	60											Switch to omni antennas						
04/04/94 10:43:25	1:13:08	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/04/94 10:45:25	1:15:08	120											UV & HR cameras ON						
04/04/94 10:45:56	1:15:40		-80.0	75.3	2074.2							S80D							
04/04/94 10:49:25	1:19:08	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/04/94 10:49:55	1:19:38	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/04/94 10:50:05	1:19:48	10											Perform NIR imaging (DHU SEQT 31)						
04/04/94 10:50:20	1:20:03	15																	Err:508
																			Slew to nadir (inertial pointing)

Orbit 208 Timeline - Type A Orbit

04/04/94 12:07:32	2:37:16		50.0	252.4	471.6				N50A				
04/04/94 12:07:33	2:37:16								MAD	LOS			
04/04/94 12:11:21	2:41:04	229	60.0	252.6	520.8				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4			
04/04/94 12:12:21	2:42:04	60								Record in SSSR Segment 3			SSDR Segment 3
04/04/94 12:15:22	2:45:05	181	70.0	253.1	589.4				N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3			
04/04/94 12:19:39	2:49:22	257							N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9			Stop laser ranging
04/04/94 12:19:39	2:49:23		80.0	254.4	678.5				N80A				
04/04/94 12:20:09	2:49:52	30								Laser power OFF			
04/04/94 12:20:39	2:50:22	30								Load EEQ_10.UMI into SEQT 10			Restore original SEQT 10
													Err:508
04/04/94 12:24:18	2:54:02		89.5	341.9	789.0				North Pole				
04/04/94 12:24:50	2:54:34		88.8	48.1	802.5				LDUSK				
													Err:508
04/04/94 12:26:18	2:56:02	0								Stop Imaging - select ST-B			
04/04/94 12:26:23	2:56:07	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508								Wait			End of slew - wait before imaging to allow s/c to settle
04/04/94 12:29:26	2:59:10		80.0	68.9	922.5				N80D				
04/04/94 12:29:40	2:59:23	15								Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B			
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)			
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec			
04/04/94 12:33:52	3:03:35	Err:508								Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)			
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)			
Err:508	Err:508	6								Load exposure table LUNIRDKS1			

Orbit 209 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/04/94 14:28:40	0:00:00		-27.8	70.8	2925.6							Aposelene							Downlinking SDR Segment 3 (orbit 208)
04/04/94 14:32:22	0:03:41		-30.0	70.8	2923.5							S30D							
04/04/94 14:46:00	0:17:19												Select ST-B						Ground Command - no matches
04/04/94 14:48:49	0:20:08		-40.0	70.7	2865.3							S40D							
04/04/94 14:52:00	0:23:19												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
04/04/94 15:03:32	0:34:51	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/04/94 15:04:34	0:35:53		-50.0	70.8	2733.9							S50D							
04/04/94 15:19:15	0:50:34		-60.0	70.9	2544.9							S60D							
																			Standard Prep2 Script
04/04/94 15:28:22	0:59:41	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/04/94 15:32:33	1:03:52		-70.0	71.2	2318.2							S70D							
04/04/94 15:33:41	1:05:00										CAN	AOS							
																			Err:508
04/04/94 15:39:22	1:10:41	0											Msg "WARNING: 2kbps in 1 min."						
04/04/94 15:40:22	1:11:41	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/04/94 15:41:22	1:12:41	60											Switch to omni antennas						
04/04/94 15:42:22	1:13:41	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/04/94 15:44:22	1:15:41	120											UV & HR cameras ON						
04/04/94 15:44:23	1:15:42		-80.0	72.5	2073.4							S80D							
04/04/94 15:47:52	1:19:11	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 4
04/04/94 15:48:22	1:19:41	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/04/94 15:48:32	1:19:51	10											Perform NIR imaging (DHU SEQT 31)						
04/04/94 15:48:47	1:20:06	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 209 Timeline - Type B Orbit

04/04/94 15:52:47	1:24:06	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S				
04/04/94 15:53:47	1:25:06	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
04/04/94 15:54:47	1:26:06	60	-89.5	160.2	1827.2				South Pole	Set SA step rate to LO				
04/04/94 15:55:49	1:27:08		-88.8	227.0	1800.8				LDAWN					
04/04/94 16:03:51	1:35:10	544	-80.0	247.1	1591.5				S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20				
04/04/94 16:11:46	1:43:05	475	-70.0	248.3	1373.6				S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19				
04/04/94 16:14:32	1:45:51	166								Err:508				Slew to South Pole for oblique viewing
04/04/94 16:18:42	1:50:01	250	-60.0	248.7	1178.1				S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11				
04/04/94 16:19:42	1:51:01	60								Record in SSSR Segment 5				SSDR Segment 5
04/04/94 16:24:49	1:56:08	307	-50.0	248.9	1006.9				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10				Stop HiRes imaging
04/04/94 16:29:39	2:00:58	290								Laser Power ON				
04/04/94 16:30:16	2:01:35	37	-40.0	249.1	860.1				S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping
04/04/94 16:35:10	2:06:29	294	-30.0	249.1	736.8				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/04/94 16:39:39	2:10:58	269	-20.0	249.2	636.0				S20A	Load EEQ_08U.UMI into SEQT 8; Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging UV and IR uncompressed
04/04/94 16:43:48	2:15:07	249							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				Resume compression
04/04/94 16:43:49	2:15:08		-10.0	249.2	556.3				S10A					
04/04/94 16:47:43	2:19:02	235	0.0	249.3	496.4				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/04/94 16:51:28	2:22:47	225	10.0	249.3	455.5				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/04/94 16:55:05	2:26:24	217							N20A	Load exposure table LUNARZ25N				
04/04/94 16:55:05	2:26:24		20.0	249.4	432.9				N20A					
04/04/94 16:57:52	2:29:11		27.8	249.4	427.5				Periselene					
04/04/94 16:58:41	2:30:00	216	30.0	249.4	428.0				N30A	Load exposure table LUNARZ35N				
04/04/94 17:02:17	2:33:36	216	40.0	249.5	440.8				N40A	Load exposure table LUNARZ45N				
04/04/94 17:05:57	2:37:16	220	50.0	249.7	471.5				N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6				Resume HiRes imaging
04/04/94 17:09:46	2:41:05	229	60.0	249.9	520.8				N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4				

Orbit 209 Timeline - Type B Orbit

04/04/94 17:10:46	2:42:05	60								Record in SSSR Segment 6				SSDR Segment 6
04/04/94 17:13:46	2:45:05	180							N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17				
04/04/94 17:13:46	2:45:05		70.0	250.3	589.4				N70A					
04/04/94 17:18:04	2:49:23	258	80.0	251.6	678.5				N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16				Stop laser ranging
04/04/94 17:18:34	2:49:53	30								Laser power OFF				
04/04/94 17:18:43	2:50:02								PMK	LOS				
04/04/94 17:19:04	2:50:23	30								Load EEQ_08.UMI into SEQT 8				Restore original SEQT 8
														Err:508
04/04/94 17:22:43	2:54:02		89.5	339.9	789.3				North Pole					
04/04/94 17:23:15	2:54:34		88.8	46.4	802.6				LDUSK					
														Err:508
04/04/94 17:24:43	2:56:03	0								Stop Imaging - select ST-B				
04/04/94 17:24:48	2:56:08	5								Err:508				Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508								Wait				End of slew - wait before imaging to allow s/c to settle
04/04/94 17:27:51	2:59:10		80.0	66.3	922.8				N80D					
04/04/94 17:28:06	2:59:25	15								Select DHU SEQT 23				Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B				
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)				Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)				
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec				
04/04/94 17:32:17	3:03:36	Err:508								Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)				Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)				
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)				
Err:508	Err:508	6								Load exposure table LUNIRDKS1				
Err:508	Err:508	6								Load exposure table LUNIRDKS2				
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)				

Orbit 209 Timeline - Type B Orbit

Err:508	Err:508	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/04/94 17:33:34	3:04:53		70.0	67.6	1080.6					N70D					
Err:508	Err:508	360								Switch to HGA					READY FOR DATA DUMP - Time approximate
Err:508															
04/04/94 17:40:02	3:11:21		60.0	68.0	1262.8					N60D					
04/04/94 17:44:00	3:15:19									Switch to DHU mode @ 128 kbps					Ground Command
04/04/94 17:47:00	3:18:19									Downlink SSSR Segment 4					Ground Command
04/04/94 17:47:24	3:18:43		50.0	68.2	1468.6					N50D					
04/04/94 17:55:48	3:27:08		40.0	68.3	1695.4					N40D					
04/04/94 18:02:00	3:33:19									Downlink SSSR Segment 5					Ground Command
04/04/94 18:05:28	3:36:47		30.0	68.3	1937.2					N30D					
04/04/94 18:07:00	3:38:19									Select ST-A					Ground Command ST-B blocked by Moon
04/04/94 18:10:41	3:42:00		25.1	68.3	2058.8					INPM					Enter penumbra
04/04/94 18:11:29	3:42:49		24.4	68.3	2076.4					INUM					Enter umbra
04/04/94 18:16:29	3:47:48		20.0	68.3	2184.7					N20D					
04/04/94 18:28:59	4:00:18		10.0	68.3	2423.5					N10D					
04/04/94 18:42:55	4:14:15		0.0	68.2	2635.8					Equator -D					
Err:508															
04/04/94 18:52:04	4:23:24	0								SSDR to IDLE; Switch to 2 kbps bypass mode					Data dump stopped
04/04/94 18:53:05	4:24:24	60								Switch to omni antennas; Record in SSSR Segment 7					SSDR Segment 7
04/04/94 18:54:05	4:25:24	60								Err:508					Slew using Inertial pointing (LGH not LHG used in name)
04/04/94 18:58:07	4:29:26		-10.0	68.2	2801.3					S10D					
04/04/94 19:00:05	4:31:24	360								Execute STB_Images					STB uncompressed - Note: Time between events includes script duration (90 sec) and WAIT between script calls (30 sec)
04/04/94 19:02:04	4:33:24	120								Execute STB_Images					ST-B uncompressed images
04/04/94 19:04:04	4:35:24	120								Execute STB_Images					ST-B uncompressed images
04/04/94 19:06:04	4:37:24	120								Execute STB_Images					ST-B uncompressed images
04/04/94 19:08:04	4:39:24	120								Execute STB_Images					ST-B uncompressed images
04/04/94 19:10:04	4:41:24	120								Execute STB_Images					ST-B uncompressed images
04/04/94 19:12:04	4:43:23	120								Execute STB_Images					ST-B uncompressed images
04/04/94 19:13:54	4:45:13	110								Execute STB_Images					ST-B uncompressed images
04/04/94 19:14:15	4:45:34		-20.0	68.1	2901.4					S20D					

Orbit 209 Timeline - Type B Orbit

04/04/94 19:15:54	4:47:13	120								Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						STOP IMAGING Slew HGA back to Earth
04/04/94 19:15:55	4:47:14		-21.0	68.1	2907.3				OUTUM							Exit umbra
04/04/94 19:16:51	4:48:10		-21.6	68.1	2910.3				OUTPM							Exit penumbra
04/04/94 19:19:00	4:50:19	185								Switch to HGA						READY FOR DATA DUMP - Time approximate
Err:508																
04/04/94 19:20:00	4:51:19									Switch to DHU mode @ 128 kbps						Ground Command
04/04/94 19:24:00	4:55:19									Resume downlink SDDR Segment 5						Ground Command
04/04/94 19:27:04	4:58:23		-27.7	68.0	2925.8				Aposelene							
STB_Images Subscript																
		0								Load exposure table STBGLOW700; Select DHU SEQT 22						ST-B imaging at 700 msec LHGSTB_22.UMI loaded into SEQT 22
		10								Stop imaging - select ST-A						Update attitude
		10								Load exposure table STBGLOW400; Select DHU SEQT 22						ST-B imaging at 400 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW200; Select DHU SEQT 22						ST-B imaging at 200 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW100; Select DHU SEQT 22						ST-B imaging at 100 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW050; Select DHU SEQT 22						ST-B imaging at 50 msec
		10								Stop imaging - select ST-A						END STB_Images

Orbit 210 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/04/94 19:27:04	0:00:00		-27.7	68.0	2925.8							Aposelene							Downlinking SSSR Segment 5 (orbit 209)
04/04/94 19:30:50	0:03:45		-30.0	68.0	2923.7							S30D							
04/04/94 19:37:00	0:09:55												Uplink and schedule L210 scripts						Ground Command
04/04/94 19:47:16	0:20:12		-40.0	68.0	2865.3							S40D							
04/04/94 19:57:00	0:29:55												SSDR to IDLE						Ground Command
																			Standard Prep1 Script
04/04/94 20:01:58	0:34:53	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/04/94 20:03:02	0:35:57		-50.0	68.0	2733.6							S50D							
04/04/94 20:07:21	0:40:16										GDS	LOS							
04/04/94 20:11:00	0:43:55												Downlink SSSR Segment 5 patches						Ground Command
04/04/94 20:17:42	0:50:37		-60.0	68.1	2544.4							S60D							
04/04/94 20:18:00	0:50:55												Downlink SSSR Segment 6						Ground Command
																			Standard Prep2 Script
04/04/94 20:26:48	0:59:43	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/04/94 20:31:00	1:03:55		-70.0	68.4	2317.6							S70D							
																			Err:508
04/04/94 20:37:18	1:10:13	0											Msg "WARNING: Omni/2k in 1 min.."						
04/04/94 20:38:18	1:11:13	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/04/94 20:39:18	1:12:13	60											Switch to omni antennas						
04/04/94 20:40:18	1:13:13	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/04/94 20:42:18	1:15:13	120											UV & HR cameras ON						
04/04/94 20:42:50	1:15:45		-80.0	69.6	2072.7							S80D							
04/04/94 20:46:18	1:19:13	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/04/94 20:46:48	1:19:43	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/04/94 20:46:58	1:19:53	10											Perform NIR imaging (DHU SEQT 31)						
04/04/94 20:47:13	1:20:08	15																	Err:508
																			Slew to nadir (inertial pointing)

Orbit 210 Timeline - Type A Orbit

04/04/94 22:08:10	2:41:06	229	60.0	247.1	520.7					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4							
04/04/94 22:09:11	2:42:06	60									Record in SSSR Segment 3							SSDR Segment 3
04/04/94 22:12:11	2:45:06	180								N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3							
04/04/94 22:12:11	2:45:06		70.0	247.5	589.4					N70A								
04/04/94 22:16:29	2:49:24	258	80.0	248.7	678.5					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9							Stop laser ranging
04/04/94 22:16:59	2:49:54	30									Laser power OFF							
04/04/94 22:17:29	2:50:24	30									Load EEQ_11.UMI into SEQT 11							Restore original SEQT 11
																		Err:508
04/04/94 22:21:08	2:54:03		89.6	337.2	789.4					North Pole								
04/04/94 22:21:40	2:54:36		88.8	44.8	802.7					LDUSK								
																		Err:508
04/04/94 22:23:08	2:56:04	0									Stop Imaging - select ST-B							
04/04/94 22:23:13	2:56:09	5									Err:508							Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait							End of slew - wait before imaging to allow s/c to settle
04/04/94 22:26:16	2:59:11		80.0	63.8	922.9					N80D								
04/04/94 22:26:31	2:59:26	15									Select DHU SEQT 23							Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B							
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)							Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)							
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec							
04/04/94 22:30:41	3:03:36	Err:508									Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)							Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)							
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)							
Err:508	Err:508	6									Load exposure table LUNIRDKS1							
Err:508	Err:508	6									Load exposure table LUNIRDKS2							
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)							

Orbit 211 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/05/94 00:25:29	0:00:00		-27.7	65.3	2926.1							Aposelene							Downlinking SDR Segment 2 (orbit 210)
04/05/94 00:29:17	0:03:48		-30.0	65.3	2924.0							S30D							
04/05/94 00:45:00	0:19:30												Downlink SDR Segment 3						Ground Command
04/05/94 00:45:43	0:20:13		-40.0	65.3	2865.3							S40D							
																			Standard Prep1 Script
04/05/94 01:00:25	0:34:55	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/05/94 01:01:29	0:36:00		-50.0	65.3	2733.4							S50D							
04/05/94 01:16:09	0:50:40		-60.0	65.3	2544.0							S60D							
04/05/94 01:20:00	0:54:30												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep2 Script
04/05/94 01:25:15	0:59:45	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/05/94 01:29:27	1:03:58		-70.0	65.6	2317.1							S70D							
																			Err:508
04/05/94 01:36:15	1:10:45	0											Msg "WARNING: 2kbps in 1 min."						
04/05/94 01:37:15	1:11:45	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/05/94 01:38:15	1:12:45	60											Switch to omni antennas						
04/05/94 01:39:15	1:13:45	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/05/94 01:41:15	1:15:45	120											UV & HR cameras ON						
04/05/94 01:41:17	1:15:48		-80.0	66.7	2072.1							S80D							
04/05/94 01:44:45	1:19:15	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 4
04/05/94 01:45:15	1:19:45	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/05/94 01:45:25	1:19:55	10											Perform NIR imaging (DHU SEQT 31)						
04/05/94 01:45:40	1:20:10	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 211 Timeline - Type B Orbit

04/05/94 01:49:40	1:24:10	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S				
04/05/94 01:50:40	1:25:10	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
04/05/94 01:51:40	1:26:10	60	-89.6	153.1	1826.0				South Pole	Set SA step rate to LO				
04/05/94 01:52:42	1:27:12		-88.8	223.7	1799.6				LDAWN					
04/05/94 02:00:44	1:35:14	544	-80.0	241.9	1590.0				S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20				
04/05/94 02:08:39	1:43:09	475	-70.0	243.0	1372.1				S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19				
04/05/94 02:11:25	1:45:55	166								Err:508				Slew to South Pole for oblique viewing
04/05/94 02:15:34	1:50:04	249	-60.0	243.4	1176.7				S60A	Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11				UV and IR uncompressed
04/05/94 02:16:34	1:51:04	60								Record in SSSR Segment 5				SSDR Segment 5
04/05/94 02:21:41	1:56:11	307	-50.0	243.6	1005.6				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10				Stop HiRes imaging Resume compression
04/05/94 02:26:31	2:01:01	290								Laser Power ON				
04/05/94 02:27:07	2:01:37	36	-40.0	243.6	858.8				S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping
04/05/94 02:32:02	2:06:32	295	-30.0	243.7	735.7				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/05/94 02:36:29	2:10:59		-20.0	243.8	634.9				S20A					
04/05/94 02:36:31	2:11:01	269							S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
04/05/94 02:40:40	2:15:10	249	-10.0	243.8	555.3				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
04/05/94 02:44:34	2:19:04	234	0.0	243.8	495.6				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/05/94 02:48:18	2:22:48	224	10.0	243.9	454.8				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/05/94 02:51:56	2:26:26	218	20.0	243.9	432.2				N20A	Load exposure table LUNARZ25N				
04/05/94 02:54:41	2:29:11		27.7	243.9	426.9				Periselene					
04/05/94 02:55:31	2:30:01	215	30.0	244.0	427.4				N30A	Load exposure table LUNARZ35N				
04/05/94 02:59:07	2:33:37	216	40.0	244.0	440.3				N40A	Load exposure table LUNARZ45N				
04/05/94 03:02:48	2:37:18	221	50.0	244.1	471.2				N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6				Resume HiRes imaging
04/05/94 03:06:36	2:41:06	228	60.0	244.3	520.5				N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4				
04/05/94 03:07:36	2:42:06	60								Record in SSSR Segment 6				SSDR Segment 6

Orbit 211 Timeline - Type B Orbit

04/05/94 03:10:37	2:45:07	181	70.0	244.7	589.3				N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17				
04/05/94 03:14:54	2:49:24	257	80.0	245.8	678.5				N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16				Stop laser ranging
04/05/94 03:15:24	2:49:54	30								Laser power OFF				
04/05/94 03:15:54	2:50:24	30								Load EEQ_11.UMI into SEQT 11				Restore original SEQT 11
														Err:508
04/05/94 03:19:33	2:54:03		89.6	335.8	789.5				North Pole					
04/05/94 03:20:05	2:54:36		88.8	43.2	802.6				LDUSK					
														Err:508
04/05/94 03:21:33	2:56:04	0								Stop Imaging - select ST-B				
04/05/94 03:21:38	2:56:09	5								Err:508				Slew sensors to Earth (inertial pointing) with waitwhileslew
04/05/94 03:22:59	2:57:29							MAD	AOS					
Err:508	Err:508	Err:508								Wait				End of slew - wait before imaging to allow s/c to settle
04/05/94 03:24:41	2:59:11		80.0	61.2	923.0				N80D					
04/05/94 03:24:57	2:59:27	15								Select DHU SEQT 23				Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B				
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)				Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)				
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec				
04/05/94 03:29:07	3:03:37	Err:508								Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)				Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)				
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)				
Err:508	Err:508	6								Load exposure table LUNIRDKS1				
Err:508	Err:508	6								Load exposure table LUNIRDKS2				
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)				
Err:508	Err:508	30								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec				Slew HGA to Earth with active waitwhileslew
04/05/94 03:30:25	3:04:55		70.0	62.3	1081.0				N70D					

Orbit 212 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/05/94 05:23:54	0:00:00		-27.7	62.6	2926.5							Aposelene							Downlinking SDDR Segment 5 (orbit 211)
04/05/94 05:27:44	0:03:49		-30.0	62.6	2924.3							S30D							
04/05/94 05:44:10	0:20:16		-40.0	62.5	2865.4							S40D							
04/05/94 05:50:00	0:26:05												Uplink and schedule L212 scripts						Ground Command
																			Standard Prep1 Script
04/05/94 05:58:52	0:34:57	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/05/94 05:59:57	0:36:02		-50.0	62.5	2733.3							S50D							
04/05/94 06:14:36	0:50:41		-60.0	62.6	2543.7							S60D							
																			Standard Prep2 Script
04/05/94 06:23:42	0:59:47	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/05/94 06:27:54	1:03:59		-70.0	62.8	2316.7							S70D							
04/05/94 06:34:00	1:10:05												SSDR to IDLE - Segment 5 complete						Ground Command
																			Err:508
04/05/94 06:34:12	1:10:17	0											Msg "WARNING: Omni/2k in 1 min.."						
04/05/94 06:35:12	1:11:17	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/05/94 06:36:12	1:12:17	60											Switch to omni antennas						
04/05/94 06:37:12	1:13:17	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/05/94 06:39:12	1:15:17	120											UV & HR cameras ON						
04/05/94 06:39:44	1:15:49		-80.0	63.8	2071.5							S80D							
04/05/94 06:43:12	1:19:17	240											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
04/05/94 06:43:42	1:19:47	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/05/94 06:43:52	1:19:57	10											Perform NIR imaging (DHU SEQT 31)						
04/05/94 06:44:07	1:20:12	15																	Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 212 Timeline - Type A Orbit

04/05/94 06:49:07	1:25:12	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S			
04/05/94 06:49:37	1:25:42	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
04/05/94 06:50:07	1:26:12	30	-89.6	151.2	1825.2					South Pole	Set SA step rate to LO			
04/05/94 06:51:08	1:27:14		-88.9	222.2	1799.1					LDAWN				
04/05/94 06:59:10	1:35:15	543								S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75S; Select DHU SEQT 14			
04/05/94 06:59:10	1:35:15		-80.0	239.4	1589.3					S80A				
04/05/94 07:07:05	1:43:10	475	-70.0	240.4	1371.4					S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65S; Select DHU SEQT 13			
04/05/94 07:14:01	1:50:06	416	-60.0	240.7	1176.0					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12			
04/05/94 07:15:01	1:51:06	60									Record in SSSR Segment 2			SSDR Segment 2
04/05/94 07:20:07	1:56:12	306	-50.0	240.9	1004.9					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11			Stop HiRes imaging
04/05/94 07:24:56	2:01:01	289									Laser Power ON			
04/05/94 07:25:33	2:01:38	37								S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10			
04/05/94 07:25:34	2:01:39		-40.0	240.9	858.2					S40A				
04/05/94 07:30:27	2:06:32	294								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9			
04/05/94 07:30:27	2:06:32		-30.0	241.0	735.1					S30A				
04/05/94 07:34:56	2:11:01	269	-20.0	241.0	634.4					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser ranging
04/05/94 07:39:05	2:15:10	249	-10.0	241.1	554.8					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			
04/05/94 07:43:00	2:19:05	235	0.0	241.1	495.1					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6			
04/05/94 07:46:44	2:22:49	224	10.0	241.1	454.4					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
04/05/94 07:50:21	2:26:26	217								N20A	Load exposure table LUNARZ25N			
04/05/94 07:50:21	2:26:27		20.0	241.2	431.8					N20A				
04/05/94 07:53:06	2:29:11		27.7	241.2	426.6					Periselene				
04/05/94 07:53:57	2:30:02	216	30.0	241.2	427.1					N30A	Load exposure table LUNARZ35N			
04/05/94 07:57:32	2:33:37		40.0	241.3	440.0					N40A				
04/05/94 07:57:34	2:33:39	217								N40A	Load exposure table LUNARZ45N			
04/05/94 08:01:12	2:37:17		50.0	241.4	470.9					N50A				
04/05/94 08:01:15	2:37:20	221								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6			Resume HiRes imaging
04/05/94 08:05:00	2:41:06		60.0	241.6	520.3					N60A				

Orbit 212 Timeline - Type A Orbit

04/05/94 08:05:03	2:41:08	228								N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4				
04/05/94 08:06:03	2:42:08	60									Record in SSSR Segment 3				SSDR Segment 3
04/05/94 08:09:01	2:45:06		70.0	241.9	589.1					N70A					
04/05/94 08:09:04	2:45:09	181								N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3				
04/05/94 08:13:19	2:49:24		80.0	242.9	678.3					N80A					
04/05/94 08:13:21	2:49:26	257								N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9				Stop laser ranging
04/05/94 08:13:51	2:49:56	30									Laser power OFF				
04/05/94 08:14:21	2:50:26	30									Msg "Done L212..."				
															Err:508
04/05/94 08:17:07	2:53:12								PMK	AOS					
04/05/94 08:17:58	2:54:03		89.6	329.5	789.1					North Pole					
04/05/94 08:18:30	2:54:36		88.9	41.7	802.5					LDUSK					
															Err:508
04/05/94 08:19:58	2:56:04	0									Stop Imaging - select ST-B				
04/05/94 08:20:03	2:56:09	5									Err:508				Slew sensors to Earth (inertial pointing) with waitwhileslew
04/05/94 08:23:06	2:59:11		80.0	58.6	923.1					N80D					
Err:508	Err:508	Err:508									Wait				End of slew - wait before imaging to allow s/c to settle
04/05/94 08:23:24	2:59:29	15									Select DHU SEQT 23				Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B				
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)				Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)				
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec				
04/05/94 08:27:32	3:03:37	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)				Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)				
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)				
Err:508	Err:508	6									Load exposure table LUNIRDKS1				

Orbit 212 Timeline - Type A Orbit

Err:508	Err:508	6															Load exposure table LUNIRDKS2							
Err:508	Err:508	6															Perform HIRES imaging (DHU SEQT 30)							
Err:508	Err:508	30															Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMode=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew	
04/05/94 08:28:50	3:04:55		70.0	59.7	1081.1												N70D							
04/05/94 08:34:00	3:10:05	Err:508															Switch to HGA							READY FOR DATA DUMP - Time approximate
Err:508																								
04/05/94 08:35:00	3:11:05																Switch to DHU mode @ 128 kbps							Ground Command
04/05/94 08:35:19	3:11:24		60.0	60.0	1263.5												N60D							
04/05/94 08:36:00	3:12:05																Downlink SSSR Segment 7 (LHG)							Ground Command
04/05/94 08:38:00	3:14:05																Select ST-A							Ground Command ST-B blocked by Moon
04/05/94 08:39:00	3:15:05																Downlink SSSR Segment 4 (orb 212)							Ground Command
04/05/94 08:42:39	3:18:44		50.0	60.1	1469.7												N50D							
04/05/94 08:51:05	3:27:10		40.0	60.2	1696.7												N40D							
04/05/94 08:53:00	3:29:05																Downlink SSSR Segment 6							Ground Command
04/05/94 09:00:44	3:36:50		30.0	60.2	1938.8												N30D							
04/05/94 09:06:15	3:42:20		24.9	60.2	2066.4												INPM							Enter penumbra
04/05/94 09:07:02	3:43:08		24.1	60.2	2084.2												INUM							Enter umbra
04/05/94 09:11:47	3:47:52		20.0	60.2	2186.5												N20D							
04/05/94 09:18:00	3:54:05																Downlink SSSR Segment 2							Ground Command
04/05/94 09:24:18	4:00:23		10.0	60.1	2425.5												N10D							
04/05/94 09:38:15	4:14:20		0.0	60.0	2637.7												Equator - D							
04/05/94 09:53:27	4:29:33		-10.0	60.0	2803.0												S10D							
04/05/94 09:57:00	4:33:05																Select ST-B							Ground Command
04/05/94 10:09:37	4:45:42		-20.0	59.9	2902.8												S20D							
04/05/94 10:10:48	4:46:53		-20.7	59.9	2907.1												OUTUM							Exit umbra
04/05/94 10:11:45	4:47:50		-21.3	59.9	2910.2												OUTPM							Exit penumbra
04/05/94 10:22:19	4:58:25		-27.7	59.8	2926.8												Aposelene							

Orbit 213 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/05/94 10:22:19	0:00:00		-27.7	59.8	2926.8							Aposelene							Downlinking SSSDR Segment 2 (orbit 212)
04/05/94 10:26:00	0:03:40												Redownload SSSDR Segment 7						Ground Command
04/05/94 10:26:11	0:03:52		-30.0	59.8	2924.6							S30D							
04/05/94 10:32:00	0:09:40												Downlink SSSDR Segment 1						Ground Command
04/05/94 10:42:00	0:19:40												Downlink SSSDR Segment 3						Ground Command
04/05/94 10:42:38	0:20:19		-40.0	59.8	2865.6							S40D							
04/05/94 10:46:00	0:23:40												Uplink and schedule L213 scripts						Ground Command
04/05/94 10:56:56	0:34:36										GDS	AOS							
																			Standard Prep1 Script
04/05/94 10:57:19	0:34:59	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/05/94 10:58:25	0:36:05		-50.0	59.7	2733.3							S50D							
04/05/94 11:08:00	0:45:40												Redownload SSSDR Segment 7						Ground Command
04/05/94 11:10:00	0:47:40												SSDR to IDLE - downlink complete						Ground Command
04/05/94 11:13:04	0:50:44		-60.0	59.8	2543.6							S60D							
																			Standard Prep2 Script
04/05/94 11:22:09	0:59:49	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/05/94 11:26:21	1:04:02		-70.0	60.0	2316.3							S70D							
																			Err:508
04/05/94 11:33:09	1:10:49	0											Msg "WARNING: 2kbps in 1 min."						
04/05/94 11:34:09	1:11:49	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/05/94 11:35:09	1:12:49	60											Switch to omni antennas						
04/05/94 11:36:09	1:13:49	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/05/94 11:38:09	1:15:49	120											UV & HR cameras ON						
04/05/94 11:38:11	1:15:52		-80.0	60.9	2071.1							S80D							
04/05/94 11:41:39	1:19:19	210											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 4
04/05/94 11:42:09	1:19:49	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/05/94 11:42:19	1:19:59	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 213 Timeline - Type B Orbit

04/05/94 12:45:09	2:22:49	224								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/05/94 12:45:09	2:22:49		10.0	238.4	454.0					N10A							
04/05/94 12:48:47	2:26:27	218								N20A	Load exposure table LUNARZ25N						
04/05/94 12:48:47	2:26:27		20.0	238.4	431.4					N20A							
04/05/94 12:50:19	2:27:59								MAD	MAOSM							Exit occultation
04/05/94 12:51:12	2:28:52								PMK	MAOSM							
04/05/94 12:51:32	2:29:13		27.7	238.5	426.2					Periselene							
04/05/94 12:51:46	2:29:26								GDS	MAOSM							
04/05/94 12:52:22	2:30:02	215								N30A	Load exposure table LUNARZ35N						
04/05/94 12:52:22	2:30:03		30.0	238.5	426.7					N30A							
04/05/94 12:55:57	2:33:37	215								N40A	Load exposure table LUNARZ45N						
04/05/94 12:55:57	2:33:37		40.0	238.5	439.7					N40A							
04/05/94 12:59:38	2:37:18	221								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/05/94 12:59:38	2:37:19		50.0	238.6	470.6					N50A							
04/05/94 13:03:26	2:41:06	228								N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/05/94 13:03:27	2:41:07		60.0	238.8	520.0					N60A							
04/05/94 13:04:26	2:42:06	60									Record in SSDR Segment 6						SSDR Segment 6
04/05/94 13:06:49	2:44:29								MAD	LOS							
04/05/94 13:07:27	2:45:07	181								N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17						
04/05/94 13:07:27	2:45:07		70.0	239.1	588.8					N70A							
04/05/94 13:11:44	2:49:24	257								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16						Stop laser ranging
04/05/94 13:11:44	2:49:24		80.0	240.1	678.1					N80A							
04/05/94 13:12:14	2:49:54	30									Laser power OFF						
04/05/94 13:12:44	2:50:24	30									Load EEQ_19.UMI into SEQT 19						Restore original SEQT 19
																	Err:508
04/05/94 13:16:24	2:54:05		89.7	329.7	789.2					North Pole							
04/05/94 13:16:55	2:54:36		88.9	40.2	802.3					LDUSK							
																	Err:508
04/05/94 13:18:25	2:56:05	0									Stop Imaging - select ST-B						
04/05/94 13:18:30	2:56:10	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait						End of slew - wait before imaging to allow s/c to settle
04/05/94 13:21:32	2:59:12		80.0	56.1	923.0					N80D							

Orbit 213 Timeline - Type B Orbit

04/05/94 13:21:39	2:59:19	15								Select DHU SEQT 23					Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B					
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)					Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)					
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec					
04/05/94 13:25:39	3:03:19	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)					Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)					
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)					
Err:508	Err:508	6								Load exposure table LUNIRDKS1					
Err:508	Err:508	6								Load exposure table LUNIRDKS2					
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)					
Err:508	Err:508	30								Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/05/94 13:27:16	3:04:57		70.0	57.0	1081.1				N70D						
Err:508	Err:508	360								Switch to HGA					READY FOR DATA DUMP - Time approximate
Err:508															
04/05/94 13:33:00	3:10:40									Select ST-A					Ground Command ST-B blocked by Moon
04/05/94 13:33:44	3:11:24		60.0	57.3	1263.6				N60D						
04/05/94 13:35:00	3:12:40									Switch to DHU mode @ 128 kbps					Ground Command
04/05/94 13:36:00	3:13:40									Downlink SSSR Segment 4					Ground Command
04/05/94 13:41:05	3:18:46		50.0	57.4	1469.8				N50D						
04/05/94 13:49:00	3:26:40									Load UVLHG_23.UMI into SEQT 23					Ground Command
04/05/94 13:49:30	3:27:10		40.0	57.5	1696.9				N40D						
04/05/94 13:52:00	3:29:40									Downlink SSSR Segment 5					Ground Command
Err:508															
04/05/94 13:56:52	3:34:32	0								UV & HR cameras ON					
04/05/94 13:57:52	3:35:32	60								SSDR to IDLE; Switch to 2 kbps bypass mode					Data dump stopped
04/05/94 13:58:52	3:36:32	60								Switch to omni antennas; Record in SSSR Segment 7					SSDR Segment 7
04/05/94 13:59:10	3:36:51		30.0	57.5	1939.1				N30D						
04/05/94 13:59:52	3:37:32	60								Err:508					Slew using Inertial pointing (LGH not LHG used in name)

Orbit 213 Timeline - Type B Orbit

04/05/94	14:00:22	3:38:02	30								Initialize filters (DHU SEQT 27)						
04/05/94	14:00:37	3:38:17	15								Select ST-B						
04/05/94	14:04:47	3:42:27		24.8	57.5	2068.7					INPM						Enter penumbra
04/05/94	14:05:34	3:43:14		24.1	57.5	2086.6					INUM						Enter umbra
04/05/94	14:05:52	3:43:32	315									Inertial pointing w/ quaternion table (LHG213B000); Execute UV_Images					START LHG OBSERVATION Note: Time between events includes script duration (19 sec) and WAIT between script calls (26 sec)
04/05/94	14:06:37	3:44:17	45									Execute UV_Images					
04/05/94	14:07:22	3:45:02	45									Execute UV_Images					
04/05/94	14:08:07	3:45:47	45									Execute UV_Images					
04/05/94	14:08:52	3:46:32	45									Execute UV_Images					
04/05/94	14:09:37	3:47:17	45									Execute UV_Images					
04/05/94	14:10:13	3:47:54		20.0	57.4	2186.8					N20D						
04/05/94	14:10:22	3:48:02	45									Execute UV_Images					
04/05/94	14:11:07	3:48:47	45									Execute UV_Images					
04/05/94	14:11:52	3:49:32	45									Execute UV_Images					
04/05/94	14:12:37	3:50:17	45									Execute UV_Images					
04/05/94	14:13:22	3:51:02	45									Use QTable LHG213B001; Execute UV_Images					
04/05/94	14:14:07	3:51:47	45									Execute UV_Images					
04/05/94	14:14:52	3:52:32	45									Execute UV_Images					
04/05/94	14:15:37	3:53:17	45									Execute UV_Images					
04/05/94	14:16:22	3:54:02	45									Execute UV_Images					
04/05/94	14:17:07	3:54:47	45									Execute UV_Images					
04/05/94	14:17:52	3:55:32	45									Execute UV_Images					
04/05/94	14:18:37	3:56:17	45									Execute UV_Images					
04/05/94	14:19:22	3:57:02	45									Execute UV_Images					
04/05/94	14:20:07	3:57:47	45									Execute UV_Images					
04/05/94	14:20:52	3:58:32	45									Use QTable LHG213B002; Execute UV_Images					
04/05/94	14:21:37	3:59:17	45									Execute UV_Images					
04/05/94	14:22:22	4:00:02	45									Execute UV_Images					
04/05/94	14:22:43	4:00:23		10.0	57.4	2425.9					N10D						
04/05/94	14:23:07	4:00:47	45									Execute UV_Images					
04/05/94	14:23:52	4:01:32	45									Execute UV_Images					
04/05/94	14:24:37	4:02:17	45									Execute UV_Images					
04/05/94	14:25:22	4:03:02	45									Execute UV_Images					
04/05/94	14:26:07	4:03:47	45									Execute UV_Images					
04/05/94	14:26:52	4:04:32	45									Execute UV_Images					
04/05/94	14:27:37	4:05:17	45									Execute UV_Images					
04/05/94	14:28:22	4:06:02	45									Use QTable LHG213B003; Execute UV_Images					
04/05/94	14:29:07	4:06:47	45									Execute UV_Images					
04/05/94	14:29:52	4:07:32	45									Execute UV_Images					
04/05/94	14:30:37	4:08:17	45									Execute UV_Images					
04/05/94	14:31:22	4:09:02	45									Execute UV_Images					

Orbit 213 Timeline - Type B Orbit

04/05/94 14:32:07	4:09:47	45												Execute UV_Images					
04/05/94 14:32:52	4:10:32	45												Execute UV_Images					
04/05/94 14:33:37	4:11:17	45												Execute UV_Images					
04/05/94 14:34:22	4:12:02	45												Execute UV_Images					
04/05/94 14:35:07	4:12:47	45												Execute UV_Images					
04/05/94 14:35:52	4:13:32	45												UV & HiRes cameras OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					END LHG OBSERVATION
04/05/94 14:36:40	4:14:20		0.0	57.3	2638.2									Equator -D					Slew HGA to Earth
04/05/94 14:40:00	4:17:40	248												Switch to HGA					READY FOR DATA DUMP - Time approximate
																			Err:508
04/05/94 14:41:00	4:18:40													Switch to DHU mode @ 128 kbps					Ground Command
04/05/94 14:44:00	4:21:40													Resume downlink SSSDR Segment 5					Ground Command
04/05/94 14:51:54	4:29:34		-10.0	57.2	2803.5									S10D					
04/05/94 14:59:00	4:36:40													Uplink and schedule L214 scripts					Ground Command
04/05/94 15:08:03	4:45:43		-20.0	57.2	2903.3									S20D					
04/05/94 15:09:06	4:46:47		-20.6	57.2	2907.0									OUTUM					Exit umbra
04/05/94 15:10:03	4:47:43		-21.2	57.1	2910.2									OUTPM					Exit penumbra
04/05/94 15:20:46	4:58:26		-27.7	57.1	2927.2									Aposelene					
																			UV_Images Subscript
		0												Load exposure table UVGLOW700; Select DHU SEQT 23					UV imaging at 700 msec UVLHG_23.UMI loaded into SEQT 23
		5												Stop all imaging					
		2												Load exposure table UVGLOW400; Select DHU SEQT 23					UV imaging at 400 msec
		5												Stop all imaging					
		2												Load exposure table UVGLOW200; Select DHU SEQT 23					UV imaging at 200 msec
		5												Stop imaging - select ST-B					END UV_Images Subscript

Orbit 214 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/05/94 15:20:46	0:00:00		-27.7	57.1	2927.2							Aposelene							Downlinking SDDR Segment 5 (orbit 213)
04/05/94 15:24:38	0:03:52		-30.0	57.1	2925.0							S30D							
04/05/94 15:41:05	0:20:19		-40.0	57.0	2865.8							S40D							
04/05/94 15:49:00	0:28:14												Downlink SDDR Segment 4 patches						Ground Command
04/05/94 15:52:00	0:31:14												Downlink SDDR Segment 6						Ground Command
																			Standard Prep1 Script
04/05/94 15:55:46	0:35:00	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/05/94 15:56:51	0:36:05		-50.0	57.0	2733.3							S50D							
04/05/94 16:09:00	0:48:14												Update state vector (GNC53_05APR1600)						Ground Command
04/05/94 16:11:31	0:50:45		-60.0	57.0	2543.5							S60D							
04/05/94 16:17:00	0:56:14												Downlink SDDR Segment 7 (LHG)						Ground Command
																			Standard Prep2 Script
04/05/94 16:20:36	0:59:50	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/05/94 16:24:48	1:04:02		-70.0	57.2	2316.1							S70D							
04/05/94 16:31:00	1:10:14												SSDR to IDLE - downlink complete						Ground Command
																			Err:508
04/05/94 16:31:06	1:10:20	0											Msg "WARNING: Omni/2k in 1 min.."						
04/05/94 16:32:06	1:11:20	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/05/94 16:33:06	1:12:20	60											Switch to omni antennas						
04/05/94 16:33:20	1:12:34												Auxiliary oscillator B ON; Auxiliary oscillator A ON						Ground Command
04/05/94 16:34:02	1:13:16										CAN	AOS							
04/05/94 16:34:06	1:13:20	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/05/94 16:36:06	1:15:20	120											UV & HR cameras ON						
04/05/94 16:36:38	1:15:52		-80.0	58.1	2070.8							S80D							
04/05/94 16:40:06	1:19:20	240											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
04/05/94 16:40:36	1:19:50	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging

Orbit 214 Timeline - Type A Orbit

04/05/94 16:40:46	1:20:00	10										Perform NIR imaging (DHU SEQT 31)		
04/05/94 16:41:01	1:20:15	15											Err:508	Slew to nadir (inertial pointing)
														Err:508
														Err:508
04/05/94 16:46:01	1:25:14	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S		
04/05/94 16:46:31	1:25:44	30										Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 15)		START MAPPING
04/05/94 16:47:01	1:26:15	30	-89.7	145.3	1824.4							South Pole	Set SA step rate to LO	
04/05/94 16:48:02	1:27:16		-88.9	219.3	1798.4							LDAWN		
04/05/94 16:56:05	1:35:19	544	-80.0	234.2	1588.2							S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75; Load exposure table LUNARH75S; Select DHU SEQT 14	
04/05/94 17:03:59	1:43:13	474	-70.0	235.1	1370.3							S70A	Load EEQ_13U.UMI into SEQT 13; Load exposure table LUNARZ65S; Load exposure table LUNNIR65; Load exposure table LUNARH65S; Select DHU SEQT 13	UV and IR uncompressed
04/05/94 17:10:53	1:50:07		-60.0	235.4	1174.9							S60A		
04/05/94 17:10:55	1:50:09	416										S60A	Load EEQ_12C.UMI into SEQT 12; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12	Resume compression Multispectral (color) bursts with HiRes camera from 60S to 50S
04/05/94 17:11:55	1:51:09	60											Record in SDR Segment 2	SSDR Segment 2
04/05/94 17:16:59	1:56:13		-50.0	235.5	1003.8							S50A		
04/05/94 17:17:01	1:56:15	306										S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11; Load EEQ_12.UMI into SEQT 12	Stop HiRes imaging Restore original SEQT 12
04/05/94 17:21:50	2:01:04	289											Laser Power ON	
04/05/94 17:22:25	2:01:39		-40.0	235.6	857.1							S40A		
04/05/94 17:22:28	2:01:42	38										S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10	
04/05/94 17:27:19	2:06:33		-30.0	235.6	734.1							S30A		
04/05/94 17:27:21	2:06:35	293										S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/05/94 17:31:48	2:11:02		-20.0	235.6	633.4							S20A		
04/05/94 17:31:50	2:11:04	269										S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
04/05/94 17:35:57	2:15:11		-10.0	235.6	553.9							S10A		
04/05/94 17:35:59	2:15:13	249										S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/05/94 17:37:12	2:16:26											CAN	MLOSM	
04/05/94 17:38:16	2:17:30											GDS	MLOSM	
04/05/94 17:38:37	2:17:51											PMK	MLOSM	Enter occultation

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04/05/94 17:39:51	2:19:05		0.0	235.7	494.2						Equator - A					
04/05/94 17:39:53	2:19:07	234									MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/05/94 17:43:35	2:22:49		10.0	235.7	453.5						N10A					
04/05/94 17:43:37	2:22:51	224									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/05/94 17:47:13	2:26:27		20.0	235.7	431.0						N20A					
04/05/94 17:47:15	2:26:29	218									N20A	Load exposure table LUNARZ25N				
04/05/94 17:49:57	2:29:11		27.7	235.7	425.8						Periselene					
04/05/94 17:50:48	2:30:02		30.0	235.7	426.3						N30A					
04/05/94 17:50:50	2:30:04	215									N30A	Load exposure table LUNARZ35N				
04/05/94 17:51:52	2:31:06									PMK	MAOSM				Exit occultation	
04/05/94 17:52:02	2:31:16									GDS	MAOSM					
04/05/94 17:53:23	2:32:37									CAN	MAOSM					
04/05/94 17:54:23	2:33:37		40.0	235.8	439.3						N40A					
04/05/94 17:54:25	2:33:39	215									N40A	Load exposure table LUNARZ45N				
04/05/94 17:58:03	2:37:17		50.0	235.9	470.3						N50A					
04/05/94 17:58:06	2:37:20	221									N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6			Resume HiRes imaging	
04/05/94 18:01:00	2:40:14											Load EEQ_23.UMI into SEQT 23			Ground Command Restore default SEQT 23	
04/05/94 18:01:52	2:41:06		60.0	236.0	519.7						N60A					
04/05/94 18:01:54	2:41:08	228									N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65; Load exposure table LUNARH65N; Select DHU SEQT 4				
04/05/94 18:02:54	2:42:08	60										Record in SSDR Segment 3			SSDR Segment 3	
04/05/94 18:05:52	2:45:06		70.0	236.3	588.6						N70A					
04/05/94 18:05:54	2:45:08	180									N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75; Load exposure table LUNARH75N; Select DHU SEQT 3				
04/05/94 18:10:10	2:49:24		80.0	237.2	677.9						N80A					
04/05/94 18:10:12	2:49:26	258									N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85; Load exposure table LUNARH85N; Select DHU SEQT 9			Stop laser ranging	
04/05/94 18:10:42	2:49:56	30										Laser power OFF				
04/05/94 18:11:12	2:50:26	30										Load EEQ_13.UMI into SEQT 13			Restore original SEQT 13	
																Err:508
04/05/94 18:14:49	2:54:03		89.7	323.2	788.7						North Pole					
04/05/94 18:15:22	2:54:36		88.9	38.8	802.0						LDUSK					
																Err:508
04/05/94 18:16:50	2:56:04	0										Stop Imaging - select ST-B				

Orbit 214 Timeline - Type A Orbit

04/05/94 18:16:55	2:56:08	5								Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
04/05/94 18:19:39	2:58:53							PMK	LOS							
04/05/94 18:19:57	2:59:11		80.0	53.5	922.8				N80D							
Err:508	Err:508	Err:508								Wait						End of slew - wait before imaging to allow s/c to settle
04/05/94 18:19:57	2:59:11	15								Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B						
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)						Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec						
04/05/94 18:24:02	3:03:16	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)						
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6								Load exposure table LUNIRDKS1						
Err:508	Err:508	6								Load exposure table LUNIRDKS2						
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)						
Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew
04/05/94 18:25:41	3:04:55		70.0	54.4	1081.0				N70D							
Err:508	Err:508	360								Switch to HGA						READY FOR DATA DUMP - Time approximate
Err:508																
04/05/94 18:32:09	3:11:23		60.0	54.6	1263.6				N60D							
04/05/94 18:37:00	3:16:13									Switch to DHU mode @ 128 kbps						Ground Command
04/05/94 18:39:31	3:18:45		50.0	54.7	1469.8				N50D							
04/05/94 18:41:00	3:20:14									Select ST-A						Ground Command
04/05/94 18:42:00	3:21:14									Downlink SDR Segment 1						Ground Command
04/05/94 18:44:00	3:23:14									Uplink and schedule L215 scripts						Ground Command
04/05/94 18:47:56	3:27:10		40.0	54.8	1697.0				N40D							

Orbit 214 Timeline - Type A Orbit

04/05/94	18:57:36	3:36:50		30.0	54.8	1939.3					N30D								
04/05/94	18:59:00	3:38:14										Downlink SSTR Segment 2							Ground Command
04/05/94	19:03:17	3:42:31		24.7	54.8	2071.0					INPM								Enter penumbra
04/05/94	19:04:05	3:43:19		24.0	54.7	2089.0					INUM								Enter umbra
04/05/94	19:08:39	3:47:53		20.0	54.7	2187.2					N20D								
04/05/94	19:21:09	4:00:23		10.0	54.7	2426.3					N10D								
04/05/94	19:35:07	4:14:21		0.0	54.6	2638.7					Equator - D								
04/05/94	19:50:20	4:29:34		-10.0	54.5	2804.0					S10D								
04/05/94	20:06:31	4:45:45		-20.0	54.4	2903.7					S20D								
04/05/94	20:07:00	4:46:13										Downlink SSTR Segment 3							Ground Command
04/05/94	20:07:22	4:46:36		-20.5	54.4	2906.9					OUTUM								Exit umbra
04/05/94	20:08:20	4:47:34		-21.1	54.4	2910.2					OUTPM								Exit penumbra
04/05/94	20:19:11	4:58:25		-27.7	54.4	2927.6					Aposelene								

Orbit 215 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/05/94 20:19:11	0:00:00		-27.7	54.4	2927.6							Aposelene							Downlinking SDR Segment 3 (orbit 214)
04/05/94 20:23:06	0:03:54		-30.0	54.3	2925.4							S30D							
04/05/94 20:28:00	0:08:48												Select ST-B						Ground Command
04/05/94 20:33:00	0:13:48												SSDR to IDLE - downlink complete						Ground Command
04/05/94 20:39:32	0:20:21		-40.0	54.3	2866.1							S40D							
																			Standard Prep1 Script
04/05/94 20:54:14	0:35:02	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/05/94 20:55:18	0:36:06		-50.0	54.2	2733.5							S50D							
04/05/94 21:00:00	0:40:48												Auxiliary oscillator A OFF; Auxiliary oscillator B OFF						Ground Command
04/05/94 21:08:05	0:48:53										GDS	LOS							
04/05/94 21:09:58	0:50:47		-60.0	54.2	2543.5							S60D							
																			Standard Prep2 Script
04/05/94 21:19:04	0:59:52	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/05/94 21:23:16	1:04:04		-70.0	54.4	2316.0							S70D							
																			Err:508
04/05/94 21:30:04	1:10:52	0											Msg "WARNING: 2kbps in 1 min."						
04/05/94 21:31:04	1:11:52	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/05/94 21:31:30	1:12:18												Cancel L215 LHG script						Ground Command L215 LHG OBSERVATION CANCELED (reason unknown)
04/05/94 21:32:04	1:12:52	60											Switch to omni antennas						
04/05/94 21:33:04	1:13:52	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/05/94 21:35:04	1:15:52	120											UV & HR cameras ON						
04/05/94 21:35:06	1:15:54		-80.0	55.2	2070.6							S80D							
04/05/94 21:38:34	1:19:22	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 4
04/05/94 21:39:04	1:19:52	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/05/94 21:39:14	1:20:02	10											Perform NIR imaging (DHU SEQT 31)						

Orbit 215 Timeline - Type B Orbit

04/05/94 21:39:29	1:20:17	15											Err:508		Slew to nadir (inertial pointing)
															Err:508
															Err:508
04/05/94 21:43:28	1:24:17	0													Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S
04/05/94 21:44:29	1:25:17	60													Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 21)
04/05/94 21:45:29	1:26:17	60	-89.7	145.0	1823.7									South Pole	Set SA step rate to LO
04/05/94 21:46:29	1:27:18		-88.9	218.0	1798.3									LDAWN	
04/05/94 21:54:32	1:35:20	543	-80.0	231.7	1587.8									S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20
04/05/94 22:02:26	1:43:14	474	-70.0	232.5	1369.8									S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19
04/05/94 22:05:12	1:46:00	166													Err:508
															Slew to South Pole for oblique viewing
04/05/94 22:09:21	1:50:09	249	-60.0	232.7	1174.4									S60A	Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11
04/05/94 22:10:21	1:51:09	60													Record in SSSR Segment 5
04/05/94 22:15:27	1:56:15	306	-50.0	232.8	1003.3									S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10
04/05/94 22:20:16	2:01:04	289													Laser Power ON
04/05/94 22:20:53	2:01:41	37	-40.0	232.9	856.6									S40A	Switch to lunar mapping mode (ACSMoDe=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10
04/05/94 22:25:47	2:06:35	294	-30.0	232.9	733.6									S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9
04/05/94 22:30:14	2:11:03		-20.0	232.9	632.9									S20A	
04/05/94 22:30:16	2:11:04	269												S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8
04/05/94 22:34:13	2:15:01													CAN	MLOSM
04/05/94 22:34:24	2:15:12	248	-10.0	232.9	553.4									S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7
04/05/94 22:38:18	2:19:06	234	0.0	232.9	493.8									Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6
04/05/94 22:42:02	2:22:50	224	10.0	233.0	453.1									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5
04/05/94 22:45:40	2:26:28	218	20.0	233.0	430.6									N20A	Load exposure table LUNARZ25N
04/05/94 22:48:23	2:29:11		27.6	233.0	425.4									Periselene	
04/05/94 22:49:15	2:30:03	215	30.0	233.0	425.9									N30A	Load exposure table LUNARZ35N
04/05/94 22:52:50	2:33:38	215	40.0	233.0	438.9									N40A	Load exposure table LUNARZ45N
04/05/94 22:52:56	2:33:44													CAN	MAOSM
															Exit occultation

Orbit 215 Timeline - Type B Orbit

04/05/94 22:56:29	2:37:17		50.0	233.1	469.9					N50A			
04/05/94 22:56:31	2:37:19	221								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6		Resume HiRes imaging
04/05/94 23:00:00	2:40:48										Load UVLHG_23.UMI into SEQT 23		Ground Command
04/05/94 23:00:19	2:41:07	228	60.0	233.2	519.4					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4		
04/05/94 23:01:19	2:42:07	60									Record in SSSR Segment 6		SSDR Segment 6
04/05/94 23:04:19	2:45:07	180	70.0	233.5	588.2					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17		
04/05/94 23:08:37	2:49:25	258	80.0	234.3	677.6					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16		Stop laser ranging
04/05/94 23:09:07	2:49:55	30									Laser power OFF		
04/05/94 23:09:37	2:50:25	30									Load EEQ_11.UMI into SEQT 11		Restore original SEQT 11
Err:508													
04/05/94 23:13:16	2:54:04		89.7	321.7	788.5					North Pole			
04/05/94 23:13:46	2:54:34		88.9	37.5	801.6					LDUSK			
Err:508													
04/05/94 23:15:16	2:56:04	0									Stop Imaging - select ST-B		
04/05/94 23:15:21	2:56:09	5									Err:508		Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait		End of slew - wait before imaging to allow s/c to settle
04/05/94 23:18:23	2:59:12		80.0	51.0	922.6					N80D			
04/05/94 23:18:28	2:59:16	15									Select DHU SEQT 23		Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B		
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)		Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)		
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec		
04/05/94 23:22:28	3:03:16	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)		Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)		
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)		
Err:508	Err:508	6									Load exposure table LUNIRDKS1		

Orbit 216 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/06/94 01:17:37	0:00:00		-27.6	51.6	2928.1							Aposelene							Downlinking SSSDR Segment 5 (orbit 215) - poor link
04/06/94 01:21:32	0:03:54		-30.0	51.6	2925.8							S30D							
04/06/94 01:37:59	0:20:21		-40.0	51.5	2866.4							S40D							
Standard Prep1 Script																			
04/06/94 01:52:41	0:35:03	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
End Prep1 Script																			
04/06/94 01:53:47	0:36:09		-50.0	51.5	2733.7							S50D							
04/06/94 02:08:26	0:50:48		-60.0	51.5	2543.6							S60D							
Standard Prep2 Script																			
04/06/94 02:17:31	0:59:53	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
End Prep2 Script																			
04/06/94 02:21:43	1:04:06		-70.0	51.6	2316.0							S70D							
Err:508																			
04/06/94 02:28:01	1:10:23	0											Msg "WARNING: Omni/2k in 1 min.."						
04/06/94 02:29:01	1:11:23	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/06/94 02:30:01	1:12:23	60											Switch to omni antennas						
04/06/94 02:31:01	1:13:23	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/06/94 02:33:01	1:15:23	120											UV & HR cameras ON						
04/06/94 02:33:32	1:15:54		-80.0	52.3	2070.5							S80D							
04/06/94 02:37:01	1:19:23	240											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1
04/06/94 02:37:31	1:19:53	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/06/94 02:37:41	1:20:03	10											Perform NIR imaging (DHU SEQT 31)						
04/06/94 02:37:56	1:20:18	15																	Slew to nadir (inertial pointing)
Err:508																			
Err:508																			
04/06/94 02:42:56	1:25:18	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S						

Orbit 216 Timeline - Type A Orbit

04/06/94 02:43:26	1:25:48	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)							START MAPPING
04/06/94 02:43:56	1:26:18	30	-89.7	141.0	1823.6						South Pole	Set SA step rate to LO						
04/06/94 02:44:56	1:27:19		-88.9	216.7	1798.2						LDAWN							
04/06/94 02:52:59	1:35:21	543	-80.0	229.1	1587.5						S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14						
04/06/94 03:00:53	1:43:15	474	-70.0	229.8	1369.4						S70A	Load exposure table LUNARZ65S; Load exposure table LUNNIR65S; Load exposure table LUNARH65S; Select DHU SEQT 13						UV and IR uncompressed
04/06/94 03:07:48	1:50:10	415	-60.0	230.0	1174.0						S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12						Resume compression
04/06/94 03:08:48	1:51:10	60										Record in SSSR Segment 2						SSDR Segment 2
04/06/94 03:13:54	1:56:16	306	-50.0	230.1	1002.9						S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11						Stop HiRes imaging
04/06/94 03:18:42	2:01:04	288										Laser Power ON						
04/06/94 03:19:20	2:01:42	38	-40.0	230.2	856.2						S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10						
04/06/94 03:24:14	2:06:36	294	-30.0	230.2	733.1						S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9						
04/06/94 03:28:42	2:11:04	268	-20.0	230.2	632.5						S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8						Start laser ranging
04/06/94 03:31:28	2:13:50										CAN	MLOSM						Enter occultation
04/06/94 03:32:51	2:15:13	249	-10.0	230.2	552.9						S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
04/06/94 03:36:45	2:19:07	234	0.0	230.2	493.3						Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6						
04/06/94 03:40:29	2:22:51	224	10.0	230.2	452.6						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/06/94 03:44:06	2:26:28	217	20.0	230.2	430.1						N20A	Load exposure table LUNARZ25N						
04/06/94 03:46:50	2:29:13		27.7	230.3	425.0						Periselene							
04/06/94 03:47:41	2:30:03	215	30.0	230.3	425.5						N30A	Load exposure table LUNARZ35N						
04/06/94 03:51:17	2:33:39	216	40.0	230.3	438.5						N40A	Load exposure table LUNARZ45N						
04/06/94 03:52:25	2:34:47										CAN	MAOSM						Exit occultation
04/06/94 03:54:57	2:37:19	220	50.0	230.4	469.4						N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/06/94 03:55:02	2:37:24										MAD	MAOSM						
04/06/94 03:58:45	2:41:07	228	60.0	230.5	518.9						N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/06/94 03:59:45	2:42:07	60										Record in SSSR Segment 3						SSDR Segment 3

Orbit 216 Timeline - Type A Orbit

04/06/94 04:02:45	2:45:07	180	70.0	230.7	587.8			N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3				
04/06/94 04:07:03	2:49:25	258						N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9				Stop laser ranging
04/06/94 04:07:33	2:49:55	30	80.0	231.4	677.2				Laser power OFF				
04/06/94 04:08:03	2:50:25	30							Load EEQ_13.UMI into SEQT 13				Restore original SEQT 13
Err:508													
04/06/94 04:11:41	2:54:03		89.7	319.5	788.2			North Pole					
04/06/94 04:12:12	2:54:34		88.9	36.2	801.2			LDUSK					
Err:508													
04/06/94 04:13:42	2:56:04	0							Stop Imaging - select ST-B				
04/06/94 04:13:46	2:56:09	5							Err:508				Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508							Wait				End of slew - wait before imaging to allow s/c to settle
04/06/94 04:16:49	2:59:11		80.0	48.4	922.3			N80D					
04/06/94 04:16:55	2:59:17	15							Select DHU SEQT 23				Earth imaging w/color HiRes
Err:508	Err:508	15							Stop imaging - select ST-B				
Err:508	Err:508	5							Slew s/c sensors to Vega (VEGAGNC12)				Slew to Vega (inertial pointing)
Err:508	Err:508	30							Park opaque filter on HiRes (DHU SEQT 27)				
Err:508	Err:508	15							Select ST-B; Activate waitwhileslew for 310 sec				
04/06/94 04:20:55	3:03:17	Err:508							Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)				Start calibration imaging
Err:508	Err:508	12							Perform LWIR imaging (DHU SEQT 25)				
Err:508	Err:508	12							Perform NIR imaging (DHU SEQT 31)				
Err:508	Err:508	6							Load exposure table LUNIRDKS1				
Err:508	Err:508	6							Load exposure table LUNIRDKS2				
Err:508	Err:508	6							Perform HiRes imaging (DHU SEQT 30)				
Err:508	Err:508	15							Use new pointing quaternion to Vega (NEWVEGAQT)				New quaternion tried to get Vega into HR FOV
Err:508	Err:508	30							Perform UV0 imaging (DHU SEQT 29)				

Orbit 216 Timeline - Type A Orbit

Err:508	Err:508	12								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/06/94 04:22:33	3:04:55		70.0	49.1	1080.5				N70D						
04/06/94 04:27:00	3:09:22	Err:508								Switch to HGA					READY FOR DATA DUMP - Time approximate
															Err:508
04/06/94 04:28:00	3:10:22									Switch to DHU mode @ 128 kbps					Ground Command
04/06/94 04:29:02	3:11:24		60.0	49.3	1263.2				N60D						
04/06/94 04:33:05	3:15:27							CAN	LOS						
04/06/94 04:34:00	3:16:22									Resume downlink SDDR Segment 5 (orbit 215)					Ground Command
04/06/94 04:36:22	3:18:44		50.0	49.4	1469.6				N50D						
04/06/94 04:44:48	3:27:10		40.0	49.4	1696.9				N40D						
04/06/94 04:46:00	3:28:22									Uplink and schedule L217 scripts					Ground Command
04/06/94 04:54:27	3:36:50		30.0	49.4	1939.4				N30D						
04/06/94 05:00:19	3:42:42		24.5	49.3	2075.2				INPM						Enter penumbra
04/06/94 05:01:08	3:43:30		23.8	49.3	2093.3				INUM						Enter umbra
04/06/94 05:05:30	3:47:52		20.0	49.3	2187.5				N20D						
04/06/94 05:18:01	4:00:23		10.0	49.2	2426.8				N10D						
04/06/94 05:24:00	4:06:22									Downlink SDDR Segment 2 (orb 216)					Ground Command
04/06/94 05:31:59	4:14:21		0.0	49.2	2639.4				Equator - D						
04/06/94 05:47:13	4:29:35		-10.0	49.1	2804.8				S10D						
04/06/94 06:03:23	4:45:46		-20.0	49.0	2904.6				S20D						
04/06/94 06:03:55	4:46:17		-20.3	49.0	2906.7				OUTUM						Exit umbra
04/06/94 06:04:53	4:47:15		-20.9	49.0	2910.0				OUTPM						Exit penumbra
04/06/94 06:16:04	4:58:26		-27.6	48.9	2928.5				Aposelene						

Orbit 217 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/06/94 06:16:04	0:00:00		-27.6	48.9	2928.5							Aposelene							Downlinking SDR Segment 2 (orbit 216)
04/06/94 06:19:58	0:03:54		-30.0	48.9	2926.3							S30D							
04/06/94 06:31:00	0:14:56												Downlink SDR Segment 6 (orb 215)						Ground Command
04/06/94 06:36:27	0:20:23		-40.0	48.8	2866.8							S40D							
																			Standard Prep1 Script
04/06/94 06:51:09	0:35:05	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/06/94 06:52:13	0:36:09		-50.0	48.7	2734.1							S50D							
04/06/94 06:55:00	0:38:56												Downlink SDR Segment 1 (orb 216)						Ground Command
04/06/94 07:06:53	0:50:49		-60.0	48.7	2543.9							S60D							
04/06/94 07:11:00	0:54:56												Downlink SDR Segment 3						Ground Command
																			Standard Prep2 Script
04/06/94 07:15:59	0:59:55	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/06/94 07:20:10	1:04:06		-70.0	48.8	2316.1							S70D							
																			Err:508
04/06/94 07:26:59	1:10:55	0											Msg "WARNING: 2kbps in 1 min."						
04/06/94 07:27:59	1:11:55	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/06/94 07:28:59	1:12:55	60											Switch to omni antennas						
04/06/94 07:29:59	1:13:55	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/06/94 07:31:59	1:15:55	120											UV & HR cameras ON						
04/06/94 07:32:00	1:15:56		-80.0	49.4	2070.5							S80D							
04/06/94 07:35:29	1:19:25	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 4
04/06/94 07:35:59	1:19:55	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging
04/06/94 07:36:09	1:20:05	10											Perform NIR imaging (DHU SEQT 31)						
04/06/94 07:36:24	1:20:20	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 217 Timeline - Type B Orbit

04/06/94 07:40:23	1:24:20	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S				
04/06/94 07:41:24	1:25:20	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
04/06/94 07:42:22	1:26:18		-89.8	136.4	1823.7					South Pole					
04/06/94 07:42:24	1:26:20	60								MAXS	Set SA step rate to LO				
04/06/94 07:43:23	1:27:19		-88.9	215.4	1798.2					LDAWN					
04/06/94 07:51:27	1:35:23	543	-80.0	226.6	1587.2					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20				
04/06/94 07:59:21	1:43:17	474	-70.0	227.2	1369.1					S70A	Load EEQ_19U.UMI into SEQT 19; Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19				UV and IR uncompressed
04/06/94 08:02:07	1:46:03	166									Err:508				Slew to South Pole for oblique viewing Resume compression
04/06/94 08:06:16	1:50:12	249	-60.0	227.4	1173.6					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11				
04/06/94 08:07:16	1:51:12	60									Record in SSSR Segment 5				SSDR Segment 5
04/06/94 08:12:22	1:56:18	306	-50.0	227.4	1002.5					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10				Stop HiRes imaging
04/06/94 08:17:09	2:01:05	287									Laser Power ON				
04/06/94 08:17:47	2:01:43	38	-40.0	227.5	855.7					S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping
04/06/94 08:22:41	2:06:37	294	-30.0	227.5	732.7					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/06/94 08:27:09	2:11:05	268	-20.0	227.5	632.0					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
04/06/94 08:27:47	2:11:43								MAD	MLOSM					Enter occultation
04/06/94 08:31:18	2:15:14	249	-10.0	227.5	552.5					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
04/06/94 08:35:12	2:19:08	234	0.0	227.5	492.8					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/06/94 08:38:56	2:22:52	224	10.0	227.5	452.2					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/06/94 08:42:33	2:26:29	217	20.0	227.5	429.7					N20A	Load exposure table LUNARZ25N				
04/06/94 08:45:16	2:29:12		27.6	227.5	424.5					Periselene					
04/06/94 08:46:08	2:30:04	215	30.0	227.5	425.0					N30A	Load exposure table LUNARZ35N				
04/06/94 08:49:43	2:33:39	215	40.0	227.6	438.0					N40A	Load exposure table LUNARZ45N				
04/06/94 08:51:19	2:35:15								MAD	MAOSM					Exit occultation
04/06/94 08:51:28	2:35:24								PMK	MAOSM					
04/06/94 08:53:23	2:37:19	220	50.0	227.6	469.0					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6				Resume HiRes imaging

Orbit 217 Timeline - Type B Orbit

04/06/94 08:57:10	2:41:07	228	60.0	227.7	518.4					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4					
04/06/94 08:58:11	2:42:07	60									Record in SSDR Segment 6					SSDR Segment 6
04/06/94 09:01:11	2:45:07	180	70.0	227.9	587.3					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17					
04/06/94 09:05:29	2:49:25	258	80.0	228.5	676.7					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16					Stop laser ranging
04/06/94 09:05:59	2:49:55	30									Laser power OFF					
04/06/94 09:06:29	2:50:25	30									Load EEQ_11.UMI into SEQT 11					SCRIPT ERROR Wrong SEQT was restored
Err:508																
04/06/94 09:10:07	2:54:03		89.8	316.3	787.7					North Pole						
04/06/94 09:10:38	2:54:34		88.9	35.0	800.6					LDUSK						
Err:508																
04/06/94 09:12:08	2:56:04	0									Stop Imaging - select ST-B					
04/06/94 09:12:13	2:56:09	5									Err:508					Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait					End of slew - wait before imaging to allow s/c to settle
04/06/94 09:15:15	2:59:11		80.0	45.9	921.8					N80D						
04/06/94 09:15:22	2:59:18	15									Select DHU SEQT 23					Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B					
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)					Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)					
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec					
04/06/94 09:19:22	3:03:18	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)					Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)					
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)					
Err:508	Err:508	6									Load exposure table LUNIRDKS1					
Err:508	Err:508	6									Load exposure table LUNIRDKS2					
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)					

Orbit 217 Timeline - Type B Orbit

Err:508	Err:508	30																	Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec										Slew HGA to Earth with active waitwhileslew							
04/06/94 09:20:59	3:04:55		70.0	46.5	1080.1														N70D																	
04/06/94 09:26:00	3:09:56	Err:508																		Switch to HGA															READY FOR DATA DUMP - Time approximate	
Err:508																																				
04/06/94 09:27:00	3:10:56																			Switch to DHU mode @ 128 kbps														Ground Command		
04/06/94 09:27:27	3:11:23		60.0	46.6	1262.8															N60D																
04/06/94 09:28:00	3:11:56																			Downlink SSSR Segment 4														Ground Command		
04/06/94 09:34:48	3:18:44		50.0	46.7	1469.3															N50D																
04/06/94 09:43:00	3:26:56																			Downlink SSSR Segment 3 (orb 216)															Ground Command	
04/06/94 09:43:13	3:27:09		40.0	46.7	1696.7															N40D																
Err:508																																				
04/06/94 09:50:00	3:33:56	0																		UV & HR cameras ON																
04/06/94 09:51:00	3:35:56	60																		Msg "WARNING: 2kbps in 1 min.."; SSDR to IDLE; Switch to 2 kbps bypass mode															SCRIPT ERROR Wait 60 seconds missing after warning message - all following commands occurred 1 min early Data dump stopped	
04/06/94 09:52:00	3:36:56	60																		Switch to omni antennas; Record in SSSR Segment 7															SSDR Segment 7	
04/06/94 09:52:53	3:36:49		30.0	46.7	1939.3															N30D																
04/06/94 09:53:00	3:37:56	60																		Err:508															Slew using Inertial pointing (LGH not LHG used in name)	
04/06/94 09:53:30	3:38:26	30																		Initialize filters (DHU SEQT 27); Load exposure table UVGLOW_400																
04/06/94 09:53:45	3:38:41	15																		Select ST-B																
04/06/94 09:58:50	3:42:46		24.4	46.6	2077.2															INPM															Enter penumbra	
04/06/94 09:59:00	3:43:56	315																		Inertial pointing w/ quaternion table (LHG217B000); Execute UV_Images																START LHG OBSERVATION NOTE: ALL COMMANDS OCCURRED 1 MIN EARLY BECAUSE OF SCRIPT ERROR
04/06/94 09:59:39	3:43:35		23.7	46.6	2095.4															INUM															Enter umbra	
04/06/94 09:59:45	3:44:41	45																		Execute UV_Images																Note: Time between events includes script duration (5 sec) and WAIT between script calls (40 sec)
04/06/94 10:00:30	3:45:26	45																		Execute UV_Images																
04/06/94 10:01:15	3:46:11	45																		Execute UV_Images																
04/06/94 10:02:00	3:46:56	45																		Execute UV_Images																
04/06/94 10:02:44	3:47:40	45																		Execute UV_Images																
04/06/94 10:03:29	3:48:25	45																		Execute UV_Images																
04/06/94 10:03:56	3:47:52		20.0	46.6	2187.4															N20D																
04/06/94 10:04:14	3:49:10	45																		Execute UV_Images																
04/06/94 10:04:59	3:49:55	45																		Execute UV_Images																

Orbit 217 Timeline - Type B Orbit

04/06/94 10:05:44	3:50:40	45																		Execute UV_Images
04/06/94 10:06:29	3:51:25	45																		Use QTable LHG217B001; Execute UV_Images
04/06/94 10:07:14	3:52:10	45																		Execute UV_Images
04/06/94 10:07:59	3:52:55	45																		Execute UV_Images
04/06/94 10:08:44	3:53:40	45																		Execute UV_Images
04/06/94 10:09:29	3:54:25	45																		Execute UV_Images
04/06/94 10:10:14	3:55:10	45																		Execute UV_Images
04/06/94 10:10:59	3:55:55	45																		Execute UV_Images
04/06/94 10:11:44	3:56:40	45																		Execute UV_Images
04/06/94 10:12:29	3:57:25	45																		Execute UV_Images
04/06/94 10:13:14	3:58:10	45																		Execute UV_Images
04/06/94 10:13:59	3:58:55	45																		Use QTable LHG217B002; Execute UV_Images
04/06/94 10:14:44	3:59:40	45																		Execute UV_Images
04/06/94 10:15:29	4:00:25	45																		Execute UV_Images
04/06/94 10:16:14	4:01:10	45																		Execute UV_Images
04/06/94 10:16:27	4:00:23		10.0	46.5	2426.9															N10D
04/06/94 10:16:59	4:01:55	45																		Execute UV_Images
04/06/94 10:17:44	4:02:40	45																		Execute UV_Images
04/06/94 10:18:29	4:03:25	45																		Execute UV_Images
04/06/94 10:19:14	4:04:10	45																		Execute UV_Images
04/06/94 10:19:59	4:04:55	45																		Execute UV_Images
04/06/94 10:20:44	4:05:40	45																		Execute UV_Images
04/06/94 10:21:29	4:06:25	45																		Use QTable LHG217B003; Execute UV_Images
04/06/94 10:22:14	4:07:10	45																		Execute UV_Images
04/06/94 10:22:59	4:07:55	45																		Execute UV_Images
04/06/94 10:23:44	4:08:40	45																		Execute UV_Images
04/06/94 10:24:29	4:09:25	45																		Execute UV_Images
04/06/94 10:25:14	4:10:10	45																		Execute UV_Images
04/06/94 10:25:59	4:10:55	45																		Execute UV_Images
04/06/94 10:26:44	4:11:40	45																		Execute UV_Images
04/06/94 10:27:29	4:12:25	45																		Execute UV_Images
04/06/94 10:28:14	4:13:10	45																		Execute UV_Images
04/06/94 10:28:59	4:13:55	45																		Use QTable LHG217B004; Execute UV_Images
04/06/94 10:29:44	4:14:40	45																		Execute UV_Images
04/06/94 10:30:25	4:14:21		0.0	46.4	2639.6															Equator - D
04/06/94 10:30:29	4:15:25	45																		Execute UV_Images
04/06/94 10:31:14	4:16:10	45																		Execute UV_Images
04/06/94 10:31:59	4:16:55	45																		Execute UV_Images
04/06/94 10:32:44	4:17:40	45																		Execute UV_Images
04/06/94 10:33:29	4:18:25	45																		Execute UV_Images
04/06/94 10:34:14	4:19:10	45																		Execute UV_Images
04/06/94 10:34:59	4:19:55	45																		Execute UV_Images
04/06/94 10:35:44	4:20:40	45																		Execute UV_Images

Orbit 217 Timeline - Type B Orbit

04/06/94 10:36:29	4:21:25	45								Use QTable LHG217B005; Execute UV_Images								
04/06/94 10:37:14	4:22:10	45								Execute UV_Images								
04/06/94 10:37:59	4:22:55	45								Execute UV_Images								
04/06/94 10:38:44	4:23:40	45								Execute UV_Images								
04/06/94 10:39:29	4:24:25	45								Execute UV_Images								
04/06/94 10:40:14	4:25:10	45								Execute UV_Images								
04/06/94 10:40:59	4:25:55	45								Execute UV_Images								
04/06/94 10:41:44	4:26:40	45								Execute UV_Images								
04/06/94 10:42:29	4:27:25	45								Execute UV_Images								
04/06/94 10:43:14	4:28:10	45								Execute UV_Images								
04/06/94 10:43:59	4:28:55	45								Use QTable LHG217B006; Execute UV_Images								
04/06/94 10:44:44	4:29:40	45								Execute UV_Images								
04/06/94 10:45:29	4:30:25	45								Execute UV_Images								
04/06/94 10:45:39	4:29:35		-10.0	46.3	2805.2				S10D									
04/06/94 10:46:14	4:31:10	45								Execute UV_Images								
04/06/94 10:46:59	4:31:55	45								Execute UV_Images								
04/06/94 10:47:44	4:32:40	45								Execute UV_Images								
04/06/94 10:48:29	4:33:25	45								Execute UV_Images								
04/06/94 10:49:14	4:34:10	45								Execute UV_Images								
04/06/94 10:49:59	4:34:55	45								Execute UV_Images								
04/06/94 10:50:44	4:35:40	45								Execute UV_Images								
04/06/94 10:51:29	4:36:25	45								Use QTable LHG217B007; Execute UV_Images								
04/06/94 10:52:14	4:37:10	45								Execute UV_Images								
04/06/94 10:52:59	4:37:55	45								Execute UV_Images								
04/06/94 10:53:44	4:38:40	45								Execute UV_Images								
04/06/94 10:54:29	4:39:25	45								Execute UV_Images								
04/06/94 10:55:14	4:40:10	45								Execute UV_Images								
04/06/94 10:55:59	4:40:55	45								Execute UV_Images								
04/06/94 10:56:44	4:41:40	45								Execute UV_Images								
04/06/94 10:57:29	4:42:25	45								Execute UV_Images								
04/06/94 10:58:14	4:43:10	45								Execute UV_Images								
04/06/94 10:58:44	4:43:40	30								Stop imaging - select ST-B; UV & HiRes cameras OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec							END LHG OBSERVATION	
04/06/94 11:01:49	4:45:45		-20.0	46.2	2905.1				S20D									Slew HGA to Earth
04/06/94 11:02:00	4:45:40	195								Switch to HGA								READY FOR DATA DUMP - Time approximate
																		Err:508
04/06/94 11:02:11	4:46:07		-20.2	46.2	2906.5				OUTUM									Exit umbra
04/06/94 11:03:00	4:46:56									Switch to DHU mode @ 128 kbps								Ground Command
04/06/94 11:03:09	4:47:06		-20.8	46.2	2909.9				OUTPM									Exit penumbra
04/06/94 11:04:00	4:47:56									Resume downlink SDDR Segment 3								Ground Command
04/06/94 11:09:00	4:52:56									Downlink SDDR Segment 5 (orb 217)								Ground Command

Orbit 217 Timeline - Type B Orbit

04/06/94 11:11:00	4:54:56															Uplink and schedule L218 scripts				Ground Command	
04/06/94 11:14:30	4:58:26		-27.7	46.1	2929.0											Aposelene					
																					UV_Images Subscript
																					UV/Vis broadband filter only (uncompressed)
		0																			Select DHU SEQT 24
		5																			Stop imaging - select ST-B
																					END UV_Images Subscript

Orbit 218 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/06/94 11:14:30	0:00:00		-27.7	46.1	2929.0							Aposelene							Downlinking SDDR Segment 5 (orbit 217)
04/06/94 11:18:25	0:03:54		-30.0	46.1	2926.8							S30D							
04/06/94 11:26:00	0:11:29												Read dosimeter latch values						Ground Command
04/06/94 11:29:03	0:14:32										GDS	AOS							
04/06/94 11:31:00	0:16:29												Expose dosimeter						Scheduled Command
04/06/94 11:34:53	0:20:23		-40.0	46.0	2867.4							S40D							
																			Standard Prep1 Script
04/06/94 11:48:36	0:34:05	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/06/94 11:50:41	0:36:10		-50.0	45.9	2734.5							S50D							
04/06/94 12:05:20	0:50:49		-60.0	45.9	2544.2							S60D							
																			Standard Prep2 Script
04/06/94 12:13:26	0:58:55	0											LWIR camera ON; Laser heater ON; Open sensor door if closed						LWIR cryocooler NOT turned on for LWIR temperature test
																			End Prep2 Script
04/06/94 12:18:38	1:04:07		-70.0	46.0	2316.3							S70D							
																			Err:508
04/06/94 12:23:56	1:09:25	0											Msg "WARNING: Omni/2k in 1 min.."						
04/06/94 12:24:56	1:10:25	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/06/94 12:25:56	1:11:25	60											Switch to omni antennas						
04/06/94 12:26:56	1:12:25	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/06/94 12:28:56	1:14:25	120											UV & HR cameras ON						
04/06/94 12:30:27	1:15:57		-80.0	46.5	2070.6							S80D							
04/06/94 12:32:56	1:18:25	240											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
04/06/94 12:33:26	1:18:55	30											Perform LWIR imaging (DHU SEQT 25)						LWIR cryocooler off
04/06/94 12:33:36	1:19:05	10											Perform NIR imaging (DHU SEQT 31)						
04/06/94 12:33:51	1:19:20	15											Activate ST-B; Slew ST-B to nadir (GNC12N218B)						Slew ST-B to South Pole
04/06/94 12:39:51	1:25:20	360											Stop all imaging; Load exposure table LH10_STB						
04/06/94 12:40:06	1:25:35	15											Image with ST-B (DHU SEQT 22)						Terminator imaging with ST-B

Orbit 218 Timeline - Type A Orbit

04/06/94 12:40:31	1:26:00	25											Load exposure table LH30_STB					
04/06/94 12:40:50	1:26:19		-89.8	135.9	1823.5								South Pole					
04/06/94 12:41:01	1:26:30	30																Err:508
																		Slew sensors to nadir (inertial pointing)
																		Err:508
04/06/94 12:41:51	1:27:20		-88.9	214.2	1798.3								LDAWN					Err:508
																		Err:508
04/06/94 12:48:54	1:34:23	0												Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S				
04/06/94 12:49:24	1:34:53	30												Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)				START MAPPING Note: LWIR cryocooler off
04/06/94 12:49:54	1:35:23	30	-80.0	224.0	1587.1								S80A	Set SA step rate to LO; Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14				
04/06/94 12:57:48	1:43:17	474	-70.0	224.5	1368.9								S70A	Load EEQ_13U.UMI into SEQT 13; Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13				UV and IR uncompressed
04/06/94 13:04:43	1:50:12	415	-60.0	224.7	1173.4								S60A	Load EEQ_12C.UMI into SEQT 12; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12				Multispectral (color) bursts with HR camera for 60S to 55S
04/06/94 13:05:43	1:51:12	60												Record in SDR Segment 2				SSDR Segment 2
04/06/94 13:07:46	1:53:15	123												Load exposure table LUNARZ55S; Load EEQ_12.UMI into SEQT 12; Select DHU SEQT 12;				Restore original SEQT 12 Stop HiRes imaging
04/06/94 13:10:49	1:56:18	183	-50.0	224.7	1002.2								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11				
04/06/94 13:15:36	2:01:05	287												Laser Power ON				
04/06/94 13:16:15	2:01:44	39	-40.0	224.8	855.4								S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10				
04/06/94 13:21:08	2:06:37	293	-30.0	224.8	732.2								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/06/94 13:24:45	2:10:14												GDS	MLOSM				
04/06/94 13:24:59	2:10:28												PMK	MLOSM				
04/06/94 13:25:24	2:10:53												MAD	MLOSM				Enter occultation
04/06/94 13:25:36	2:11:05	268	-20.0	224.8	631.6								S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
04/06/94 13:29:45	2:15:14	249	-10.0	224.8	552.0								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
04/06/94 13:33:39	2:19:08	234	0.0	224.8	492.4								Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/06/94 13:37:22	2:22:51	223	10.0	224.8	451.7								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/06/94 13:41:00	2:26:29	218	20.0	224.8	429.2								N20A	Load exposure table LUNARZ25N				

Orbit 218 Timeline - Type A Orbit

04/06/94 13:43:43	2:29:13		27.7	224.8	424.0					Periselene			
04/06/94 13:44:34	2:30:03	214	30.0	224.8	424.4					N30A	Load exposure table LUNARZ35N		
04/06/94 13:48:10	2:33:39	216	40.0	224.8	437.4					N40A	Load exposure table LUNARZ45N		
04/06/94 13:50:29	2:35:58									MAD	MAOSM		Exit occultation
04/06/94 13:50:33	2:36:02									PMK	MAOSM		
04/06/94 13:50:38	2:36:07									GDS	MAOSM		
04/06/94 13:51:50	2:37:19	220	50.0	224.8	468.4					N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6		Resume HiRes imaging
04/06/94 13:55:38	2:41:07	228	60.0	224.9	517.9					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4		
04/06/94 13:56:38	2:42:07	60									Record in SSSR Segment 3		SSDR Segment 3
04/06/94 13:59:38	2:45:07	180	70.0	225.1	586.7					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3		
04/06/94 14:03:55	2:49:24	257	80.0	225.6	676.1					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9		Stop laser ranging
04/06/94 14:04:25	2:49:54	30									Laser power OFF		
04/06/94 14:04:55	2:50:24	30									Load EEQ_13.UMI into SEQT 13		Restore original SEQT 13
													Err:508
04/06/94 14:05:03	2:50:32									MAD	LOS		
04/06/94 14:08:34	2:54:03		89.8	316.0	787.2					North Pole			
04/06/94 14:09:04	2:54:34		88.9	33.9	799.9					LDUSK			
													Err:508
04/06/94 14:10:34	2:56:03	0									Stop Imaging - select ST-B		
04/06/94 14:10:39	2:56:08	5									Err:508		Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait		End of slew - wait before imaging to allow s/c to settle
04/06/94 14:13:41	2:59:11		80.0	43.3	921.2					N80D			
04/06/94 14:13:48	2:59:17	15									Select DHU SEQT 23		Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B		
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)		Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)		
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec		

Orbit 218 Timeline - Type A Orbit

04/06/94 14:17:48	3:03:17	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)						LWIR cryocooler off
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6								Load exposure table LUNIRDKS1						
Err:508	Err:508	6								Load exposure table LUNIRDKS2						
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)						
Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMode=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew
04/06/94 14:19:24	3:04:54		70.0	43.8	1079.5				N70D							
04/06/94 14:25:00	3:10:29	Err:508								Switch to HGA						READY FOR DATA DUMP - Time approximate
																Err:508
04/06/94 14:27:00	3:12:29									Switch to DHU mode @ 128 kbps						Ground Command
04/06/94 14:25:52	3:11:21		60.0	44.0	1262.2				N60D							
04/06/94 14:28:00	3:13:29									Downlink SSSR Segment 5 (orb 217)						Ground Command
04/06/94 14:31:00	3:16:29									Downlink SSSR Segment 6 (orb 217)						Ground Command
04/06/94 14:33:00	3:18:29									Select ST-A						Ground Command ST-B blocked by Moon
04/06/94 14:33:13	3:18:43		50.0	44.0	1468.7				N50D							
04/06/94 14:41:39	3:27:09		40.0	44.0	1696.2				N40D							
04/06/94 14:51:19	3:36:48		30.0	43.9	1938.9				N30D							
04/06/94 14:53:00	3:38:29									Downlink SSSR Segment 7 (LHG)						Ground Command
04/06/94 14:57:22	3:42:51		24.4	43.9	2078.9				INPM							Enter penumbra
04/06/94 14:58:10	3:43:40		23.6	43.9	2097.2				INUM							Enter umbra
04/06/94 15:02:21	3:47:51		20.0	43.9	2187.2				N20D							
04/06/94 15:05:00	3:50:29									Downlink SSSR Segment 1 (orb 218)						Ground Command
04/06/94 15:14:52	4:00:22		10.0	43.8	2426.8				N10D							
04/06/94 15:22:00	4:07:29									Downlink SSSR Segment 2						Ground Command
04/06/94 15:28:50	4:14:20		0.0	43.7	2639.7				Equator - D							
04/06/94 15:44:04	4:29:34		-10.0	43.6	2805.5				S10D							
04/06/94 15:45:00	4:30:29									Uplink and schedule L219 scripts						Ground Command
04/06/94 16:00:14	4:45:43		-20.0	43.5	2905.5				S20D							
04/06/94 16:00:26	4:45:55		-20.1	43.5	2906.3				OUTUM							Exit umbra
04/06/94 16:01:24	4:46:53		-20.7	43.5	2909.7				OUTPM							Exit penumbra
04/06/94 16:12:58	4:58:27		-27.7	43.4	2929.6				Aposelene							

Orbit 219 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/06/94 16:12:58	0:00:00		-27.7	43.4	2929.6							Aposelene							Downlinking SSSDR Segment 2 (orbit 218)
04/06/94 16:13:00	0:00:01												Select ST-B						Ground Command - no matches
04/06/94 16:14:00	0:01:01												Select ST-A						Ground Command - no matches
04/06/94 16:15:00	0:02:02												Select ST-B						Ground Command - no matches
04/06/94 16:16:51	0:03:53		-30.0	43.4	2927.3							S30D							
04/06/94 16:19:00	0:06:01												Stop all ST imaging; Uplink ST exposure tables						Ground Command
04/06/94 16:20:00	0:07:01												Select ST-B						Ground Command
04/06/94 16:28:00	0:15:02												Update state vector (GNC53_06APR1600)						Ground Command
04/06/94 16:30:00	0:17:01												Downlink SSSDR data patches						Ground Command
04/06/94 16:33:19	0:20:21		-40.0	43.3	2868.0							S40D							
																			Standard Prep1 Script
04/06/94 16:48:04	0:35:05	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/06/94 16:49:06	0:36:08		-50.0	43.2	2735.1							S50D							
04/06/94 16:52:00	0:39:01												Downlink SSSDR Segment 3						Ground Command
04/06/94 17:03:47	0:50:49		-60.0	43.1	2544.7							S60D							
																			Standard Prep2 Script
04/06/94 17:12:54	0:59:55	0											LWIR camera ON; Laser heater ON; Open sensor door if closed						LWIR cryocooler NOT turned on for LWIR temperature test
																			End Prep2 Script
04/06/94 17:17:05	1:04:07		-70.0	43.2	2316.7							S70D							
04/06/94 17:21:00	1:08:01												SSDR to IDLE - downlink complete						Ground Command
																			Err:508
04/06/94 17:23:54	1:10:55	0											Msg "WARNING: 2kbps in 1 min."						
04/06/94 17:24:54	1:11:55	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/06/94 17:25:54	1:12:56	60											Switch to omni antennas						
04/06/94 17:26:54	1:13:56	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/06/94 17:28:54	1:15:55	120											UV & HR cameras ON						
04/06/94 17:28:54	1:15:56		-80.0	43.6	2070.9							S80D							
04/06/94 17:32:15	1:19:16										CAN	AOS							

Orbit 219 Timeline - Type B Orbit

04/06/94 17:32:24	1:19:26	210								Initialize filters (DHU SEQT 27); Record in SDDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 4
04/06/94 17:32:54	1:19:56	30								Perform LWIR imaging (DHU SEQT 25)						LWIR cryocooler off
04/06/94 17:33:04	1:20:05	10								Perform NIR imaging (DHU SEQT 31)						
04/06/94 17:33:19	1:20:20	15														Err:508
																Err:508
																Err:508
04/06/94 17:37:18	1:24:20	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S						
04/06/94 17:38:19	1:25:20	60								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)						START MAPPING Note: LWIR cryocooler off
04/06/94 17:39:18	1:26:19	60	-89.8	130.7	1823.8					South Pole						
04/06/94 17:39:19	1:26:20	60								MAXS						Set SA step rate to LO
04/06/94 17:40:17	1:27:19	60	-89.0	213.1	1798.6					LDAWN						
04/06/94 17:48:22	1:35:24	543	-80.0	221.5	1587.1					S80A						Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20
04/06/94 17:56:16	1:43:17	474	-70.0	221.9	1368.8					S70A						Load EEQ_19U.UMI into SEQT 19; Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19
04/06/94 17:59:02	1:46:03	166														UV and IR uncompressed Slew to South Pole for oblique viewing Resume compression
04/06/94 18:03:11	1:50:12	249	-60.0	222.0	1173.2					S60A						Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11
04/06/94 18:04:11	1:51:13	60														Record in SDDR Segment 5
04/06/94 18:09:15	1:56:17	60	-50.0	222.1	1001.9					S50A						SSDR Segment 5
04/06/94 18:09:17	1:56:18	306								S50A						Load exposure table LUNARZ45S; Select DHU SEQT 10
04/06/94 18:14:04	2:01:05	287														Laser Power ON
04/06/94 18:14:42	2:01:43	38	-40.0	222.1	855.0					S40A						Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10
04/06/94 18:19:36	2:06:38	294	-30.0	222.1	731.9					S30A						Load exposure table LUNARZ25S; Select DHU SEQT 9
04/06/94 18:22:16	2:09:17									CAN	MLOSM					
04/06/94 18:22:33	2:09:34									GDS	MLOSM					
04/06/94 18:22:44	2:09:46									PMK	MLOSM					Enter occultation
04/06/94 18:24:04	2:11:05	268	-20.0	222.1	631.1					S20A						Load exposure table LUNARZ15S; Select DHU SEQT 8

Orbit 219 Timeline - Type B Orbit

04/06/94 18:28:12	2:15:14	248	-10.0	222.1	551.5					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
04/06/94 18:32:06	2:19:08	234	0.0	222.0	491.9					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6						
04/06/94 18:35:50	2:22:52	224	10.0	222.0	451.2					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/06/94 18:39:27	2:26:29	217	20.0	222.0	428.6					N20A	Load exposure table LUNARZ25N						
04/06/94 18:42:10	2:29:12		27.7	222.0	423.4					Periselene							
04/06/94 18:43:01	2:30:02	214	30.0	222.0	423.9					N30A	Load exposure table LUNARZ35N						
04/06/94 18:46:37	2:33:38	216	40.0	222.1	436.9					N40A	Load exposure table LUNARZ45N						
04/06/94 18:49:38	2:36:40									PMK	MAOSM						Exit occultation
04/06/94 18:49:39	2:36:40									GDS	MAOSM						
04/06/94 18:50:14	2:37:15									CAN	MAOSM						
04/06/94 18:50:16	2:37:17	219	50.0	222.1	467.8					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/06/94 18:54:04	2:41:06	228	60.0	222.1	517.2					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/06/94 18:55:04	2:42:06	60									Record in SDR Segment 6						SSDR Segment 6
04/06/94 18:58:04	2:45:05	180	70.0	222.3	586.1					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17						
04/06/94 19:02:21	2:49:22	257	80.0	222.7	675.4					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16						Stop laser ranging
04/06/94 19:02:51	2:49:53	30									Laser power OFF						
04/06/94 19:03:21	2:50:23	30									Load EEQ_19.UMI into SEQT 19						Restore original SEQT 19
																	Err:508
04/06/94 19:07:00	2:54:02		89.8	317.4	786.6					North Pole							
04/06/94 19:07:30	2:54:32		89.0	32.7	799.1					LDUSK							
04/06/94 19:12:08	2:59:10		80.0	40.8	920.5					N80D							
																	Err:508
04/06/94 19:14:08	3:01:09	0									Stop Imaging - select ST-B						
04/06/94 19:14:13	3:01:14	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait						End of slew - wait before imaging to allow s/c to settle
04/06/94 19:17:17	3:04:19	15									Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B						
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)						Slew to Vega (inertial pointing)
04/06/94 19:17:51	3:04:52		70.0	41.2	1078.8					N70D							
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)						

Orbit 219 Timeline - Type B Orbit

Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec								
04/06/94 19:19:09	3:06:10							PMK	LOS									
04/06/94 19:21:22	3:08:24	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)								Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)								LWIR cryocooler off
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)								
Err:508	Err:508	6								Load exposure table LUNIRDKS1								
Err:508	Err:508	6								Load exposure table LUNIRDKS2								
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)								
Err:508	Err:508	30								Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec								Slew HGA to Earth with active waitwhileslew
04/06/94 19:24:18	3:11:20		60.0	41.3	1261.6				N60D									
04/06/94 19:27:00	3:14:01	Err:508								Switch to HGA								READY FOR DATA DUMP - Time approximate
Err:508																		
04/06/94 19:28:00	3:15:02									Switch to DHU mode @ 128 kbps								Ground Command
04/06/94 19:31:39	3:18:41		50.0	41.3	1468.1				N50D									
04/06/94 19:33:00	3:20:01									Downlink SSSR Segment 4								Ground Command
04/06/94 19:40:04	3:27:06		40.0	41.3	1695.6				N40D									
04/06/94 19:45:00	3:32:01									Uplink & load UVLHG_24.UMI into SEQT 24								Ground Command
04/06/94 19:49:44	3:36:46		30.0	41.2	1938.4				N30D									
04/06/94 19:55:52	3:42:54		24.3	41.2	2080.5				INPM									Enter penumbra
04/06/94 19:56:41	3:43:43		23.5	41.2	2098.9				INUM									Enter umbra
04/06/94 20:00:46	3:47:48		20.0	41.2	2186.8				N20D									
04/06/94 20:10:00	3:57:02									Downlink SSSR Segment 5								Ground Command
04/06/94 20:13:17	4:00:19		10.0	41.1	2426.7				N10D									
04/06/94 20:27:15	4:14:17		0.0	41.0	2639.7				Equator -D									
Err:508																		
04/06/94 20:34:52	4:21:53	0								SSDR to IDLE; Switch to 2 kbps bypass mode								Data dump stopped
04/06/94 20:35:52	4:22:53	60								Switch to omni antennas; Record in SSSR Segment 7								SSDR Segment 7
04/06/94 20:36:52	4:23:53	60								Err:508								Slew using Inertial pointing (LGH not LHG used in name)
04/06/94 20:42:31	4:29:33		-10.0	40.9	2805.7				S10D									

Orbit 219 Timeline - Type B Orbit

04/06/94 20:42:52	4:29:53	360								Execute STB_Images						STB uncompressed - Note: Time between events includes script duration (90 sec) and WAIT between script calls (30 sec)
04/06/94 20:44:52	4:31:53	120								Execute STB_Images						ST-B uncompressed images
04/06/94 20:46:51	4:33:53	120								Execute STB_Images						ST-B uncompressed images
04/06/94 20:48:51	4:35:53	120								Execute STB_Images						ST-B uncompressed images
04/06/94 20:50:51	4:37:53	120								Execute STB_Images						ST-B uncompressed images
04/06/94 20:52:51	4:39:53	120								Execute STB_Images						ST-B uncompressed images
04/06/94 20:54:51	4:41:53	120								Execute STB_Images						ST-B uncompressed images
04/06/94 20:56:42	4:43:44	110								Execute STB_Images						ST-B uncompressed images
04/06/94 20:58:40	4:45:42		-20.0	40.8	2906.0				S20D							
04/06/94 20:58:40	4:45:42		-20.0	40.8	2906.0				OUTUM							Exit umbra
04/06/94 20:58:42	4:45:43	120								Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						STOP IMAGING Slew HGA back to Earth
04/06/94 20:59:39	4:46:41		-20.6	40.8	2909.6				OUTPM							Exit penumbra
04/06/94 21:03:00	4:50:01	258								Switch to HGA						READY FOR DATA DUMP - Time approximate
Err:508																
04/06/94 21:06:00	4:53:01									Switch to DHU mode @ 128 kbps						Ground Command
04/06/94 21:11:00	4:58:02									Resume downlink SDR Segment 5						Ground Command
04/06/94 21:11:25	4:58:27		-27.7	40.7	2930.1				Aposelene							
STB_Images Subscript																
		0								Load exposure table STBGLOW700; Select DHU SEQT 22						ST-B imaging at 700 msec LHGSTB_22.UMI loaded into SEQT 22
		10								Stop imaging - select ST-A						Update attitude
		10								Load exposure table STBGLOW400; Select DHU SEQT 22						ST-B imaging at 400 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW200; Select DHU SEQT 22						ST-B imaging at 200 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW100; Select DHU SEQT 22						ST-B imaging at 100 msec
		10								Stop imaging - select ST-A						Update attitude only
		10								Load exposure table STBGLOW050; Select DHU SEQT 22						ST-B imaging at 50 msec
		10								Stop imaging - select ST-A						END STB_Images

Orbit 220 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/06/94 21:11:25	0:00:00		-27.7	40.7	2930.1							Aposelene							Downlinking SDDR Segment 5 (orbit 219)
04/06/94 21:14:00	0:02:34												Uplink and schedule L220 scripts						Ground Command Comm problems - had to upload each script separately
04/06/94 21:15:16	0:03:50		-30.0	40.6	2927.9							S30D							
04/06/94 21:31:45	0:20:19		-40.0	40.5	2868.7							S40D							
																			Standard Prep1 Script
04/06/94 21:46:31	0:35:05	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/06/94 21:47:34	0:36:08		-50.0	40.4	2735.8							S50D							
04/06/94 22:02:14	0:50:48		-60.0	40.4	2545.4							S60D							
04/06/94 22:06:44	0:55:18										GDS	LOS							
																			Standard Prep2 Script
04/06/94 22:11:21	0:59:55	0											LWIR camera ON; Laser heater ON; Open sensor door if closed						LWIR cryocooler NOT turned on for LWIR temperature test
																			End Prep2 Script
04/06/94 22:13:00	1:01:34												Downlink SDDR Segment 6						Ground Command
04/06/94 22:15:32	1:04:06		-70.0	40.4	2317.3							S70D							
																			Err:508
04/06/94 22:21:51	1:10:25	0											Msg "WARNING: Omni/2k in 1 min.."						
04/06/94 22:22:51	1:11:25	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/06/94 22:23:51	1:12:25	60											Switch to omni antennas						
04/06/94 22:24:51	1:13:25	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/06/94 22:26:51	1:15:25	120											UV & HR cameras ON						
04/06/94 22:27:22	1:15:56		-80.0	40.7	2071.3							S80D							
04/06/94 22:30:51	1:19:25	240											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
04/06/94 22:31:21	1:19:55	30											Perform LWIR imaging (DHU SEQT 25)						LWIR cryocooler off
04/06/94 22:31:31	1:20:05	10											Perform NIR imaging (DHU SEQT 31)						
04/06/94 22:31:46	1:20:20	15																	Err:508 Slew sensors to nadir (inertial pointing)

Orbit 220 Timeline - Type A Orbit

										Err:508	
										Err:508	
04/06/94 22:36:46	1:25:20	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S	
04/06/94 22:37:16	1:25:50	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)	START MAPPING Note: LWIR cryocooler off
04/06/94 22:37:46	1:26:20	30	-89.9	131.0	1823.8				South Pole	Set SA step rate to LO	
04/06/94 22:38:44	1:27:18		-89.0	211.9	1799.1				LDAWN		
04/06/94 22:46:48	1:35:22		-80.0	218.9	1587.2				S80A		
04/06/94 22:46:50	1:35:24	544							S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14	
04/06/94 22:54:44	1:43:18	474	-70.0	219.3	1368.8				S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13	
04/06/94 23:01:37	1:50:11		-60.0	219.3	1173.0				S60A		
04/06/94 23:01:39	1:50:13	415							S60A	Load EEQ_12U.UMI into SEQT 12; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12	UV and IR uncompressed
04/06/94 23:02:39	1:51:13	60								Record in SDR Segment 2	SSDR Segment 2
04/06/94 23:07:44	1:56:18	305	-50.0	219.4	1001.7				S50A	Load EEQ_11C.UMI into SEQT 11; Load exposure table LUNARZ45S; Load exposure table LUNARH45S; Select DHU SEQT 11;	Multispectral (color) bursts with HR camera for 50S to 40S Resume compression
04/06/94 23:12:31	2:01:05	287								Laser Power ON	
04/06/94 23:13:10	2:01:44	39	-40.0	219.4	854.7				S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10; Load EEQ_11.UMI into SEQT 11	Stop HiRes imaging Restore original SEQT 11
04/06/94 23:18:03	2:06:37	293	-30.0	219.4	731.5				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/06/94 23:20:08	2:08:42							CAN	MLOSM		Enter occultation
04/06/94 23:22:31	2:11:05	268	-20.0	219.3	630.7				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
04/06/94 23:26:40	2:15:14	249	-10.0	219.3	551.1				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/06/94 23:30:33	2:19:07	233	0.0	219.3	491.4				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/06/94 23:34:17	2:22:51	224	10.0	219.3	450.6				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/06/94 23:37:54	2:26:28	217	20.0	219.3	428.1				N20A	Load exposure table LUNARZ25N	
04/06/94 23:40:39	2:29:13		27.7	219.3	422.8				Periselene		
04/06/94 23:41:28	2:30:02	214	30.0	219.3	423.3				N30A	Load exposure table LUNARZ35N	
04/06/94 23:45:04	2:33:38	216	40.0	219.3	436.2				N40A	Load exposure table LUNARZ45N	

Orbit 220 Timeline - Type A Orbit

04/06/94 23:48:43	2:37:17	219	50.0	219.3	467.1					N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6	Resume HiRes imaging
04/06/94 23:49:08	2:37:42									CAN MAOSM		Exit occultation
04/06/94 23:52:31	2:41:05	228	60.0	219.4	516.5					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4	
04/06/94 23:53:31	2:42:05	60									Record in SSSR Segment 3	SSDR Segment 3
04/06/94 23:56:31	2:45:05	180	70.0	219.5	585.3					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3	
04/07/94 00:00:48	2:49:22	257	80.0	219.8	674.6					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9	Stop laser ranging
04/07/94 00:01:18	2:49:52	30									Laser power OFF	
04/07/94 00:01:48	2:50:22	30									Load EEQ_12.UMI into SEQT 12	Restore original SEQT 12
												Err:508
04/07/94 00:05:26	2:54:00		89.9	313.3	785.8					North Pole		
04/07/94 00:05:56	2:54:30		89.0	31.5	798.2					LDUSK		
												Err:508
04/07/94 00:07:27	2:56:01	0									Stop Imaging - select ST-B	
04/07/94 00:07:31	2:56:06	5									Err:508	Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait	End of slew - wait before imaging to allow s/c to settle
04/07/94 00:10:33	2:59:07		80.0	38.2	919.7					N80D		
04/07/94 00:10:36	2:59:10	15									Select DHU SEQT 23	Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B	
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)	Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)	
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec	
04/07/94 00:14:41	3:03:15	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)	Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)	LWIR cryocooler off

Orbit 221 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/07/94 02:09:53	0:00:00		-27.7	37.9	2930.8							Aposelene							Downlinking SDR Segment 2 (orbit 220)
04/07/94 02:13:43	0:03:49		-30.0	37.9	2928.6							S30D							
04/07/94 02:30:11	0:20:17		-40.0	37.8	2869.4							S40D							
04/07/94 02:34:00	0:24:06												Downlink SDR Segment 3						Ground Command
																			Standard Prep1 Script
04/07/94 02:44:58	0:35:04	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/07/94 02:45:59	0:36:05		-50.0	37.7	2736.7							S50D							
04/07/94 03:00:40	0:50:47		-60.0	37.6	2546.2							S60D							
04/07/94 03:06:00	0:56:06												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep2 Script
04/07/94 03:09:48	0:59:54	0											LWIR camera ON; Laser heater ON; Open sensor door if closed						
04/07/94 03:10:00	1:00:06												LWIR cryocooler ON						Ground Command
																			End Prep2 Script
04/07/94 03:13:59	1:04:06		-70.0	37.6	2318.0							S70D							
																			Err:508
04/07/94 03:20:48	1:10:54	0											Msg "WARNING: 2kbps in 1 min."						
04/07/94 03:21:48	1:11:54	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/07/94 03:22:48	1:12:54	60											Switch to omni antennas						
04/07/94 03:23:48	1:13:54	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/07/94 03:25:48	1:15:54	120											UV & HR cameras ON						
04/07/94 03:25:49	1:15:56		-80.0	37.8	2071.9							S80D							
04/07/94 03:29:18	1:19:24	210											Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDR in Segment 4
04/07/94 03:29:48	1:19:54	30											Perform LWIR imaging (DHU SEQT 25)						
04/07/94 03:29:58	1:20:04	10											Perform NIR imaging (DHU SEQT 31)						
04/07/94 03:30:13	1:20:19	15												Err:508					Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 221 Timeline - Type B Orbit

04/07/94 03:34:13	1:24:19	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S					
04/07/94 03:35:13	1:25:19	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)					START MAPPING
04/07/94 03:36:13	1:26:19	60	-89.9	124.2	1824.4					South Pole	Set SA step rate to LO					
04/07/94 03:37:11	1:27:18		-89.0	210.7	1799.6					LDAWN						
04/07/94 03:45:17	1:35:23	544	-80.0	216.4	1587.4					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20					
04/07/94 03:53:11	1:43:17	474	-70.0	216.6	1368.9					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19					
04/07/94 03:55:57	1:46:03	166									Err:508					Slew to South Pole for oblique viewing
04/07/94 04:00:06	1:50:12	249	-60.0	216.7	1173.0					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11					
04/07/94 04:01:06	1:51:12	60									Record in SSSR Segment 5					SSDR Segment 5
04/07/94 04:06:12	1:56:18	306	-50.0	216.7	1001.5					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10					Stop HiRes imaging
04/07/94 04:10:59	2:01:05	287									Laser Power ON					
04/07/94 04:11:37	2:01:43		-40.0	216.7	854.5					S40A						
04/07/94 04:11:38	2:01:44	39								S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load EEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35S; Select DHU SEQT 10					Resume nadir mapping UV and IR uncompressed
04/07/94 04:16:31	2:06:37	293	-30.0	216.6	731.2					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9					Resume compression
04/07/94 04:18:04	2:08:10									CAN	MLOSM					Enter occultation
04/07/94 04:20:59	2:11:05	268	-20.0	216.6	630.3					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8					Start laser ranging
04/07/94 04:25:07	2:15:13	248	-10.0	216.6	550.7					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7					
04/07/94 04:29:01	2:19:07	234	0.0	216.6	490.9					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6					
04/07/94 04:32:44	2:22:50	223	10.0	216.6	450.1					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5					
04/07/94 04:36:21	2:26:27	217	20.0	216.6	427.5					N20A	Load exposure table LUNARZ25N					
04/07/94 04:39:06	2:29:13		27.7	216.6	422.2					Periselene						
04/07/94 04:39:56	2:30:02	215	30.0	216.6	422.6					N30A	Load exposure table LUNARZ35N					
04/07/94 04:43:31	2:33:37	215	40.0	216.6	435.5					N40A	Load exposure table LUNARZ45N					
04/07/94 04:47:10	2:37:16	219	50.0	216.6	466.4					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6					Resume HiRes imaging
04/07/94 04:47:37	2:37:43									MAD	MAOSM					Exit occultation
04/07/94 04:48:03	2:38:09									CAN	MAOSM					

Orbit 221 Timeline - Type B Orbit

04/07/94 04:50:58	2:41:04	228	60.0	216.6	515.7				N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4				
04/07/94 04:51:58	2:42:04	60								Record in SDR Segment 6				SSDR Segment 6
04/07/94 04:54:58	2:45:04	180	70.0	216.7	584.5				N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17				
04/07/94 04:59:14	2:49:20	256	80.0	216.9	673.7				N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16				Stop laser ranging
04/07/94 04:59:44	2:49:50	30								Laser power OFF				
04/07/94 04:59:57	2:50:03							CAN	LOS					
04/07/94 05:00:14	2:50:20	30								Load EEQ_10.UMI into SEQT 10				Restore original SEQT 10
														Err:508
04/07/94 05:03:52	2:53:58		89.9	299.4	784.6				North Pole					
04/07/94 05:04:22	2:54:29		89.0	30.3	797.2				LDUSK					
														Err:508
04/07/94 05:05:53	2:55:59	0								Stop Imaging - select ST-B				
04/07/94 05:05:58	2:56:04	5								Err:508				Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508								Wait				End of slew - wait before imaging to allow s/c to settle
04/07/94 05:08:59	2:59:06		80.0	35.6	918.8				N80D					
04/07/94 05:09:11	2:59:17	15								Select DHU SEQT 23				Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B				
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)				Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)				
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec				
04/07/94 05:13:16	3:03:22	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)				
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)				
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)				
Err:508	Err:508	6								Load exposure table LUNIRDKS1				
Err:508	Err:508	6								Load exposure table LUNIRDKS2				
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)				

Orbit 221 Timeline - Type B Orbit

Err:508	Err:508	30																	Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec										Slew HGA to Earth with active waitwhileslew									
04/07/94 05:14:42	3:04:49		70.0	35.9	1077.0														N70D																			
04/07/94 05:19:00	3:09:06	Err:508																		Switch to HGA																		READY FOR DATA DUMP - Time approximate
																																					Err:508	
04/07/94 05:20:00	3:10:06																			Switch to DHU mode @ 128 kbps																	Ground Command	
04/07/94 05:21:09	3:11:16		60.0	35.9	1259.7															N60D																		
04/07/94 05:26:00	3:16:06																																				Ground Command - problem commanding through MAD	
04/07/94 05:28:30	3:18:36		50.0	35.9	1466.3															N50D																		
04/07/94 05:36:55	3:27:01		40.0	35.9	1694.0															N40D																		
04/07/94 05:46:34	3:36:40		30.0	35.8	1937.0															N30D																		
04/07/94 05:47:00	3:37:06																																				SSDR to IDLE - downlink paused	Ground Command
																																					Err:508	
04/07/94 05:47:44	3:37:50	0																																			SSDR to IDLE; Switch to 2 kbps bypass mode	
04/07/94 05:48:44	3:38:50	60																																			Switch to omni antennas; Record in SSDR Segment 7	SSDR Segment 7
04/07/94 05:49:44	3:39:50	60																																			Slew using Inertial pointing (LGH not LHG used in name)	
04/07/94 05:52:53	3:42:59		24.1	35.8	2083.4															INPM																	Enter penumbra	
04/07/94 05:53:43	3:43:49		23.4	35.8	2101.9															INUM																	Enter umbra	
04/07/94 05:55:44	3:45:50	360																																			STB uncompressed - Note: Time between events includes script duration (90 sec) and WAIT between script calls (30 sec)	
04/07/94 05:57:36	3:47:43		20.0	35.7	2185.7															N20D																		
04/07/94 05:57:44	3:47:50	120																																			Execute STB_Images	ST-B uncompressed images
04/07/94 05:59:43	3:49:50	120																																			Execute STB_Images	ST-B uncompressed images
04/07/94 06:01:43	3:51:50	120																																			Execute STB_Images	ST-B uncompressed images
04/07/94 06:03:43	3:53:50	120																																			Execute STB_Images	ST-B uncompressed images
04/07/94 06:05:43	3:55:50	120																																			Execute STB_Images	ST-B uncompressed images
04/07/94 06:07:43	3:57:50	120																																			Execute STB_Images	ST-B uncompressed images
04/07/94 06:09:33	3:59:40	110																																			Execute STB_Images	ST-B uncompressed images
04/07/94 06:10:07	4:00:14		10.0	35.7	2425.9																																N10D	
04/07/94 06:11:34	4:01:40	120																																			Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec	STOP IMAGING Slew HGA back to Earth
04/07/94 06:14:00	4:04:06	146																																			Switch to HGA	READY FOR DATA DUMP - Time approximate
																																					Err:508	

Orbit 221 Timeline - Type B Orbit

04/07/94 06:15:00	4:05:06																	Switch to DHU mode @ 128 kbps																			Ground Command		
04/07/94 06:17:00	4:07:06																																			Ground Command			
04/07/94 06:22:00	4:12:06																																			Ground Command			
04/07/94 06:24:00	4:14:06																																			Ground Command			
04/07/94 06:24:05	4:14:12		0.0	35.5	2639.5																															Equator -D			
04/07/94 06:39:19	4:29:26		-10.0	35.4	2806.1																															S10D			
04/07/94 06:55:08	4:45:15		-19.8	35.3	2905.4																															Exit umbra			
04/07/94 06:55:30	4:45:37		-20.0	35.3	2906.9																															S20D			
04/07/94 06:56:07	4:46:13		-20.4	35.3	2909.2																															OUTUM			
04/07/94 07:08:21	4:58:27		-27.7	35.2	2931.4																															OUTPM			
																																					Aposelene		
																																						STB_Images Subscript	
			0																																			Load exposure table STBGLOW700; Select DHU SEQT 22	ST-B imaging at 700 msec LHGSTB_22.UMI loaded into SEQT 22
			10																																			Stop imaging - select ST-A	Update attitude
			10																																			Load exposure table STBGLOW400; Select DHU SEQT 22	ST-B imaging at 400 msec
			10																																			Stop imaging - select ST-A	Update attitude only
			10																																			Load exposure table STBGLOW200; Select DHU SEQT 22	ST-B imaging at 200 msec
			10																																			Stop imaging - select ST-A	Update attitude only
			10																																			Load exposure table STBGLOW100; Select DHU SEQT 22	ST-B imaging at 100 msec
			10																																			Stop imaging - select ST-A	Update attitude only
			10																																			Load exposure table STBGLOW050; Select DHU SEQT 22	ST-B imaging at 50 msec
			10																																			Stop imaging - select ST-A	END STB_Images

Orbit 222 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/07/94 07:08:21	0:00:00		-27.7	35.2	2931.4							Aposelene							Downlinking SSSR Segment 5 (orbit 221)
04/07/94 07:12:08	0:03:46		-30.0	35.2	2929.3							S30D							
04/07/94 07:28:36	0:20:15		-40.0	35.0	2870.3							S40D							
04/07/94 07:42:00	0:33:38												Downlink SSSR Segment 6						Ground Command
																			Standard Prep1 Script
04/07/94 07:43:26	0:35:04	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/07/94 07:44:25	0:36:04		-50.0	34.9	2737.6							S50D							
04/07/94 07:59:07	0:50:45		-60.0	34.8	2547.1							S60D							
04/07/94 08:08:00	0:59:38												Downlink SSSR Segment 7 (LHG)						Ground Command
																			Standard Prep2 Script
04/07/94 08:08:16	0:59:54	0											LWIR camera ON; Laser heater ON; Open sensor door if closed						LWIR cryocooler NOT turned on
																			End Prep2 Script
04/07/94 08:12:26	1:04:04		-70.0	34.8	2318.8							S70D							
04/07/94 08:18:00	1:09:38												SSDR to IDLE - downlink complete						Ground Command
																			Err:508
04/07/94 08:18:46	1:10:24	0											Msg "WARNING: Omni/2k in 1 min.."						
04/07/94 08:19:46	1:11:24	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/07/94 08:20:46	1:12:24	60											Switch to omni antennas						
04/07/94 08:21:46	1:13:24	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/07/94 08:23:46	1:15:24	120											UV & HR cameras ON						
04/07/94 08:24:16	1:15:54		-80.0	34.9	2072.6							S80D							
04/07/94 08:26:00	1:17:38												Ranging A ON						Ground Command
04/07/94 08:27:46	1:19:24	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/07/94 08:28:16	1:19:54	30											Perform LWIR imaging (DHU SEQT 25)						LWIR cryocooler off
04/07/94 08:28:26	1:20:04	10											Perform NIR imaging (DHU SEQT 31)						
04/07/94 08:28:41	1:20:19	15																Err:508	Slew sensors to nadir (inertial pointing)
																			Err:508

Orbit 222 Timeline - Type A Orbit

											Err:508	
04/07/94 08:33:41	1:25:19	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S	
04/07/94 08:34:11	1:25:49	30									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 15)	START MAPPING Note: LWIR cryocooler off
04/07/94 08:34:41	1:26:19	30	-89.9	126.3	1824.8					South Pole	Set SA step rate to LO	
04/07/94 08:35:38	1:27:16		-89.0	209.4	1800.3					LDAWN		
04/07/94 08:43:45	1:35:23	544	-80.0	213.8	1587.8					S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14	
04/07/94 08:51:39	1:43:17	474	-70.0	214.0	1369.1					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13	
04/07/94 08:58:34	1:50:12	415	-60.0	214.0	1173.1					S60A	Load EEQ_12C.UMI into SEQT 12; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12	Multispectral (color) bursts with HR camera for 60S to 55S
04/07/94 08:59:34	1:51:12	60									Record in SSSR Segment 2	SSDR Segment 2
04/07/94 09:01:37	1:53:15	123									Load EEQ_12.UMI into SEQT 12 Select DHU SEQT 12	Restore original SEQT 12
04/07/94 09:04:40	1:56:18	183	-50.0	214.0	1001.4					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11;	Stop HiRes imaging
04/07/94 09:09:27	2:01:05	287									Laser Power ON	
04/07/94 09:10:05	2:01:43	38	-40.0	214.0	854.3					S40A	Load EEQ_10U.UMI into SEQT 10 Load exposure table LUNARZ35S; Select DHU SEQT 10	UV and IR uncompressed
04/07/94 09:14:59	2:06:37	294	-30.0	213.9	730.9					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	Resume compression
04/07/94 09:15:09	2:06:47									MAD	MLOSM	Enter occultation
04/07/94 09:19:27	2:11:05	268	-20.0	213.9	630.0					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
04/07/94 09:23:35	2:15:13	248	-10.0	213.9	550.2					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/07/94 09:27:29	2:19:07	234	0.0	213.9	490.4					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/07/94 09:31:12	2:22:50	223	10.0	213.9	449.5					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/07/94 09:34:49	2:26:27	217	20.0	213.8	426.8					N20A	Load exposure table LUNARZ25N	
04/07/94 09:37:34	2:29:13		27.8	213.8	421.5					Periselene		
04/07/94 09:38:23	2:30:01	214	30.0	213.8	422.0					N30A	Load exposure table LUNARZ35N	
04/07/94 09:41:58	2:33:36	215	40.0	213.8	434.8					N40A	Load exposure table LUNARZ45N	
04/07/94 09:45:37	2:37:15	219	50.0	213.8	465.6					N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6	Resume HiRes imaging
04/07/94 09:46:26	2:38:04									MAD	MAOSM	Exit occultation
04/07/94 09:46:28	2:38:06									PMK	MAOSM	

Orbit 222 Timeline - Type A Orbit

04/07/94 09:49:25	2:41:03	228	60.0	213.8	514.9					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4		
04/07/94 09:50:25	2:42:03	60									Record in SSSR Segment 3		SSDR Segment 3
04/07/94 09:51:00	2:42:38										Ranging A OFF		Ground Command
04/07/94 09:53:24	2:45:02	179	70.0	213.9	583.6					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3		
04/07/94 09:57:41	2:49:19	257	80.0	214.1	672.8					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9		Stop laser ranging
04/07/94 09:58:11	2:49:49	30									Laser power OFF		
04/07/94 09:58:41	2:50:19	30									Load EEQ_10.UMI into SEQT 10		Restore original SEQT 10
													Err:508
04/07/94 10:02:18	2:53:56		89.9	292.2	783.5					North Pole			
04/07/94 10:02:48	2:54:26		89.0	28.9	796.1					LDUSK			
													Err:508
04/07/94 10:04:20	2:55:58	0									Stop Imaging - select ST-B		
04/07/94 10:04:25	2:56:03	5									Err:508		Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait		End of slew - wait before imaging to allow s/c to settle
04/07/94 10:07:26	2:59:04		80.0	33.1	917.7					N80D			
04/07/94 10:07:40	2:59:18	15									Select DHU SEQT 23		Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B		
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)		Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)		
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec		
04/07/94 10:11:45	3:03:23	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)		Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)		LWIR cryocooler off
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)		
Err:508	Err:508	6									Load exposure table LUNIRDKS1		
Err:508	Err:508	6									Load exposure table LUNIRDKS2		

Orbit 222 Timeline - Type A Orbit

Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)			
Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec			Slew HGA to Earth with active waitwhileslew
04/07/94 10:13:08	3:04:47		70.0	33.2	1075.9				N70D				
04/07/94 10:18:57	3:10:35	Err:508								Switch to HGA			READY FOR DATA DUMP - Time approximate
													Err:508
04/07/94 10:20:00	3:11:38									Switch to DHU mode @ 128 kbps			Ground Command
04/07/94 10:19:35	3:11:13		60.0	33.3	1258.6				N60D				
04/07/94 10:24:00	3:15:38									Downlink SSSDR Segment 1			Ground Command
04/07/94 10:24:30	3:16:08									Uplink and schedule L223 scripts			Ground Command
04/07/94 10:26:55	3:18:33		50.0	33.2	1465.2				N50D				
04/07/94 10:32:00	3:23:38									Downlink SSSDR Segment 2			Ground Command
04/07/94 10:35:20	3:26:58		40.0	33.2	1692.9				N40D				
04/07/94 10:44:59	3:36:37		30.0	33.1	1936.0				N30D				
04/07/94 10:51:23	3:43:02		24.0	33.1	2084.6				INPM				Enter penumbra
04/07/94 10:52:14	3:43:52		23.3	33.1	2103.3				INUM				Enter umbra
04/07/94 10:56:02	3:47:40		20.0	33.0	2184.9				N20D				
04/07/94 11:08:31	4:00:09		10.0	32.9	2425.4				N10D				
04/07/94 11:13:00	4:04:38									Read dosimeter latch values			Ground Command
04/07/94 11:18:00	4:09:38									Expose dosimeter			Scheduled Command
04/07/94 11:22:29	4:14:08		0.0	32.8	2639.3				Equator - D				
04/07/94 11:37:44	4:29:23		-10.0	32.7	2806.2				S10D				
04/07/94 11:53:21	4:45:00		-19.7	32.6	2905.1				OUTUM				Exit umbra
04/07/94 11:53:54	4:45:32		-20.0	32.6	2907.3				S20D				
04/07/94 11:54:20	4:45:58		-20.3	32.6	2908.9				OUTPM				Exit penumbra
04/07/94 11:56:00	4:47:38									Downlink SSSDR Segment 3			Ground Command
04/07/94 12:01:45	4:53:23							GDS	AOS				
04/07/94 12:06:49	4:58:27		-27.8	32.5	2932.1				Aposelene				

Orbit 223 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/07/94 12:06:49	0:00:00		-27.8	32.5	2932.1							Aposelene							Downlinking SDDR Segment 3 (orbit 222)
04/07/94 12:10:32	0:03:42		-30.0	32.4	2930.0							S30D							
04/07/94 12:25:00	0:18:10												SSDR to IDLE - downlink complete						Ground Command
04/07/94 12:27:02	0:20:13		-40.0	32.3	2871.3							S40D							
																			Standard Prep1 Script
04/07/94 12:41:54	0:35:04	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/07/94 12:42:51	0:36:02		-50.0	32.2	2738.7							S50D							
04/07/94 12:57:33	0:50:44		-60.0	32.1	2548.2							S60D							
																			Standard Prep2 Script
04/07/94 13:06:44	0:59:54	0											LWIR camera ON; Laser heater ON; Open sensor door if closed						LWIR cryocooler NOT turned on
																			End Prep2 Script
04/07/94 13:10:53	1:04:04		-70.0	32.0	2319.6							S70D							
																			Err:508
04/07/94 13:17:44	1:10:54	0											Msg "WARNING: 2kbps in 1 min."						
04/07/94 13:18:44	1:11:54	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/07/94 13:19:44	1:12:54	60											Switch to omni antennas						
04/07/94 13:20:44	1:13:54	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/07/94 13:22:44	1:15:54	120											UV & HR cameras ON						
04/07/94 13:22:44	1:15:54		-80.0	32.1	2073.2							S80D							
04/07/94 13:26:14	1:19:24	210											Initialize filters (DHU SEQT 27); Record in SDDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 4
04/07/94 13:26:44	1:19:54	30											Perform LWIR imaging (DHU SEQT 25)						LWIR cryocooler off
04/07/94 13:26:54	1:20:04	10											Perform NIR imaging (DHU SEQT 31)						
04/07/94 13:27:09	1:20:19	15																	Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 223 Timeline - Type B Orbit

04/07/94 13:31:09	1:24:19	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S						
04/07/94 13:32:09	1:25:19	60									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 21)						START MAPPING Note: LWIR cryocooler off
04/07/94 13:33:09	1:26:19	60	-89.9	125.7	1825.2					South Pole	Set SA step rate to LO						
04/07/94 13:34:07	1:27:17		-89.0	207.4	1800.9					LDAWN							
04/07/94 13:42:13	1:35:23	544	-80.0	211.1	1588.1					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20						
04/07/94 13:50:07	1:43:17	474	-70.0	211.3	1369.2					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19						
04/07/94 13:52:53	1:46:03	166									Err:508						Slew to South Pole for oblique viewing
04/07/94 13:57:02	1:50:12	249	-60.0	211.3	1173.1					S60A	Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11						UV and IR uncompressed
04/07/94 13:58:02	1:51:12	60									Record in SSDR Segment 5						SSDR Segment 5
04/07/94 14:03:08	1:56:18	306	-50.0	211.3	1001.3					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10						Stop HiRes imaging Resume compression
04/07/94 14:07:55	2:01:05	287									Laser Power ON						
04/07/94 14:08:34	2:01:44	39	-40.0	211.2	854.1					S40A	Switch to lunar mapping mode (ACSMoDe=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10						Resume nadir mapping
04/07/94 14:12:47	2:05:57								GDS	MLOSM							
04/07/94 14:12:56	2:06:06								PMK	MLOSM							
04/07/94 14:13:13	2:06:23								MAD	MLOSM							Enter occultation
04/07/94 14:13:27	2:06:37	293	-30.0	211.2	730.6					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9						
04/07/94 14:17:55	2:11:05	268	-20.0	211.2	629.6					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8						Start laser ranging
04/07/94 14:22:03	2:15:13	248	-10.0	211.2	549.7					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
04/07/94 14:25:56	2:19:06	233	0.0	211.1	489.9					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6						
04/07/94 14:29:40	2:22:50	224	10.0	211.1	448.9					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/07/94 14:33:16	2:26:26	216	20.0	211.1	426.2					N20A	Load exposure table LUNARZ25N						
04/07/94 14:36:02	2:29:13		27.8	211.1	420.8					Periselene							
04/07/94 14:36:51	2:30:01	215	30.0	211.1	421.3					N30A	Load exposure table LUNARZ35N						
04/07/94 14:40:25	2:33:35	214	40.0	211.1	434.1					N40A	Load exposure table LUNARZ45N						
04/07/94 14:44:05	2:37:15	220	50.0	211.1	464.8					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/07/94 14:45:15	2:38:25								GDS	MAOSM							Exit occultation
04/07/94 14:45:15	2:38:25								PMK	MAOSM							

Orbit 223 Timeline - Type B Orbit

04/07/94 14:45:15	2:38:25							MAD	MAOSM				
04/07/94 14:47:52	2:41:02	227	60.0	211.1	514.1				N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4			
04/07/94 14:48:52	2:42:02	60								Record in SSSDR Segment 6			SSDR Segment 6
04/07/94 14:51:51	2:45:01	179	70.0	211.1	582.7				N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17			
04/07/94 14:56:08	2:49:18	257	80.0	211.3	671.8				N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16			Stop laser ranging
04/07/94 14:56:38	2:49:48	30								Laser power OFF			
04/07/94 14:57:08	2:50:18	30								Load EEQ_11.UMI into SEQT 11			Restore original SEQT 11
Err:508													
04/07/94 15:00:45	2:53:56		89.9	300.1	782.7				North Pole				
04/07/94 15:01:14	2:54:25		89.0	26.8	795.1				LDUSK				
Err:508													
04/07/94 15:02:46	2:55:56	0								Stop Imaging - select ST-B			
04/07/94 15:02:51	2:56:01	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
04/07/94 15:05:52	2:59:03		80.0	30.4	916.7				N80D				
Err:508	Err:508	Err:508								Wait			End of slew - wait before imaging to allow s/c to settle
04/07/94 15:06:17	2:59:27	15								Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B			
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)			
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec			
04/07/94 15:08:19	3:01:29							MAD	LOS				
04/07/94 15:10:19	3:03:29	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)			LWIR cryocooler off
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)			
Err:508	Err:508	6								Load exposure table LUNIRDKS1			
Err:508	Err:508	6								Load exposure table LUNIRDKS2			
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)			

Orbit 223 Timeline - Type B Orbit

Err:508	Err:508	30								Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/07/94 15:11:34	3:04:44		70.0	30.5	1074.8					N70D					
04/07/94 15:16:00	3:09:10	Err:508									Switch to HGA				READY FOR DATA DUMP - Time approximate
															Err:508
04/07/94 15:17:00	3:10:10										Switch to DHU mode @ 128 kbps				Ground Command
04/07/94 15:18:00	3:11:10										Downlink SSSR Segment 4				Ground Command
04/07/94 15:18:01	3:11:12		60.0	30.6	1257.6					N60D					
04/07/94 15:24:00	3:17:10										Select ST-A				Ground Command ST-B blocked by Moon
04/07/94 15:25:21	3:18:32		50.0	30.5	1464.2					N50D					
04/07/94 15:32:00	3:25:10										Downlink SSSR Segment 5				Ground Command
04/07/94 15:33:45	3:26:55		40.0	30.5	1692.0					N40D					
															Err:508
04/07/94 15:40:46	3:33:56	0									UV & HR cameras ON				
04/07/94 15:41:46	3:34:56	60									Msg "WARNING: 2kbps in 1 min.."; SSDR to IDLE; Switch to 2 kbps bypass mode				SCRIPT ERROR Wait 60 seconds missing after warning message - all following commands occurred 1 min early Data dump stopped
04/07/94 15:42:46	3:35:56	60									Switch to omni antennas; Record in SSSR Segment 7				SSDR Segment 7
04/07/94 15:43:24	3:36:35		30.0	30.4	1935.2					N30D					
04/07/94 15:43:46	3:36:56	60									Err:508				Slew using Inertial pointing (LGH not LHG used in name)
04/07/94 15:44:16	3:37:26	30									Initialize filters (DHU SEQT 27); Load exposure table UVGLOW_400				
04/07/94 15:44:31	3:37:41	15									Select ST-B				
04/07/94 15:49:54	3:43:05		23.9	30.3	2086.2					INPM					Enter penumbra
04/07/94 15:50:00	3:43:10	329									Inertial pointing w/ quaternion table (LHG223000); Execute UV_Images				START LHG OBSERVATION NOTE: ALL COMMANDS OCCURRED 1 MIN EARLY BECAUSE OF SCRIPT ERROR
04/07/94 15:50:45	3:43:56		23.2	30.3	2104.9					INUM					Enter umbra
04/07/94 15:50:45	3:43:55	45									Execute UV_Images				Note: Time between events includes script duration (5 sec) and WAIT between script calls (40 sec)
04/07/94 15:51:30	3:44:40	45									Execute UV_Images				
04/07/94 15:52:15	3:45:25	45									Execute UV_Images				
04/07/94 15:53:00	3:46:10	45									Execute UV_Images				
04/07/94 15:53:45	3:46:55	45									Execute UV_Images				
04/07/94 15:54:27	3:47:37		20.0	30.3	2184.2					N20D					
04/07/94 15:54:30	3:47:40	45									Execute UV_Images				
04/07/94 15:55:15	3:48:25	45									Execute UV_Images				

Orbit 223 Timeline - Type B Orbit

04/07/94	15:56:00	3:49:10	45							Execute UV_Images								
04/07/94	15:56:30	3:49:40								HiRes camera OFF								Ground Command - HR not needed
04/07/94	15:56:45	3:49:55	45							Execute UV_Images								
04/07/94	15:57:30	3:50:40	45							Use QTable LHG223001; Execute UV_Images								
04/07/94	15:58:15	3:51:25	45							Execute UV_Images								
04/07/94	15:59:00	3:52:10	45							Execute UV_Images								
04/07/94	15:59:45	3:52:55	45							Execute UV_Images								
04/07/94	16:00:30	3:53:40	45							Execute UV_Images								
04/07/94	16:01:15	3:54:25	45							Execute UV_Images								
04/07/94	16:02:00	3:55:10	45							Execute UV_Images								
04/07/94	16:02:45	3:55:55	45							Execute UV_Images								
04/07/94	16:03:30	3:56:40	45							Execute UV_Images								
04/07/94	16:04:15	3:57:25	45							Execute UV_Images								
04/07/94	16:05:00	3:58:10	45							Use QTable LHG223002; Execute UV_Images								
04/07/94	16:05:45	3:58:55	45							Execute UV_Images								
04/07/94	16:06:30	3:59:40	45							Execute UV_Images								
04/07/94	16:06:56	4:00:07		10.0	30.2	2424.9			N10D									
04/07/94	16:07:15	4:00:25	45							Execute UV_Images								
04/07/94	16:08:00	4:01:10	45							Execute UV_Images								
04/07/94	16:08:45	4:01:55	45							Execute UV_Images								
04/07/94	16:09:30	4:02:40	45							Execute UV_Images								
04/07/94	16:10:15	4:03:25	45							Execute UV_Images								
04/07/94	16:11:00	4:04:10	45							Execute UV_Images								
04/07/94	16:11:45	4:04:55	45							Execute UV_Images								
04/07/94	16:12:30	4:05:40	45							Use QTable LHG223003; Execute UV_Images								
04/07/94	16:13:15	4:06:25	45							Execute UV_Images								
04/07/94	16:14:00	4:07:10	45							Execute UV_Images								
04/07/94	16:14:45	4:07:55	45							Execute UV_Images								
04/07/94	16:15:30	4:08:40	45							Execute UV_Images								
04/07/94	16:16:15	4:09:25	45							Execute UV_Images								
04/07/94	16:17:00	4:10:10	45							Execute UV_Images								
04/07/94	16:17:45	4:10:55	45							Execute UV_Images								
04/07/94	16:18:30	4:11:40	45							Execute UV_Images								
04/07/94	16:19:15	4:12:25	45							Execute UV_Images								
04/07/94	16:20:00	4:13:10	45							Use QTable LHG223004; Execute UV_Images								
04/07/94	16:20:45	4:13:55	45							Execute UV_Images								
04/07/94	16:20:54	4:14:05		0.0	30.1	2639.1			Equator -D									
04/07/94	16:21:30	4:14:40	45							Execute UV_Images								
04/07/94	16:22:15	4:15:25	45							Execute UV_Images								
04/07/94	16:23:00	4:16:10	45							Execute UV_Images								
04/07/94	16:23:45	4:16:55	45							Execute UV_Images								
04/07/94	16:24:30	4:17:40	45							Execute UV_Images								

Orbit 223 Timeline - Type B Orbit

04/07/94 16:25:15	4:18:25	45							Execute UV_Images										
04/07/94 16:26:00	4:19:10	45							Execute UV_Images										
04/07/94 16:26:45	4:19:55	45							Execute UV_Images										
04/07/94 16:27:30	4:20:40	45							Use QTable LHG223005; Execute UV_Images										
04/07/94 16:28:15	4:21:25	45							Execute UV_Images										
04/07/94 16:29:00	4:22:10	45							Execute UV_Images										
04/07/94 16:29:45	4:22:55	45							Execute UV_Images										
04/07/94 16:30:30	4:23:40	45							Execute UV_Images										
04/07/94 16:31:15	4:24:25	45							Execute UV_Images										
04/07/94 16:32:00	4:25:10	45							Execute UV_Images										
04/07/94 16:32:45	4:25:55	45							Execute UV_Images										
04/07/94 16:33:30	4:26:40	45							Execute UV_Images										
04/07/94 16:34:15	4:27:25	45							Execute UV_Images										
04/07/94 16:35:00	4:28:10	45							Use QTable LHG223006; Execute UV_Images										
04/07/94 16:35:45	4:28:55	45							Execute UV_Images										
04/07/94 16:36:08	4:29:19		-10.0	30.0	2806.3			S10D											
04/07/94 16:36:30	4:29:40	45							Execute UV_Images										
04/07/94 16:37:15	4:30:25	45							Execute UV_Images										
04/07/94 16:38:00	4:31:10	45							Execute UV_Images										
04/07/94 16:38:45	4:31:55	45							Execute UV_Images										
04/07/94 16:39:30	4:32:40	45							Execute UV_Images										
04/07/94 16:40:15	4:33:25	45							Execute UV_Images										
04/07/94 16:41:00	4:34:10	45							Execute UV_Images										
04/07/94 16:41:45	4:34:55	45							Execute UV_Images										
04/07/94 16:42:30	4:35:40	45							Use QTable LHG223007; Execute UV_Images										
04/07/94 16:43:15	4:36:25	45							Execute UV_Images										
04/07/94 16:44:00	4:37:10	45							Execute UV_Images										
04/07/94 16:44:45	4:37:55	45							Execute UV_Images										
04/07/94 16:45:30	4:38:40	45							Execute UV_Images										
04/07/94 16:46:15	4:39:25	45							Execute UV_Images										
04/07/94 16:47:00	4:40:10	45							Execute UV_Images										
04/07/94 16:47:45	4:40:55	45							Execute UV_Images										
04/07/94 16:48:30	4:41:40	45							Execute UV_Images										
									Stop imaging - select ST-B; UV & HiRes cameras OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec									END LHG OBSERVATION	
04/07/94 16:49:15	4:42:25	45																	Slew HGA to Earth
04/07/94 16:51:34	4:44:45		-19.5	29.8	2904.7			OUTUM											Exit umbra
04/07/94 16:52:00	4:45:10	165							Switch to HGA										READY FOR DATA DUMP - Time approximate
																			Err:508
04/07/94 16:52:20	4:45:31		-20.0	29.8	2907.8			S20D											
04/07/94 16:52:30	4:45:40								Switch to DHU mode @ 128 kbps										Ground Command

Orbit 224 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/07/94 17:05:17	0:00:00		-27.8	29.7	2932.8							Aposelene	Rotating SA-A to more favorable sun position						Downlinking SSSDR Segment 5 (orbit 223)
04/07/94 17:08:00	0:02:42												Set SA-A mode to AUTO						Ground Command - good position
04/07/94 17:08:57	0:03:40		-30.0	29.7	2930.8							S30D							
04/07/94 17:12:00	0:06:42												Uplink C-series DHU sequence tables (SEQ_LUNAR_C)						Ground Command
04/07/94 17:18:00	0:12:42												Uplink D-series DHU sequence tables (SEQ_LUNAR_D)						Ground Command Loaded for backwards flight test
04/07/94 17:22:00	0:16:42												Uplink and schedule L224 scripts						Ground Command
04/07/94 17:25:28	0:20:11		-40.0	29.6	2872.2							S40D							
04/07/94 17:28:00	0:22:42												Update state vector (GNC53_07APR1700)						Ground Command
																			Standard Prep1 Script
04/07/94 17:40:21	0:35:03	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/07/94 17:41:17	0:36:00		-50.0	29.4	2739.7							S50D							
04/07/94 17:56:01	0:50:43		-60.0	29.3	2549.2							S60D							
04/07/94 18:00:00	0:54:42												Downlink SSSDR Segment 6						Ground Command
																			Standard Prep2 Script
04/07/94 18:05:11	0:59:53	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/07/94 18:09:20	1:04:03		-70.0	29.3	2320.7							S70D							
																			Err:508
04/07/94 18:15:41	1:10:23	0											Msg "WARNING: Omni/2k in 1 min.."						
04/07/94 18:16:41	1:11:23	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/07/94 18:17:41	1:12:23	60											Switch to omni antennas						
04/07/94 18:18:41	1:13:23	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/07/94 18:20:41	1:15:23	120											UV & HR cameras ON						
04/07/94 18:21:11	1:15:54		-80.0	29.3	2074.1							S80D							
04/07/94 18:22:46	1:17:28										CAN	AOS							
04/07/94 18:24:41	1:19:23	240											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1
04/07/94 18:25:11	1:19:53	30											Perform LWIR imaging (DHU SEQT 25)						Start dark field imaging

Orbit 224 Timeline - Type A Orbit

04/07/94 18:25:21	1:20:03	10								Perform NIR imaging (DHU SEQT 31)				
04/07/94 18:25:36	1:20:18	15									Err:508			Slew to nadir (inertial pointing)
Err:508														
Err:508														
04/07/94 18:30:36	1:25:18	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S				
04/07/94 18:31:06	1:25:48	30								Switch to lunar mapping mode (ACSMoDe=LunarMapping, -X forward) GNC14NEGRW; Start Imaging (DHU SEQT 15)				BACKWARDS FLIGHT TEST START MAPPING
04/07/94 18:31:36	1:26:18	30	-89.9	115.1	1826.1				South Pole	Set SA step rate to LO				
04/07/94 18:32:33	1:27:16		-89.0	205.9	1801.8				LDAWN					
04/07/94 18:40:41	1:35:23	545	-80.0	208.5	1588.6				S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14				
04/07/94 18:48:35	1:43:17	474	-70.0	208.6	1369.6				S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13				
04/07/94 18:55:30	1:50:12	415	-60.0	208.6	1173.2				S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12				
04/07/94 18:56:30	1:51:12	60								Record in SSSR Segment 2				SSDR Segment 2
04/07/94 19:01:36	1:56:18	306	-50.0	208.6	1001.3				S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11;				Stop HiRes imaging
04/07/94 19:03:14	1:57:56	98								Load exposure table LUNARH45S; Stop all imaging; Load EEQ_11C.UMI into SEQT 11; Select DHU SEQT 11				Multispectral (color) bursts with HR camera for 47S to 40S
04/07/94 19:06:23	2:01:05	189								Laser Power ON				
04/07/94 19:07:02	2:01:44	39	-40.0	208.5	854.0				S40A	Load exposure table LUNARZ35S; Load EEQ_10U.UMI into SEQT 10; Select DHU SEQT 10; Load EEQ_11.UMI into SEQT 11				Stop HiRes imaging UV and IR uncompressed Restore original SEQT 11
04/07/94 19:10:54	2:05:36								CAN	MLOSM				
04/07/94 19:10:58	2:05:40								GDS	MLOSM				
04/07/94 19:11:04	2:05:46								PMK	MLOSM				Enter occultation
04/07/94 19:11:55	2:06:37	293	-30.0	208.5	730.3				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				Resume compression
04/07/94 19:16:23	2:11:05	268	-20.0	208.5	629.2				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
04/07/94 19:20:31	2:15:13	248	-10.0	208.4	549.3				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
04/07/94 19:24:24	2:19:06	233	0.0	208.4	489.3				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/07/94 19:28:07	2:22:49	223	10.0	208.4	448.3				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				

Orbit 224 Timeline - Type A Orbit

04/07/94 19:31:44	2:26:26	217	20.0	208.4	425.5					N20A	Load exposure table LUNARZ25N							
04/07/94 19:34:31	2:29:14		27.8	208.4	420.1					Periselene								
04/07/94 19:35:18	2:30:00	214	30.0	208.4	420.5					N30A	Load exposure table LUNARZ35N							
04/07/94 19:38:53	2:33:35	215	40.0	208.3	433.3					N40A	Load exposure table LUNARZ45N							
04/07/94 19:42:32	2:37:14	219	50.0	208.3	463.9					N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging	
04/07/94 19:44:01	2:38:43								GDS	MAOSM								Exit occultation
04/07/94 19:44:01	2:38:43								PMK	MAOSM								
04/07/94 19:44:23	2:39:05								CAN	MAOSM								
04/07/94 19:46:19	2:41:01	227	60.0	208.3	513.1					N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4							
04/07/94 19:47:19	2:42:01	60									Record in SSSDR Segment 3							
04/07/94 19:50:18	2:45:00	179	70.0	208.3	581.7					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3							
04/07/94 19:54:34	2:49:16	256	80.0	208.4	670.8					N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9						Stop laser ranging	
04/07/94 19:55:04	2:49:46	30									Laser power OFF							
04/07/94 19:55:34	2:50:16	30									Load EEQ_10.UMI into SEQT 10							Restore original SEQT 10
																		Err:508
04/07/94 19:59:12	2:53:55		89.9	309.8	781.7					North Pole								
04/07/94 19:59:42	2:54:24		89.0	25.3	793.9					LDUSK								
																		Err:508
04/07/94 20:01:13	2:55:55	0									Stop Imaging (Select DHU SEQT 2)							
04/07/94 20:01:18	2:56:00	5									Set SA step rate to HI (SACSTPHI); Slew s/c sensors to EARTH (ORB224EARTH); Turn laser power OFF; Load EARTH exposure table (earth_view_zaxis)							
Err:508	Err:508	Err:508									Wait							End of slew - wait before imaging to allow s/c to settle
04/07/94 20:04:15	2:58:57	15									Select DHU SEQT 23							Earth imaging w/color HiRes
04/07/94 20:04:18	2:59:01		80.0	27.8	915.5					N80D								
Err:508	Err:508	15									Stop imaging - select ST-B							
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)							Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)							
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec							

Orbit 224 Timeline - Type A Orbit

04/07/94 20:07:56	3:02:38	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)									Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)									
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)									
Err:508	Err:508	6								Load exposure table LUNIRDKS1									
Err:508	Err:508	6								Load exposure table LUNIRDKS2									
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)									
Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMode=EarthPointing, Center); Activate waitwhileslew for 360 sec									Slew HGA to Earth with active waitwhileslew
04/07/94 20:10:00	3:04:43		70.0	27.9	1073.6				N70D										
04/07/94 20:13:00	3:07:42	Err:508								Switch to HGA									READY FOR DATA DUMP - Time approximate
																			Err:508
04/07/94 20:14:00	3:08:42									Switch to DHU mode @ 128 kbps									Ground Command
04/07/94 20:16:27	3:11:10		60.0	27.9	1256.3				N60D										
04/07/94 20:17:20	3:12:02							PMK	LOS										
04/07/94 20:23:47	3:18:30		50.0	27.8	1462.9				N50D										
04/07/94 20:32:10	3:26:53		40.0	27.8	1690.7				N40D										
04/07/94 20:37:00	3:31:42									Resume downlink SDDR Segment 6									Ground Command
04/07/94 20:41:49	3:36:32		30.0	27.7	1934.0				N30D										
04/07/94 20:48:25	3:43:08		23.9	27.6	2087.3				INPM										Enter penumbra
04/07/94 20:49:16	3:43:59		23.1	27.6	2106.2				INUM										Enter umbra
04/07/94 20:52:50	3:47:33		20.0	27.6	2183.2				N20D										
04/07/94 20:53:00	3:47:42									Downlink SDDR Segment 7 (LHG)									Ground Command
04/07/94 21:04:00	3:58:42									Downlink SDDR Segment 1									Ground Command
04/07/94 21:05:00	3:59:42									Uplink E-series DHU sequence tables (SEQ_LUNAR_E)									Ground Command
04/07/94 21:05:20	4:00:03		10.0	27.5	2424.2				N10D										
04/07/94 21:13:00	4:07:42									Downlink SDDR Segment 2									Ground Command
04/07/94 21:16:00	4:10:42									Uplink and schedule L225 scripts									Ground Command
04/07/94 21:19:18	4:14:01		0.0	27.4	2638.7				Equator - D										
04/07/94 21:34:32	4:29:15		-10.0	27.2	2806.3				S10D										
04/07/94 21:49:46	4:44:29		-19.4	27.1	2904.3				OUTUM										Exit umbra
04/07/94 21:50:44	4:45:27		-20.0	27.1	2908.2				S20D										
04/07/94 21:50:46	4:45:29		-20.0	27.1	2908.4				OUTPM										Exit penumbra
04/07/94 21:58:00	4:52:42									SSDR to IDLE - downlink paused									Ground Command
04/07/94 22:03:46	4:58:29		-27.8	27.0	2933.5				Aposelene										For station change

Orbit 225 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/07/94 22:03:47	0:00:00		-27.8	27.0	2933.5							Aposelene							Downlink paused for station change
04/07/94 22:07:00	0:03:13												Resume downlink SSDR Segment 2						Ground Command
04/07/94 22:07:23	0:03:36		-30.0	27.0	2931.6							S30D							
04/07/94 22:23:54	0:20:07		-40.0	26.8	2873.3							S40D							
																			Standard Prep1 Script
04/07/94 22:38:49	0:35:02	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/07/94 22:39:44	0:35:57		-50.0	26.7	2740.9							S50D							
04/07/94 22:42:00	0:38:13												Downlink SSDR Segment 3						Ground Command
04/07/94 22:51:58	0:48:11		-58.2	26.6	2586.7						GDS	LOS							
04/07/94 22:54:27	0:50:40		-60.0	26.6	2550.4							S60D							
																			Standard Prep2 Script
04/07/94 23:03:39	0:59:52	0											LWIR camera & cryocooler ON; Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/07/94 23:07:48	1:04:01		-70.0	26.5	2321.8							S70D							
04/07/94 23:14:00	1:10:13												SSDR to IDLE - downlink complete						Ground Command
																			Err:508
04/07/94 23:14:39	1:10:52	0											Msg "WARNING: 2kbps in 1 min."						
04/07/94 23:15:39	1:11:52	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/07/94 23:16:39	1:12:52	60											Switch to omni antennas						
04/07/94 23:17:39	1:13:52	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/07/94 23:19:39	1:15:52		-80.0	26.5	2075.1							S80D							
04/07/94 23:19:39	1:15:52	120											UV & HR cameras ON						
04/07/94 23:23:09	1:19:22	210											Initialize filters (DHU SEQT 27); Record in SSDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSDR in Segment 4
04/07/94 23:23:39	1:19:52	30											Perform LWIR imaging (DHU SEQT 25)						
04/07/94 23:23:49	1:20:02	10											Perform NIR imaging (DHU SEQT 31)						
04/07/94 23:24:04	1:20:17	15																Err:508	Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 225 Timeline - Type B Orbit

04/07/94 23:28:04	1:24:17	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S				
04/07/94 23:29:04	1:25:17	60									Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
04/07/94 23:30:03	1:26:16		-90.0	104.7	1827.0					South Pole					
04/07/94 23:30:04	1:26:17	60								MAXS	Set SA step rate to LO				
04/07/94 23:31:01	1:27:14		-89.0	204.3	1802.7					LDAWN					
04/07/94 23:39:08	1:35:21	544	-80.0	205.9	1589.2					S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20				
04/07/94 23:47:03	1:43:16	475	-70.0	205.9	1369.9					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19				
04/07/94 23:49:49	1:46:02	166									Err:508				Slew to South Pole for oblique viewing
04/07/94 23:53:58	1:50:11	249	-60.0	205.9	1173.4					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11				
04/07/94 23:54:58	1:51:11	60									Record in SSSR Segment 5				SSDR Segment 5
04/08/94 00:00:04	1:56:17	306	-50.0	205.9	1001.4					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 10				Stop HiRes imaging
04/08/94 00:04:51	2:01:04	287									Laser Power ON				
04/08/94 00:05:30	2:01:43	39	-40.0	205.8	853.9					S40A	Switch to lunar mapping mode (ACSMoDe=LunarMapping); Load EEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping UV and IR uncompressed
04/08/94 00:09:06	2:05:19		-32.7	205.8	761.0				CAN	MLOSM					Enter occultation
04/08/94 00:10:23	2:06:36	293	-30.0	205.8	730.1					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				Resume compression
04/08/94 00:14:51	2:11:04	268	-20.0	205.8	628.9					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
04/08/94 00:18:59	2:15:12	248	-10.0	205.7	548.9					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
04/08/94 00:22:52	2:19:05	233	0.0	205.7	488.8					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/08/94 00:26:35	2:22:48	223	10.0	205.7	447.7					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/08/94 00:30:12	2:26:25	217	20.0	205.6	424.9					N20A	Load exposure table LUNARZ25N				
04/08/94 00:33:00	2:29:13		27.9	205.6	419.4					Periselene					
04/08/94 00:33:46	2:29:59	214	30.0	205.6	419.8					N30A	Load exposure table LUNARZ35N				
04/08/94 00:37:20	2:33:33	214	40.0	205.6	432.4					N40A	Load exposure table LUNARZ45N				
04/08/94 00:40:59	2:37:12	219	50.0	205.6	463.0					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6				Resume HiRes imaging
04/08/94 00:43:06	2:39:19		55.6	205.5	488.7				CAN	MAOSM					Exit occultation

Orbit 225 Timeline - Type B Orbit

04/08/94 00:44:46	2:40:59	227	60.0	205.5	512.2					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4			
04/08/94 00:45:46	2:41:59	60									Record in SDR Segment 6			SSDR Segment 6
04/08/94 00:48:45	2:44:58	179	70.0	205.5	580.7					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17			
04/08/94 00:51:00	2:47:13										LWIR cryocooler OFF			Ground Command
04/08/94 00:53:01	2:49:14	256	80.0	205.6	669.6					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16			Stop laser ranging
04/08/94 00:53:31	2:49:44	30									Laser power OFF			
04/08/94 00:54:01	2:50:14	30									Load EEQ_10.UMI into SEQT 10			Restore original SEQT 10
Err:508														
04/08/94 00:57:39	2:53:52		90.0	290.0	780.4					North Pole				
04/08/94 00:58:08	2:54:21		89.0	23.6	792.6					LDUSK				
Err:508														
04/08/94 00:59:39	2:55:52	0									Stop Imaging - select ST-B			
04/08/94 00:59:44	2:55:57	5									Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
04/08/94 01:02:46	2:58:59		80.0	25.2	914.3					N80D				
Err:508	Err:508	Err:508									Wait			End of slew - wait before imaging to allow s/c to settle
04/08/94 01:03:07	2:59:20	15									Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B			
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)			
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec			
04/08/94 01:07:12	3:03:25	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)			LWIR cryocooler off
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)			
Err:508	Err:508	6									Load exposure table LUNIRDKS1			
Err:508	Err:508	6									Load exposure table LUNIRDKS2			
Err:508	Err:508	6									Perform HIRES imaging (DHU SEQT 30)			

Orbit 225 Timeline - Type B Orbit

Err:508	Err:508	30																Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec											Slew HGA to Earth with active waitwhileslew							
04/08/94 01:08:28	3:04:41		70.0	25.2	1072.3													N70D																		
04/08/94 01:14:24	3:10:37	Err:508																Switch to HGA																	READY FOR DATA DUMP - Time approximate	
																																			Err:508	
04/08/94 01:14:53	3:11:06		60.0	25.2	1255.0													N60D																		
04/08/94 01:16:00	3:12:13																		Switch to DHU mode @ 128 kbps																Ground Command	
04/08/94 01:18:00	3:14:13																		Downlink SSSDR Segment 4																Ground Command	
04/08/94 01:22:13	3:18:26		50.0	25.1	1461.6														N50D																	
04/08/94 01:28:00	3:24:13																		Uplink and schedule L226 scripts																Ground Command	
04/08/94 01:30:36	3:26:49		40.0	25.1	1689.4														N40D																	
04/08/94 01:32:00	3:28:13																		Downlink SSSDR Segment 5																Ground Command	
04/08/94 01:40:14	3:36:27		30.0	25.0	1932.8														N30D																	
04/08/94 01:46:57	3:43:10		23.8	24.9	2088.5														INPM																Enter penumbra	
04/08/94 01:47:48	3:44:01		23.0	24.9	2107.5														INUM																Enter umbra	
04/08/94 01:51:15	3:47:28		20.0	24.9	2182.2														N20D																	
04/08/94 02:03:45	3:59:58		10.0	24.8	2423.5														N10D																	
04/08/94 02:17:43	4:13:56		0.0	24.6	2638.3														Equator -D																	
04/08/94 02:32:57	4:29:10		-10.0	24.5	2806.4														S10D																	
04/08/94 02:47:58	4:44:11		-19.3	24.4	2903.9														OUTUM																Exit umbra	
04/08/94 02:48:59	4:45:12		-19.9	24.4	2908.0														OUTPM																Exit penumbra	
04/08/94 02:49:09	4:45:22		-20.0	24.4	2908.7														S20D																	
04/08/94 02:57:00	4:53:13																			Downlink SSSDR Segment 6															Ground Command	
04/08/94 03:02:16	4:58:29		-27.9	24.2	2934.2														Aposelene																	

Orbit 226 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/08/94 03:02:16	0:00:00		-27.9	24.2	2934.2							Aposelene							Downlinking SSSR Segment 6 (orbit 225)
04/08/94 03:05:47	0:03:31		-30.0	24.2	2932.4							S30D							
04/08/94 03:22:19	0:20:03		-40.0	24.1	2874.4							S40D							
04/08/94 03:25:00	0:22:44												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
04/08/94 03:37:16	0:35:00	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/08/94 03:38:09	0:35:53		-50.0	23.9	2742.2							S50D							
04/08/94 03:52:53	0:50:37		-60.0	23.8	2551.7							S60D							
																			Standard Prep2 Script
04/08/94 04:02:06	0:59:50	0											LWIR camera ON; Laser heater ON; Open sensor door if closed						LWIR cryocooler NOT turned on
																			End Prep2 Script
04/08/94 04:06:14	1:03:58		-70.0	23.7	2323.0							S70D							
																			Err:508
04/08/94 04:12:36	1:10:20	0											Msg "WARNING: Omni/2k in 1 min.."						
04/08/94 04:13:36	1:11:20	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/08/94 04:14:36	1:12:20	60											Switch to omni antennas						
04/08/94 04:15:36	1:13:20	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/08/94 04:17:36	1:15:20	120											UV & HR cameras ON						
04/08/94 04:18:06	1:15:50		-80.0	23.6	2076.1							S80D							
04/08/94 04:21:36	1:19:20	240											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/08/94 04:22:06	1:19:50	30											Perform LWIR imaging (DHU SEQT 25)						LWIR cryocooler off
04/08/94 04:22:16	1:20:00	10											Perform NIR imaging (DHU SEQT 31)						
04/08/94 04:22:31	1:20:15	15																	Slew sensors to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 226 Timeline - Type A Orbit

04/08/94 04:27:31	1:25:15	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85; Load exposure table LUNARH85S			
04/08/94 04:28:01	1:25:45	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING Note: LWIR cryocooler off
04/08/94 04:28:31	1:26:15	30	-90.0	90.9	1827.8						South Pole Set SA step rate to LO			
04/08/94 04:29:28	1:27:12		-89.0	202.5	1803.7						LDAWN			
04/08/94 04:37:36	1:35:20	545	-80.0	203.3	1589.8						S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14		
04/08/94 04:45:31	1:43:15	475									S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13		
04/08/94 04:52:27	1:50:11	416	-60.0	203.2	1173.7						S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12		
04/08/94 04:53:07	1:50:51		-58.9	203.2	1153.6					MAD	AOS			
04/08/94 04:53:27	1:51:11	60										Record in SDR Segment 2		SSDR Segment 2
04/08/94 04:58:33	1:56:17	306	-50.0	203.2	1001.4						S50A	Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45S; Select DHU SEQT 11		Stop HiRes imaging UV and IR uncompressed
04/08/94 05:03:19	2:01:03	286										Laser Power ON		
04/08/94 05:03:58	2:01:42	39	-40.0	203.1	853.8						S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10		Resume compression
04/08/94 05:06:34	2:04:18		-34.8	203.1	786.0					MAD	MLOSM			
04/08/94 05:07:18	2:05:02		-33.3	203.1	767.3					CAN	MLOSM			Enter occultation
04/08/94 05:08:52	2:06:36	294	-30.0	203.1	729.9						S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9		
04/08/94 05:13:19	2:11:03	267	-20.0	203.0	628.6						S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8		Start laser ranging
04/08/94 05:17:27	2:15:11	248	-10.0	203.0	548.4						S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7		
04/08/94 05:21:21	2:19:05	234	0.0	203.0	488.3						Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6		
04/08/94 05:25:03	2:22:47	222	10.0	202.9	447.1						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5		
04/08/94 05:28:40	2:26:24	217	20.0	202.9	424.2						N20A	Load exposure table LUNARZ25N		
04/08/94 05:31:29	2:29:13		27.9	202.9	418.6						Periselene			
04/08/94 05:32:14	2:29:58	214	30.0	202.9	419.0						N30A	Load exposure table LUNARZ35N		
04/08/94 05:35:48	2:33:32	214	40.0	202.8	431.6						N40A	Load exposure table LUNARZ45N		
04/08/94 05:39:27	2:37:11	219	50.0	202.8	462.1						N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6		Resume HiRes imaging
04/08/94 05:41:19	2:39:03		55.0	202.8	484.6					MAD	MAOSM			Exit occultation

Orbit 226 Timeline - Type A Orbit

04/08/94 05:43:14	2:40:58	227	60.0	202.8	511.2						N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4		
04/08/94 05:44:14	2:41:58	60										Record in SSSR Segment 3		SSDR Segment 3
04/08/94 05:47:13	2:44:57	179	70.0	202.8	579.6						N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3		
04/08/94 05:51:28	2:49:12	255	80.0	202.8	668.5						N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9		Stop laser ranging
04/08/94 05:51:58	2:49:42	30										Laser power OFF		
04/08/94 05:52:28	2:50:12	30										Load EEQ_11.UMI into SEQT 11		Restore original SEQT 11
														Err:508
04/08/94 05:56:06	2:53:50		90.0	291.1	779.2						North Pole			
04/08/94 05:56:35	2:54:19		89.0	21.8	791.3						LDUSK			
														Err:508
04/08/94 05:58:06	2:55:50	0										Stop Imaging - select ST-B		
04/08/94 05:58:11	2:55:55	5										Err:508		Slew sensors to Earth (inertial pointing) with waitwhileslew
04/08/94 06:01:12	2:58:56		80.0	22.5	913.0						N80D			
Err:508	Err:508	Err:508										Wait		End of slew - wait before imaging to allow s/c to settle
04/08/94 06:01:40	2:59:24	15										Select DHU SEQT 23		Earth imaging w/color HiRes
Err:508	Err:508	15										Stop imaging - select ST-B		
Err:508	Err:508	5										Slew s/c sensors to Vega (VEGAGNC12)		Slew to Vega (inertial pointing)
Err:508	Err:508	30										Park opaque filter on HiRes (DHU SEQT 27)		
Err:508	Err:508	15										Select ST-B; Activate waitwhileslew for 310 sec		
04/08/94 06:05:50	3:03:34	Err:508										Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)		Start calibration imaging
Err:508	Err:508	12										Perform LWIR imaging (DHU SEQT 25)		LWIR cryocooler off
Err:508	Err:508	12										Perform NIR imaging (DHU SEQT 31)		
Err:508	Err:508	6										Load exposure table LUNIRDKS1		
Err:508	Err:508	6										Load exposure table LUNIRDKS2		
Err:508	Err:508	6										Perform HiRes imaging (DHU SEQT 30)		

Orbit 226 Timeline - Type A Orbit

04/08/94 06:06:54	3:04:38		70.0	22.5	1070.9						N70D								
Err:508	Err:508	30										Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew	
Err:508	Err:508	360										Switch to HGA							READY FOR DATA DUMP - Time approximate
Err:508																			
04/08/94 06:13:19	3:11:03		60.0	22.5	1253.6						N60D								
04/08/94 06:20:38	3:18:22		50.0	22.4	1460.2						N50D								
04/08/94 06:21:00	3:18:44											Switch downlink rate to 8 kbps							Ground Command - no TLM lock due to DSN problems
04/08/94 06:29:01	3:26:45		40.0	22.3	1688.1						N40D								
04/08/94 06:31:00	3:28:44											Switch to DHU mode @ 128 kbps							Ground Command Station 15 minutes late locking
04/08/94 06:32:00	3:29:44											Downlink SSSDR Segment 1							Ground Command
04/08/94 06:36:00	3:33:44											Select ST-A							Ground Command - no matches with ST-B
04/08/94 06:38:39	3:36:23		30.0	22.3	1931.6						N30D								
04/08/94 06:40:00	3:37:44											Downlink SSSDR Segment 2							Ground Command
04/08/94 06:41:00	3:38:44											Uplink and schedule L227 scripts							Ground Command
04/08/94 06:45:27	3:43:11		23.7	22.2	2089.7						INPM								Enter penumbra
04/08/94 06:46:19	3:44:03		22.9	22.2	2108.9						INUM								Enter umbra
04/08/94 06:49:40	3:47:24		20.0	22.2	2181.2						N20D								
04/08/94 07:02:09	3:59:53		10.0	22.0	2422.7						N10D								
04/08/94 07:16:07	4:13:51		0.0	21.9	2637.9						Equator -D								
04/08/94 07:31:21	4:29:05		-10.0	21.8	2806.4						S10D								
04/08/94 07:46:10	4:43:54		-19.2	21.6	2903.4						OUTUM								Exit umbra
04/08/94 07:47:11	4:44:55		-19.8	21.6	2907.6						OUTPM								Exit penumbra
04/08/94 07:47:33	4:45:17		-20.0	21.6	2909.1						S20D								
04/08/94 07:56:00	4:53:44											Downlink SSSDR Segment 3							Ground Command
04/08/94 08:00:44	4:58:28		-27.9	21.5	2935.0						Aposelene								

Orbit 227 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/08/94 08:00:44	0:00:00		-27.9	21.5	2935.0							Aposelene							Downlinking SSSDR Segment 3 (orbit 226)
04/08/94 08:04:12	0:03:28		-30.0	21.5	2933.2							S30D							
04/08/94 08:20:44	0:20:00		-40.0	21.3	2875.5							S40D							
04/08/94 08:26:00	0:25:16												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
04/08/94 08:35:44	0:35:00	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/08/94 08:36:35	0:35:51		-50.0	21.2	2743.5							S50D							
04/08/94 08:43:00	0:42:16												Select ST-B						Ground Command - no matches
04/08/94 08:51:20	0:50:36		-60.0	21.1	2553.0							S60D							
																			Standard Prep2 Script
04/08/94 09:00:34	0:59:50	0											LWIR camera ON; Laser heater ON; Open sensor door if closed						LWIR cryocooler NOT turned on
																			End Prep2 Script
04/08/94 09:04:41	1:03:57		-70.0	20.9	2324.3							S70D							
																			Err:508
04/08/94 09:11:34	1:10:50	0											Msg "WARNING: 2kbps in 1 min."						
04/08/94 09:12:34	1:11:50	60											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/08/94 09:13:34	1:12:50	60											Switch to omni antennas						
04/08/94 09:14:34	1:13:50	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/08/94 09:16:34	1:15:50		-80.0	20.8	2077.2							S80D							
04/08/94 09:16:34	1:15:50	120											UV & HR cameras ON						
04/08/94 09:20:04	1:19:20	210											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 4
04/08/94 09:20:34	1:19:50	30											Perform LWIR imaging (DHU SEQT 25)						LWIR cryocooler off
04/08/94 09:20:44	1:20:00	10											Perform NIR imaging (DHU SEQT 31)						
04/08/94 09:20:59	1:20:15	15																	Slew to nadir (inertial pointing)
																			Err:508
																			Err:508

Orbit 227 Timeline - Tyne B Orbit

04/08/94 09:24:59	1:24:15	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S							
04/08/94 09:25:59	1:25:15	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)							START MAPPING Note: LWIR cryocooler off
04/08/94 09:26:59	1:26:15	60	-90.0	57.4	1828.6						South Pole Set SA step rate to LO							
04/08/94 09:27:56	1:27:12		-89.0	200.7	1804.7						LDAWN							
04/08/94 09:36:04	1:35:20	545	-80.0	200.6	1590.4						S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20						
04/08/94 09:43:59	1:43:15	475	-70.0	200.6	1370.8						S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19						
04/08/94 09:46:45	1:46:01	166										Err:508						Slew to South Pole for oblique viewing
04/08/94 09:48:57	1:48:13		-63.0	200.5	1229.0				PMK		AOS							
04/08/94 09:50:55	1:50:11	250	-60.0	200.5	1173.9						S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11						
04/08/94 09:51:55	1:51:11	60										Record in SDR Segment 5						SSDR Segment 5
04/08/94 09:57:01	1:56:17	306	-50.0	200.4	1001.5						S50A	Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45S; Select DHU SEQT 11						Stop HiRes imaging UV and IR uncompressed
04/08/94 10:01:48	2:01:04	287										Laser Power ON						
04/08/94 10:02:27	2:01:43	39	-40.0	200.4	853.7						S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10						Resume nadir mapping Resume compression
04/08/94 10:04:38	2:03:54		-35.6	200.4	796.2				PMK		MLOSM							
04/08/94 10:04:48	2:04:04		-35.3	200.4	791.9				MAD		MLOSM							Enter occultation
04/08/94 10:07:20	2:06:36	293	-30.0	200.4	729.7						S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9						
04/08/94 10:11:48	2:11:04	268	-20.0	200.3	628.2						S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8						Start laser ranging
04/08/94 10:15:56	2:15:12	248	-10.0	200.3	548.0						S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
04/08/94 10:19:49	2:19:05	233	0.0	200.2	487.8						Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6						
04/08/94 10:23:32	2:22:48	223	10.0	200.2	446.5						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/08/94 10:27:08	2:26:24	216	20.0	200.2	423.5						N20A	Load exposure table LUNARZ25N						
04/08/94 10:29:58	2:29:14		28.0	200.1	417.9						Periselene							
04/08/94 10:30:42	2:29:58	214	30.0	200.1	418.2						N30A	Load exposure table LUNARZ35N						
04/08/94 10:34:16	2:33:32	214	40.0	200.1	430.7						N40A	Load exposure table LUNARZ45N						
04/08/94 10:37:54	2:37:10	218	50.0	200.1	461.2						N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/08/94 10:39:56	2:39:12		55.4	200.0	485.7				PMK		MAOSM							Exit occultation
04/08/94 10:39:58	2:39:14		55.5	200.0	486.3				MAD		MAOSM							

Orbit 227 Timeline - Type B Orbit

04/08/94 10:41:41	2:40:57	227	60.0	200.0	510.1				N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4			
04/08/94 10:42:41	2:41:57	60								Record in SDR Segment 6			SSDR Segment 6
04/08/94 10:45:40	2:44:56	179	70.0	200.0	578.5				N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17			
04/08/94 10:49:55	2:49:11	255	80.0	200.0	667.3				N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16			Stop laser ranging
04/08/94 10:50:25	2:49:41	30								Laser power OFF			
04/08/94 10:50:55	2:50:11	30								Load EEQ_11.UMI into SEQT 11			Restore original SEQT 11
Err:508													
04/08/94 10:54:33	2:53:49		90.0	20.4	778.1				North Pole				
04/08/94 10:55:01	2:54:17		89.0	19.9	789.9				LDUSK				
Err:508													
04/08/94 10:56:33	2:55:49	0								Stop Imaging - select ST-B			
04/08/94 10:56:38	2:55:54	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
04/08/94 10:59:39	2:58:55		80.0	19.9	911.6				N80D				
Err:508	Err:508	Err:508								Wait			End of slew - wait before imaging to allow s/c to settle
04/08/94 11:00:17	2:59:33	15								Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B			
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)			
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec			
04/08/94 11:04:17	3:03:33	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)			LWIR cryocooler off
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)			
Err:508	Err:508	6								Load exposure table LUNIRDKS1			
Err:508	Err:508	6								Load exposure table LUNIRDKS2			
Err:508	Err:508	6								Perform HIRES imaging (DHU SEQT 30)			
04/08/94 11:05:20	3:04:36		70.0	19.8	1069.6				N70D				

Orbit 227 Timeline - Type B Orbit

Err:508	Err:508	30												Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					Slew HGA to Earth with active waitwhileslew
04/08/94 11:10:00	3:09:16	Err:508												Switch to HGA					READY FOR DATA DUMP - Time approximate
Err:508																			
04/08/94 11:11:00	3:10:16													Switch to DHU mode @ 128 kbps					Ground Command
04/08/94 11:11:45	3:11:01		60.0	19.8	1252.2								N60D						
04/08/94 11:12:00	3:11:16													Downlink SSSDR Segment 4					Ground Command
04/08/94 11:14:00	3:13:16													Uplink and schedule L228 scripts					Ground Command
04/08/94 11:19:04	3:18:20		50.0	19.7	1458.7								N50D						
04/08/94 11:25:00	3:24:16													Downlink SSSDR Segment 5					Ground Command
04/08/94 11:27:27	3:26:43		40.0	19.6	1686.7								N40D						
04/08/94 11:31:00	3:30:16													Select ST-A					Ground Command ST-B blocked by Moon
04/08/94 11:37:04	3:36:20		30.0	19.5	1930.3								N30D						
04/08/94 11:39:00	3:38:16													Read dosimeter latch values					Ground Command
04/08/94 11:43:58	3:43:14		23.6	19.5	2091.0								INPM						Enter penumbra
04/08/94 11:44:00	3:43:16													Expose dosimeter					Scheduled Command
04/08/94 11:44:50	3:44:06		22.8	19.5	2110.3								INUM						Enter umbra
04/08/94 11:48:04	3:47:20		20.0	19.4	2180.1								N20D						
04/08/94 12:00:33	3:59:49		10.0	19.3	2421.9								N10D						
04/08/94 12:14:30	4:13:46		0.0	19.2	2637.5								Equator -D						
04/08/94 12:24:00	4:23:16													Uplink new delta-V burn software					Ground Command
04/08/94 12:28:14	4:27:30		-9.0	19.1	2792.9								GDS AOS						
04/08/94 12:29:45	4:29:01		-10.0	19.0	2806.4								S10D						
04/08/94 12:42:00	4:41:16													Downlink SSSDR Segment 6					Ground Command
04/08/94 12:44:21	4:43:37		-19.0	18.9	2902.8								OUTUM						Exit umbra
04/08/94 12:45:22	4:44:38		-19.7	18.9	2907.2								OUTPM						Exit penumbra
04/08/94 12:45:57	4:45:13		-20.0	18.9	2909.6								S20D						
04/08/94 12:59:21	4:58:37		-28.1	18.8	2935.8								Aposelene						

Orbit 228 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/08/94 12:59:21	0:00:00		-28.1	18.8	2935.8							Aposelene							Downlinking SSSDR Segment 6 (orbit 227)
04/08/94 13:02:36	0:03:15		-30.0	18.7	2934.1							S30D							
04/08/94 13:06:00	0:06:39												SSDR to IDLE - downlink complete						Ground Command
04/08/94 13:08:00	0:08:39												Auxiliary oscillator B ON						Ground Command - BSR test
04/08/94 13:15:00	0:15:39												Select ST-B						Ground Command
04/08/94 13:19:08	0:19:47		-40.0	18.6	2876.8							S40D							
04/08/94 13:30:00	0:30:39												Subcarrier B OFF						Ground Command - BSR test
																			Standard Prep1 Script
04/08/94 13:34:12	0:34:51	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/08/94 13:35:00	0:35:39		-50.0	18.4	2744.9							S50D							
04/08/94 13:37:00	0:37:39												Subcarrier B ON						Ground Command - BSR test
04/08/94 13:38:00	0:38:39												Switch to bypass mode @ 2 kbps						Ground Command - BSR test
04/08/94 13:49:46	0:50:25		-60.0	18.3	2554.5							S60D							
04/08/94 13:53:00	0:53:39												Subcarrier B OFF						Ground Command - BSR test
04/08/94 13:59:00	0:59:39												Subcarrier B ON						Ground Command - BSR test
																			Standard Prep2 Script
04/08/94 13:59:12	0:59:51	0											Laser heater ON; Open sensor door if closed						NOTE: LWIR command has been moved to Prep3 script
																			End Prep2 Script
04/08/94 14:03:08	1:03:47		-70.0	18.1	2325.7							S70D							
04/08/94 14:08:00	1:08:39												Auxiliary oscillator A ON						Ground Command - BSR test
																			Err:508
04/08/94 14:09:31	1:10:10	0											Msg "WARNING: Omni/2k in 1 min.."						
04/08/94 14:09:57	1:10:35	25											LWIR camera and cryocooler ON						
04/08/94 14:10:32	1:11:10	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/08/94 14:11:32	1:12:11	60											Switch to omni antennas						
04/08/94 14:12:32	1:13:11	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/08/94 14:15:01	1:15:40		-80.0	17.9	2078.5							S80D							
04/08/94 14:18:32	1:19:11	360											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1
04/08/94 14:19:12	1:19:51	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging

Orbit 228 Timeline - Type A Orbit

04/08/94 15:25:36	2:26:15	216	20.0	197.4	422.7				N20A	Load exposure table LUNARZ25N										
04/08/94 15:28:27	2:29:06		28.0	197.4	417.0				Periselene											
04/08/94 15:29:09	2:29:48		30.0	197.4	417.4				N30A											
04/08/94 15:29:10	2:29:49	214							N30A	Load exposure table LUNARZ35N										
04/08/94 15:32:44	2:33:23	214	40.0	197.4	429.8				N40A	Load exposure table LUNARZ45N										
04/08/94 15:36:22	2:37:01	218	50.0	197.3	460.1				N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6									Resume HiRes imaging	
04/08/94 15:38:33	2:39:12		55.8	197.2	486.7			GDS	MAOSM											Exit occultation
04/08/94 15:38:34	2:39:13		55.9	197.2	487.1			PMK	MAOSM											
04/08/94 15:38:37	2:39:16		56.0	197.2	487.7			MAD	MAOSM											
04/08/94 15:40:08	2:40:47		60.0	197.3	509.0				N60A											
04/08/94 15:40:09	2:40:48	227							N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4										
04/08/94 15:41:09	2:41:48	60								Record in SDR Segment 3										SSDR Segment 3
04/08/94 15:44:07	2:44:46	178	70.0	197.2	577.3				N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3										
04/08/94 15:48:22	2:49:01	255	80.0	197.0	666.0				N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9										Stop laser ranging
04/08/94 15:48:52	2:49:31	30								Laser power OFF										
04/08/94 15:49:22	2:50:01	30								Load EEQ_07.UMI into SEQT 7										Restore original SEQT 7
											Err:508									
04/08/94 15:52:59	2:53:38		90.0	128.9	776.4				North Pole											
04/08/94 15:53:28	2:54:07		89.0	19.2	788.4				LDUSK											
											Err:508									
04/08/94 15:55:00	2:55:39	0								Stop Imaging - select ST-B										
04/08/94 15:55:05	2:55:44	5								Err:508										Slew sensors to Earth (inertial pointing) with waitwhileslew
04/08/94 15:58:05	2:58:44		80.0	17.3	910.2				N80D											
Err:508	Err:508	Err:508								Wait										End of slew - wait before imaging to allow s/c to settle
04/08/94 15:59:06	2:59:45	15								Select DHU SEQT 23										Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B										
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)										Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)										

Orbit 228 Timeline - Type A Orbit

Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec									
04/08/94 16:01:00	3:01:39									Auxiliary oscillator A OFF									Ground Command - BSR test
04/08/94 16:03:00	3:03:39									Auxiliary oscillator B OFF									Ground Command - BSR test
04/08/94 16:03:03	3:03:42	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)									Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)									
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)									
Err:508	Err:508	6								Load exposure table LUNIRDKS1									
Err:508	Err:508	6								Load exposure table LUNIRDKS2									
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)									
04/08/94 16:03:46	3:04:25		70.0	17.2	1068.0					N70D									
Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec									Slew HGA to Earth with active waitwhileslew
04/08/94 16:05:02	3:05:41								MAD	LOS									
04/08/94 16:08:00	3:08:39	Err:508								Switch to HGA									READY FOR DATA DUMP - Time approximate
																			Err:508
04/08/94 16:09:00	3:09:39									Switch to DHU mode @ 128 kbps									Ground Command
04/08/94 16:10:00	3:10:39									Downlink SSSDR Segment 1									Ground Command
04/08/94 16:10:11	3:10:50		60.0	17.1	1250.6					N60D									
04/08/94 16:17:29	3:18:08		50.0	17.0	1457.2					N50D									
04/08/94 16:19:00	3:19:39									Downlink SSSDR Segment 2									Ground Command
04/08/94 16:22:00	3:22:39									Update state vector (GNC53_08APR1600)									Ground Command
04/08/94 16:23:00	3:23:39									Select ST-A									Ground Command - no matches with ST-B
04/08/94 16:25:51	3:26:30		40.0	16.9	1685.1					N40D									
04/08/94 16:28:00	3:28:39									Uplink and schedule L229 scripts									Ground Command
04/08/94 16:35:28	3:36:07		30.0	16.8	1928.9					N30D									
04/08/94 16:42:29	3:43:08		23.5	16.8	2092.0					INPM									Enter penumbra
04/08/94 16:43:21	3:44:00		22.7	16.7	2111.4					INUM									Enter umbra
04/08/94 16:46:28	3:47:07		20.0	16.7	2178.8					N20D									
04/08/94 16:58:57	3:59:36		10.0	16.6	2421.0					N10D									
04/08/94 17:12:54	4:13:33		0.0	16.5	2637.0					Equator - D									
04/08/94 17:28:09	4:28:48		-10.0	16.3	2806.3					S10D									
04/08/94 17:42:31	4:43:10		-18.9	16.2	2902.3					OUTUM									Exit umbra
04/08/94 17:43:33	4:44:12		-19.5	16.2	2906.8					OUTPM									Exit penumbra

Orbit 228 Timeline - Type A Orbit

04/08/94 17:44:21	4:45:00		-20.0	16.2	2910.0									S20D								
04/08/94 17:53:00	4:53:39													Downlink SDR Segment 3								Ground Command
04/08/94 17:57:43	4:58:22		-28.0	16.0	2936.6									Aposelene								

Orbit 229 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/08/94 17:57:43	0:00:00		-28.0	16.0	2936.6							Aposelene							Downlinking SSSR Segment 3 (orbit 228)
04/08/94 18:01:00	0:03:17		-30.0	16.0	2935.0							S30D							
04/08/94 18:17:33	0:19:50		-40.0	15.8	2878.0							S40D							
04/08/94 18:23:00	0:25:17												SSDR to IDLE - downlink complete						Ground Command
04/08/94 18:30:00	0:32:17												Select ST-B						Ground Command - no matches
																			Standard Prep1 Script
04/08/94 18:32:09	0:34:26	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/08/94 18:33:26	0:35:43		-50.0	15.7	2746.3							S50D							
04/08/94 18:35:00	0:37:17												Update state vector (GNC53_08APR1800)						Ground Command
04/08/94 18:48:12	0:50:29		-60.0	15.5	2555.9							S60D							
																			Standard Prep2 Script
04/08/94 18:57:08	0:59:25	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/08/94 19:01:35	1:03:52		-70.0	15.4	2327.0							S70D							
																			Err:508
04/08/94 19:07:28	1:09:45	0											Msg "WARNING: 2kbps in 1 min.."						
04/08/94 19:07:53	1:10:10	25											LWIR camera and cryocooler ON						
04/08/94 19:08:28	1:10:45	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/08/94 19:09:29	1:11:45	60											Switch to omni antennas						
04/08/94 19:10:29	1:12:46	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/08/94 19:13:28	1:15:45		-80.0	15.1	2079.6							S80D							
04/08/94 19:16:29	1:18:46	360											Initialize filters (DHU SEQT 27); Record in SSSR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 4
04/08/94 19:17:09	1:19:26	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/08/94 19:17:23	1:19:40	15																	Slew sensors to nadir at South Pole (inertial pointing)
04/08/94 19:18:54	1:21:11	90											UV & HR cameras ON						
																			Err:508
																			Err:508

Orbit 229 Timeline - Type B Orbit

04/08/94 19:21:54	1:24:11	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S				
04/08/94 19:22:54	1:25:11	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)				START MAPPING
04/08/94 19:23:54	1:26:11	60	-90.0	285.0	1830.4					South Pole	Set SA step rate to LO				
04/08/94 19:24:43	1:27:00		-89.2	197.3	1809.0				CAN	AOS					
04/08/94 19:24:50	1:27:07		-89.0	197.9	1806.9					LDAWN					
04/08/94 19:32:59	1:35:16	545								S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20				
04/08/94 19:33:00	1:35:17		-80.0	195.4	1591.9					S80A					
04/08/94 19:40:54	1:43:11	475	-70.0	195.2	1371.8					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19				
04/08/94 19:43:40	1:45:57	166									Err:508				Slew to South Pole for oblique viewing
04/08/94 19:47:50	1:50:07	250	-60.0	195.1	1174.5					S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11				
04/08/94 19:48:50	1:51:07	60									Record in SSSR Segment 5				SSDR Segment 5
04/08/94 19:53:56	1:56:13	306	-50.0	195.0	1001.7					S50A	Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45S; Select DHU SEQT 11				Stop HiRes imaging UV and IR uncompressed
04/08/94 19:58:43	2:01:00	287									Laser Power ON				
04/08/94 19:59:22	2:01:39	39	-40.0	195.0	853.5					S40A	Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping Resume compression
04/08/94 20:01:12	2:03:29		-36.4	194.9	805.8				GDS	MLOSM					
04/08/94 20:01:16	2:03:33		-36.3	194.9	804.2					PMK	MLOSM				
04/08/94 20:01:17	2:03:34		-36.2	194.9	803.6					CAN	MLOSM				Enter occultation
04/08/94 20:04:15	2:06:32	293	-30.0	194.9	729.2					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/08/94 20:08:43	2:11:00	268	-20.0	194.9	627.5					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging
04/08/94 20:12:51	2:15:08	248								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7				
04/08/94 20:12:52	2:15:09		-10.0	194.8	547.1					S10A					
04/08/94 20:16:44	2:19:01	233								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6				
04/08/94 20:16:45	2:19:02		0.0	194.8	486.6					Equator - A					
04/08/94 20:20:26	2:22:43	222	10.0	194.7	445.2					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5				
04/08/94 20:24:02	2:26:19	216	20.0	194.7	422.0					N20A	Load exposure table LUNARZ25N				
04/08/94 20:26:56	2:29:13		28.0	194.7	416.2					Periselene					
04/08/94 20:27:36	2:29:53	214								N30A	Load exposure table LUNARZ35N				
04/08/94 20:27:37	2:29:54		30.0	194.7	416.6					N30A					
04/08/94 20:31:10	2:33:27	214								N40A	Load exposure table LUNARZ45N				

Orbit 229 Timeline - Type B Orbit

04/08/94 20:31:11	2:33:28		40.0	194.6	428.9					N40A				
04/08/94 20:34:48	2:37:05	218	50.0	194.6	459.2					N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6			Resume HiRes imaging
04/08/94 20:37:11	2:39:28		56.3	194.5	488.1				GDS	MAOSM				Exit occultation
04/08/94 20:37:11	2:39:28		56.3	194.5	488.2				PMK	MAOSM				
04/08/94 20:37:25	2:39:42		56.9	194.5	491.2				CAN	MAOSM				
04/08/94 20:38:34	2:40:51	226	60.0	194.5	508.0					N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4			
04/08/94 20:39:34	2:41:51	60									Record in SDR Segment 6			SSDR Segment 6
04/08/94 20:42:33	2:44:50	179								N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17			
04/08/94 20:42:34	2:44:51		70.0	194.4	576.1					N70A				
04/08/94 20:46:48	2:49:05	255								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16			Stop laser ranging
04/08/94 20:46:49	2:49:06		80.0	194.3	664.8					N80A				
04/08/94 20:47:18	2:49:35	30									Laser power OFF			
04/08/94 20:47:48	2:50:05	30									Load EEQ_11.UMI into SEQT 11			Restore original SEQT 11
														Err:508
04/08/94 20:51:26	2:53:43		90.0	116.5	775.1					North Pole				
04/08/94 20:51:54	2:54:11		89.0	17.0	787.0					LDUSK				
														Err:508
04/08/94 20:53:27	2:55:44	0									Stop Imaging - select ST-B			
04/08/94 20:53:32	2:55:49	5									Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
04/08/94 20:56:31	2:58:48		80.0	14.7	908.8					N80D				
Err:508	Err:508	Err:508									Wait			End of slew - wait before imaging to allow s/c to settle
04/08/94 20:57:33	2:59:50	15									Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B			
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)			
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec			
04/08/94 21:01:33	3:03:50	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)			Start calibration imaging

Orbit 229 Timeline - Tyne R Orbit

Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)				
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)				
Err:508	Err:508	6								Load exposure table LUNIRDKS1				
Err:508	Err:508	6								Load exposure table LUNIRDKS2				
04/08/94 21:02:12	3:04:29		70.0	14.5	1066.6				N70D					
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)				
Err:508	Err:508	30								Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center); Activate waitwhileslew for 360 sec			Slew HGA to Earth with active waitwhileslew	
04/08/94 21:06:00	3:08:17	Err:508								Switch to HGA				READY FOR DATA DUMP - Time approximate
														Err:508
04/08/94 21:07:00	3:09:17									Switch to DHU mode @ 128 kbps				Ground Command
04/08/94 21:08:37	3:10:54		60.0	14.4	1249.1				N60D					
04/08/94 21:14:32	3:16:49		51.8	14.3	1418.0			PMK	LOS					
04/08/94 21:15:55	3:18:12		50.0	14.3	1455.7				N50D					
04/08/94 21:17:00	3:19:17									Downlink SSSDR Segment 4				Ground Command
04/08/94 21:18:00	3:20:17									Select ST-A				Ground Command ST-B blocked by Moon
04/08/94 21:24:16	3:26:33		40.0	14.2	1683.7				N40D					
04/08/94 21:33:00	3:35:17									Downlink SSSDR Segment 5				Ground Command
04/08/94 21:33:53	3:36:10		30.0	14.1	1927.6				N30D					
04/08/94 21:36:00	3:38:17									Uplink and schedule L230 scripts				Ground Command
04/08/94 21:41:00	3:43:17		23.4	14.0	2093.4				INPM					Enter penumbra
04/08/94 21:41:53	3:44:10		22.6	14.0	2112.9				INUM					Enter umbra
04/08/94 21:44:52	3:47:09		20.0	14.0	2177.7				N20D					
04/08/94 21:57:21	3:59:38		10.0	13.9	2420.1				N10D					
04/08/94 22:11:18	4:13:35		0.0	13.7	2636.5				Equator - D					
04/08/94 22:26:33	4:28:50		-10.0	13.6	2806.4				S10D					
04/08/94 22:40:41	4:42:58		-18.8	13.4	2901.6				OUTUM					Exit umbra
04/08/94 22:41:44	4:44:01		-19.4	13.4	2906.3				OUTPM					Exit penumbra
04/08/94 22:42:45	4:45:02		-20.0	13.4	2910.5				S20D					
04/08/94 22:55:00	4:57:17									Downlink SSSDR Segment 6				Ground Command
04/08/94 22:56:12	4:58:29		-28.1	13.3	2937.5				Aposelene					

Orbit 230 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/08/94 22:56:12	0:00:00		-28.1	13.3	2937.5							Aposelene							Downlinking SDDR Segment 6 (orbit 229)
04/08/94 22:59:25	0:03:13		-30.0	13.3	2935.9							S30D							
04/08/94 23:11:00	0:14:48												Select ST-B						Ground Command
04/08/94 23:15:58	0:19:46		-40.0	13.1	2879.2							S40D							
04/08/94 23:19:00	0:22:48												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
04/08/94 23:31:08	0:34:56	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/08/94 23:31:52	0:35:40		-50.0	12.9	2747.6							S50D							
04/08/94 23:46:38	0:50:26		-60.0	12.8	2557.3							S60D							
04/08/94 23:53:00	0:56:48												Auxiliary oscillator B ON						Ground Command - BSR test
04/08/94 23:54:28	0:58:16		-65.7	12.7	2429.3						GDS	LOS							
																			Standard Prep2 Script
04/08/94 23:55:28	0:59:16	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/09/94 00:00:02	1:03:50		-70.0	12.6	2328.3							S70D							
04/09/94 00:02:00	1:05:48												Auxiliary oscillator A ON						Ground Command - BSR test
																			Err:508
04/09/94 00:06:28	1:10:16	0											Msg "WARNING: Omni/2k in 1 min.."						
04/09/94 00:06:53	1:10:41	25											LWIR camera and cryocooler ON						
04/09/94 00:07:28	1:11:16	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/09/94 00:08:28	1:12:16	60											Switch to omni antennas						
04/09/94 00:09:28	1:13:16	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSM=StarPointing, Index=3)						Slew to Crux
04/09/94 00:11:56	1:15:44		-80.0	12.3	2080.7							S80D							
04/09/94 00:15:28	1:19:16	360											Initialize filters (DHU SEQT 27); Record in SDDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SDDR in Segment 1
04/09/94 00:16:08	1:19:56	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/09/94 00:16:23	1:20:11	15																Err:508	Slew sensors to nadir (inertial pointing)
04/09/94 00:17:53	1:21:41	90											UV & HR cameras ON						
																			Err:508
																			Err:508

Orbit 230 Timeline - Type A Orbit

04/09/94 00:21:23	1:25:11	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S			
04/09/94 00:21:53	1:25:41	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
04/09/94 00:22:23	1:26:11	30									South Pole Set SA step rate to LO			
04/09/94 00:23:18	1:27:06		-89.0	195.6	1807.9						LDAWN			
04/09/94 00:31:29	1:35:17	546	-80.0	192.7	1592.6						S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14		
04/09/94 00:39:24	1:43:12		-70.0	192.5	1372.2						S70A			
04/09/94 00:39:25	1:43:13	476									S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13		
04/09/94 00:46:20	1:50:08		-60.0	192.4	1174.7						S60A			
04/09/94 00:46:21	1:50:09	416									S60A	Load EEQ_12C.UMI into SEQT 12; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12		Multispectral (color) bursts with HiRes camera.
04/09/94 00:47:21	1:51:09	60										Record in SSSR Segment 2		SSDR Segment 2
04/09/94 00:52:27	1:56:15	306	-50.0	192.3	1001.7						S50A	Load EEQ_12.UMI into SEQT 12; Load EEQ_11U.UMI into SEQT 11; Load exposure table LUNARZ45S; Select DHU SEQT 11		Restore original SEQT 12 Stop HiRes imaging UV and IR uncompressed
04/09/94 00:57:13	2:01:01	286										Laser Power ON		
04/09/94 00:57:52	2:01:40		-40.0	192.3	853.4						S40A			
04/09/94 00:57:53	2:01:41	40									S40A	Load exposure table LUNARZ35S; Load exposure table LUNARH35S; Select DHU SEQT 10		Resume HiRes imaging Resume compression
04/09/94 00:59:41	2:03:29		-36.4	192.2	805.3					CAN	MLOSM			Enter occultation
04/09/94 01:02:46	2:06:34	293	-30.0	192.2	729.0						S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9		Stop HiRes imaging
04/09/94 01:07:13	2:11:01	267	-20.0	192.1	627.1						S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8		Start laser ranging
04/09/94 01:11:21	2:15:09	248	-10.0	192.1	546.6						S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7		
04/09/94 01:15:14	2:19:02	233	0.0	192.1	486.0						Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6		
04/09/94 01:18:56	2:22:44		10.0	192.0	444.5						N10A			
04/09/94 01:18:57	2:22:45	223									N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5		
04/09/94 01:22:32	2:26:20		20.0	192.0	421.2						N20A			
04/09/94 01:22:33	2:26:21	216									N20A	Load exposure table LUNARZ25N		
04/09/94 01:25:25	2:29:13		28.1	191.9	415.4						Periselene			
04/09/94 01:26:06	2:29:54	213	30.0	191.9	415.7						N30A	Load exposure table LUNARZ35N		
04/09/94 01:29:39	2:33:27		40.0	191.9	428.0						N40A			
04/09/94 01:29:40	2:33:28	214									N40A	Load exposure table LUNARZ45N		

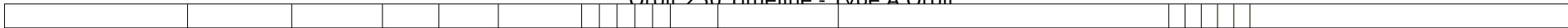
Orbit 230 Timeline - Type A Orbit

04/09/94 01:33:18	2:37:06	218	50.0	191.8	458.2						N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6					Resume HiRes imaging
04/09/94 01:36:01	2:39:49		57.3	191.7	492.2						CAN	MAOSM					Exit occultation
04/09/94 01:37:04	2:40:52	226	60.0	191.8	506.9							N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4				
04/09/94 01:38:04	2:41:52	60											Record in SSSR Segment 3				SSDR Segment 3
04/09/94 01:41:02	2:44:50	178	70.0	191.7	575.0							N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3				
04/09/94 01:42:00	2:45:48												Auxiliary oscillator B OFF				Ground Command - BSR test
04/09/94 01:45:00	2:48:48												Auxiliary oscillator A OFF				Ground Command - BSR test
04/09/94 01:45:16	2:49:04		80.0	191.5	663.6							N80A					
04/09/94 01:45:17	2:49:05	255										N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9				Stop laser ranging
04/09/94 01:45:47	2:49:35	30											Laser power OFF				
04/09/94 01:46:17	2:50:05	30											Load EEQ_07.UMI into SEQT 7				SCRIPT ERROR SEQT 11 should've been restored, not SEQT 7
Err:508																	
04/09/94 01:49:53	2:53:41		89.9	112.5	773.8							North Pole					
04/09/94 01:50:21	2:54:09		89.0	14.7	785.7							LDUSK					
Err:508																	
04/09/94 01:51:53	2:55:41	0											Stop Imaging - select ST-B				
04/09/94 01:51:57	2:55:46	5											Err:508				Slew sensors to Earth (inertial pointing) with waitwhileslew
04/09/94 01:54:58	2:58:46		80.0	12.0	907.4							N80D					
Err:508	Err:508	Err:508											Wait				End of slew - wait before imaging to allow s/c to settle
04/09/94 01:56:03	2:59:51	15											Select DHU SEQT 23				Earth imaging w/color HiRes
Err:508	Err:508	15											Stop imaging - select ST-B				
Err:508	Err:508	5											Slew s/c sensors to Vega (VEGAGNC12)				Slew to Vega (inertial pointing)
Err:508	Err:508	30											Park opaque filter on HiRes (DHU SEQT 27)				
Err:508	Err:508	15											Select ST-B; Activate waitwhileslew for 310 sec				

Orbit 230 Timeline - Type A Orbit

04/09/94 02:00:08	3:03:56	Err:508														Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)							Start calibration imaging	
Err:508	Err:508	12														Perform LWIR imaging (DHU SEQT 25)								
Err:508	Err:508	12														Perform NIR imaging (DHU SEQT 31)								
Err:508	Err:508	6														Load exposure table LUNIRDKS1								
04/09/94 02:00:38	3:04:26		70.0	11.8	1065.2											N70D								
Err:508	Err:508	6														Load exposure table LUNIRDKS2								
Err:508	Err:508	6														Perform HiRes imaging (DHU SEQT 30)								
Err:508	Err:508	30														Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec							Slew HGA to Earth with active waitwhileslew	
04/09/94 02:07:03	3:10:51		60.0	11.7	1247.6											N60D								
04/09/94 02:07:20	3:11:08	Err:508														Switch to HGA								READY FOR DATA DUMP - Time approximate
																								Err:508
04/09/94 02:10:00	3:13:48															Switch to DHU mode @ 128 kbps								Ground Command
04/09/94 02:13:00	3:16:48															Downlink SSSDR Segment 1								Ground Command
04/09/94 02:14:20	3:18:08		50.0	11.6	1454.2											N50D								
04/09/94 02:20:00	3:23:48															Uplink and schedule L231 scripts								Ground Command
04/09/94 02:22:42	3:26:30		40.0	11.5	1682.3											N40D								
04/09/94 02:32:00	3:35:48															Downlink SSSDR Segment 2								Ground Command
04/09/94 02:32:18	3:36:06		30.0	11.4	1926.3											N30D								
04/09/94 02:39:32	3:43:20		23.3	11.3	2095.0											INPM								Enter penumbra
04/09/94 02:40:25	3:44:13		22.5	11.3	2114.6											INUM								Enter umbra
04/09/94 02:43:17	3:47:05		20.0	11.3	2176.6											N20D								
04/09/94 02:55:45	3:59:33		10.0	11.1	2419.3											N10D								
04/09/94 03:09:42	4:13:30		0.0	11.0	2636.1											Equator - D								
04/09/94 03:24:57	4:28:45		-10.0	10.9	2806.4											S10D								
04/09/94 03:38:52	4:42:40		-18.6	10.7	2901.0											OUTUM								Exit umbra
04/09/94 03:39:55	4:43:43		-19.2	10.7	2905.8											OUTPM								Exit penumbra
04/09/94 03:41:09	4:44:57		-20.0	10.7	2911.0											S20D								
04/09/94 03:53:00	4:56:48															Downlink SSSDR Segment 3								Ground Command
04/09/94 03:54:41	4:58:29		-28.1	10.6	2938.3											Aposelene								

Orbit 230 Timeline - Type A Orbit



Orbit 231 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment	
04/09/94 03:54:41	0:00:00		-28.1	10.6	2938.3							Aposelene							Downlinking SDDR Segment 3 (orbit 230)	
04/09/94 03:57:50	0:03:09		-30.0	10.5	2936.8							S30D								
04/09/94 04:14:24	0:19:43		-40.0	10.4	2880.3							S40D								
04/09/94 04:23:00	0:28:19												SSDR to IDLE - downlink complete						Ground Command	
																			Standard Prep1 Script	
04/09/94 04:29:05	0:34:24	0											NIR camera & cryocooler ON; SA mode to AUTO							
																			End Prep1 Script	
04/09/94 04:30:18	0:35:37		-50.0	10.2	2749.0							S50D								
04/09/94 04:45:05	0:50:24		-60.0	10.0	2558.6							S60D								
																			Standard Prep2 Script	
04/09/94 04:54:05	0:59:24	0											Laser heater ON; Open sensor door if closed							
																			End Prep2 Script	
04/09/94 04:58:29	1:03:48		-70.0	9.9	2329.5							S70D								
																			Err:508	
04/09/94 05:04:25	1:09:44	0											Msg "WARNING: 2kbps in 1 min.."							
04/09/94 05:04:50	1:10:09	25											LWIR camera and cryocooler ON							
04/09/94 05:05:25	1:10:44	35											SSDR to IDLE; Switch to 2 kbps bypass mode							
04/09/94 05:06:25	1:11:44	60											Switch to omni antennas							
04/09/94 05:07:25	1:12:44	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux	
04/09/94 05:10:23	1:15:42		-80.0	9.6	2081.8							S80D								
04/09/94 05:13:25	1:18:44	360											Initialize filters (DHU SEQT 27); Record in SDDR Segment 4; Load Crux exposure table (LUNCRUX)							Start SDDR in Segment 4
04/09/94 05:14:05	1:19:24	40											Perform NIR imaging (DHU SEQT 31)							Dark field imaging
04/09/94 05:14:20	1:19:39	15																		Err:508
04/09/94 05:15:50	1:21:09	90											UV & HR cameras ON							Slew sensors to nadir (inertial pointing)
																				Err:508
																				Err:508
04/09/94 05:15:57	1:21:16	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S							set to 05:13:51 instead of 05:18:51. It executed immediately after end of Prep3 script.

Orbit 231 Timeline - Type B Orbit

04/09/94 05:16:57	1:22:16	60																	Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)			NOTE: Because previous slew was not finished when this slew started, GNC locked up in slew mode for rest of script
04/09/94 05:17:57	1:23:16	60																	MAXS			Set SA step rate to LO
04/09/94 05:20:35	1:25:54			-89.7	0.7	1837.8													MAD			AOS
04/09/94 05:20:50	1:26:09			-89.9	286.4	1832.4																South Pole
04/09/94 05:21:46	1:27:05			-89.0	193.1	1808.8																LDAWN
04/09/94 05:27:03	1:32:22	546																				S80A
04/09/94 05:29:57	1:35:16			-80.0	190.0	1593.2																S80A
04/09/94 05:34:59	1:40:18	476																				S70A
04/09/94 05:37:45	1:43:04	166																				
04/09/94 05:37:53	1:43:12			-70.0	189.8	1372.7																S70A
04/09/94 05:41:55	1:47:14	250																				S60A
04/09/94 05:42:55	1:48:14	60																				
04/09/94 05:44:49	1:50:08			-60.0	189.7	1174.9																S60A
04/09/94 05:48:02	1:53:21	307																				S50A
04/09/94 05:50:55	1:56:14			-50.0	189.6	1001.8																S50A
04/09/94 05:52:48	1:58:07	286																				
04/09/94 05:53:27	1:58:46	39																				S40A
04/09/94 05:56:21	2:01:40			-40.0	189.5	853.3																S40A
04/09/94 05:57:25	2:02:44			-37.9	189.5	824.5																MAD
04/09/94 05:58:05	2:03:24			-36.6	189.5	807.3																CAN
04/09/94 05:58:21	2:03:40	294																				S30A
04/09/94 06:01:14	2:06:33			-30.0	189.5	728.7																S30A
04/09/94 06:02:48	2:08:07	267																				S20A
04/09/94 06:05:42	2:11:01			-20.0	189.4	626.8																S20A
04/09/94 06:06:56	2:12:15	248																				S10A
04/09/94 06:09:50	2:15:09			-10.0	189.4	546.1																S10A
04/09/94 06:10:49	2:16:08	233																				MEQA
04/09/94 06:13:42	2:19:01			0.0	189.3	485.4																Equator - A
04/09/94 06:14:31	2:19:50	222																				N10A

Orbit 231 Timeline - Type B Orbit

04/09/94 06:17:25	2:22:44		10.0	189.3	443.8						N10A			
04/09/94 06:18:07	2:23:26	216									N20A	Load exposure table LUNARZ25N		
04/09/94 06:21:01	2:26:20		20.0	189.2	420.4						N20A			
04/09/94 06:21:40	2:26:59	213									N30A	Load exposure table LUNARZ35N		
04/09/94 06:23:54	2:29:13		28.1	189.2	414.6						Periselene			
04/09/94 06:24:34	2:29:53		30.0	189.2	414.9						N30A			
04/09/94 06:25:14	2:30:33	214									N40A	Load exposure table LUNARZ45N		
04/09/94 06:28:07	2:33:26		40.0	189.1	427.0						N40A			
04/09/94 06:28:52	2:34:11	218									N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6		Resume HiRes imaging
04/09/94 06:31:45	2:37:04		50.0	189.1	457.2						N50A			
04/09/94 06:32:38	2:37:57	226									N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4		
04/09/94 06:33:38	2:38:57	60										Record in SSSR Segment 6		SSDR Segment 6
04/09/94 06:34:04	2:39:23		56.2	189.0	485.5				MAD	MAOSM				Exit occultation
04/09/94 06:35:31	2:40:50		60.0	189.0	505.8						N60A			
04/09/94 06:36:35	2:41:54	177									N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17		
04/09/94 06:39:29	2:44:48		70.0	188.9	573.8						N70A			
04/09/94 06:40:50	2:46:09	255									N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N Select DHU SEQT 16		Stop laser ranging
04/09/94 06:41:20	2:46:39	30										Laser power OFF		
04/09/94 06:41:50	2:47:09	30										Load EEQ_11.UMI into SEQT 11		Restore original SEQT 11
Err:508														
04/09/94 06:43:44	2:49:03		80.0	188.7	662.3						N80A			
04/09/94 06:48:20	2:53:39		89.9	104.5	772.6						North Pole			
04/09/94 06:48:48	2:54:07		89.0	12.2	784.3						LDUSK			
Err:508														
04/09/94 06:50:20	2:55:39	0										Stop Imaging - select ST-B		
04/09/94 06:50:25	2:55:44	5										Err:508		No slew - GNC command ignored
04/09/94 06:53:25	2:58:44		80.0	9.3	906.1						N80D			
04/09/94 06:56:25	3:01:44	360										Wait		
04/09/94 06:56:40	3:01:59	15										Select DHU SEQT 23		No data (not downlinked)
04/09/94 06:56:55	3:02:14	15										Stop imaging - select ST-B		
04/09/94 06:57:00	3:02:19	5										Slew s/c sensors to Vega (VEGAGNC12)		No slew - GNC command ignored
04/09/94 06:57:30	3:02:49	30										Park opaque filter on HiRes (DHU SEQT 27)		

Orbit 231 Timeline - Type B Orbit

04/09/94 06:57:45	3:03:04	15									Select ST-B; Activate waitwhileslew for 320 sec					
04/09/94 06:59:05	3:04:24		70.0	9.1	1063.7					N70D						
04/09/94 07:03:05	3:08:24	320									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)					No data (not downlinked)
04/09/94 07:03:17	3:08:36	12									Perform LWIR imaging (DHU SEQT 25)					No data (not downlinked)
04/09/94 07:03:29	3:08:48	12									Perform NIR imaging (DHU SEQT 31)					No data (not downlinked)
04/09/94 07:03:35	3:08:54	6									Load exposure table LUNIRDKS1					No data (not downlinked)
04/09/94 07:03:41	3:09:00	6									Load exposure table LUNIRDKS2					No data (not downlinked)
04/09/94 07:03:47	3:09:06	6									Perform HiRes imaging (DHU SEQT 30)					No data (not downlinked)
04/09/94 07:04:17	3:09:36	30									Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec					No slew - GNC command ignored
04/09/94 07:05:29	3:10:48		60.0	8.9	1246.2					N60D						
04/09/94 07:10:17	3:15:36	360									Switch to HGA					READY FOR DATA DUMP
Err:508																
04/09/94 07:12:46	3:18:05		50.0	8.8	1452.8					N50D						
04/09/94 07:14:00	3:19:19										Momentum dump (closed loop spin)					Ground Command
04/09/94 07:16:00	3:21:19										Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)					Ground Command
04/09/94 07:21:00	3:26:19										Select ST-A					Ground Command ST-B blocked by Moon
04/09/94 07:21:07	3:26:26		40.0	8.7	1680.9					N40D						
04/09/94 07:24:00	3:29:19										Switch to DHU mode @ 128 kbps					Ground Command
04/09/94 07:26:00	3:31:19										Downlink SDR Segment 4					Ground Command
04/09/94 07:30:42	3:36:01		30.0	8.6	1925.0					N30D						
04/09/94 07:33:00	3:38:19										Uplink & load EEQ_30E.UMI into SEQT 30					Ground Command
04/09/94 07:35:00	3:40:19										Downlink SDR Segment 5					Ground Command
04/09/94 07:38:04	3:43:23		23.2	8.6	2096.6					INPM						Enter penumbra
04/09/94 07:38:58	3:44:17		22.4	8.6	2116.4					INUM						Enter umbra
04/09/94 07:41:42	3:47:01		20.0	8.5	2175.6					N20D						
04/09/94 07:54:10	3:59:29		10.0	8.4	2418.6					N10D						
04/09/94 08:01:00	4:06:19										Uplink and load EEQ_30.UMI into SEQT 30					Ground Command Restore original SEQT 30
04/09/94 08:08:06	4:13:25		0.0	8.3	2635.7					Equator - D						
04/09/94 08:23:21	4:28:40		-10.0	8.1	2806.5					S10D						
04/09/94 08:33:00	4:38:19										SSDR to IDLE - Segment 5 complete					Ground Command
04/09/94 08:37:02	4:42:21		-18.5	8.0	2900.3					OUTUM						Exit umbra

Orbit 231 Timeline - Type B Orbit

04/09/94 08:38:05	4:43:24		-19.1	8.0	2905.2					OUTPM						Exit penumbra
04/09/94 08:39:34	4:44:53		-20.0	8.0	2911.5					S20D						
04/09/94 08:44:00	4:49:19										Switch to bypass mode @ 2 kbps					Ground Command
04/09/94 08:46:00	4:51:19										Switch to omni antennas					Ground Command
04/09/94 08:51:00	4:56:19										Select ST-B					Ground Command
04/09/94 08:53:10	4:58:29		-28.2	7.8	2939.1					Aposelene						

Orbit 232 Timeline - Special Recovery Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/09/94 08:53:10	0:00:00		-28.2	7.8	2939.1							Aposelene							Downlink paused
04/09/94 08:54:00	0:00:50												Switch to lunar mapping mode (ACSMODE=LunarMapping)						Ground Command - GNC test
04/09/94 08:56:14	0:03:04		-30.0	7.8	2937.7							S30D							
04/09/94 08:59:00	0:05:50												Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center)						Ground Command
04/09/94 09:03:00	0:09:50												Switch to HGA						Ground Command
04/09/94 09:04:00	0:10:50												Switch to DHU mode @ 128 kbps						Ground Command
04/09/94 09:06:00	0:12:50												Downlink SDR Segment 6						Ground Command
04/09/94 09:12:49	0:19:39		-40.0	7.6	2881.5							S40D							
04/09/94 09:28:44	0:35:34		-50.0	7.5	2750.3							S50D							
04/09/94 09:30:00	0:36:50												Uplink and schedule Recovery scripts for Orbit 232						Ground Command
04/09/94 09:43:31	0:50:21		-60.0	7.3	2560.0							S60D							
04/09/94 09:56:56	1:03:46		-70.0	7.1	2330.8							S70D							
04/09/94 10:08:51	1:15:41		-80.0	6.8	2082.8							S80D							
04/09/94 10:17:25	1:24:15		-88.1	5.8	1879.6						PMK	AOS							
																			LMRecoverPrep1 Script
04/09/94 10:18:55	1:25:45	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/09/94 10:19:18	1:26:08		-89.9	285.5	1833.3							South Pole							
04/09/94 10:20:14	1:27:04		-89.0	190.5	1809.7							LDAWN							
04/09/94 10:28:25	1:35:15		-80.0	187.3	1593.8							S80A							
04/09/94 10:36:21	1:43:11		-70.0	187.1	1373.0							S70A							
																			LMRecoverPrep2 Script
04/09/94 10:37:55	1:44:45	0											LWIR camera and cryocooler ON; Laser heater ON; Open sensor door if closed						
04/09/94 10:38:55	1:45:45	60											UV & HR cameras ON						
04/09/94 10:40:25	1:47:15	90											Msg "WARNING: Omni/2k in 1 min.."						
04/09/94 10:41:25	1:48:15	60											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/09/94 10:42:25	1:49:15	60											Switch to omni antennas						
04/09/94 10:43:18	1:50:08		-60.0	187.0	1175.1							S60A							
04/09/94 10:43:25	1:50:15	60											Select ST-B; Set SA step rate to HI; Switch to lunar mapping mode using GNC14RECOVER (ACSMODE=LunarMapping, center angle=-0.047124)						Slew s/c sensors +2.7 deg longitude to cover Orbit 231 track
																			End Prep2 Script
																			LMRecover Script

Orbit 232 Timeline - Special Recovery Orbit

04/09/94 10:48:25	1:55:15	0								Record in S5DR Segment 7; Initialize filters (DHU SEQT 28); Load exposure table LUNARZ45S; Select DHU SEQT 11	Record entire orbit in S5DR Segment 7 START MAPPING No HiRes images to reduce data
04/09/94 10:48:55	1:55:45	30								Select lunar mapping mode using GNC14RECOVER (ACSMMode=LunarMapping, center angle=-0.047124); Set SA step rate to LO	
04/09/94 10:49:24	1:56:14		-50.0	186.9	1001.8				S50A		
04/09/94 10:54:12	2:01:02	317								Laser Power ON	
04/09/94 10:54:50	2:01:40		-40.0	186.8	853.1				S40A		
04/09/94 10:54:51	2:01:41	39							S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10	
04/09/94 10:55:45	2:02:35		-38.2	186.8	828.5			PMK	MLOSM		
04/09/94 10:55:52	2:02:42		-37.9	186.8	825.1			MAD	MLOSM		Enter occultation
04/09/94 10:59:43	2:06:33		-30.0	186.7	728.4				S30A		
04/09/94 10:59:44	2:06:34	293							S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/09/94 11:04:11	2:11:01		-20.0	186.7	626.3				S20A		
04/09/94 11:04:12	2:11:02	268							S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging (oblique)
04/09/94 11:08:18	2:15:08		-10.0	186.6	545.6				S10A		
04/09/94 11:08:21	2:15:11	249							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/09/94 11:12:11	2:19:01		0.0	186.6	484.8				Equator - A		
04/09/94 11:12:14	2:19:04	233							MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/09/94 11:15:53	2:22:43		10.0	186.5	443.1				N10A		
04/09/94 11:15:58	2:22:48	224							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/09/94 11:19:29	2:26:19		20.0	186.5	419.7				N20A		
04/09/94 11:19:35	2:26:25	217							N20A	Load exposure table LUNARZ25N	
04/09/94 11:22:23	2:29:13		28.2	186.5	413.7				Periselene		
04/09/94 11:23:02	2:29:52		30.0	186.5	414.0				N30A		
04/09/94 11:23:09	2:29:59	214							N30A	Load exposure table LUNARZ35N	
04/09/94 11:26:36	2:33:26		40.0	186.4	426.1				N40A		
04/09/94 11:26:45	2:33:35	216							N40A	Load exposure table LUNARZ45N	
04/09/94 11:30:13	2:37:03		50.0	186.4	456.2				N50A		
04/09/94 11:30:24	2:37:14	219							N50A	Switch to lunar mapping mode (ACSMMode=LunarMapping); Load exposure table LUNARZ55N; Select DHU SEQT 6	Return to nadir mapping
04/09/94 11:32:32	2:39:22		56.2	186.3	484.5			PMK	MAOSM		Exit occultation
04/09/94 11:32:37	2:39:27		56.4	186.3	485.8			MAD	MAOSM		
04/09/94 11:33:59	2:40:49		60.0	186.3	504.7				N60A		
04/09/94 11:34:12	2:41:02	228							N60A	Load exposure table LUNARZ65N; Select DHU SEQT 4	
04/09/94 11:35:00	2:41:50									Read dosimeter latch values	Ground Command
04/09/94 11:37:57	2:44:47		70.0	186.2	572.7				N70A		

Orbit 232 Timeline - Special Recovery Orbit

04/09/94 11:38:12	2:45:02	240							N70A	Load exposure table LUNARZ75N; Select DHU SEQT 3			
04/09/94 11:40:00	2:46:50									Uplink and load EEQ_30E.UMI into SEQT 30			Ground Command
04/09/94 11:42:00	2:48:50									Expose dosimeter			Scheduled Command
04/09/94 11:42:11	2:49:01		80.0	186.0	661.1				N80A				
04/09/94 11:42:29	2:49:19	257							N80A	Load exposure table LUNARZ85N; Select DHU SEQT 9			Stop laser ranging
04/09/94 11:42:59	2:49:49	30								Laser power OFF			
													End LMRecover Script
04/09/94 11:46:00	2:52:50									Record in SDDR Segment 1			Ground Command
04/09/94 11:46:47	2:53:37		89.9	95.5	771.4				North Pole				
04/09/94 11:47:15	2:54:05		89.1	9.6	783.0				LDUSK				
													Err:508
04/09/94 11:48:47	2:55:37	0								Stop Imaging - select ST-B			
04/09/94 11:48:52	2:55:42	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
04/09/94 11:51:51	2:58:41		80.0	6.5	904.7				N80D				
04/09/94 11:54:42	3:01:32	350								Park opaque filter on HiRes (DHU SEQT 27)			
04/09/94 11:54:52	3:01:42	10								Select DHU SEQT 23			Earth imaging w/color HiRes
04/09/94 11:55:00	3:01:50	8								Inertial pointing w/ quaternion table (EARTH232000); Perform HIRES imaging (DHU SEQT 30)			HIRES COLOR MOSAIC OF EARTH EEQ_30E.UMI loaded into SEQT 30 NOTE: SEQT did not execute properly. All images uncompressed & vast majority of images were in filter 1.
04/09/94 11:57:00	3:03:50	120								Load QTable EARTH232001			
04/09/94 11:57:31	3:04:21		70.0	6.3	1062.3				N70D				
04/09/94 11:59:00	3:05:50	120								Load QTable EARTH232002			
04/09/94 12:01:00	3:07:50	120								Load QTable EARTH232003			
04/09/94 12:02:59	3:09:50	120								Load QTable EARTH232004			
04/09/94 12:03:55	3:10:45		60.0	6.2	1244.8				N60D				
04/09/94 12:04:59	3:11:49	120								Load QTable EARTH232005			
04/09/94 12:06:59	3:13:49	120								Load QTable EARTH232006			
04/09/94 12:08:59	3:15:49	120								Load QTable EARTH232007			
04/09/94 12:10:59	3:17:49	120								Load QTable EARTH232008			
04/09/94 12:11:11	3:18:01	12	50.0	6.1	1451.4				N50D	Select DHU SEQT 2			END HR EARTH MOSAIC
04/09/94 12:11:16	3:18:06	5								Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
04/09/94 12:11:46	3:18:36	30								Park opaque filter on HiRes (DHU SEQT 27)			
04/09/94 12:12:01	3:18:51	15								Select ST-B; Activate waitwhileslew for 310 sec			

Orbit 232 Timeline - Special Recovery Orbit

04/09/94 12:15:02	3:21:52	180								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)						
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6								Load exposure table LUNIRDKS1						
Err:508	Err:508	6								Load exposure table LUNIRDKS2						
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)						Filter 1 only
Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew
04/09/94 12:19:32	3:26:22		40.0	6.0	1679.5				N40D							
04/09/94 12:21:30	3:28:20	Err:508								Switch to HGA						READY FOR DATA DUMP - Time approximate
Err:508																
04/09/94 12:22:00	3:28:50									Switch to DHU mode @ 128 kbps						Ground Command
04/09/94 12:28:00	3:34:50									Downlink SDR Segment 7						Ground Command
04/09/94 12:29:07	3:35:57		30.0	5.9	1923.8				N30D							
04/09/94 12:36:37	3:43:27		23.0	5.8	2098.5				INPM							Enter penumbra
04/09/94 12:37:31	3:44:21		22.2	5.8	2118.4				INUM							Enter umbra
04/09/94 12:40:06	3:46:56		20.0	5.8	2174.5				N20D							
04/09/94 12:52:34	3:59:24		10.0	5.7	2417.9				N10D							
04/09/94 13:06:23	4:13:13		0.1	5.6	2633.9			GDS	AOS							
04/09/94 13:06:30	4:13:20		0.0	5.5	2635.4				Equator - D							
04/09/94 13:21:45	4:28:35		-10.0	5.4	2806.5				S10D							
04/09/94 13:35:12	4:42:02		-18.3	5.3	2899.7				OUTUM							Exit umbra
04/09/94 13:36:16	4:43:06		-19.0	5.3	2904.7				OUTPM							Exit penumbra
04/09/94 13:37:58	4:44:48		-20.0	5.2	2912.1				S20D							
04/09/94 13:51:39	4:58:29		-28.2	5.1	2940.0				Aposelene							

Orbit 233 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/09/94 13:51:39	0:00:00		-28.2	5.1	2940.0							Aposelene							Downlinking SSSR Segment 7 (orbit 232)
04/09/94 13:54:00	0:02:21												Downlink SSSR Segment 1						Ground Command
04/09/94 13:54:39	0:03:00		-30.0	5.1	2938.7							S30D							
04/09/94 14:05:00	0:13:21												Uplink and schedule L233 scripts						Ground Command
04/09/94 14:11:14	0:19:35		-40.0	4.9	2882.8							S40D							
04/09/94 14:27:10	0:35:31		-50.0	4.8	2751.7							S50D							
04/09/94 14:35:00	0:43:21												Load EEQ_03X.UMI into SEQT 22						Ground Command
04/09/94 14:41:58	0:50:19		-60.0	4.6	2561.3							S60D							
																			Standard Prep1 Script
04/09/94 14:43:05	0:51:26	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/09/94 14:55:00	1:03:21												SSDR to IDLE - downlink complete						Ground Command
04/09/94 14:55:23	1:03:44		-70.0	4.4	2332.0							S70D							
04/09/94 15:03:00	1:11:21												Load EEQ_04X.UMI into SEQT 26; Load EEQ_05X.UMI into SEQT 25; Load EEQ_06X.UMI into SEQT 24; Load EEQ_07X.UMI into SEQT 23; Load EEQ_09X.UMI into SEQT 0						Ground Command Tables required for orbit 232 data recovery procedure
04/09/94 15:07:19	1:15:40		-80.0	4.2	2083.9							S80D							
																			Standard Prep2 Script
04/09/94 15:08:05	1:16:26	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/09/94 15:17:47	1:26:08		-90.0	273.7	1833.9							South Pole							
																			Err:508
04/09/94 15:18:24	1:26:45	0											Msg "WARNING: 2kbps in 1 min.."						
04/09/94 15:18:42	1:27:03		-89.1	187.2	1810.6							LDAWN							
04/09/94 15:18:49	1:27:10	25											LWIR camera and cryocooler ON						
04/09/94 15:19:25	1:27:45	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/09/94 15:20:25	1:28:46	60											Switch to omni antennas						
04/09/94 15:21:25	1:29:46	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/09/94 15:26:54	1:35:15		-80.0	184.5	1594.4							S80A							
04/09/94 15:27:25	1:35:46	360											Initialize filters (DHU SEQT 27); Record in SSSR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 4
04/09/94 15:28:05	1:36:26	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging

Orbit 233 Timeline - Type B Orbit

04/09/94 15:28:19	1:36:40	15										Err:508			Slew sensors to nadir (inertial pointing)	
04/09/94 15:29:50	1:38:11	90													UV & HR cameras ON	
															Err:508	
															Err:508	
04/09/94 15:32:50	1:41:11	0													Initialize filters (DHU SEQT 28); Load exposure table LUNARZ75S	
04/09/94 15:33:50	1:42:11	60													Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 20)	START MAPPING
04/09/94 15:34:50	1:43:11	60	-70.0	184.3	1373.4							S70A			Set SA step rate to LO; Load exposure table LUNARZ65S; Select DHU SEQT 19	
04/09/94 15:37:36	1:45:57	167													Err:508	Slew to South Pole for oblique viewing
04/09/94 15:41:46	1:50:07		-60.0	184.2	1175.3							S60A				
04/09/94 15:41:47	1:50:08	250										S60A			Load exposure table LUNARZ55S; Select DHU SEQT 11	
04/09/94 15:47:53	1:56:14	366	-50.0	184.1	1001.7							S50A			Load exposure table LUNARZ45S; Select DHU SEQT 11	
04/09/94 15:52:40	2:01:01	287													Laser Power ON	
04/09/94 15:53:19	2:01:40	39	-40.0	184.1	853.0							S40A			Switch to lunar mapping mode (ACSMoDe=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10	Resume nadir mapping
04/09/94 15:54:10	2:02:31		-38.3	184.0	829.9							GDS	MLOSM			
04/09/94 15:54:14	2:02:35		-38.2	184.0	828.0							PMK	MLOSM			
04/09/94 15:54:20	2:02:41		-38.0	184.0	825.4							MAD	MLOSM			Enter occultation
04/09/94 15:58:12	2:06:33	293	-30.0	184.0	728.1							S30A			Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/09/94 15:59:12	2:07:33	60													Record in SDDR Segment 5	SDDR Segment 5
04/09/94 15:59:50	2:08:11	38													Inertial pointing w/ quaternion table (ORB233_RECOV000); Select DHU SEQT 0	START OF ORBIT 232 DATA RECOVERY PROCEDURE Slew ahead along 233 track SEQT EEQ_09X.UMI is loaded into SEQT 0
04/09/94 16:01:30	2:09:51	100													Load exposure table LUNARZ15S; Select DHU SEQT 22	Start laser ranging (oblique) SEQT EEQ_03X.UMI is loaded into SEQT 22
04/09/94 16:02:39	2:11:00		-20.0	184.0	625.9							S20A				
04/09/94 16:03:10	2:11:31	100													Load QTable ORB233_RECOV001	
04/09/94 16:04:40	2:13:01	90													Select DHU SEQT 8	Start slew to Orbit 232 track
04/09/94 16:06:30	2:14:51	110													Load exposure table LUNARZ25S; Load QTable ORB233_RECOV002	
04/09/94 16:06:47	2:15:08		-10.0	183.9	545.0							S10A				
04/09/94 16:08:40	2:17:01	130													Select DHU SEQT 0	End slew
04/09/94 16:09:50	2:18:11	70													Load QTable ORB233_RECOV003	Start mapping Orbit 232 track
04/09/94 16:10:40	2:19:01		0.0	183.9	484.2										Equator - A	

Orbit 233 Timeline - Type B Orbit

04/09/94 16:41:39	2:50:00	0								Err:508	T/L ERROR: Imaging not stopped before slew Slew sensors to Earth (inertial pointing)
Err:508	Err:508	60								Perform NIR imaging (DHU SEQT 31)	SEQT 31 did not execute
Err:508	Err:508	6								Perform LWIR imaging (DHU SEQT 25)	Wrong SEQT
Err:508	Err:508	12								Select ST-B; Activate waitwhileslew for 290 sec	
Err:508	Err:508	Err:508								Load EARTH exposure table (EARTH_VIEW_AXIS);	End of slew - wait before imaging to allow s/c to settle
04/09/94 16:45:14	2:53:35		90.0	97.4	770.0				North Pole		
04/09/94 16:45:17	2:53:38	15								Select DHU SEQT 23	Earth imaging
Err:508	Err:508	15								Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Goldstone (ACSMODE=EarthPointing, GDS); Activate waitwhileslew for 360 sec	Slew HGA to Goldstone with active waitwhileslew
04/09/94 16:45:42	2:54:03		89.1	6.2	781.6				LDUSK		
Err:508	Err:508	Err:508								Msg "change to HGA at 128K in 20 sec"	Slew ended
04/09/94 16:48:00	2:56:21	20								Switch to HGA; Switch to DHU mode @ 128 kbps	READY FOR DATA DUMP Time approximate
Err:508											
04/09/94 16:49:00	2:57:21									Select ST-A	Ground Command ST-B blocked by Moon
04/09/94 16:49:00	2:57:21									Auxiliary oscillator B ON	Ground Command
04/09/94 16:50:18	2:58:39		80.0	3.7	903.3				N80D		
04/09/94 16:52:00	3:00:21									Downlink SDR Segment 4	Ground Command
04/09/94 16:55:57	3:04:18		70.0	3.6	1060.9				N70D		
04/09/94 17:00:36	3:08:57		62.6	3.5	1194.2				MAD	LOS	
04/09/94 17:02:21	3:10:42		60.0	3.5	1243.3					N60D	
04/09/94 17:09:37	3:17:58		50.0	3.4	1449.9					N50D	
04/09/94 17:11:00	3:19:21									Downlink SDR Segment 5	Ground Command
04/09/94 17:15:00	3:23:21									Update state vector (GNC53_09APR1700)	Ground Command
04/09/94 17:17:58	3:26:19		40.0	3.3	1678.1					N40D	
04/09/94 17:27:32	3:35:53		30.0	3.2	1922.5					N30D	
04/09/94 17:35:10	3:43:31		22.9	3.1	2100.4					INPM	Enter penumbra
04/09/94 17:36:04	3:44:25		22.1	3.1	2120.5					INUM	Enter umbra
04/09/94 17:37:00	3:45:21									Uplink and schedule BSR234 scripts	Ground Command
04/09/94 17:38:31	3:46:52		20.0	3.1	2173.5					N20D	
04/09/94 17:50:58	3:59:19		10.0	2.9	2417.1					N10D	
04/09/94 18:04:55	4:13:16		0.0	2.8	2635.1				Equator - D		
04/09/94 18:08:00	4:16:21									SSDR to IDLE - downlink paused	Ground Command
BSR234Init Script											

Orbit 233 Timeline - Type B Orbit

04/09/94 18:09:00	4:17:21	0							Slew s/c HGA to Goldstone (ACSMODE=EarthPointing, GDS); Msg "Dump ends in 60 sec."									
04/09/94 18:09:53	4:18:14	53							Start BSR telemetry log									2 sec wait imbedded
04/09/94 18:09:55	4:18:16	2							SSDR to IDLE; Record in SSDR Segment 0; Ranging B OFF									Record data in SSDR Segment 0
04/09/94 18:10:00	4:18:21	5							Auxiliary oscillator B ON; Telemetry subcarrier B OFF									
04/09/94 18:12:00	4:20:21	120							Slew to initial BSR attitude (BSR234IN)									Inertial pointing (uses first quaternion in QTable BSR_234000)
End BSR234Init Script																		
BSR234 Script																		
04/09/94 18:18:00	4:26:21	0							Load QTable BSR_234000									START BSR EXPERIMENT
04/09/94 18:20:00	4:28:21	120							Load QTable BSR_234001									
04/09/94 18:20:11	4:28:32							S10D										
04/09/94 18:30:00	4:38:21	600							Load QTable BSR_234002									
04/09/94 18:31:00	4:39:21	60																Slew HGA to South Pole
04/09/94 18:33:24	4:41:45							OUTUM										Exit umbra
04/09/94 18:34:28	4:42:49							OUTPM										Exit penumbra
04/09/94 18:36:24	4:44:45							S20D										
04/09/94 18:40:00	4:48:21	600							Load QTable BSR_234003									
04/09/94 18:46:00	4:54:21																	Minimum beta angle
04/09/94 18:50:00	4:58:21	600							Load QTable BSR_234004									Continued in orbit 234 timeline
04/09/94 18:50:08	4:58:29		-28.2	2.4	2940.9			Aposelene										

Orbit 234 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/09/94 18:50:08	0:00:00		-28.2	2.4	2940.9							Aposelene							Executing BSR_234 Script
04/09/94 18:53:04	0:02:56		-30.0	2.3	2939.6							S30D							
04/09/94 19:00:00	0:09:52	600											Load QTable BSR_234005						
04/09/94 19:09:40	0:19:32		-40.0	2.2	2883.9							S40D							
04/09/94 19:10:00	0:19:52	600											Load QTable BSR_234006						
04/09/94 19:20:00	0:29:52	600											Load QTable BSR_234007						
04/09/94 19:25:36	0:35:28		-50.0	2.0	2753.0							S50D							
04/09/94 19:30:00	0:39:52	600											Load QTable BSR_234008						
04/09/94 19:40:00	0:49:52	600											Load QTable BSR_234009						
04/09/94 19:40:25	0:50:17		-60.0	1.9	2562.6							S60D							
04/09/94 19:41:35	0:51:27	95											Execute LM Prep1 script: NIR camera & cryocooler ON; SA mode to AUTO						
04/09/94 19:49:00	0:58:52	445											Msg "BSR234: Done"						
																			End BSR234 Script
																			BSR234Done Script
04/09/94 19:50:00	0:59:52	0											Telemetry subcarrier B ON; Auxiliary oscillator B OFF; Switch to bypass mode @ 2 kbps; Switch to omni antennas; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						Clean up after BSR experiment Slew HGA to Earth with active waitwhileslew
04/09/94 19:53:51	1:03:43		-70.0	1.7	2333.2							S70D							
04/09/94 19:54:00	1:03:52	240											Switch to HGA						READY FOR DATA DUMP - Time approximate
																			End BSR234Done Script
04/09/94 19:55:00	1:04:52												Switch to DHU mode @ 128 kbps						Ground Command
04/09/94 19:55:30	1:05:22												Downlink SSSDR Segment 0 (BSR)						Ground Command
04/09/94 19:56:00	1:05:52												Select ST-B						Ground Command
04/09/94 19:57:00	1:06:52												Resume downlink SSSDR Segment 5						Ground Command
04/09/94 20:03:00	1:12:52												Uplink and schedule L234 scripts						Ground Command
04/09/94 20:05:00	1:14:52												Uplink and load EEQ_05X.UMI into SEQT 25						Ground Command
04/09/94 20:05:47	1:15:39		-80.0	1.5	2084.8							S80D							
04/09/94 20:15:37	1:25:29		-89.4	358.9	1849.6						CAN	AOS							
04/09/94 20:16:15	1:26:07		-90.0	270.4	1834.6							South Pole							
																			Err:508
04/09/94 20:16:35	1:26:27	0											Execute LM_Prep2 script: Laser heater ON; Open sensor door if closed						
04/09/94 20:16:54	1:26:47	20											Msg "WARNING: Omni/2k in 1 min.."						
04/09/94 20:17:00	1:26:52												Uplink and schedule L234B script						Ground Command

Orbit 234 Timeline - Type A Orbit

04/09/94 20:17:10	1:27:02		-89.1	184.3	1811.3						LDAWN						
04/09/94 20:17:19	1:27:12	25										LWIR camera and cryocooler ON					
04/09/94 20:17:54	1:27:47	35										SSDR to IDLE; Switch to 2 kbps bypass mode					
04/09/94 20:18:55	1:28:47	60										Switch to omni antennas					
04/09/94 20:19:55	1:29:47	60										Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMoDe=StarPointing, Index=3)					Slew to Crux
04/09/94 20:22:00	1:31:52											ST-A door CLOSE					Ground Command
04/09/94 20:25:22	1:35:14		-80.0	181.8	1594.9						S80A						
04/09/94 20:25:24	1:35:16	329										Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)					Start SSSDR in Segment 1
04/09/94 20:26:04	1:35:56	40										Perform NIR imaging (DHU SEQT 31)					Dark field imaging
04/09/94 20:26:19	1:36:11	15											Err:508				Slew sensors to nadir (inertial pointing)
04/09/94 20:27:49	1:37:41	90										UV & HR cameras ON					
																	Err:508
																	Err:508
04/09/94 20:31:20	1:41:12	0										Initialize filters (DHU SEQT 28); Load exposure table LUNARZ75S					
04/09/94 20:32:20	1:42:12	60										Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 14)					START MAPPING
04/09/94 20:33:19	1:43:11		-70.0	181.6	1373.7						S70A						
04/09/94 20:33:20	1:43:12	60									S70A	Set SA step rate to LO; Load exposure table LUNARZ65S; Select DHU SEQT 13					
04/09/94 20:40:15	1:50:07		-60.0	181.5	1175.3						S60A						
04/09/94 20:40:17	1:50:09	417									S60A	Load exposure table LUNARZ55S; Select DHU SEQT 12					
04/09/94 20:46:22	1:56:14		-50.0	181.4	1001.7						S50A						
04/09/94 20:46:23	1:56:15	366									S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11					
04/09/94 20:51:09	2:01:01	286										Laser Power ON					
04/09/94 20:51:48	2:01:40		-40.0	181.3	852.7						S40A						
04/09/94 20:51:49	2:01:41	40									S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10					
04/09/94 20:52:43	2:02:35		-38.2	181.3	827.8					GDS	MLOSM						
04/09/94 20:52:44	2:02:36		-38.1	181.3	827.3					PMK	MLOSM						
04/09/94 20:52:49	2:02:41	60										Record in SSSDR Segment 2					SSDR Segment 2
04/09/94 20:52:55	2:02:47		-37.8	181.3	822.4					CAN	MLOSM						Enter occultation
04/09/94 20:56:10	2:06:02	201										Inertial pointing w/ quaternion table (ORB234_RECOV000); Select DHU SEQT 0					START OF ORBIT 233 DATA RECOVERY PROCEDURE SEQT EEQ_09X.UMI is loaded into SEQT 0
04/09/94 20:56:26	2:06:18	16										Load exposure table LUNARZ25S					

Orbit 234 Timeline - Type A Orbit

04/09/94 20:56:41	2:06:33		-30.0	181.3	727.7				S30A		
04/09/94 20:58:12	2:08:04	106								Load exposure table LUNARZ15S; Select DHU SEQT 22	Start laser ranging (oblique) SEQT EEQ_03X.UMI is loaded into SEQT 22
04/09/94 20:59:30	2:09:22	78								Load QTable ORB234_RECOV001	
04/09/94 20:59:52	2:09:44	22								Load exposure table LUNARZ05S; Select DHU SEQT 23	SEQT EEQ_07X.UMI is loaded into SEQT 23
04/09/94 21:01:08	2:11:00		-20.0	181.2	625.4				S20A		
04/09/94 21:01:30	2:11:22	98								Load exposure table LUNARZ05N; Select DHU SEQT 24	SEQT EEQ_06X.UMI is loaded into SEQT 24
04/09/94 21:02:50	2:12:42	80								Load QTable ORB234_RECOV002	
04/09/94 21:03:14	2:13:06	24								Load exposure table LUNARZ15N; Select DHU SEQT 25	SEQT EEQ_05X.UMI is loaded into SEQT 25
04/09/94 21:04:10	2:14:02	56								Select DHU SEQT 5	Start slew to orbit 233 track
04/09/94 21:05:16	2:15:08		-10.0	181.2	544.5				S10A		
04/09/94 21:05:24	2:15:16	74								Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/09/94 21:06:10	2:16:02	46								Load QTable ORB234_RECOV003	
04/09/94 21:07:46	2:17:38	96								Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/09/94 21:09:08	2:19:00		0.0	181.1	483.5				Equator - A		
04/09/94 21:09:30	2:19:22	104								Load QTable ORB234_RECOV004	
04/09/94 21:10:10	2:20:02	40								Select DHU SEQT 23	End slew Start mapping orbit 233 track
04/09/94 21:12:08	2:22:00	118								Load exposure table LUNARZ05N	SCRIPT ERROR: Selection of DHU SEQT 24 was omitted here
04/09/94 21:12:50	2:22:42	42								Load QTable ORB234_RECOV005	
Err:508											
04/09/94 21:12:50	2:22:42		10.0	181.1	441.7				N10A		
Err:508											
04/09/94 21:13:50	2:23:42	0								Load exposure table LUNARZ15N; Select DHU SEQT 25	
04/09/94 21:15:30	2:25:22	100								Load exposure table LUNARZ25N	
04/09/94 21:16:10	2:26:02	40								Load QTable ORB234_RECOV006	
04/09/94 21:16:26	2:26:18		20.0	181.0	418.0				N20A		
04/09/94 21:17:15	2:27:07	65								Load exposure table LUNARZ35N	
04/09/94 21:19:10	2:29:02	115								Select DHU SEQT 5	Start slew back to orbit 233 track
04/09/94 21:19:21	2:29:13		28.2	181.0	412.0				Periselene		
04/09/94 21:19:30	2:29:22	20								Load QTable ORB234_RECOV007	
04/09/94 21:19:58	2:29:50		30.0	181.0	412.3				N30A		
04/09/94 21:22:00	2:31:52	150								Load exposure table LUNARZ25N	
04/09/94 21:22:50	2:32:42	50								Load QTable ORB234_RECOV008	
04/09/94 21:23:32	2:33:24		40.0	181.0	424.2				N40A		
04/09/94 21:24:44	2:34:36	114								Load exposure table LUNARZ15N	
04/09/94 21:26:10	2:36:02	86								Load QTable ORB234_RECOV009; Select DHU SEQT 25	End slew - start mapping on orbit 234 track
04/09/94 21:27:04	2:36:56	54								Load exposure table LUNARZ25N	
04/09/94 21:27:09	2:37:01		50.0	180.9	454.1				N50A		
04/09/94 21:27:10	2:37:02	6								Record in SSSR Segment 3	SSDR Segment 3

Orbit 234 Timeline - Type A Orbit

04/09/94 21:28:34	2:38:26	84										Load exposure table LUNARZ35N		
04/09/94 21:29:30	2:39:22	56										Load QTable ORB234_RECOV010		
04/09/94 21:29:33	2:39:25		56.4	180.8	483.7				GDS	MAOSM				Exit occultation
04/09/94 21:29:33	2:39:25		56.5	180.8	483.7				PMK	MAOSM				
04/09/94 21:29:41	2:39:33		56.8	180.8	485.7				CAN	MAOSM				
04/09/94 21:30:00	2:39:52	30										Load exposure table LUNARZ45N		
04/09/94 21:30:54	2:40:46		60.0	180.9	502.6					N60A				
04/09/94 21:31:24	2:41:16	84										Load exposure table LUNARZ55N; Select DHU SEQT 26		SEQT EEQ_04X.UMI is loaded into SEQT26
04/09/94 21:32:50	2:42:42	86										Load exposure table LUNARZ65N; Load QTable ORB234_RECOV011; Select DHU SEQT 22		
04/09/94 21:34:10	2:44:02	80										Switch to lunar mapping mode (ACSMMode=LunarMapping); Select DHU SEQT 4		END ORBIT 233 DATA RECOVERY PROCEDURES Resume nadir mapping
04/09/94 21:34:52	2:44:44		70.0	180.8	570.4					N70A				
04/09/94 21:34:53	2:44:45	43								N70A		Load exposure table LUNARZ75N; Select DHU SEQT 3		
04/09/94 21:39:05	2:48:57		80.0	180.6	658.7					N80A				
04/09/94 21:39:07	2:48:59	254								N80A		Load exposure table LUNARZ85N; Select DHU SEQT 9		Stop laser ranging
04/09/94 21:39:37	2:49:29	30										Laser power OFF		
														Err:508
04/09/94 21:43:41	2:53:33		90.0	95.6	768.7					North Pole				
04/09/94 21:44:08	2:54:00		89.1	3.3	780.3					LDUSK				
														Err:508
04/09/94 21:44:13	2:54:05	0										Stop Imaging - select ST-B		
04/09/94 21:44:18	2:54:10	5										Err:508		Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508										Wait		End of slew - wait before imaging to allow s/c to settle
04/09/94 21:47:45	2:57:37	15										Select DHU SEQT 23		Earth imaging
Err:508	Err:508	15										Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMMode=EarthPointing, Center); Activate waitwhileslew for 360 sec		Slew HGA to Earth with active waitwhileslew
04/09/94 21:48:45	2:58:37		80.0	1.0	902.0					N80D				
04/09/94 21:51:00	3:00:52	Err:508										Switch to HGA		READY FOR DATA DUMP - Time approximate
														Err:508
04/09/94 21:52:00	3:01:52											Switch to DHU mode @ 128 kbps		Ground Command
04/09/94 21:53:00	3:02:52											Auxiliary oscillator B ON		Ground Command
04/09/94 21:54:24	3:04:16		70.0	0.8	1059.6					N70D				

Orbit 234 Timeline - Type A Orbit

04/09/94 22:00:47	3:10:39		60.0	0.7	1241.9					N60D				
04/09/94 22:08:03	3:17:55		50.0	0.6	1448.6					N50D				
04/09/94 22:11:00	3:20:52										Resume downlink SSSR Segment 5			Ground Command
04/09/94 22:11:09	3:21:01		46.1	0.6	1535.7				PMK	LOS				
04/09/94 22:16:23	3:26:15		40.0	0.5	1676.9					N40D				
04/09/94 22:21:00	3:30:52										Load EEQ_22.UMI into SEQT 22; Load EEQ_23.UMI into SEQT 23; Load EEQ_24.UMI into SEQT 24; Load EEQ_25.UMI into SEQT 25; Load EEQ_26.UMI into SEQT 26; Load EEQ_09.UMI into SEQT 9; Load EEQ_33.UMI into SEQT 0			Ground Command Restore original sequence tables replaced for recovery orbits
04/09/94 22:25:57	3:35:49		30.0	0.4	1921.4					N30D				
04/09/94 22:27:00	3:36:52										Auxiliary oscillator B OFF			Ground Command
04/09/94 22:30:00	3:39:52										Ranging B ON			Ground Command
04/09/94 22:33:43	3:43:35		22.8	0.4	2102.5					INPM				Enter penumbra
04/09/94 22:34:38	3:44:30		22.0	0.4	2122.8					INUM				Enter umbra
04/09/94 22:35:00	3:44:52										Downlink SSSR Segment 6			Ground Command
04/09/94 22:36:56	3:46:48		20.0	0.3	2172.6					N20D				
04/09/94 22:39:00	3:48:52										Uplink and schedule L235 scripts			Ground Command
04/09/94 22:44:00	3:53:52										Downlink SSSR Segment 1			Ground Command
04/09/94 22:49:23	3:59:15		10.0	0.2	2416.5					N10D				
04/09/94 22:54:00	4:03:52										Downlink SSSR Segment 2			Ground Command
04/09/94 22:57:00	4:06:52										Update state vector (GNC53_09APR2230)			Ground Command
04/09/94 23:03:19	4:13:11		0.0	0.1	2634.8					Equator - D				
04/09/94 23:13:00	4:22:52										Ranging B OFF			Ground Command
04/09/94 23:14:00	4:23:52										SSDR to IDLE - downlink paused			Ground Command
04/09/94 23:15:00	4:24:52										Auxiliary oscillator B ON			Ground Command
04/09/94 23:18:34	4:28:26		-10.0	359.9	2806.8					S10D				
BSR235Init Script														
04/09/94 23:19:00	3:03:23	0									Slew s/c HGA to Canberra (ACSMODE=EarthPointing, CAN); Msg "Dump ends in 60 sec."			Slew HGA to Canberra
04/09/94 23:19:53	3:04:16	53									Start BSR telemetry log			2 sec wait imbedded
04/09/94 23:19:55	3:04:18	2									SSDR to IDLE; Record in SSSR Segment 0; Ranging B OFF			Record data in SSSR Segment 0
04/09/94 23:20:00	3:04:23	5									Auxiliary oscillator B ON; Telemetry subcarrier B OFF			
04/09/94 23:22:00	3:06:23	120									Slew to initial BSR attitude (BSR235IN)			Inertial pointing (uses first quaternion in QTable BSRQT000)
End BSR235Init Script														
BSR235 Script														
04/09/94 23:28:00	3:33:00	0									Load QTable BSR_235001			START BSR EXPERIMENT
04/09/94 23:30:00	3:35:00	120									Load QTable BSR_235002			
04/09/94 23:31:32	3:36:32									OUTUM				Exit umbra

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04/09/94 23:32:37	3:37:37										OUTPM								Exit penumbra
04/09/94 23:34:48	3:39:48										S20D								
04/09/94 23:40:00	3:45:00	600																	Load QTable BSR_235003
04/09/94 23:46:00	3:51:00																		Minimum beta angle
04/09/94 23:48:37	3:53:37		-28.3	359.6	2941.7						Aposelene								Continued in orbit 235 timeline

Orbit 235 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/09/94 23:48:37	0:00:00		-28.3	359.6	2941.7							Aposelene							Executing BSR_235 Script
04/09/94 23:50:00	0:01:23	600											Load QTable BSR_235004						
04/09/94 23:51:30	0:02:53		-30.0	359.6	2940.5							S30D							
04/10/94 00:00:00	0:11:23	600											Load QTable BSR_235005						
04/10/94 00:08:06	0:19:29		-40.0	359.5	2885.1							S40D							
04/10/94 00:10:00	0:21:23	600											Load QTable BSR_235006						
04/10/94 00:20:00	0:31:23	600											Load QTable BSR_235007						
04/10/94 00:24:02	0:35:25		-50.0	359.3	2754.2							S50D							
04/10/94 00:30:00	0:41:23	600											Load QTable BSR_235008						
04/10/94 00:38:52	0:50:15		-60.0	359.1	2563.8							S60D							
04/10/94 00:38:53	0:50:16											S60D							
04/10/94 00:40:00	0:51:23	600											Load QTable BSR_235009						
04/10/94 00:46:00	0:57:23	360											Execute LM Prep1 script: NIR camera & cryocooler ON; SA mode to AUTO						
04/10/94 00:49:44	1:01:07		-68.0	359.0	2381.7						GDS	LOS							
04/10/94 00:50:00	1:01:23	240											Load QTable BSR_235010						
04/10/94 00:52:18	1:03:41		-70.0	359.0	2334.2							S70D							
04/10/94 01:00:00	1:11:23	600											Load QTable BSR_235011						
04/10/94 01:04:15	1:15:38		-80.0	358.8	2085.7							S80D							
04/10/94 01:10:00	1:21:23	600											Load QTable BSR_235012						
04/10/94 01:14:43	1:26:06		-90.0	276.0	1835.4							South Pole							
04/10/94 01:15:38	1:27:01		-89.1	181.2	1812.0							LDAWN							
04/10/94 01:16:00	1:27:23	360											Msg "BSR235 : Done"						
																			End BSR235 Script
																			BSR235Done Script
04/10/94 01:16:50	1:28:13	0											Telemetry subcarrier B ON; Auxiliary oscillator B OFF; Switch to bypass mode @ 2 kbps; Switch to omni antennas						Clean up after BSR experiment
																			End BSR235Done Script
																			Err:508
04/10/94 01:17:00	1:28:23	0											Msg " Executing: L235_Prep3"						SCRIPT ERROR - no wait req'd
04/10/94 01:21:00	1:32:23	240											Execute LM_Prep2 script: Laser heater ON; Open sensor door if closed						
04/10/94 01:21:20	1:32:43	20											Msg "WARNING: Omni/2k in 1 min.."						
04/10/94 01:21:45	1:33:08	25											LWIR camera and cryocooler ON						
04/10/94 01:22:20	1:33:43	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/10/94 01:23:00	1:34:23												Ranging A ON						Ground Command
04/10/94 01:23:20	1:34:43	60											Switch to omni antennas						

Orbit 235 Timeline - Type B Orbit

04/10/94 01:23:51	1:35:14		-80.0	179.0	1595.3					S80A				
04/10/94 01:24:20	1:35:43	60									Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)			Slew to Crux
04/10/94 01:29:00	1:40:23										Ranging B ON			Ground Command
04/10/94 01:30:20	1:41:43	360									Initialize filters (DHU SEQT 27); Record in SDR Segment 4; Load Crux exposure table (LUNCRUX)			Start SDR in Segment 4 (nonstandard because of BSR experiments)
04/10/94 01:31:00	1:42:23	40									Perform NIR imaging (DHU SEQT 31)			Dark field imaging
04/10/94 01:31:15	1:42:38	15										Err:508		Slew sensors to nadir (inertial pointing)
04/10/94 01:31:48	1:43:11		-70.0	178.8	1373.9					S70A				
04/10/94 01:32:45	1:44:08	90									UV & HR cameras ON			
														Err:508
														Err:508
04/10/94 01:37:15	1:48:38	0									Initialize filters (DHU SEQT 28)			SCRIPT ERROR Loading of exposure table LUNARZ65S was omitted
04/10/94 01:37:45	1:49:08	30									Start Imaging (DHU SEQT 12)			START MAPPING
04/10/94 01:38:44	1:50:07		-60.0	178.7	1175.4					S60A				
04/10/94 01:38:45	1:50:08	60								S60A	Set SA step rate to LO; Load exposure table LUNARZ55S			
04/10/94 01:44:51	1:56:14	366	-50.0	178.6	1001.5					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11			
04/10/94 01:49:37	2:01:00	286									Laser Power ON			
04/10/94 01:50:17	2:01:40	40	-40.0	178.6	852.5					S40A	Switch to lunar mapping mode (ACSMMode=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10			
04/10/94 01:51:17	2:02:40	60									Record in SDR Segment 5			SSDR Segment 5
04/10/94 01:51:31	2:02:54		-37.5	178.5	819.3			CAN		MLOSM				Enter occultation
04/10/94 01:55:10	2:06:33	233	-30.0	178.5	727.4					S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9			
04/10/94 01:59:37	2:11:00	267	-20.0	178.5	625.0					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser imaging
04/10/94 02:03:44	2:15:07		-10.0	178.4	543.9					S10A				
04/10/94 02:03:45	2:15:08	248								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			
04/10/94 02:07:37	2:19:00	232	0.0	178.4	482.9					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6			
04/10/94 02:11:19	2:22:42	222	10.0	178.4	440.9					N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
04/10/94 02:14:54	2:26:17		20.0	178.3	417.2					N20A				
04/10/94 02:14:55	2:26:18	216								N20A	Load exposure table LUNARZ25N			
04/10/94 02:17:50	2:29:13		28.3	178.3	411.1					Periselene				
04/10/94 02:18:26	2:29:49		30.0	178.3	411.4					N30A				
04/10/94 02:18:27	2:29:50	212								N30A	Load exposure table LUNARZ35N			

Orbit 235 Timeline - Type B Orbit

04/10/94 02:22:00	2:33:23	213	40.0	178.2	423.3						N40A	Load exposure table LUNARZ45N						
04/10/94 02:25:37	2:37:00	217	50.0	178.2	453.1						N50A	Load exposure table LUNARZ55N; Select DHU SEQT 6						
04/10/94 02:28:12	2:39:35		57.0	178.1	485.3					CAN	MAOSM							Exit occultation
04/10/94 02:29:22	2:40:45		60.0	178.1	501.5						N60A							
04/10/94 02:29:23	2:40:46	226									N60A	Load exposure table LUNARZ65N; Select DHU SEQT 4						
04/10/94 02:30:23	2:41:46	60										Record in SSSR Segment 6						SSDR Segment 6
04/10/94 02:33:19	2:44:42		70.0	178.1	569.2						N70A							
04/10/94 02:33:20	2:44:43	177									N70A	Load exposure table LUNARZ75N; Select DHU SEQT 17						
04/10/94 02:37:33	2:48:56		80.0	177.9	657.5						N80A							
04/10/94 02:37:34	2:48:57	254									N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Select DHU SEQT 16						Stop laser ranging
04/10/94 02:38:03	2:49:26	0										Laser power OFF; Stop Imaging - select ST-B						Selection of ST-B did not execute - imaging did not stop
04/10/94 02:38:08	2:49:31	5										Err:508						Slew sensors to Earth (inertial pointing)
04/10/94 02:39:08	2:50:31	60										Perform NIR imaging (DHU SEQT 31)						DHU SEQT 16 still running
04/10/94 02:39:14	2:50:37	6										Perform LWIR imaging (DHU SEQT 25)						Wrong SEQT loaded (EEQ_05X.UMI instead of EEQ_25.UMI)
04/10/94 02:39:22	2:50:45	12										Stop imaging - select ST-B; Activate waitwhileslew for 300 sec						
Err:508	Err:508	Err:508										Load EARTH exposure table (EARTH_VIEW_ZAXIS)						At end of slew
04/10/94 02:41:47	2:53:10	15										Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15										Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew
04/10/94 02:42:08	2:53:31		90.0	90.8	767.5						North Pole							
04/10/94 02:42:35	2:53:58		89.1	0.3	779.1						LDUSK							
04/10/94 02:47:00	2:58:23	Err:508										Switch to HGA						READY FOR DATA DUMP - Time approximate
04/10/94 02:47:12	2:58:35		80.0	358.2	900.7						N80D							
04/10/94 02:48:00	2:59:23											Switch to DHU mode @ 128 kbps						Ground Command
04/10/94 02:51:00	3:02:23											Downlink SSSR Segment 0 (BSR)						Ground Command
04/10/94 02:52:50	3:04:13		70.0	358.1	1058.3						N70D							
04/10/94 02:53:00	3:04:23											Resume downlink SSSR Segment 2						Ground Command
04/10/94 02:59:13	3:10:36		60.0	358.0	1240.6						N60D							

Orbit 235 Timeline - Type B Orbit

04/10/94 03:01:00	3:12:23										Use inertial pointing to rotate s/c about X axis				Ground Command Rotate s/c to clear ST-B view (no matches)
04/10/94 03:06:29	3:17:52		50.0	357.9	1447.3						N50D				
04/10/94 03:14:48	3:26:11		40.0	357.8	1675.7						N40D				
04/10/94 03:24:23	3:35:46		30.0	357.7	1920.3						N30D				
04/10/94 03:26:00	3:37:23											Uplink and schedule L236 scripts			Ground Command
04/10/94 03:32:17	3:43:40		22.7	357.6	2104.9						INPM				Enter penumbra
04/10/94 03:33:12	3:44:35		21.8	357.6	2125.3						INUM				Enter umbra
04/10/94 03:35:20	3:46:43		20.0	357.6	2171.7						N20D				
04/10/94 03:47:48	3:59:11		10.0	357.5	2415.9						N10D				
04/10/94 03:48:00	3:59:23											Downlink SDR Segment 3			Ground Command
04/10/94 04:01:44	4:13:07		0.0	357.3	2634.6						Equator - D				
04/10/94 04:16:00	4:27:23											Resume Earth pointing mode (ACSMMode=EarthPointing, Center)			Ground Command
04/10/94 04:16:59	4:28:22		-10.0	357.2	2807.0						S10D				
04/10/94 04:18:00	4:29:23											Auxiliary oscillator B ON; SSDR to IDLE - downlink paused; Ranging A OFF; Ranging B OFF			Ground Command
BSR236Init Script															
04/10/94 04:29:00	4:40:23		0									Slew s/c HGA to Goldstone (ACSMMode=EarthPointing, GDS); Msg "Dump ends in 60 sec."			Slew HGA to Goldstone
04/10/94 04:29:40	4:41:03		40									Start BSR telemetry log			2 sec wait imbedded
04/10/94 04:29:41	4:41:04		-17.9	357.1	2897.3						OUTUM				Exit umbra
04/10/94 04:29:42	4:41:05		2									SSDR to IDLE; Record in SDR Segment 0; Ranging B OFF			Data downlink stopped Record data in SDR Segment 0
04/10/94 04:30:02	4:41:25		20									Auxiliary oscillator B ON; Telemetry subcarrier B OFF			
04/10/94 04:30:46	4:42:09		-18.5	357.1	2902.8						OUTPM				Exit penumbra
04/10/94 04:32:02	4:43:25		120									Slew to initial BSR attitude (BSR236IN)			Inertial pointing (uses first quaternion in QTable BSR_236002)
End BSR234Init Script															
04/10/94 04:33:12	4:44:35		-20.0	357.0	2913.7						S20D				
BSR236Script															
04/10/94 04:38:00	3:59:07		0									Load QTable BSR_236002			START BSR EXPERIMENT
04/10/94 04:44:00	4:05:07														Minimum beta angle
04/10/94 04:47:06	4:58:29		-28.3	356.9	2942.6						Aposelene				Continued in orbit 236 timeline

Orbit 236 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/10/94 04:47:06	0:00:00		-28.3	356.9	2942.6							Aposelene							Executing BSR_236 Script
04/10/94 04:48:00	0:00:54	600											Load QTable BSR_236003						
04/10/94 04:49:55	0:02:49		-30.0	356.9	2941.4							S30D							
04/10/94 04:58:00	0:10:54	600											Load QTable BSR_236004						
04/10/94 05:06:32	0:19:26		-40.0	356.7	2886.2							S40D							
04/10/94 05:08:00	0:20:54	600											Load QTable BSR_236005						
04/10/94 05:18:00	0:30:54	600											Load QTable BSR_236006						
04/10/94 05:22:29	0:35:23		-50.0	356.6	2755.4							S50D							
04/10/94 05:28:00	0:40:54	600											Load QTable BSR_236007						
04/10/94 05:37:19	0:50:13		-60.0	356.4	2565.0							S60D							
04/10/94 05:38:00	0:50:54	600											Load QTable BSR_236008						
04/10/94 05:45:30	0:58:24	450											Execute LM Prep1 script: NIR camera & cryocooler ON; SA mode to AUTO						
04/10/94 05:48:00	1:00:54	150											Load QTable BSR_236009						
04/10/94 05:48:34	1:01:28		-68.3	356.3	2376.0						MAD	AOS							
04/10/94 05:50:46	1:03:40		-70.0	356.3	2335.3							S70D							
04/10/94 05:58:00	1:10:54	600											Load QTable BSR_236010						
04/10/94 06:02:43	1:15:37		-80.0	356.1	2086.6							S80D							
04/10/94 06:08:00	1:20:54	600											Load QTable BSR_236011						
04/10/94 06:13:12	1:26:06		-90.0	256.6	1835.7							South Pole							
04/10/94 06:15:00	1:27:54	420											Msg "BSR236: Done"						
																			End BSR236 Script
04/10/94 06:14:07	1:27:01		-89.1	178.1	1812.7							LDAWN							
																			BSR236Done Script
04/10/94 06:15:50	1:28:44	0											Telemetry subcarrier B ON; Auxiliary oscillator B OFF; Switch to bypass mode @ 2 kbps; Switch to omni antennas						Clean up after BSR experiment
																			End BSR236Done Script
																			Err:508
04/10/94 06:16:00	1:28:54	0											Msg " Executing: L236_Prep3"						SCRIPT ERROR - no wait req'd
04/10/94 06:16:00	1:28:54	268											Execute LM_Prep2 script: Laser heater ON; Open sensor door if closed						
04/10/94 06:20:47	1:33:42	20											Msg "Already at 2kbps!!"						
04/10/94 06:21:13	1:34:07	25											LWIR camera and cryocooler ON						
04/10/94 06:21:48	1:34:42	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/10/94 06:22:00	1:34:54												Ranging B ON						Ground Command
04/10/94 06:22:19	1:35:13		-80.0	176.2	1595.7							S80A							
04/10/94 06:22:48	1:35:42	60											Switch to omni antennas						

Orbit 236 Timeline - Type A Orbit

04/10/94 06:23:00	1:35:54									Ranging A ON			Ground Command
04/10/94 06:23:48	1:36:42	60								Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)			Slew to Crux
04/10/94 06:29:48	1:42:42	360								Initialize filters (DHU SEQT 27); Record in SDR Segment 7; Load Crux exposure table (LUNCRUX)			Record entire mapping in SDR Segment 7 (nonstandard because of BSR experiments)
04/10/94 06:30:16	1:43:10		-70.0	176.1	1374.1				S70A				
04/10/94 06:30:28	1:43:22	40								Perform NIR imaging (DHU SEQT 31)			Dark field imaging
04/10/94 06:30:43	1:43:37	15									Err:508		Slew sensors to nadir (inertial pointing)
04/10/94 06:31:53	1:44:47		-67.8	176.0	1327.3			CAN	LOS				
04/10/94 06:32:13	1:45:07	90								UV & HR cameras ON			
													Err:508
													Err:508
04/10/94 06:35:43	1:48:37	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ65S			
04/10/94 06:36:13	1:49:07	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 14)			START MAPPING
04/10/94 06:37:13	1:50:07	60	-60.0	176.0	1175.4				S60A	Set SA step rate to LO; Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12			SCRIPT ERROR HiRes imaging inadvertently performed (no HR was planned to reduce data)
04/10/94 06:43:19	1:56:13		-50.0	175.9	1001.4				S50A				
04/10/94 06:43:20	1:56:14	367							S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11			Stop HiRes imaging
04/10/94 06:48:06	2:01:00	286								Laser Power ON			
04/10/94 06:48:45	2:01:39		-40.0	175.8	852.2				S40A				
04/10/94 06:48:46	2:01:40	40							S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10			
04/10/94 06:49:28	2:02:22		-38.6	175.8	832.7			MAD	MLOSM				Enter occultation
04/10/94 06:53:38	2:06:32		-30.0	175.8	727.0				S30A				
04/10/94 06:53:39	2:06:33	293							S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9			
04/10/94 06:58:06	2:11:00	267	-20.0	175.7	624.4				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser ranging
04/10/94 07:02:13	2:15:07	247	-10.0	175.7	543.3				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			
04/10/94 07:06:05	2:18:59		0.0	175.7	482.2				Equator - A				
04/10/94 07:06:06	2:19:00	233							MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6			
04/10/94 07:09:47	2:22:41		10.0	175.6	440.2				N10A				
04/10/94 07:09:48	2:22:42	222							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
04/10/94 07:13:22	2:26:16		20.0	175.6	416.4				N20A				
04/10/94 07:13:23	2:26:17	215							N20A	Load exposure table LUNARZ25N			
04/10/94 07:16:19	2:29:13		28.3	175.5	410.3				Periselene				

Orbit 236 Timeline - Type A Orbit

04/10/94 07:16:55	2:29:49	212	30.0	175.5	410.5					N30A	Load exposure table LUNARZ35N						
04/10/94 07:20:28	2:33:22	213	40.0	175.5	422.4					N40A	Load exposure table LUNARZ45N						
04/10/94 07:24:05	2:36:59	217	50.0	175.5	452.2					N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Select DHU SEQT 6						
04/10/94 07:26:06	2:39:00		55.4	175.4	476.7				MAD	MAOSM							Exit occultation
04/10/94 07:27:50	2:40:44	225	60.0	175.4						N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Select DHU SEQT 4						
04/10/94 07:31:46	2:44:40		70.0	175.3	568.1					N70A							
04/10/94 07:31:47	2:44:41	237								N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Select DHU SEQT 3						
04/10/94 07:36:00	2:48:54	253								N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Select DHU SEQT 9						Stop laser ranging
04/10/94 07:36:30	2:49:24	30									Msg "Done L236"						
Err:508																	
04/10/94 07:36:00	2:48:54		80.0	175.2	656.3					N80A							Err:508
Err:508																	
04/10/94 07:36:30	2:49:24	0									Err:508						Slew sensors to Earth (inertial pointing)
04/10/94 07:37:30	2:50:24	60									Perform NIR imaging (DHU SEQT 31)						DHU SEQT 9 still running
04/10/94 07:37:36	2:50:30	6									Perform LWIR imaging (DHU SEQT 25)						Wrong SEQT loaded (EEQ_05X.UMI instead of EEQ_25.UMI)
Err:508	Err:508	12									Stop imaging - select ST-B; Load EARTH exposure table (EARTH_VIEW_ZAXIS); Activate waitwhileslew for 360 sec						
04/10/94 07:40:35	2:53:29		90.0	63.9	766.5					North Pole							
04/10/94 07:41:02	2:53:56		89.1	357.2	777.9					LDUSK							
Err:508	Err:508	Err:508									Wait						At end of slew
04/10/94 07:40:30	2:53:24	15									Select DHU SEQT 23						Earth imaging w/HR color
Err:508	Err:508	15									Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew
04/10/94 07:46:45	2:59:39	Err:508									Switch to HGA						READY FOR DATA DUMP - Time approximate
Err:508																	
04/10/94 07:45:38	2:58:32		80.0	355.5	899.5					N80D							
04/10/94 07:46:00	2:58:54										Switch to DHU mode @ 128 kbps						Ground Command
04/10/94 07:48:00	3:00:54										Downlink SSSDR Segment 0						Ground Command
04/10/94 07:51:00	3:03:54										Resume downlink SSSDR Segment 3 (orbit 234)						Ground Command

Orbit 236 Timeline - Type A Orbit

04/10/94 07:51:17	3:04:11		70.0	355.3	1057.0						N70D						
04/10/94 07:57:39	3:10:33		60.0	355.2	1239.4						N60D						
04/10/94 08:02:00	3:14:54											Downlink SSSR Segment 2 patches					Ground Command
04/10/94 08:03:00	3:15:54											Uplink and schedule L237 scripts					Ground Command
04/10/94 08:04:55	3:17:49		50.0	355.2	1446.0						N50D						
04/10/94 08:13:14	3:26:08		40.0	355.1	1674.5						N40D						
04/10/94 08:17:00	3:29:54											Use inertial pointing to rotate s/c about X axis					Ground Command Rotate s/c to clear ST-B view (no matches)
04/10/94 08:22:48	3:35:42		30.0	355.0	1919.3						N30D						
04/10/94 08:30:51	3:43:45		22.5	354.9	2107.4						INPM						Enter penumbra
04/10/94 08:31:47	3:44:41		21.7	354.9	2128.0						INUM						Enter umbra
04/10/94 08:33:45	3:46:39		20.0	354.9	2170.9						N20D						
04/10/94 08:46:12	3:59:06		10.0	354.7	2415.4						N10D						
04/10/94 08:51:00	4:03:54											Update state vector (GNC53_10APR0800)					Ground Command
04/10/94 08:57:00	4:09:54											Auxiliary oscillator B ON					Ground Command
04/10/94 09:00:08	4:13:02		0.0	354.6	2634.4						Equator - D						
04/10/94 09:01:00	4:13:54											Ranging A OFF Ranging B OFF					Ground Command
04/10/94 09:02:00	4:14:54											Slew HGA to Madrid (ACSMODE=EarthPointing, MAD)					Ground Command
04/10/94 09:03:00	4:15:54											Downlink SSSR Segment 4 (orb 235)					Ground Command
04/10/94 09:12:00	4:24:54											SSDR to IDLE - Segment 4 complete					Ground Command
BSR237Init Script																	
04/10/94 09:13:00	4:25:54	0										Slew s/c HGA to Madrid (ACSMODE=EarthPointing, MAD); Msg "Dump ends in 60 sec."					Slew HGA to Madrid
04/10/94 09:13:38	4:26:32	38										Start BSR telemetry log					2 sec wait imbedded
04/10/94 09:13:40	4:26:34	2										SSDR to IDLE; Record in SSSR Segment 0; Ranging B OFF					Record data in SSSR Segment 0
04/10/94 09:14:00	4:26:54	20										Auxiliary oscillator B ON; Telemetry subcarrier B OFF					
04/10/94 09:15:24	4:28:18		-10.0	354.5	2807.2						S10D						
04/10/94 09:16:00	4:28:54	120										Slew to initial BSR attitude (BSR237IN)					Inertial pointing (uses first quaternion in QTable BSR_237000)
End BSR237Init Script																	
BSR237 Script																	
04/10/94 09:22:00	4:34:54	0										Load QTable BSR_237000					START BSR EXPERIMENT
04/10/94 09:25:00	4:37:54	180										Load QTable BSR_237001					
04/10/94 09:27:51	4:40:45		-17.7	354.4	2896.4						OUTUM						Exit umbra
04/10/94 09:28:56	4:41:50		-18.4	354.3	2902.0						OUTPM						Exit penumbra
04/10/94 09:31:38	4:44:32		-20.0	354.3	2914.3						S20D						
04/10/94 09:38:00	4:50:54																Minimum beta angle
04/10/94 09:45:00	4:57:54	1200										Load QTable BSR_237002					
04/10/94 09:45:35	4:58:29		-28.4	354.2	2943.4						Aposelene						Continued in orbit 237 timeline

Orbit 237 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/10/94 09:45:35	0:00:00		-28.4	354.2	2943.4							Aposelene							Executing BSR_237 Script
04/10/94 09:48:21	0:02:46		-30.0	354.2	2942.3							S30D							
04/10/94 10:01:40	0:16:05	1000											Msg "BSR237: Done"						
																			End BSR237 Script
																			BSR237Done Script
04/10/94 10:02:00	0:16:25	0											Telemetry subcarrier B ON; Auxiliary oscillator B OFF; Switch to bypass mode @ 2 kbps; Switch to omni antennas; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						Clean up after BSR experiment
04/10/94 10:04:58	0:19:23		-40.0	354.0	2887.3							S40D							Slew HGA to Earth with active waitwhileslew
04/10/94 10:08:00	0:22:25	360											Switch to HGA						READY FOR DATA DUMP - Time approximate
																			End BSR237Done Script
04/10/94 10:20:56	0:35:21		-50.0	353.8	2756.6							S50D							
04/10/94 10:22:00	0:36:25												Switch to DHU mode @ 128 kbps						Ground Command
04/10/94 10:28:00	0:42:25												Ranging A ON Ranging B ON						Ground Command
04/10/94 10:29:00	0:43:25												Downlink SDR Segment 0 (BSR)						Ground Command
04/10/94 10:30:00	0:44:25												Downlink SDR Segment 5 (orb 235)						Ground Command
04/10/94 10:35:46	0:50:11		-60.0	353.7	2566.1							S60D							
																			Standard Prep1 Script
04/10/94 10:36:00	0:50:25	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/10/94 10:46:36	1:01:01		-68.0	353.6	2384.7						PMK	AOS							
04/10/94 10:49:14	1:03:39		-70.0	353.5	2336.2							S70D							
04/10/94 11:01:11	1:15:36		-80.0	353.4	2087.3							S80D							
																			Err:508
04/10/94 11:11:00	1:25:25	0											Execute LM_Prep2 script: Laser heater ON; Open sensor door if closed						
04/10/94 11:11:19	1:25:44	20											Msg "WARNING: Omni/2k in 1 min.."						
04/10/94 11:11:40	1:26:05		-90.0	267.6	1836.5							South Pole							
04/10/94 11:11:45	1:26:10	25											LWIR camera and cryocooler ON						
04/10/94 11:12:20	1:26:45	35											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/10/94 11:12:35	1:27:00		-89.1	174.9	1813.2							LDAWN							
04/10/94 11:13:20	1:27:45	60											Switch to omni antennas						

Orbit 237 Timeline - Type B Orbit

04/10/94 11:14:20	1:28:45	60								Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)				Slew to Crux
04/10/94 11:20:20	1:34:45	360								Initialize filters (DHU SEQT 27); Record in SSDR Segment 1; Load Crux exposure table (LUNCRUX)				Start SSDR in Segment 1 (nonstandard because of BSR experiments)
04/10/94 11:20:48	1:35:13		-80.0	173.5	1596.1				S80A					
04/10/94 11:21:00	1:35:25	40								Perform NIR imaging (DHU SEQT 31)				Dark field imaging
04/10/94 11:21:15	1:35:40	15									Err:508			Slew sensors to nadir (inertial pointing)
04/10/94 11:22:45	1:37:10	90								UV & HR cameras ON; Activate waitwhileslew for 300 sec				
04/10/94 11:26:00	1:40:25	195								Msg " Complete: L237_Prep3"				
														Err:508
														Err:508
04/10/94 11:26:44	1:41:09	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ75S				
Err:508	Err:508	60								Switch to lunar mapping mode (ACSMMode=LunarMapping); Start Imaging (DHU SEQT 20)				START MAPPING
04/10/94 11:28:45	1:43:10	60	-70.0	173.3	1374.2				S70A	Set SA step rate to LO; Load exposure table LUNARZ65S; Select DHU SEQT 19				
04/10/94 11:28:45	1:43:10	0							S60A	Load exposure table LUNARZ55S				SCRIPT ERROR Wait of 250 seconds was omitted - all remaining commands in this script occurred 250 seconds early
04/10/94 11:31:31	1:45:56	167								Err:508				Slew to South Pole for oblique viewing
04/10/94 11:35:42	1:50:07		-60.0	173.2	1175.4				S60A					
04/10/94 11:37:38	1:52:03	367							S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11				
04/10/94 11:41:48	1:56:13		-50.0	173.2	1001.2				S50A					
04/10/94 11:42:23	1:56:48	285								Laser Power ON				
04/10/94 11:43:03	1:57:28	40							S40A	Switch to lunar mapping mode (ACSMMode=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10				Resume nadir mapping
04/10/94 11:44:03	1:58:28	60								Record in SSDR Segment 2				SSDR Segment 2
04/10/94 11:47:14	2:01:39		-40.0	173.1	851.9				S40A					
04/10/94 11:47:56	2:02:21	233							S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/10/94 11:48:02	2:02:27		-38.4	173.1	830.4			PMK	MLOSM					
04/10/94 11:48:07	2:02:32		-38.3	173.1	828.2			MAD	MLOSM					Enter occultation
04/10/94 11:52:07	2:06:32		-30.0	173.1	726.5				S30A					
04/10/94 11:52:23	2:06:48	267							S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8				

Orbit 237 Timeline - Type B Orbit

04/10/94 11:56:31	2:10:56	248								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
04/10/94 11:56:34	2:10:59		-20.0	173.0	623.9					S20A							
04/10/94 12:00:23	2:14:48	232								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6						
04/10/94 12:00:41	2:15:06		-10.0	173.0	542.7					S10A							
04/10/94 12:04:05	2:18:30	222								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/10/94 12:04:34	2:18:59		0.0	172.9	481.5					Equator - A							
04/10/94 12:07:40	2:22:05	215								N20A	Load exposure table LUNARZ25N						
04/10/94 12:08:15	2:22:40		10.0	172.9	439.4					N10A							
04/10/94 12:11:12	2:25:37	212								N30A	Load exposure table LUNARZ35N						
04/10/94 12:11:50	2:26:15		20.0	172.8	415.6					N20A							
04/10/94 12:14:45	2:29:10	213	30.0	172.8	409.7					N40A	Load exposure table LUNARZ45N						
04/10/94 12:14:48	2:29:13		28.4	172.8	409.4					Periselene							
04/10/94 12:18:22	2:32:47	217								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/10/94 12:18:55	2:33:20		40.0	172.8	421.4					N40A							
04/10/94 12:22:06	2:36:31	224								N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/10/94 12:22:32	2:36:57		50.0	172.7	451.2					N50A							
04/10/94 12:23:06	2:37:31	60									Record in SSSR Segment 3						SSDR Segment 3
04/10/94 12:24:25	2:38:50		55.1	172.7	473.9				PMK	MAOSM							Exit occultation
04/10/94 12:24:33	2:38:58		55.4	172.7	475.7				MAD	MAOSM							
04/10/94 12:26:03	2:40:28	177								N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17						
04/10/94 12:26:17	2:40:42		60.0	172.7	499.4					N60A							
04/10/94 12:30:14	2:44:39		70.0	172.6	567.1					N70A							
04/10/94 12:30:17	2:44:42	254								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARNIR85N; Select DHU SEQT 16						Stop laser ranging SCRIPT ERROR: HiRes imaging stopped because LUNARNIR85N was loaded instead of LUNARH85N
04/10/94 12:30:47	2:45:12	30									Laser power OFF						
Err:508																	
04/10/94 12:34:27	2:48:52		80.0	172.5	655.2					N80A							
04/10/94 12:39:02	2:53:27		90.0	75.4	765.2					North Pole							
04/10/94 12:39:29	2:53:54		89.1	354.0	776.7					LDUSK							
Err:508																	
04/10/94 12:41:02	2:55:27	0									Stop Imaging - select ST-B						
04/10/94 12:41:07	2:55:32	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew

Orbit 237 Timeline - Type B Orbit

04/10/94 13:40:00	3:54:25															Downlink SSSR Segment 7 (orb 236)				Ground Command	
04/10/94 13:44:37	3:59:02		10.0	352.0	2415.0											N10D					
04/10/94 13:58:33	4:12:58		0.0	351.9	2634.3											Equator - D					
04/10/94 14:13:49	4:28:14		-10.0	351.7	2807.5											S10D					
04/10/94 14:25:59	4:40:24		-17.5	351.6	2895.5											OUTUM				Exit umbra	
04/10/94 14:27:05	4:41:30		-18.2	351.6	2901.2											OUTPM				Exit penumbra	
04/10/94 14:30:03	4:44:28		-20.0	351.6	2915.0											S20D					
04/10/94 14:33:00	4:47:25																Update state vector (GNC53_10APR1200)				Ground Command
04/10/94 14:36:00	4:50:25																Resume Earth pointing mode (ACSMODE=EarthPointing, Center)				Ground Command
04/10/94 14:44:03	4:58:28		-28.4	351.4	2944.3											Aposelene					

Orbit 238 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/10/94 14:44:03	0:00:00		-28.4	351.4	2944.3							Aposelene							Downlinking SSSDR Segment 7 (orbit 236)
04/10/94 14:46:46	0:02:43		-30.0	351.4	2943.2							S30D							
04/10/94 15:03:24	0:19:21		-40.0	351.3	2888.3							S40D							
04/10/94 15:15:00	0:30:57												Downlink SSSDR Segment 1 (orb 237)						Ground Command
																			Standard Prep1 Script
04/10/94 15:18:54	0:34:51	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/10/94 15:19:22	0:35:19		-50.0	351.1	2757.7							S50D							
04/10/94 15:26:00	0:41:57												Downlink SSSDR Segment 2						Ground Command
04/10/94 15:34:14	0:50:11		-60.0	350.9	2567.1							S60D							
																			Err:508
04/10/94 15:43:14	0:59:11	0											Laser heater ON; Open sensor door if closed						
																			Err:508
04/10/94 15:47:42	1:03:39		-70.0	350.8	2337.1							S70D							
																			Err:508
04/10/94 15:54:13	1:10:10	0											Msg "WARNING: Omni/2k in 1 min.."						
04/10/94 15:54:39	1:10:35	25											LWIR camera and cryocooler ON						
04/10/94 15:55:14	1:11:10	35											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/10/94 15:56:14	1:12:11	60											Switch to omni antennas						
04/10/94 15:57:14	1:13:11	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSM=StarPointing, Index=3)						Slew to Crux
04/10/94 15:59:39	1:15:36		-80.0	350.6	2088.0							S80D							
04/10/94 16:03:14	1:19:11	360											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 4 (nonstandard because of BSR experiments)
04/10/94 16:03:54	1:19:51	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/10/94 16:04:09	1:20:05	15												Err:508					Slew sensors to nadir (inertial pointing)
04/10/94 16:05:39	1:21:36	90											UV & HR cameras ON; Activate waitwhileslew for 300 sec						
04/10/94 16:09:00	1:24:57	201											Msg "Complete: L238_Prep3"						At end of slew - time approximate
																			Err:508
																			Err:508

Orbit 238 Timeline - Type A Orbit

04/10/94 16:09:09	1:25:06	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S			
04/10/94 16:09:39	1:25:36	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)			START MAPPING
04/10/94 16:10:09	1:26:06	30	-90.0	248.1	1836.7					South Pole	Set SA step rate to LO			
04/10/94 16:11:03	1:27:00		-89.1	172.9	1813.8					LDAWN				
04/10/94 16:19:17	1:35:14	548	-80.0	170.8	1596.3					S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14			
04/10/94 16:27:14	1:43:11	477	-70.0	170.6	1374.3					S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13			
04/10/94 16:34:10	1:50:07		-60.0	170.5	1175.2					S60A				
04/10/94 16:34:11	1:50:08	417								S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12			
04/10/94 16:35:11	1:51:08	60									Record in SSSR Segment 5			SSDR Segment 5
04/10/94 16:40:17	1:56:14	306	-50.0	170.4	1000.9					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11			Stop HiRes imaging
04/10/94 16:45:03	2:01:00	286									Laser Power ON			
04/10/94 16:45:43	2:01:40	40	-40.0	170.4	851.5					S40A	Load exposure table LUNARZ35S; Load exposure table LUNARH35S; Select DHU SEQT 10			
04/10/94 16:46:40	2:02:37		-38.1	170.3	825.7				GDS	MLOSM				
04/10/94 16:46:42	2:02:39		-38.0	170.3	824.9				PMK	MLOSM				
04/10/94 16:46:43	2:02:40		-38.0	170.3	824.5				MAD	MLOSM				Enter occultation
04/10/94 16:50:36	2:06:33	293	-30.0	170.3	726.1					S30A	Load EEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25S; Select DHU SEQT 9			UV and IR uncompressed
04/10/94 16:55:03	2:11:00	267	-20.0	170.3	623.4					S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8			Start laser ranging Resume compression
04/10/94 16:59:10	2:15:07	247	-10.0	170.2	542.1					S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7			
04/10/94 17:03:02	2:18:59	232	0.0	170.2	480.8					Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6			
04/10/94 17:06:43	2:22:40		10.0	170.1	438.7					N10A				
04/10/94 17:06:44	2:22:41	222								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5			
04/10/94 17:10:18	2:26:15		20.0	170.1	414.8					N20A				
04/10/94 17:10:19	2:26:16	215								N20A	Load exposure table LUNARZ25N			
04/10/94 17:13:16	2:29:13		28.4	170.1	408.6					Periselene				
04/10/94 17:13:51	2:29:48	212	30.0	170.1	408.8					N30A	Load exposure table LUNARZ35N			
04/10/94 17:17:23	2:33:20		40.0	170.0	420.6					N40A				
04/10/94 17:17:24	2:33:21	213								N40A	Load exposure table LUNARZ45N			

Orbit 238 Timeline - Type A Orbit

04/10/94 17:21:00	2:36:57	216	50.0	170.0	450.2					N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6	Resume HiRes imaging
04/10/94 17:22:46	2:38:43		54.8	169.9	471.7					GDS MAOSM		Exit occultation
04/10/94 17:22:51	2:38:48		55.0	169.9	472.7					PMK MAOSM		
04/10/94 17:22:55	2:38:52		55.2	169.9	473.6					MAD MAOSM		
04/10/94 17:24:44	2:40:41		60.0	169.9	498.5					N60A		
04/10/94 17:24:45	2:40:42	225								N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4	
04/10/94 17:25:45	2:41:42	60									Record in SSSR Segment 6	SSDR Segment 6
04/10/94 17:28:41	2:44:38	176	70.0	169.9	566.0					N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3	
04/10/94 17:32:54	2:48:51		80.0	169.7	654.1					N80A		
04/10/94 17:32:55	2:48:52	254								N80A	Load EEQ_09.UMI into SEQT 9; Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9	Restore original SEQT 9
04/10/94 17:33:25	2:49:22	30									Laser power OFF	Stop laser ranging
												Err:508
04/10/94 17:37:29	2:53:26		90.0	65.9	764.2					North Pole		
04/10/94 17:37:56	2:53:53		89.1	352.1	775.5					LDUSK		
												Err:508
04/10/94 17:39:29	2:55:25	0									Stop Imaging - select ST-B	
04/10/94 17:39:33	2:55:30	5									Err:508	Slew sensors to Earth (inertial pointing) with waitwhileslew
04/10/94 17:42:32	2:58:29		80.0	350.0	897.2					N80D		
Err:508	Err:508	Err:508									Wait	End of slew - wait before imaging to allow s/c to settle
04/10/94 17:42:50	2:58:47	15									Select DHU SEQT 23	Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B	
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)	Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)	
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec	

Orbit 238 Timeline - Type A Orbit

04/10/94 17:46:51	3:02:48	120								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)							Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)							Incorrect DHU SEQT table loaded
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)							
Err:508	Err:508	6								Load exposure table LUNIRDKS1							
Err:508	Err:508	6								Load exposure table LUNIRDKS2							
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)							
Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec							Slew HGA to Earth with active waitwhileslew
04/10/94 17:48:10	3:04:07		70.0	349.9	1054.6				N70D								
04/10/94 17:52:00	3:07:57	Err:508								Switch to HGA							READY FOR DATA DUMP - Time approximate
																	Err:508
04/10/94 17:52:30	3:08:27									Switch to DHU mode @ 128 kbps							Ground Command
04/10/94 17:54:00	3:09:57									Resume downlink SSSR Segment 2							Ground Command
04/10/94 17:54:31	3:10:28		60.0	349.8	1237.0				N60D								
04/10/94 17:59:19	3:15:16		53.2	349.7	1374.8			MAD	LOS								
04/10/94 18:01:46	3:17:43		50.0	349.7	1443.8				N50D								
04/10/94 18:10:05	3:26:02		40.0	349.6	1672.4				N40D								
04/10/94 18:19:38	3:35:35		30.0	349.5	1917.4				N30D								
04/10/94 18:24:00	3:39:57									Downlink SSSR Segment 3 (orb 237)							Ground Command
04/10/94 18:26:00	3:41:57									Use inertial pointing to rotate s/c about X axis							Ground Command Rotate s/c to clear ST-B view (no matches)
04/10/94 18:28:00	3:43:57		22.2	349.4	2112.9				INPM								Enter penumbra
04/10/94 18:28:57	3:44:54		21.4	349.4	2133.8				INUM								Enter umbra
04/10/94 18:30:36	3:46:33		20.0	349.4	2169.5				N20D								
04/10/94 18:43:02	3:58:59		10.0	349.3	2414.6				N10D								
04/10/94 18:48:00	4:03:57									Uplink and schedule L239 scripts							Ground Command
04/10/94 18:56:58	4:12:55		0.0	349.1	2634.2			Equator - D									
04/10/94 19:07:00	4:22:57									Downlink SSSR Segment 4							Ground Command
04/10/94 19:12:00	4:27:57									Ranging A OFF Ranging B OFF							Ground Command
04/10/94 19:12:14	4:28:11		-10.0	349.0	2807.8				S10D								
04/10/94 19:18:00	4:33:57									Downlink SSSR Segment 5							Ground Command
04/10/94 19:24:08	4:40:05		-17.4	348.9	2894.5				OUTUM								Exit umbra
04/10/94 19:25:14	4:41:11		-18.0	348.9	2900.4				OUTPM								Exit penumbra
04/10/94 19:28:28	4:44:25		-20.0	348.8	2915.6				S20D								

Orbit 239 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/10/94 19:42:32	0:00:00		-28.4	348.7	2945.1							Aposelene							Downlinking SSSDR Segment 5 (orbit 238)
04/10/94 19:45:12	0:02:40		-30.0	348.7	2944.1							S30D							
04/10/94 20:01:51	0:19:19		-40.0	348.5	2889.4							S40D							
																			Standard Prep1 Script
04/10/94 20:16:52	0:34:20	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/10/94 20:17:49	0:35:17		-50.0	348.4	2758.7							S50D							
04/10/94 20:20:00	0:37:28												Update state vector (GNC53_10APR2000); Resume standard dump attitude (ACSMMode=EarthPointing, Center)						Ground Command
04/10/94 20:32:41	0:50:09		-60.0	348.2	2568.1							S60D							
04/10/94 20:33:00	0:50:28												Downlink SSSDR Segment 6						Ground Command
																			Err:508
04/10/94 20:41:52	0:59:20	0											Laser heater ON; Open sensor door if closed						
																			Err:508
04/10/94 20:46:10	1:03:38		-70.0	348.1	2338.0							S70D							Err:508
04/10/94 20:52:11	1:09:40	0											Msg "WARNING: 2kbps in 1 min.."						
04/10/94 20:52:37	1:10:05	25											LWIR camera and cryocooler ON						
04/10/94 20:53:12	1:10:40	35											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/10/94 20:54:12	1:11:40	60											Switch to omni antennas						
04/10/94 20:55:12	1:12:40	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/10/94 20:58:07	1:15:35		-80.0	347.9	2088.6							S80D							
04/10/94 21:01:12	1:18:40	360											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1 (nonstandard because of BSR experiments)
04/10/94 21:01:52	1:19:20	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/10/94 21:02:07	1:19:35	15																Err:508	Slew sensors to nadir at South Pole (inertial pointing)
04/10/94 21:03:37	1:21:05	90											UV & HR cameras ON; Activate waitwhileslew for 300 sec						
04/10/94 21:06:00	1:23:28	143											Msg "Complete: L239_Prep3"						At end of slew - time approximate
																			Err:508
																			Err:508

Orbit 239 Timeline - Type B Orbit

04/10/94 21:06:37	1:24:05	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S					
04/10/94 21:07:37	1:25:05	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)					START MAPPING
04/10/94 21:08:37	1:26:05	60	-90.0	258.3	1837.3					South Pole	Set SA step rate to LO					
04/10/94 21:09:31	1:26:59		-89.1	169.5	1814.3					LDAWN						
04/10/94 21:16:32	1:34:00		-81.4	167.9	1629.0				CAN	AOS						
04/10/94 21:17:45	1:35:13		-80.0	168.0	1596.5					S80A						
04/10/94 21:17:46	1:35:14	549								S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20					
04/10/94 21:20:00	1:37:28										Ranging A ON Ranging B ON					Ground Command
04/10/94 21:25:42	1:43:10		-70.0	167.9	1374.3					S70A						
04/10/94 21:25:43	1:43:11	477								S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19					
04/10/94 21:28:29	1:45:57	167									Err:508					Slew to South Pole for oblique viewing
04/10/94 21:32:39	1:50:07		-60.0	167.8	1175.1					S60A						
04/10/94 21:32:40	1:50:08	250								S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11					
04/10/94 21:33:40	1:51:08	60									Record in SDR Segment 2					SSDR Segment 2
04/10/94 21:38:46	1:56:14	306	-50.0	167.7	1000.7					S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11					Stop HiRes imaging
04/10/94 21:43:32	2:01:00	286									Laser Power ON					
04/10/94 21:44:11	2:01:39		-40.0	167.6	851.1					S40A						
04/10/94 21:44:12	2:01:40	40								S40A	Load EEQ_10U.UMI into SEQT 10: Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10					Resume nadir mapping UV and IR uncompressed
04/10/94 21:45:20	2:02:48		-37.7	167.6	820.3				PMK	MLOSM						
04/10/94 21:45:22	2:02:50		-37.7	167.6	819.6				GDS	MLOSM						
04/10/94 21:45:42	2:03:10		-37.0	167.6	810.7				CAN	MLOSM						Enter occultation
04/10/94 21:49:04	2:06:32		-30.0	167.6	725.6					S30A						
04/10/94 21:49:05	2:06:33	293								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9					Resume compression
04/10/94 21:53:31	2:10:59		-20.0	167.5	622.8					S20A						
04/10/94 21:53:32	2:11:00	267								S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8					Start laser ranging
04/10/94 21:57:38	2:15:06		-10.0	167.5	541.4					S10A						
04/10/94 21:57:39	2:15:07	247								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7					
04/10/94 22:01:30	2:18:58		0.0	167.5	480.1					Equator - A						
04/10/94 22:01:31	2:18:59	232								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6					

Orbit 239 Timeline - Type B Orbit

04/10/94 22:05:12	2:22:40	221	10.0	167.4	437.9						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/10/94 22:08:47	2:26:15	215	20.0	167.4	414.0						N20A	Load exposure table LUNARZ25N						
04/10/94 22:11:45	2:29:13		28.4	167.3	407.7						Periselene							
04/10/94 22:12:19	2:29:47	212	30.0	167.3	408.0						N30A	Load exposure table LUNARZ35N						
04/10/94 22:15:51	2:33:19		40.0	167.3	419.6						N40A							
04/10/94 22:15:52	2:33:21	214									N40A	Load exposure table LUNARZ45N						
04/10/94 22:19:28	2:36:56		50.0	167.3	449.3						N50A							
04/10/94 22:19:29	2:36:57	217									N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6					Resume HiRes imaging	
04/10/94 22:21:12	2:38:40		54.7	167.2	470.2				GDS		MAOSM						Exit occultation	
04/10/94 22:21:12	2:38:40		54.7	167.2	470.3				PMK		MAOSM							
04/10/94 22:21:17	2:38:45		54.9	167.2	471.3				CAN		MAOSM							
04/10/94 22:23:12	2:40:40		60.0	167.2	497.4						N60A							
04/10/94 22:23:13	2:40:42	224									N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/10/94 22:24:14	2:41:42	60										Record in SSDR Segment 3					SSDR Segment 3	
04/10/94 22:27:08	2:44:36		70.0	167.1	565.0						N70A							
04/10/94 22:27:10	2:44:39	177									N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17						
04/10/94 22:31:21	2:48:49		80.0	167.0	653.0						N80A							
04/10/94 22:31:24	2:48:52	253									N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16					Stop laser ranging	
04/10/94 22:31:54	2:49:22	30										Laser power OFF						
04/10/94 22:32:24	2:49:52	30										Load EEQ_10.UMI into SEQT 10					Restore original SEQT 10	
																		Err:508
04/10/94 22:35:55	2:53:23		90.0	95.4	762.8						North Pole							
04/10/94 22:36:23	2:53:51		89.1	348.7	774.3						LDUSK							
																		Err:508
04/10/94 22:37:56	2:55:24	0										Stop Imaging - select ST-B						
04/10/94 22:38:01	2:55:29	5										Err:508					Slew sensors to Earth (inertial pointing) with waitwhileslew	
Err:508	Err:508	Err:508										Wait					End of slew - wait before imaging to allow s/c to settle	
04/10/94 22:40:58	2:58:26		80.0	347.2	896.0						N80D							
04/10/94 22:41:05	2:58:33	15										Select DHU SEQT 23					Earth imaging w/color HiRes	
Err:508	Err:508	15										Stop imaging - select ST-B						
Err:508	Err:508	5										Slew s/c sensors to Vega (VEGAGNC12)					Slew to Vega (inertial pointing)	

Orbit 239 Timeline - Tyne R Orbit

Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)							
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec							
04/10/94 22:45:00	3:02:28	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)							Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)							Incorrect DHU SEQT loaded
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)							
Err:508	Err:508	6								Load exposure table LUNIRDKS1							
Err:508	Err:508	6								Load exposure table LUNIRDKS2							
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)							
Err:508	Err:508	30								Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec							Slew HGA to Earth with active waitwhileslew
04/10/94 22:46:36	3:04:04		70.0	347.1	1053.4				N70D								
04/10/94 22:52:00	3:09:28	Err:508								Switch to HGA							READY FOR DATA DUMP - Time approximate
																	Err:508
04/10/94 22:52:57	3:10:25		60.0	347.0	1235.8				N60D								
04/10/94 22:53:00	3:10:28									Switch to DHU mode @ 128 kbps							Ground Command
04/10/94 23:00:00	3:17:28									Resume downlink SDR Segment 6							Ground Command
04/10/94 23:00:12	3:17:40		50.0	346.9	1442.6				N50D								
04/10/94 23:06:00	3:23:28									Uplink and schedule M2burn script							Ground Command
04/10/94 23:07:28	3:24:56		41.2	346.9	1643.5			PMK	LOS								
04/10/94 23:08:31	3:25:59		40.0	346.9	1671.3				N40D								
04/10/94 23:12:00	3:29:28									Set delta-V pressure regulation							Ground Command
04/10/94 23:13:00	3:30:28									Downlink SDR Segment 1 (orb 239)							Ground Command
04/10/94 23:14:00	3:31:28									Set delta-V pressure regulation							Ground Command
04/10/94 23:18:00	3:35:28									Switch to DUPER format							Ground Command
04/10/94 23:18:04	3:35:32		30.0	346.8	1916.5				N30D								
04/10/94 23:22:00	3:39:28									Set delta-V pressure regulation							Ground Command
04/10/94 23:23:00	3:40:28									Uplink and schedule L240 scripts							Ground Command
04/10/94 23:26:35	3:44:03		22.1	346.7	2115.9				INPM								Enter penumbra
04/10/94 23:27:33	3:45:01		21.3	346.7	2137.0				INUM								Enter umbra
04/10/94 23:29:01	3:46:29		20.0	346.7	2168.8				N20D								
04/10/94 23:31:00	3:48:28									Downlink SDR Segment 2							Ground Command
04/10/94 23:38:00	3:55:28									Uplink s/w patch TM_PATCH_DB							Ground Command
04/10/94 23:41:27	3:58:55		10.0	346.5	2414.1				N10D								
04/10/94 23:55:23	4:12:51		0.0	346.4	2634.2				Equator - D								

Orbit 239 Timeline - Type B Orbit

04/11/94 00:10:39	4:28:07		-10.0	346.3	2808.0					S10D							
04/11/94 00:22:16	4:39:44		-17.2	346.2	2893.5					OUTUM							Exit umbra
04/11/94 00:23:23	4:40:51		-17.9	346.1	2899.6					OUTPM							Exit penumbra
04/11/94 00:26:54	4:44:22		-20.0	346.1	2916.2					S20D							
04/11/94 00:41:01	4:58:29		-28.4	346.0	2946.0					Aposelene							

Orbit 240 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/11/94 00:41:01	0:00:00		-28.4	346.0	2946.0							Aposelene							Downlinking SDDR Segment 2 (orbit 239)
04/11/94 00:43:38	0:02:37		-30.0	346.0	2944.9							S30D							
04/11/94 00:59:00	0:17:59												SDDR to IDLE - downlink paused						Ground Command
04/11/94 01:00:17	0:19:16		-40.0	345.8	2890.4							S40D							
																			L240 Burn Prep Script
04/11/94 01:05:48	0:24:47	0											Msg "WARNING: 8k in 1 min.."						
04/11/94 01:06:48	0:25:47	60											SDDR to IDLE; Switch to 8 kbps bypass mode						Data dump stopped
04/11/94 01:07:48	0:26:47	60											Switch to omni antennas						
04/11/94 01:08:48	0:27:47	60											NIR camera & cryocooler ON; Set SA mode to AUTO; Sensor door CLOSE; Slew to burn attitude (GNC12B240RW)						Prepare for orbit 240 mapping Slew to burn attitude (inertial pointing)
04/11/94 01:08:53	0:27:52	5											ST doors CLOSE						SCRIPT ERROR: Wait before ST door closing was 600 tics instead of 600 seconds
																			End Burn Prep Script
04/11/94 01:16:16	0:35:15		-50.0	345.7	2759.8							S50D							
																			DV BurnPrep Script
04/11/94 01:23:48	0:42:47	0											Switch to RCS format						
Err:508	Err:508	5											Open RCS latch valves						
Err:508	Err:508	5											Select to RCSALL format for downlink						
Err:508	Err:508	1											Select RCS format for IDC						
Err:508	Err:508	5											Process IDC						
																			End DV_BurnPrep Script
04/11/94 01:27:00	0:45:59												Cancel M2 burn; Disable delta-V thruster						Ground Command Sensor door OPEN indication
																			DV Burn Script
04/11/94 01:28:07	0:47:06	0											Velocity jets ENABLE; GNC diagnostics OFF; Start IDC format 03						
Err:508	Err:508	1											Process IDC						
Err:508	Err:508	35											Start M2 burn with tight jets (GNC12B240JT?)						BURN ABORTED
																			End DV Burn Script
																			DV BurnPost Script
04/11/94 01:28:57	0:47:56	0											Keep burn attitude with loose jets (GNC12B240JL?); Velocity jets DISABLE						

Orbit 240 Timeline - Type A Orbit

04/11/94 01:29:57	0:48:56	60								IDC processing STOP; GNC diagnostics ON; Keep attitude with RW (GNC12B240RW?)									
End DV BurnPost Script																			
04/11/94 01:31:09	0:50:08		-60.0	345.5	2569.1					S60D									
04/11/94 01:40:59	0:59:58		-67.2	345.4	2405.5				GDS	LOS									
04/11/94 01:44:37	1:03:36		-70.0	345.4	2338.8					S70D									
Err:508																			
04/11/94 01:50:11	1:09:10	0									Laser heater ON; ST-B door OPEN; Select ST-B; Sensor door OPEN								
04/11/94 01:51:10	1:10:09	60									Msg "WARNING: Omni/2k in 1 min.."								
04/11/94 01:51:35	1:10:34	25									LWIR camera and cryocooler ON								
04/11/94 01:52:10	1:11:09	35									SSDR to IDLE; Set downlink rate to 2 kbps								
04/11/94 01:53:11	1:12:09	60									Wait								no commands- already on omnis
04/11/94 01:54:11	1:13:10	60									Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)								Slew to Crux
04/11/94 01:56:36	1:15:35		-80.0	345.2	2089.3					S80D									
04/11/94 02:00:11	1:19:10	360									Initialize filters (DHU SEQT 27); Record in SSDR Segment 4; Load Crux exposure table (LUNCRUX)								Start SSDR in Segment 4 (nonstandard because of BSR experiments)
04/11/94 02:00:51	1:19:50	40									Perform NIR imaging (DHU SEQT 31)								Dark field imaging
04/11/94 02:01:06	1:20:05	15																	Err:508
04/11/94 02:02:36	1:21:35	90									UV & HR cameras ON								Slew sensors to nadir (inertial pointing)
Err:508																			
Err:508																			
04/11/94 02:06:06	1:25:05	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S								
04/11/94 02:06:36	1:25:35	30									Switch to lunar mapping mode (ACSMMode=LunarMapping); Start Imaging (DHU SEQT 15)								START MAPPING
04/11/94 02:07:05	1:26:04		-90.0	285.5	1837.9					South Pole									
04/11/94 02:07:06	1:26:05	30								MAXS	Set SA step rate to LO								
04/11/94 02:08:00	1:26:59		-89.1	166.0	1814.7					LDAWN									
04/11/94 02:16:14	1:35:13	548	-80.0	165.2	1596.7					S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14								
04/11/94 02:24:11	1:43:10		-70.0	165.1	1374.4					S70A									

Orbit 240 Timeline - Type A Orbit

04/11/94 02:24:12	1:43:11	478							S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13	
04/11/94 02:31:08	1:50:07	416	-60.0	165.0	1175.0				S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12	
04/11/94 02:32:08	1:51:07	60								Record in SSSR Segment 5	SSDR Segment 5
04/11/94 02:37:14	1:56:13		-50.0	164.9	1000.4				S50A		
04/11/94 02:37:15	1:56:14	307							S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11	Stop HiRes imaging
04/11/94 02:42:00	2:00:59	285								Laser Power ON	
04/11/94 02:42:40	2:01:39	40	-40.0	164.9	850.7				S40A	Load EEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35S; Load exposure table LUNARH35S; Select DHU SEQT 10	UV and IR uncompressed Resume HiRes imaging
04/11/94 02:44:28	2:03:27		-36.4	164.8	803.0			CAN	MLOSM		Enter occultation
04/11/94 02:47:33	2:06:32	293	-30.0	164.8	725.1				S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9	Resume compression Stop HiRes imaging
04/11/94 02:52:00	2:10:59	267	-20.0	164.8	622.2				S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
04/11/94 02:56:07	2:15:06	247	-10.0	164.8	540.8				S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/11/94 02:59:59	2:18:58	232	0.0	164.7	479.4				Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/11/94 03:03:40	2:22:39	221	10.0	164.7	437.2				N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/11/94 03:07:15	2:26:14	215	20.0	164.6	413.2				N20A	Load exposure table LUNARZ25N	
04/11/94 03:10:14	2:29:13		28.5	164.6	406.9				Periselene		
04/11/94 03:10:46	2:29:45		30.0	164.6	407.1				N30A		
04/11/94 03:10:47	2:29:46	212							N30A	Load exposure table LUNARZ35N	
04/11/94 03:14:19	2:33:18	212	40.0	164.6	418.7				N40A	Load exposure table LUNARZ45N	
04/11/94 03:17:55	2:36:54	216	50.0	164.5	448.3				N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6	Resume HiRes imaging
04/11/94 03:19:41	2:38:40		54.8	164.5	469.6			CAN	MAOSM		Exit occultation
04/11/94 03:21:39	2:40:38		60.0	164.5	496.4				N60A		
04/11/94 03:21:40	2:40:39	225							N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4	
04/11/94 03:22:40	2:41:39	60								Record in SSSR Segment 6	SSDR Segment 6
04/11/94 03:25:35	2:44:34		70.0	164.4	563.9				N70A		
04/11/94 03:25:36	2:44:35	176							N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3	
04/11/94 03:29:48	2:48:47	252	80.0	164.4	651.9				N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9	Stop laser ranging

Orbit 240 Timeline - Type A Orbit

04/11/94 03:30:18	2:49:17	30									Laser power OFF						
04/11/94 03:30:48	2:49:47	30									Load EEQ_10.UMI into SEQT 10						Restore original SEQT 10
Err:508																	
04/11/94 03:34:22	2:53:21		90.0	119.0	761.6						North Pole						
04/11/94 03:34:49	2:53:48		89.1	345.1	773.2						LDUSK						
Err:508																	
04/11/94 03:36:23	2:55:22	0									Stop Imaging - select ST-B						
04/11/94 03:36:28	2:55:27	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait						End of slew - wait before imaging to allow s/c to settle
04/11/94 03:39:08	2:58:07	15									Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B						
04/11/94 03:39:25	2:58:24		80.0	344.4	894.8						N80D						
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)						Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 310 sec						
04/11/94 03:42:38	3:01:37	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)						Incorrect DHU SEQT table loaded
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6									Load exposure table LUNIRDKS1						
Err:508	Err:508	6									Load exposure table LUNIRDKS2						
Err:508	Err:508	6									Perform HiRes imaging (DHU SEQT 30)						
Err:508	Err:508	30									Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec						Slew HGA to Earth with active waitwhileslew
04/11/94 03:45:02	3:04:01		70.0	344.3	1052.3						N70D						
04/11/94 03:49:00	3:07:59	Err:508									Switch to HGA						READY FOR DATA DUMP - Time approximate
Err:508																	
04/11/94 03:50:00	3:08:59										Switch to DHU mode @ 128 kbps						Ground Command

Orbit 241 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/11/94 05:39:29	0:00:00		-28.5	343.3	2946.8							Aposelene							Downlinking SDDR Segment 5 (orbit 240)
04/11/94 05:40:00	0:00:31												Cancel L241 Post script						Ground Command
04/11/94 05:41:00	0:01:31												Set downlink rate to 8 kbps						Ground Command
04/11/94 05:42:04	0:02:35		-30.0	343.2	2945.8							S30D							
04/11/94 05:43:00	0:03:31												Reschedule L241 Post script						Ground Command
04/11/94 05:44:00	0:04:31												Uplink and schedule M2Burn scripts						Ground Command
04/11/94 05:51:00	0:11:31												Switch to DUPER format						Ground Command
04/11/94 05:58:43	0:19:14		-40.0	343.1	2891.4							S40D							
																			L241 Burn Prep Script
04/11/94 06:05:48	0:26:19	0											Msg "WARNING: 8k in 1 min.."						
04/11/94 06:06:48	0:27:19	60											SDDR to IDLE; Switch to 8 kbps bypass mode						Data dump stopped
04/11/94 06:07:48	0:28:19	60											Switch to omni antennas						
04/11/94 06:08:48	0:29:19	60											NIR camera & cryocooler ON; Set SA mode to AUTO; Sensor door CLOSE; Slew to burn attitude (GNC12B241RW)						Prepare for orbit 241 mapping Slew to burn attitude (inertial pointing)
04/11/94 06:14:43	0:35:14		-50.0	342.9	2760.9							S50D							
04/11/94 06:18:10	0:38:41		-52.2	342.9	2721.9						MAD	AOS							
04/11/94 06:18:48	0:39:19	600											ST doors CLOSE						
																			End Burn Prep Script
																			DV BurnPrep Script
04/11/94 06:23:48	0:44:19	0											Switch to RCS format						
04/11/94 06:23:53	0:44:24	5											Open RCS latch valves						
04/11/94 06:23:58	0:44:29	5											Select to RCSALL format for downlink						
04/11/94 06:23:59	0:44:30	1											Select RCS format for IDC						
04/11/94 06:24:04	0:44:35	5											Process IDC						
																			End DV BurnPrep Script
																			DV Burn Script
04/11/94 06:28:07	0:48:38	0											Velocity jets ENABLE; GNC diagnostics OFF; Start IDC format 03						
04/11/94 06:28:08	0:48:39	1											Process IDC						
04/11/94 06:28:43	0:49:14	35											Start M2 burn with tight jets (GNC12B241JT?)						
04/11/94 06:28:48	0:49:19	5											Start of burn						Maintenance 2 Burn (M2) @ 06:28:48 DV=8.718 m/s
04/11/94 06:28:54	0:49:25	6																	End of burn (duration=5.62 sec)
																			End DV Burn Script
																			DV BurnPost Script

Orbit 241 Timeline - Type B Orbit

04/11/94 06:28:57	0:49:28	0								Keep burn attitude with loose jets (GNC12B241JL?); Velocity jets DISABLE									
04/11/94 06:29:35	0:50:06		-60.0	342.8	2570.6				S60D										
04/11/94 06:29:57	0:50:28	60								IDC processing STOP; GNC diagnostics ON; Keep attitude with RW (GNC12B241RW?)									
End DV BurnPost Script																			
04/11/94 06:31:00	0:51:31									Shut down DV configuration									Ground Command
Err:508																			
04/11/94 06:38:54	0:59:25	0								Laser heater ON; Open sensor door if closed									
Err:508																			
04/11/94 06:39:00	0:59:31									Restart SCL to enable rules									Ground Command - this wiped out all the scheduled times for the L241 scripts
04/11/94 06:43:04	1:03:35		-70.0	342.7	2347.6				S70D										
04/11/94 06:45:00	1:05:31									Reschedule L241 scripts									Ground Command
04/11/94 06:46:00	1:06:31									Update state vector (GNC53_11APR0645)									Ground Command
Err:508																			
04/11/94 06:49:14	1:09:45	0								ST-B door OPEN; Select ST-B; Msg "WARNING: 2kbps in 1 min.."									
04/11/94 06:49:39	1:10:10	25								LWIR camera and cryocooler ON									
04/11/94 06:50:14	1:10:45	35								SSDR to IDLE; Set downlink rate to 2 kbps									
04/11/94 06:51:14	1:11:45	60								Wait									no commands- already on omnis
04/11/94 06:52:14	1:12:45	60								Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)									Slew to Crux
04/11/94 06:55:04	1:15:35		-80.0	342.6	2104.2				S80D										
04/11/94 06:58:14	1:18:45	360								Initialize filters (DHU SEQT 27); Record in SSDR Segment 1; Load Crux exposure table (LUNCRUX)									Start SSDR in Segment 1 (nonstandard because of BSR experiments)
04/11/94 06:58:54	1:19:25	40								Perform NIR imaging (DHU SEQT 31)									Dark field imaging
04/11/94 06:59:09	1:19:40	15																	Slew sensors to nadir at South Pole (inertial pointing)
04/11/94 07:00:39	1:21:10	90								UV & HR cameras ON; Activate waitwhileslew for 300 sec									
04/11/94 07:03:00	1:23:31	141								Msg "Complete: L241_Prep3"									At end of slew - time approximate
Err:508																			
Err:508																			
04/11/94 07:03:39	1:24:10	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S									NOTE: Large difference between scheduled & orbital event times is due to M2 burn effects

Orbit 241 Timeline - Type B Orbit

04/11/94 07:58:27	2:18:58	232									MEQA	Load exposure table LUNARZ05N; Initialize filters (DHU SEQT 28); Select DHU SEQT 6				
04/11/94 07:59:19	2:19:50		0.0	162.0	503.0						Equator - A					
04/11/94 08:02:08	2:22:39	221									N10A	Load exposure table LUNARZ15N; Initialize filters (DHU SEQT 28); Select DHU SEQT 5				
04/11/94 08:03:05	2:23:36		10.0	162.0	459.8						N10A					
04/11/94 08:05:43	2:26:14	215									N20A	Load exposure table LUNARZ25N				
04/11/94 08:06:43	2:27:14		20.0	161.9	434.9						N20A					
04/11/94 08:09:14	2:29:45	211									N30A	Load exposure table LUNARZ35N				
04/11/94 08:09:57	2:30:28		29.0	161.9	427.7						Periselene					
04/11/94 08:10:19	2:30:50		30.0	161.9	427.8						N30A					
04/11/94 08:12:47	2:33:18	213									N40A	Load exposure table LUNARZ45N				
04/11/94 08:13:55	2:34:26		40.0	161.9	438.5						N40A					
04/11/94 08:16:23	2:36:54	216									N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Initialize filters (DHU SEQT 28); Select DHU SEQT 6			Resume HiRes imaging	
04/11/94 08:17:34	2:38:05		50.0	161.8	467.0						N50A					
04/11/94 08:18:22	2:38:53		52.1	161.8	476.1					MAD	MAOSM				Exit occultation	
04/11/94 08:20:07	2:40:38	224									N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Initialize filters (DHU SEQT 28); Select DHU SEQT 4				
04/11/94 08:21:07	2:41:38	60										Record in SSDR Segment 3			SSDR Segment 3	
04/11/94 08:21:22	2:41:53		60.0	161.8	513.9						N60A					
04/11/94 08:24:03	2:44:34	176									N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Initialize filters (DHU SEQT 28); Select DHU SEQT 17				
04/11/94 08:25:21	2:45:52		70.0	161.8	580.1						N70A					
04/11/94 08:28:15	2:48:46	252									N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Initialize filters (DHU SEQT 28); Select DHU SEQT 16			Stop laser ranging	
04/11/94 08:28:45	2:49:16	30										Laser power OFF				
04/11/94 08:29:15	2:49:46	30										Load EEQ_10.UMI into SEQT 10			Restore original SEQT 10	
																Err:508
04/11/94 08:29:36	2:50:07		80.0	161.8	666.5						N80A					
04/11/94 08:34:13	2:54:44		90.0	329.0	774.7						North Pole					
04/11/94 08:34:40	2:55:11		89.1	341.5	785.8						LDUSK					
																Err:508
04/11/94 08:34:48	2:55:19	0										Stop Imaging - select ST-B				

Orbit 241 Timeline - Type B Orbit

04/11/94 08:34:53	2:55:24	5								Err:508	Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508								Wait	End of slew - wait before imaging to allow s/c to settle
04/11/94 08:37:51	2:58:22	15								Select DHU SEQT 23	Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B	
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)	Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)	
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec	
04/11/94 08:39:17	2:59:48		80.0	341.6	905.4					N80D	
04/11/94 08:41:14	3:01:45	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)
Err:508	Err:508	12									Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)	Incorrect DHU SEQT loaded
Err:508	Err:508	6								Perform NIR imaging (DHU SEQT 31)	
Err:508	Err:508	6								Load exposure table LUNIRDKS1	
Err:508	Err:508	6								Load exposure table LUNIRDKS2	
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)	
Err:508	Err:508	30								Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec	Slew HGA to Earth with active waitwhileslew
04/11/94 08:44:56	3:05:27		70.0	341.6	1060.1					N70D	
04/11/94 08:48:26	3:08:57	Err:508									Switch to HGA
											READY FOR DATA DUMP - Time approximate
											Err:508
04/11/94 08:51:18	3:11:49		60.0	341.5	1239.3					N60D	
04/11/94 08:53:00	3:13:31										Switch to DHU mode @ 128 kbps
04/11/94 08:55:00	3:15:31										Resume downlink SDR Segment 5
04/11/94 08:58:32	3:19:03		50.0	341.5	1442.2					N50D	
04/11/94 09:01:00	3:21:31										Update state vector (GNC53_11APR0900)
04/11/94 09:06:48	3:27:19		40.0	341.4	1666.6					N40D	Ground Command
04/11/94 09:16:17	3:36:48		30.0	341.3	1906.9					N30D	

Orbit 241 Timeline - Type B Orbit

04/11/94 09:21:00	3:41:31															Uplink & load EEQ_30E.UMI into SEQT 30				Ground Command For HR mosaic of Earth
04/11/94 09:24:54	3:45:25	22.0	341.2	2105.8						INPM										Enter penumbra
04/11/94 09:25:51	3:46:22	21.1	341.2	2126.6						INUM										Enter umbra
04/11/94 09:27:00	3:47:31															Uplink and schedule L242 scripts				Ground Command
04/11/94 09:27:09	3:47:40	20.0	341.2	2154.3						N20D										
04/11/94 09:39:27	3:59:58	10.0	341.1	2395.1						N10D										
04/11/94 09:53:13	4:13:44	0.0	341.0	2611.7						Equator - D										
04/11/94 09:57:00	4:17:31															Downlink SDR Segment 6 (orb 240)				Ground Command
04/11/94 10:08:17	4:28:48	-10.0	340.8	2784.2						S10D										
04/11/94 10:19:30	4:40:01	-17.0	340.7	2868.6						OUTUM										Exit umbra
04/11/94 10:20:37	4:41:08	-17.7	340.7	2875.0						OUTPM										Exit penumbra
04/11/94 10:24:19	4:44:50	-20.0	340.7	2893.4						S20D										
04/11/94 10:30:00	4:50:31															Downlink SDR Segment 1 (orb 241)				Ground Command
04/11/94 10:39:13	4:59:44	-29.0	340.6	2926.4						Aposelene										

Orbit 242 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/11/94 10:39:13	0:00:00		-29.0	340.6	2926.4							Aposelene							Downlinking SSSDR Segment 1 (orbit 241)
04/11/94 10:40:52	0:01:39		-30.0	340.5	2926.0							S30D							
04/11/94 10:43:00	0:03:47												Downlink SSSDR Segment 2						Ground Command
04/11/94 10:57:21	0:18:08		-40.0	340.4	2877.6							S40D							
																			Standard Prep1 Script
04/11/94 11:12:47	0:33:34	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/11/94 11:13:14	0:34:01		-50.0	340.3	2754.4							S50D							
04/11/94 11:17:35	0:38:22		-52.8	340.2	2707.0						PMK	AOS							
04/11/94 11:28:04	0:48:51		-60.0	340.1	2571.5							S60D							
																			Standard Prep2 Script
04/11/94 11:37:07	0:57:54	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/11/94 11:41:33	1:02:20		-70.0	340.0	2348.4							S70D							
																			Err:508
04/11/94 11:48:07	1:08:54	0											Msg "WARNING: Omni/2k in 1 min.."						
04/11/94 11:48:32	1:09:19	25											LWIR camera and cryocooler ON						
04/11/94 11:49:17	1:10:04	35											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/11/94 11:50:17	1:11:04	60											Switch to omni antennas						
04/11/94 11:51:17	1:12:04	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/11/94 11:53:34	1:14:21		-80.0	340.0	2104.8							S80D							
04/11/94 11:57:17	1:18:04	360											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 4 (nonstandard because of BSR experiments)
04/11/94 11:57:57	1:18:44	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/11/94 11:58:12	1:18:59	15												Err:508					Slew sensors to nadir (inertial pointing)
04/11/94 11:59:42	1:20:29	90											UV & HR cameras ON; Activate waitwhileslew for 300 sec						
04/11/94 12:03:00	1:23:47	198											Msg "Complete: L242_Prep3"						At end of slew - time approximate
																			Err:508
																			Err:508

Orbit 242 Timeline - Type A Orbit

04/11/94 12:03:02	1:23:49	0								Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S					NOTE: Timeline was based on pre-burn trajectory resulting in a few seconds difference in events
04/11/94 12:03:32	1:24:19	30								Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)					START MAPPING
04/11/94 12:04:02	1:24:49	30							MAXS	Set SA step rate to LO					
04/11/94 12:04:08	1:24:55		-90.0	49.1	1857.8				South Pole						
04/11/94 12:05:03	1:25:50		-89.1	158.7	1834.9				LDAWN						
04/11/94 12:13:11	1:33:58	549							S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14					
04/11/94 12:13:22	1:34:09		-80.0	159.6	1619.7				S80A						
04/11/94 12:21:08	1:41:55	477							S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13					
04/11/94 12:21:26	1:42:13		-70.0	159.6	1399.2				S70A						
04/11/94 12:28:05	1:48:52	417							S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12					
04/11/94 12:28:28	1:49:15		-60.0	159.5	1200.8				S60A						
04/11/94 12:29:05	1:49:52	60								Record in SSSR Segment 5					SSDR Segment 5
04/11/94 12:34:12	1:54:59	307							S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11					Stop HiRes imaging
04/11/94 12:34:41	1:55:28		-50.0	159.5	1026.5				S50A						
04/11/94 12:38:57	1:59:44	285								Laser Power ON					
04/11/94 12:39:37	2:00:24	40							S40A	Load EEQ_10U.UMI into SEQT 10; Load exposure table LUNARZ35S; Load exposure table LUNARH35S; Select DHU SEQT 10					UV and IR uncompressed
04/11/94 12:40:12	2:00:59		-40.0	159.4	876.6				S40A						
04/11/94 12:42:21	2:03:08		-35.8	159.4	820.2			PMK	MLOSM						
04/11/94 12:42:23	2:03:10		-35.7	159.4	819.7			MAD	MLOSM						Enter occultation
04/11/94 12:44:30	2:05:17	293							S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9					Stop HiRes imaging Resume compression
04/11/94 12:45:10	2:05:57		-30.0	159.4	750.4				S30A						
04/11/94 12:48:57	2:09:44	267							S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8					Start laser ranging
04/11/94 12:49:42	2:10:29		-20.0	159.3	646.8				S20A						
04/11/94 12:53:03	2:13:50	246							S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7					
04/11/94 12:53:53	2:14:40		-10.0	159.3	564.5				S10A						
04/11/94 12:56:55	2:17:42	232							MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6					
04/11/94 12:57:49	2:18:36		0.0	159.3	502.3				Equator - A						
04/11/94 13:00:36	2:21:23	221							N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5					
04/11/94 13:01:34	2:22:21		10.0	159.2	459.0				N10A						

Orbit 242 Timeline - Type A Orbit

04/11/94 13:04:10	2:24:57	214							N20A	Load exposure table LUNARZ25N			
04/11/94 13:05:13	2:26:00		20.0	159.2	434.1				N20A				
04/11/94 13:07:42	2:28:29	212							N30A	Load exposure table LUNARZ35N			
04/11/94 13:08:27	2:29:14		29.0	159.2	426.9				Periselene				
04/11/94 13:08:48	2:29:35		30.0	159.2	427.0				N30A				
04/11/94 13:11:14	2:32:01	212							N40A	Load exposure table LUNARZ45N			
04/11/94 13:12:24	2:33:11		40.0	159.2	437.6				N40A				
04/11/94 13:14:50	2:35:37	216							N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6			Resume HiRes imaging
04/11/94 13:16:03	2:36:50		50.0	159.1	466.0				N50A				
04/11/94 13:16:32	2:37:19		51.3	159.1	471.8			PMK	MAOSM				Exit occultation
04/11/94 13:16:44	2:37:31		51.8	159.1	473.8			MAD	MAOSM				
04/11/94 13:18:34	2:39:21	224							N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4			
04/11/94 13:19:34	2:40:21	60								Record in SDR Segment 6			SSDR Segment 6
04/11/94 13:19:50	2:40:37		60.0	159.1	512.9				N60A				
04/11/94 13:22:30	2:43:17	176							N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3			
04/11/94 13:23:49	2:44:36		70.0	159.1	579.1				N70A				
04/11/94 13:26:42	2:47:29	252							N80A	Load EEQ_09.UMI into SEQT 9; Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9			SCRIPT ERROR: Original SEQT 9 was already in place
04/11/94 13:27:12	2:47:59	30								Laser power OFF			Stop laser ranging
04/11/94 13:27:42	2:48:29	30								Load EEQ_10.UMI into SEQT 10			Restore original SEQT 10
Err:508													
04/11/94 13:28:04	2:48:51		80.0	159.1	665.5				N80A				
04/11/94 13:31:00	2:51:47									Initialize filters for HiRes mosaic (DHU SEQT 27)			Ground Command
04/11/94 13:32:41	2:53:28		90.0	236.9	773.4				North Pole				
04/11/94 13:33:08	2:53:55		89.1	337.8	784.7				LDUSK				
Err:508													
04/11/94 13:33:16	2:54:03	0								Stop Imaging - select DHU SEQT 2			T/L ERROR Filter initialization for mosaic omitted (done by ground cmd)
04/11/94 13:33:21	2:54:08	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
04/11/94 13:37:45	2:58:32		80.0	338.8	904.3				N80D				
04/11/94 13:39:21	3:00:08	360								Image Earth (Select DHU SEQT 23)			Image Earth w/all cameras

Orbit 242 Timeline - Type A Orbit

04/11/94 13:39:29	3:00:16	8								Inertial pointing w/ quaternion table (EARTH242000); Perform HiRes imaging (DHU SEQT 30)								HIRES COLOR MOSAIC OF EARTH EEQ_30E.UMI loaded into SEQT 30
04/11/94 13:41:29	3:02:16	120								Load QTable EARTH242001								
04/11/94 13:43:23	3:04:09		70.0	338.8	1059.0					N70D								
04/11/94 13:43:28	3:04:15	120								Load QTable EARTH242002								
04/11/94 13:45:28	3:06:15	120								Load QTable EARTH242003								
04/11/94 13:47:28	3:08:15	120								Load QTable EARTH242004								
04/11/94 13:49:28	3:10:15	120								Load QTable EARTH242005								
04/11/94 13:49:45	3:10:32		60.0	338.8	1238.2					N60D								
04/11/94 13:51:28	3:12:16	120								Load QTable EARTH242006								
04/11/94 13:53:28	3:14:16	120								Load QTable EARTH242007								
04/11/94 13:55:28	3:16:15	120								Load QTable EARTH242008								
04/11/94 13:55:40	3:16:31	12								Stop imaging - select ST-B								END EARTH MOSAIC
04/11/94 13:55:45	3:16:36	5								Slew s/c sensors to Vega (VEGAGNC12)								Slew to Vega (inertial pointing)
04/11/94 13:56:15	3:17:06	30								Park opaque filter on HiRes (DHU SEQT 27)								
04/11/94 13:56:30	3:17:21	15								Select ST-B; Activate waitwhileslew for 330 sec								
04/11/94 13:56:59	3:17:46		50.0	338.7	1441.2					N50D								
04/11/94 13:58:30	3:19:37	120								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)								Start calibration imaging
04/11/94 13:58:42	3:19:49	12								Perform LWIR imaging (DHU SEQT 25)								Incorrect DHU SEQT loaded - Hires Images
04/11/94 13:58:54	3:20:01	12								Perform NIR imaging (DHU SEQT 31)								
04/11/94 13:59:00	3:20:07	6								Load exposure table LUNIRDKS1								
04/11/94 13:59:06	3:20:13	6								Load exposure table LUNIRDKS2								
04/11/94 13:59:12	3:20:19	6								Perform HiRes imaging (DHU SEQT 30)								
04/11/94 13:59:42	3:20:49	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec								Slew HGA to Earth with active waitwhileslew
04/11/94 14:04:00	3:22:49	257								Switch to HGA								READY FOR DATA DUMP - Time approximate
Err:508																		
04/11/94 14:05:00	3:25:47									Switch to DHU mode @ 128 kbps								Ground Command
04/11/94 14:05:15	3:26:02		40.0	338.6	1665.6					N40D								
04/11/94 14:09:00	3:29:47									Downlink SDDR Segment 4 (orb 242)								Ground Command
04/11/94 14:12:00	3:32:47									Load EEQ_30.UMI into SEQT 30								Ground Command Restore original SEQT 30

Orbit 242 Timeline - Type A Orbit

04/11/94 14:12:06	3:32:53		32.7	338.6	1841.4					GDS	AOS								
04/11/94 14:14:44	3:35:31		30.0	338.6	1906.1						N30D								
04/11/94 14:17:00	3:37:47											Downlink SSDR Segment 5							Ground Command
04/11/94 14:23:31	3:44:18		21.8	338.5	2109.1						INPM								Enter penumbra
04/11/94 14:24:29	3:45:16		21.0	338.5	2130.1						INUM								Enter umbra
04/11/94 14:25:35	3:46:22		20.0	338.5	2153.7						N20D								
04/11/94 14:37:54	3:58:41		10.0	338.4	2394.8						N10D								
04/11/94 14:51:39	4:12:26		0.0	338.2	2611.7						Equator - D								
04/11/94 14:59:00	4:19:47											Uplink and schedule L243 scripts							Ground Command
04/11/94 15:06:00	4:26:47											SSDR to IDLE - downlink paused							Ground Command
04/11/94 15:06:43	4:27:30		-10.0	338.1	2784.5						S10D								
04/11/94 15:15:00	4:35:47											Resume downlink SSDR Segment 5							Ground Command
04/11/94 15:17:39	4:38:26		-16.9	338.0	2867.4						OUTUM								Exit umbra
04/11/94 15:18:47	4:39:34		-17.6	338.0	2874.0						OUTPM								Exit penumbra
04/11/94 15:22:46	4:43:33		-20.0	338.0	2894.0						S20D								
04/11/94 15:37:43	4:58:30		-29.0	337.8	2927.2						Aposelene								

Orbit 243 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/11/94 15:37:43	0:00:00		-29.0	337.8	2927.2							Aposelene							Downlinking SSSDR Segment 5 (orbit 242)
04/11/94 15:39:19	0:01:36		-30.0	337.8	2926.8							S30D							
04/11/94 15:48:00	0:10:17												Downlink SSSDR Segment 6 (orb 242)						Ground Command
04/11/94 15:55:49	0:18:06		-40.0	337.7	2878.5							S40D							
																			Standard Prep1 Script
04/11/94 16:10:51	0:33:08	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/11/94 16:11:43	0:34:00		-50.0	337.5	2755.4							S50D							
04/11/94 16:26:33	0:48:50		-60.0	337.4	2572.4							S60D							
																			Standard Prep2 Script
04/11/94 16:35:51	0:58:08	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/11/94 16:36:00	0:58:17												Downlink SSSDR Segment 2 patches						Ground Command
04/11/94 16:39:00	1:01:17												Downlink SSSDR Segment 3 (orb 241)						Ground Command
04/11/94 16:40:02	1:02:19		-70.0	337.4	2349.1							S70D							
																			Err:508
04/11/94 16:46:10	1:08:28	0											Msg "WARNING: 2kbps in 1 min.."						
04/11/94 16:46:36	1:08:53	25											LWIR camera and cryocooler ON						
04/11/94 16:47:11	1:09:28	35											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/11/94 16:48:11	1:10:28	60											Switch to omni antennas						
04/11/94 16:49:11	1:11:28	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/11/94 16:52:04	1:14:21		-80.0	337.4	2105.4							S80D							
04/11/94 16:55:11	1:17:28	360											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 4
04/11/94 16:55:51	1:18:08	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/11/94 16:56:06	1:18:23	15																	Slew sensors to nadir at South Pole (inertial pointing)
04/11/94 16:57:36	1:19:53	90											UV & HR cameras ON						Err:508
																			Err:508
04/11/94 17:00:36	1:22:53	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S						

Orbit 243 Timeline - Type B Orbit

04/11/94 17:01:36	1:23:53	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)								START MAPPING
04/11/94 17:02:36	1:24:53	60								MAXS	Set SA step rate to LO								
04/11/94 17:02:38	1:24:55		-90.0	67.2	1858.1					South Pole									
04/11/94 17:03:33	1:25:50		-89.1	154.5	1835.2					LDAWN									
04/11/94 17:11:49	1:34:06	553								S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20								
04/11/94 17:11:52	1:34:09		-80.0	156.7	1619.9					S80A									
04/11/94 17:19:52	1:42:09	483								S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19								
04/11/94 17:19:55	1:42:12		-70.0	156.8	1399.2					S70A									
04/11/94 17:22:41	1:44:58	169									Err:508								Slew to South Pole for oblique viewing
04/11/94 17:26:55	1:49:12	254								S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11								
04/11/94 17:26:58	1:49:15		-60.0	156.7	1200.7					S60A									
04/11/94 17:27:55	1:50:12	60									Record in SDR Segment 5								SSDR Segment 5
04/11/94 17:33:07	1:55:24	312								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11								Stop HiRes imaging
04/11/94 17:33:10	1:55:27		-50.0	156.7	1026.2					S50A									
04/11/94 17:38:00	2:00:17										Ranging B OFF Ranging A OFF								Ground Command
04/11/94 17:38:07	2:00:24	300									Laser Power ON								
04/11/94 17:38:38	2:00:55	31								S40A	Load EEQ_10U.UMI into SEQT 10; Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10								Resume nadir mapping UV and IR uncompressed
04/11/94 17:38:42	2:00:59		-40.0	156.7	876.2					S40A									
04/11/94 17:41:11	2:03:28		-35.1	156.6	811.3				MAD	MLOSM									
04/11/94 17:41:16	2:03:33		-34.9	156.6	809.0				PMK	MLOSM									
04/11/94 17:41:18	2:03:35		-34.9	156.6	808.3				GDS	MLOSM									Enter occultation
04/11/94 17:43:36	2:05:53	298								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9								Resume compression
04/11/94 17:43:39	2:05:56		-30.0	156.6	749.9					S30A									
04/11/94 17:48:07	2:10:24	271								S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8								Start laser ranging
04/11/94 17:48:11	2:10:28		-20.0	156.6	646.3					S20A									
04/11/94 17:52:18	2:14:35	251								S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7								
04/11/94 17:52:22	2:14:39		-10.0	156.6	563.9					S10A									
04/11/94 17:56:14	2:18:31	236								MEQA	Load exposure table LUNARZ05N; Select DHU SEQT 6								
04/11/94 17:56:18	2:18:35		0.0	156.5	501.6					Equator - A									

Orbit 243 Timeline - Type B Orbit

04/11/94 17:59:59	2:22:16	225								N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/11/94 18:00:04	2:22:21		10.0	156.5	458.3					N10A							
04/11/94 18:03:38	2:25:55	219								N20A	Load exposure table LUNARZ25N						
04/11/94 18:03:42	2:25:59		20.0	156.5	433.3					N20A							
04/11/94 18:06:57	2:29:14		29.0	156.5	426.1					Periselene							
04/11/94 18:07:12	2:29:29	214								N30A	Load exposure table LUNARZ35N						
04/11/94 18:07:17	2:29:34		30.0	156.5	426.1					N30A							
04/11/94 18:10:48	2:33:05	216								N40A	Load exposure table LUNARZ45N						
04/11/94 18:10:53	2:33:10		40.0	156.4	436.7					N40A							
04/11/94 18:14:27	2:36:44	219								N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging
04/11/94 18:14:32	2:36:49		50.0	156.4	465.1					N50A							
04/11/94 18:14:45	2:37:02		50.6	156.4	468.1				GDS	MAOSM							Exit occultation
04/11/94 18:14:52	2:37:09		50.9	156.4	469.3				PMK	MAOSM							
04/11/94 18:14:58	2:37:15		51.2	156.4	470.3				MAD	MAOSM							
04/11/94 18:18:14	2:40:31	227								N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/11/94 18:18:19	2:40:36		60.0	156.4	512.0					N60A							
04/11/94 18:19:14	2:41:31	60									Record in SDR Segment 6						SSDR Segment 6
04/11/94 18:22:12	2:44:29	178								N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 3						UV images Pole to Pole to help in orbit 111 recovery
04/11/94 18:22:18	2:44:35		70.0	156.4	578.0					N70A							
04/11/94 18:26:27	2:48:44	255								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 9						Stop laser imaging
04/11/94 18:26:32	2:48:49		80.0	156.5	664.4					N80A							
04/11/94 18:26:57	2:49:14	30									Laser power OFF						
04/11/94 18:27:27	2:49:44	30									Load EEQ_10.UMI into SEQT 10						Restore original SEQT 10
																	Err:508
04/11/94 18:31:09	2:53:26		90.0	261.0	772.5					North Pole							
04/11/94 18:31:36	2:53:53		89.1	333.6	783.6					LDUSK							
																	Err:508
04/11/94 18:33:03	2:55:20	0									Stop Imaging - select ST-B						
04/11/94 18:33:08	2:55:25	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait						End of slew - wait before imaging to allow s/c to settle
04/11/94 18:36:06	2:58:23	15									Select DHU SEQT 23						Earth imaging w/color HiRes
04/11/94 18:36:12	2:58:29		80.0	335.9	903.1					N80D							
Err:508	Err:508	15									Stop imaging - select ST-B						

Orbit 243 Timeline - Type B Orbit

Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)				Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)				
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 320 sec				
04/11/94 18:39:19	3:01:36	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)				Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)				Incorrect DHU SEQT loaded
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)				
Err:508	Err:508	6								Load exposure table LUNIRDKS1				
Err:508	Err:508	6								Load exposure table LUNIRDKS2				
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)				
Err:508	Err:508	30								Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec				Slew HGA to Earth with active waitwhileslew
04/11/94 18:41:51	3:04:08		70.0	336.0	1057.9				N70D					
04/11/94 18:44:00	3:06:17	Err:508								Switch to HGA				READY FOR DATA DUMP - Time approximate
Err:508														
04/11/94 18:45:00	3:07:17									Switch to DHU mode @ 128 kbps				Ground Command
04/11/94 18:48:12	3:10:29		60.0	336.0	1237.0				N60D					
04/11/94 18:49:00	3:11:17									Resume downlink SDR Segment 3				Ground Command
04/11/94 18:55:26	3:17:43		50.0	335.9	1440.1				N50D					
04/11/94 18:58:15	3:20:32		46.5	335.9	1518.1			MAD	LOS					
04/11/94 19:03:42	3:25:59		40.0	335.9	1664.6				N40D					
04/11/94 19:06:00	3:28:17									Downlink SDR Segment 4 (orb 243)				Ground Command
04/11/94 19:13:11	3:35:28		30.0	335.8	1905.3				N30D					
04/11/94 19:21:00	3:43:17									Downlink SDR Segment 5				Ground Command
04/11/94 19:22:09	3:44:26		21.6	335.7	2112.5				INPM					Enter penumbra
04/11/94 19:23:08	3:45:25		20.8	335.7	2133.8				INUM					Enter umbra
04/11/94 19:24:01	3:46:18		20.0	335.7	2153.0				N20D					
04/11/94 19:36:20	3:58:37		10.0	335.6	2394.4				N10D					
04/11/94 19:50:05	4:12:22		0.0	335.5	2611.7				Equator - D					
04/11/94 20:05:10	4:27:27		-10.0	335.4	2784.8				S10D					
04/11/94 20:07:00	4:29:17									Update state vector (GNC53_11APR1900)				Ground Command
04/11/94 20:15:48	4:38:05		-16.7	335.3	2866.1				OUTUM					Exit umbra
04/11/94 20:16:56	4:39:13		-17.4	335.3	2872.9				OUTPM					Exit penumbra
04/11/94 20:21:13	4:43:30		-20.0	335.2	2894.6				S20D					

Orbit 244 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/11/94 20:36:12	0:00:00		-29.1	335.1	2928.0							Aposelene							Downlinking SSSR Segment 5 (orbit 243)
04/11/94 20:37:46	0:01:34		-30.0	335.1	2927.6							S30D							
04/11/94 20:52:00	0:15:48												Downlink SSSR Segment 6						Ground Command
04/11/94 20:54:17	0:18:05		-40.0	335.0	2879.5							S40D							
																			Standard Prep1 Script
04/11/94 21:09:49	0:33:37	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/11/94 21:10:11	0:33:59		-50.0	334.8	2756.4							S50D							
04/11/94 21:19:00	0:42:48												SSDR to IDLE - downlink complete						Ground Command
04/11/94 21:25:01	0:48:49		-60.0	334.7	2573.3							S60D							
																			Standard Prep2 Script
04/11/94 21:34:09	0:57:57	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/11/94 21:38:31	1:02:19		-70.0	334.7	2349.9							S70D							
																			Err:508
04/11/94 21:45:09	1:08:57	0											Msg "WARNING: 2kbps in 1 min.."						
04/11/94 21:45:34	1:09:22	25											LWIR camera and cryocooler ON						
04/11/94 21:46:09	1:09:57	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/11/94 21:47:09	1:10:57	60											Switch to omni antennas						
04/11/94 21:48:09	1:11:57	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/11/94 21:50:33	1:14:21		-80.0	334.7	2105.9							S80D							
04/11/94 21:54:09	1:17:57	360											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/11/94 21:54:49	1:18:37	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/11/94 21:55:04	1:18:52	15																	Slew sensors to nadir (inertial pointing)
04/11/94 21:56:34	1:20:22	90											UV & HR cameras ON						
																			Err:508
																			Err:508
04/11/94 22:00:04	1:23:52	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S						

Orbit 244 Timeline - Type A Orbit

04/11/94 22:00:34	1:24:22	30									Switch to lunar mapping mode (ACSMMode=LunarMapping); Start Imaging (DHU SEQT 15)				START MAPPING
04/11/94 22:01:04	1:24:52	30								MAXS	Set SA step rate to LO				
04/11/94 22:01:08	1:24:56		-89.9	70.6	1858.2					South Pole					
04/11/94 22:02:03	1:25:51		-89.1	150.6	1835.5					LDAWN					
04/11/94 22:10:18	1:34:06	554								S80A	Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14				
04/11/94 22:10:22	1:34:10		-80.0	153.9	1620.1					S80A					
04/11/94 22:13:33	1:37:21		-76.2	153.9	1533.4				CAN	AOS					
04/11/94 22:18:21	1:42:09	483								S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19				
04/11/94 22:18:25	1:42:13		-70.0	154.0	1399.2					S70A					
04/11/94 22:19:21	1:43:09	60									Record in SDR Segment 2				SSDR Segment 2
04/11/94 22:20:00	1:43:48	39									Inertial pointing w/ quaternion table (ORB233_FILL000)				START OF ORBIT 233 RECOVERY PROCEDURE
04/11/94 22:23:00	1:46:48	180									Load exposure table LUNARZ35S; Load exposure table LUNARH35S; Select DHU SEQT 9				
04/11/94 22:25:00	1:48:48	120									Load exposure table LUNARZ45S; Load exposure table LUNARH45S; Load QTable ORB233_FILL001				Start slew back to 244 track
04/11/94 22:25:00	1:48:48										Load exposure table LUNARZ55S				Ground Command - OPS ERROR
04/11/94 22:25:23	1:49:11	23								S60A	Select DHU SEQT 12				
04/11/94 22:25:28	1:49:16		-60.0	154.0	1200.5					S60A					
04/11/94 22:28:00	1:51:48	157									Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Switch to lunar mapping mode (ACSMMode=LunarMapping)				END ORBIT 233 RECOVERY PROCEDURES Resume nadir mapping
04/11/94 22:31:35	1:55:23	215								S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11				Stop HiRes imaging
04/11/94 22:31:40	1:55:28		-50.0	153.9	1025.9					S50A					
04/11/94 22:36:35	2:00:23	300									Laser Power ON				
04/11/94 22:37:06	2:00:54	31								S40A	Load exposure table LUNARZ35S; Select DHU SEQT 10				
04/11/94 22:37:11	2:00:59		-40.0	153.9	875.8					S40A					
04/11/94 22:40:07	2:03:55		-34.2	153.9	799.6				PMK	MLOSM					
04/11/94 22:40:12	2:04:00		-34.0	153.9	797.6				GDS	MLOSM					
04/11/94 22:40:44	2:04:32		-32.9	153.9	784.3				CAN	MLOSM					Enter occultation
04/11/94 22:42:04	2:05:52	298								S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9				
04/11/94 22:42:09	2:05:57		-30.0	153.9	749.4					S30A					
04/11/94 22:43:45	2:07:33	101									Load exposure table LUNARZ45S; Inertial pointing w/ quaternion table (ORB111_RECOV000); Select DHU SEQT 0				START OF ORBIT 111 RECOVERY PROCEDURE SEQT EEQ_09X.UMI is loaded into SEQT 0

Orbit 244 Timeline - Type A Orbit

04/11/94 22:45:43	2:09:31	118										Select DHU SEQT 22	SEQT EEQ_03X.UMI is loaded into SEQT 22 Start laser ranging (oblique)
04/11/94 22:46:41	2:10:29		-20.0	153.9	645.7					S20A			
04/11/94 22:47:05	2:10:53	82										Load exposure table LUNARZ55S; Load QTable ORB111_RECOV001	
04/11/94 22:48:45	2:12:33	100										Select DHU SEQT 8	Start slew to 111 track
04/11/94 22:50:25	2:14:13	100										Load QTable ORB111_RECOV002	
04/11/94 22:50:46	2:14:34	21								S10A		Select DHU SEQT 9	
04/11/94 22:50:52	2:14:40		-10.0	153.8	563.2					S10A			
04/11/94 22:52:45	2:16:33	119										Load exposure table LUNARZ45S; Select DHU SEQT 0	End slew Start mapping 111 track
04/11/94 22:53:45	2:17:33	60										Load QTable ORB111_RECOV003	
Err:508													
04/11/94 22:54:48	2:18:36		0.0	153.8	500.9					Equator - A			
Err:508													
04/11/94 22:55:05	2:18:53	0										Select DHU SEQT 22	
04/11/94 22:56:55	2:20:43	110										Select DHU SEQT 23	SEQT EEQ_07X.UMI is loaded into SEQT 23
04/11/94 22:57:05	2:20:53	10										Load QTable ORB111_RECOV004	
04/11/94 22:58:27	2:22:15	82								N10A		Select DHU SEQT 24	SEQT EEQ_06X.UMI is loaded into SEQT 24
04/11/94 22:58:33	2:22:21		10.0	153.8	457.5					N10A			
04/11/94 22:59:55	2:23:43	88										Select DHU SEQT 25	SEQT EEQ_05X.UMI is loaded into SEQT 25
04/11/94 23:00:25	2:24:13	30										Load exposure table LUNARZ35S; Load QTable ORB111_RECOV005	
04/11/94 23:02:11	2:25:59		20.0	153.8	432.5					N20A			
04/11/94 23:03:45	2:27:33	200										Load exposure table LUNARZ15S; Load QTable ORB111_RECOV006	
04/11/94 23:05:26	2:29:14		29.1	153.7	425.2					Periselene			
04/11/94 23:05:46	2:29:34		30.0	153.7	425.3					N30A			
04/11/94 23:06:31	2:30:19	166										Select DHU SEQT 26	SEQT EEQ_04X.UMI is loaded into SEQT 26
04/11/94 23:07:05	2:30:53	34										Load exposure table LUNARZ05N; Load QTable ORB111_RECOV007	
04/11/94 23:07:45	2:31:33	40										Load exposure table LUNARZ15N; Select DHU SEQT 4	
04/11/94 23:09:15	2:33:03	90								N40A		Select DHU SEQT 5	
04/11/94 23:09:21	2:33:09		40.0	153.7	435.8					N40A			
04/11/94 23:10:25	2:34:13	70										Load QTable ORB111_RECOV008	
04/11/94 23:12:45	2:36:33	140										Load exposure table LUNARZ35N; Select DHU SEQT 25	
04/11/94 23:12:54	2:36:42	9								N50A		Load exposure table LUNARZ55N	
04/11/94 23:13:01	2:36:49		50.0	153.7	464.2					N50A			
04/11/94 23:13:04	2:36:52		50.1	153.7	465.4				GDS	MAOSM			Exit occultation
04/11/94 23:13:04	2:36:52		50.1	153.7	465.4				CAN	MAOSM			
04/11/94 23:13:04	2:36:52		50.2	153.7	465.5				PMK	MAOSM			
04/11/94 23:13:45	2:37:33	51										Load QTable ORB111_RECOV009	

Orbit 244 Timeline - Type A Orbit

04/11/94 23:14:57	2:38:45	72								Select DHU SEQT 26			
04/11/94 23:16:41	2:40:29	104						N60A		Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N			Resume HiRes imaging
04/11/94 23:16:47	2:40:35		60.0	153.7	511.0			N60A					
04/11/94 23:17:05	2:40:53	24								Load QTable ORB111_RECOV010; Select DHU SEQT 22			
04/11/94 23:17:45	2:41:33	40								Record in SSSR Segment 3; Switch to lunar mapping mode (ACSMODE=LunarMapping); Select DHU SEQT 4			END ORBIT 111 RECOVERY PROCEDURES SSDR Segment 3
04/11/94 23:20:39	2:44:27	174						N70A		Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3			
04/11/94 23:20:46	2:44:34		70.0	153.7	577.1			N70A					
04/11/94 23:24:54	2:48:42	255						N80A		Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9			Stop laser ranging
04/11/94 23:25:00	2:48:48		80.0	153.9	663.4			N80A					
04/11/94 23:25:24	2:49:12	30								Laser power OFF			
04/11/94 23:25:54	2:49:42	30								Load EEQ_23.UMI into SEQT23; Load EEQ_32.UMI into SEQT25			Restore default SEQTs 23 & 25
													Err:508
04/11/94 23:29:37	2:53:25		89.9	258.6	771.5			North Pole					
04/11/94 23:30:04	2:53:52		89.1	329.8	782.6			LDUSK					
													Err:508
04/11/94 23:31:29	2:55:17	0								Stop Imaging - select ST-B			
04/11/94 23:31:34	2:55:22	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508								Wait			End of slew - wait before imaging to allow s/c to settle
04/11/94 23:34:40	2:58:28		80.0	333.1	902.1			N80D					
04/11/94 23:34:42	2:58:30	15								Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B			
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)			
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec			

Orbit 245 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/12/94 01:34:42	0:00:00		-29.1	332.4	2928.8							Aposelene							Downlinking SSSR Segment 2 (orbit 244)
04/12/94 01:36:13	0:01:31		-30.0	332.4	2928.5							S30D							
04/12/94 01:39:00	0:04:18												Load EEQ_03X.UMI into SEQT 22; Load EEQ_04X.UMI into SEQT 26; Load EEQ_05X.UMI into SEQT 25; Load EEQ_06X.UMI into SEQT 24; Load EEQ_07X.UMI into SEQT 23; Load EEQ_09X.UMI into SEQT 0					Ground Command Tables required for orbit 244 data recovery procedure	
04/12/94 01:48:00	0:13:18												Downlink SSSR Segment 3						Ground Command
04/12/94 01:52:44	0:18:02		-40.0	332.2	2880.5							S40D							
																			Standard Prep1 Script
04/12/94 02:07:47	0:33:05	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/12/94 02:08:39	0:33:57		-50.0	332.1	2757.4							S50D							
04/12/94 02:20:00	0:45:18												SSDR to IDLE - downlink complete						Ground Command
04/12/94 02:23:30	0:48:48		-60.0	332.0	2574.2							S60D							
04/12/94 02:31:38	0:56:56		-65.9	332.0	2445.3						GDS	LOS							
																			Standard Prep2 Script
04/12/94 02:32:47	0:58:05	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/12/94 02:37:00	1:02:18		-70.0	332.0	2350.5							S70D							
																			Err:508
04/12/94 02:43:07	1:08:25	0											Msg "WARNING: 2kbps in 1 min.."						
04/12/94 02:43:32	1:08:50	25											LWIR camera and cryocooler ON						
04/12/94 02:44:07	1:09:25	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/12/94 02:45:07	1:10:25	60											Switch to omni antennas						
04/12/94 02:46:07	1:11:25	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/12/94 02:49:02	1:14:20		-80.0	332.1	2106.3							S80D							
04/12/94 02:52:07	1:17:25	360											Initialize filters (DHU SEQT 27); Record in SSSR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 4
04/12/94 02:52:47	1:18:05	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/12/94 02:53:02	1:18:20	15																	Slew sensors to nadir at South Pole (inertial pointing)
04/12/94 02:54:32	1:19:50	90												Err:508					
													UV & HR cameras ON						

Orbit 245 Timeline - Type B Orbit

											Err:508	
											Err:508	
04/12/94 02:58:32	1:23:50	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S	
04/12/94 02:59:02	1:24:20	30									Switch to lunar mapping mode (ACSMMode=LunarMapping); Start Imaging (DHU SEQT 21)	START MAPPING
04/12/94 02:59:32	1:24:50	30							MAXS		Set SA step rate to LO	
04/12/94 02:59:37	1:24:55		-89.9	60.6	1858.7				South Pole			
04/12/94 03:00:32	1:25:50		-89.1	146.7	1835.7				LDAWN			
04/12/94 03:08:46	1:34:04	554							S80A		Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20	
04/12/94 03:08:51	1:34:09		-80.0	151.0	1620.2				S80A			
04/12/94 03:16:49	1:42:07	483							S70A		Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19	
04/12/94 03:16:55	1:42:13		-70.0	151.2	1399.1				S70A			
04/12/94 03:19:37	1:44:55	169										Slew to South Pole for oblique viewing
04/12/94 03:23:51	1:49:09	253							S60A		Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11	
04/12/94 03:23:57	1:49:15		-60.0	151.2	1200.2				S60A			
04/12/94 03:30:04	1:55:22	373							S50A		Load exposure table LUNARZ45S; Select DHU SEQT 11	Stop HiRes imaging
04/12/94 03:30:10	1:55:28		-50.0	151.2	1025.5				S50A			
04/12/94 03:35:03	2:00:21	299									Laser Power ON	
04/12/94 03:35:34	2:00:52	31							S40A		Switch to lunar mapping mode (ACSMMode=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10	Resume nadir mapping
04/12/94 03:35:41	2:00:59		-40.0	151.2	875.3				S40A			
04/12/94 03:36:34	2:01:52	60									Record in SSSR Segment 5	SSDR Segment 5
04/12/94 03:39:15	2:04:33	161									Inertial pointing w/ quaternion table (ORBORB244_RECOV000); Select DHU SEQT 0	START OF ORBIT 244 DATA RECOVERY PROCEDURE SEQT EEQ_09X.UMI is loaded into SEQT 0
04/12/94 03:39:44	2:05:02		-31.9	151.1	771.1			CAN	MLOSM			Enter occultation
04/12/94 03:40:32	2:05:50	77							S30A		Load exposure table LUNARZ45S....	
04/12/94 03:40:39	2:05:57		-30.0	151.1	748.9				S30A			
04/12/94 03:41:19	2:06:37	47									Select DHU SEQT 22	SEQT EEQ_03X.UMI is loaded into SEQT 22
04/12/94 03:42:35	2:07:53	76									Load QTable ORB244_RECOV001	Start laser ranging (oblique)
04/12/94 03:42:58	2:08:16	23									Select DHU SEQT 23	SEQT EEQ_07X.UMI is loaded into SEQT 23
04/12/94 03:44:37	2:09:55	99									Load exposure table LUNARZ55S.; Select DHU SEQT 24	SEQT EEQ_06X.UMI is loaded into SEQT 24

Orbit 245 Timeline - Type B Orbit

04/12/94 03:45:10	2:10:28		-20.0	151.1	645.1					S20A									
04/12/94 03:45:55	2:11:13	78									Load QTable ORB244_RECOV002								
04/12/94 03:46:19	2:11:37	24									Select DHU SEQT 25								SeqT EEQ_05X.UMI is loaded into SEQT25
04/12/94 03:47:15	2:12:33	56									Select DHU SEQT 5								Start slew to 244 track
04/12/94 03:48:30	2:13:48	75									Select DHU SEQT 6								
04/12/94 03:49:15	2:14:33	45									Load QTable ORB244_RECOV003; Load exposure table LUNARZ35S								
04/12/94 03:49:21	2:14:39		-10.0	151.1	562.6					S10A									
04/12/94 03:50:52	2:16:10	97									Load exposure table LUNARZ25S; Select DHU SEQT 7								
04/12/94 03:52:35	2:17:53	103									Load QTable ORB244_RECOV004								
04/12/94 03:53:15	2:18:33	40									Load exposure table LUNARZ35S; Select DHU SEQT 23								End slew, map 244
																			Err:508
04/12/94 03:53:17	2:18:35		0.0	151.1	500.1					Equator - A									Err:508
																			Err:508
04/12/94 03:55:55	2:21:13	0									Load QTable ORB244_RECOV005								
04/12/94 03:56:55	2:22:13	60								N10A	Select DHU SEQT 25								
04/12/94 03:57:02	2:22:20		10.0	151.0	456.8					N10A									
04/12/94 03:59:15	2:24:33	140									Load QTable ORB244_RECOV006; Load exposure table LUNARZ25S								
04/12/94 04:00:40	2:25:58		20.0	151.0	431.7					N20A									
04/12/94 04:02:15	2:27:33	180									Load exp table LUNARZ15N; Select DHU SEQT 5								Start slew to 245 track
04/12/94 04:02:35	2:27:53	20									Load QTable ORB244_RECOV007								
04/12/94 04:03:55	2:29:13		29.1	151.0	424.4					Periselene									
04/12/94 04:04:07	2:29:25	92								N30A	Load exposure table LUNARZ45N								
04/12/94 04:04:15	2:29:33		30.0	151.0	424.5					N30A									
04/12/94 04:05:55	2:31:13	108									Load QTable ORB244_RECOV008; Load exposure table LUNARZ55N;								
04/12/94 04:07:42	2:33:00	107								N40A	Load exposure table LUNARZ65N								
04/12/94 04:07:50	2:33:08		40.0	151.0	434.9					N40A									
04/12/94 04:09:15	2:34:33	93									Load QTable ORB244_RECOV009; Select DHU SEQT 25								End slew, map 245
04/12/94 04:11:20	2:36:38		49.6	151.0	462.5				CAN	MAOSM									Exit occultation
04/12/94 04:11:29	2:36:47		50.0	151.0	463.3					N50A									
04/12/94 04:12:35	2:37:53	200									Load QTable ORB244_RECOV010								
04/12/94 04:14:25	2:39:43	110									Select DHU SEQT 26								SeqT EEQ_04X.UMI is loaded into SEQT 26
04/12/94 04:15:16	2:40:34		60.0	151.0	510.1					N60A									
04/12/94 04:15:55	2:41:13	90									Load QTable ORB244_RECOV011; Load exposure table LUNARZ75N; Select DHU SEQT 22								
04/12/94 04:17:15	2:42:33	80									Switch to lunar mapping mode (ACSMODE=LunarMapping); Select DHU SEQT 4								END ORBIT 244 RECOVERY PROCEDURES
04/12/94 04:18:15	2:43:33	60									Record in SDR Segment 6								SSDR Segment 6

Orbit 245 Timeline - Type B Orbit

04/12/94 04:19:06	2:44:24	51								N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 3	Resume HiRes imaging UV images Pole to Pole to help in orbit 111 recovery
04/12/94 04:19:14	2:44:32		70.0	151.1	576.1					N70A		
04/12/94 04:23:20	2:48:38	254								N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 9	Stop laser imaging
04/12/94 04:23:28	2:48:46		80.0	151.3	662.4					N80A		
04/12/94 04:23:50	2:49:08	30									Laser power OFF	
04/12/94 04:24:20	2:49:38	30									Load EEQ_23.UMI into SEQT23; Load EEQ_32.UMI into SEQT25	Restore default SEQTs 23 & 25
Err:508												
04/12/94 04:28:04	2:53:22		89.9	235.3	770.2					North Pole		
04/12/94 04:28:31	2:53:49		89.1	325.8	781.6					LDUSK		
Err:508												
04/12/94 04:29:54	2:55:13	0									Stop Imaging - select ST-B	
04/12/94 04:29:59	2:55:17	5									Err:508	Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait	End of slew - wait before imaging to allow s/c to settle
04/12/94 04:33:05	2:58:23	15									Select DHU SEQT 23	Earth imaging w/color HiRes
04/12/94 04:33:08	2:58:26		80.0	330.2	901.0					N80D		
Err:508	Err:508	15									Stop imaging - select ST-B	
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)	Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)	
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 240 sec	
04/12/94 04:36:10	3:01:28	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform LWIR imaging (DHU SEQT 25)	Start calibration imaging
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)	
Err:508	Err:508	6									Load exposure table LUNIRDKS1	
Err:508	Err:508	6									Load exposure table LUNIRDKS2	
Err:508	Err:508	6									Perform UV0 imaging (DHU SEQT 29)	
Err:508	Err:508	12									Perform HiRes imaging (DHU SEQT 30)	

Orbit 246 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/12/94 06:33:11	0:00:00		-29.1	329.7	2929.6							Aposelene							Downlinking SSSDR Segment 5 (orbit 245)
04/12/94 06:34:41	0:01:30		-30.0	329.7	2929.3							S30D							
04/12/94 06:50:23	0:17:12		-39.5	329.5	2885.0						MAD	AOS							
04/12/94 06:51:12	0:18:01		-40.0	329.5	2881.4							S40D							
04/12/94 07:01:00	0:27:49												Load EEQ_23.UMI into SEQT 23; Load EEQ_32.UMI into SEQT 25; Load EEQ_36.UMI into SEQT 26						Ground Command Restore original SEQTs 23,25 and 26
																			Standard Prep1 Script
04/12/94 07:06:14	0:33:03	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/12/94 07:07:07	0:33:56		-50.0	329.4	2758.3							S50D							
04/12/94 07:21:59	0:48:48		-60.0	329.3	2575.0							S60D							
																			Standard Prep2 Script
04/12/94 07:30:34	0:57:23	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/12/94 07:32:00	0:58:49												SSDR to IDLE - Segment 5 complete						Ground Command
04/12/94 07:35:29	1:02:18		-70.0	329.3	2351.2							S70D							
																			Err:508
04/12/94 07:41:34	1:08:23	0											Msg "WARNING: Omni/2k in 1 min.."						
04/12/94 07:41:59	1:08:48	25											LWIR camera and cryocooler ON						
04/12/94 07:42:34	1:09:23	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/12/94 07:43:34	1:10:23	60											Switch to omni antennas						
04/12/94 07:44:14	1:11:02		-77.1	329.4	2177.1						CAN	LOS							
04/12/94 07:44:34	1:11:23	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/12/94 07:47:31	1:14:20		-80.0	329.5	2106.8							S80D							
04/12/94 07:50:34	1:17:23	360											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1
04/12/94 07:51:14	1:18:03	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/12/94 07:51:29	1:18:18	15																Err:508	Slew sensors to nadir (inertial pointing)
04/12/94 07:52:59	1:19:48	90											UV & HR cameras ON; Activate waitwhileslew for 300 sec						
04/12/94 07:56:00	1:22:49	181											Msg "Complete: L246_Prep3"						At end of slew - time approximate
																			Err:508

Orbit 246 Timeline - Type A Orbit

													Err:508	
04/12/94 07:56:59	1:23:48	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S	
04/12/94 07:57:29	1:24:18	30											Switch to lunar mapping mode (ACSMoDe=LunarMapping); Start Imaging (DHU SEQT 15)	START MAPPING
04/12/94 07:57:59	1:24:48	30											MAXS Set SA step rate to LO	
04/12/94 07:58:06	1:24:55		-89.9	54.9	1859.1								South Pole	
04/12/94 07:59:02	1:25:51		-89.1	142.7	1835.9								LDAWN	
04/12/94 08:07:14	1:34:03	555											S80A Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14	
04/12/94 08:07:21	1:34:10		-80.0	148.2	1620.2								S80A	
04/12/94 08:15:17	1:42:06	483											S70A Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13	
04/12/94 08:15:24	1:42:13		-70.0	148.4	1399.0								S70A	
04/12/94 08:22:19	1:49:08	422											S60A Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12	
04/12/94 08:22:27	1:49:16		-60.0	148.4	1200.0								S60A	
04/12/94 08:23:19	1:50:08	60												Record in SSSR Segment 2 SSDR Segment 2
04/12/94 08:28:31	1:55:20	312											S50A Load exposure table LUNARZ45S; Select DHU SEQT 11	Stop HiRes imaging
04/12/94 08:28:39	1:55:27		-50.0	148.4	1025.2								S50A	
04/12/94 08:33:31	2:00:20	300												Laser Power ON
04/12/94 08:34:02	2:00:51	31											S40A Load exposure table LUNARZ35S; Select DHU SEQT 10	
04/12/94 08:34:10	2:00:59		-40.0	148.4	874.9								S40A	
04/12/94 08:38:24	2:05:13		-31.5	148.4	766.4								MAD MLOSM	Enter occultation
04/12/94 08:39:00	2:05:49	298											S30A Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/12/94 08:39:08	2:05:57		-30.0	148.4	748.3								S30A	
04/12/94 08:43:31	2:10:20	271											S20A Load exposure table LUNARZ15S; Select DHU SEQT 8	Start laser ranging
04/12/94 08:43:39	2:10:28		-20.0	148.4	644.5								S20A	
04/12/94 08:47:42	2:14:31	251											S10A Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/12/94 08:47:50	2:14:38		-10.0	148.4	561.9								S10A	
04/12/94 08:51:37	2:18:26	235											MEQA Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/12/94 08:51:46	2:18:35		0.0	148.3	499.5								Equator - A	
04/12/94 08:55:22	2:22:11	225											N10A Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/12/94 08:55:31	2:22:20		10.0	148.3	456.0								N10A	
04/12/94 08:59:00	2:25:49	218											N20A Load exposure table LUNARZ25N	
04/12/94 08:59:09	2:25:58		20.0	148.3	430.9								N20A	

Orbit 246 Timeline - Type A Orbit

04/12/94 09:02:24	2:29:12		29.1	148.3	423.6							Periselene			
04/12/94 09:02:34	2:29:23	214										N30A	Load exposure table LUNARZ35N		
04/12/94 09:02:43	2:29:32		30.0	148.3	423.6							N30A			
04/12/94 09:06:09	2:32:58	215										N40A	Load exposure table LUNARZ45N		
04/12/94 09:06:18	2:33:06		40.0	148.3	434.1							N40A			
04/12/94 09:08:43	2:35:32		46.6	148.3	451.6						MAD	MAOSM			Exit occultation
04/12/94 09:09:48	2:36:37	219										N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6		Resume HiRes imaging
04/12/94 09:09:57	2:36:46		50.0	148.3	462.4							N50A			
04/12/94 09:13:34	2:40:23	226										N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4		
04/12/94 09:13:44	2:40:33		60.0	148.3	509.1							N60A			
04/12/94 09:14:34	2:41:23	60											Record in SDR Segment 3		SSDR Segment 3
04/12/94 09:17:32	2:44:21	178										N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3		
04/12/94 09:17:42	2:44:31		70.0	148.4	575.1							N70A			
04/12/94 09:21:46	2:48:35	254										N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9		Stop laser ranging
04/12/94 09:21:56	2:48:45		80.0	148.6	661.4							N80A			
04/12/94 09:22:16	2:49:05	30											Laser power OFF		
Err:508															
04/12/94 09:26:32	2:53:21		89.9	243.5	769.4							North Pole			
04/12/94 09:26:59	2:53:48		89.1	321.8	780.6							LDUSK			
Err:508															
04/12/94 09:28:22	2:55:11	0											Stop Imaging - select ST-B		
Err:508	Err:508	5											Err:508		Slew sensors to Earth (inertial pointing)
04/12/94 09:31:29	2:58:17	182											Load EARTH exposure table (EARTH_VIEW_AXIS)		
04/12/94 09:31:35	2:58:24		80.0	327.4	900.0							N80D			
04/12/94 09:31:43	2:58:32	15											Select DHU SEQT 23		Earth imaging w/color HiRes
04/12/94 09:31:59	2:58:48	15											Stop imaging - select ST-B		
04/12/94 09:32:04	2:58:52	5											Slew s/c sensors to Vega (VEGAGNC12)		Slew to Vega (inertial pointing)
04/12/94 09:32:34	2:59:23	30											Park opaque filter on HiRes (DHU SEQT 27)		
04/12/94 09:32:48	2:59:37	15											Select ST-B; Activate waitwhileslew for 240 sec		

Orbit 246 Timeline - Type A Orbit

04/12/94 09:34:51	3:01:39	122								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform LWIR imaging (DHU SEQT 25)									Start calibration imaging
04/12/94 09:35:03	3:01:52	12								Perform NIR imaging (DHU SEQT 31)									
04/12/94 09:35:09	3:01:58	6								Load exposure table LUNIRDKS1									
04/12/94 09:35:15	3:02:04	6								Load exposure table LUNIRDKS2									
04/12/94 09:35:21	3:02:10	6								Perform UV0 imaging (DHU SEQT 29)									
04/12/94 09:35:33	3:02:22	12								Perform HiRes imaging (DHU SEQT 30)									
04/12/94 09:36:03	3:02:52	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMode=EarthPointing, Center); Activate waitwhileslew for 360 sec									Slew HGA to Earth with active waitwhileslew
04/12/94 09:37:13	3:04:02		70.0	327.6	1054.7					N70D									
04/12/94 09:42:03	3:08:52	360								Switch to HGA									READY FOR DATA DUMP - Time approximate
Err:508																			
04/12/94 09:43:33	3:10:22		60.0	327.7	1234.0					N60D									
04/12/94 09:44:00	3:10:49										Switch to DHU mode @ 128 kbps								Ground Command
04/12/94 09:47:00	3:13:49										Downlink SSSDR Segment 6 (orb 245)								Ground Command
04/12/94 09:50:46	3:17:35		50.0	327.7	1437.2					N50D									
04/12/94 09:59:01	3:25:50		40.0	327.6	1662.0					N40D									
04/12/94 10:08:30	3:35:19		30.0	327.6	1903.1					N30D									
04/12/94 10:13:00	3:39:49										Downlink SSSDR Segment 1 (orb 246)								Ground Command
04/12/94 10:18:04	3:44:53		21.1	327.5	2124.0					INPM									Enter penumbra
04/12/94 10:19:04	3:45:53		20.2	327.5	2145.9					INUM									Enter umbra
04/12/94 10:19:20	3:46:09		20.0	327.5	2151.5					N20D									
04/12/94 10:22:00	3:48:48										Downlink SSSDR Segment 2								Ground Command
04/12/94 10:31:38	3:58:27		10.0	327.4	2393.6					N10D									
04/12/94 10:45:24	4:12:13		0.0	327.3	2611.8					Equator - D									
04/12/94 10:57:00	4:23:49										Uplink and schedule L247 scripts								Ground Command
04/12/94 11:00:29	4:27:18		-10.0	327.2	2785.8					S10D									
04/12/94 11:10:12	4:37:01		-16.1	327.1	2861.9					OUTUM									Exit umbra
04/12/94 11:11:22	4:38:11		-16.8	327.1	2869.2					OUTPM									Exit penumbra
04/12/94 11:16:33	4:43:22		-20.0	327.1	2896.5					S20D									
04/12/94 11:31:00	4:57:49										Downlink SSSDR Segment 3								Ground Command
04/12/94 11:31:40	4:58:29		-29.1	326.9	2930.4					Aposelene									

Orbit 247 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/12/94 11:31:40	0:00:00		-29.1	326.9	2930.4							Aposelene							Downlinking SSSR Segment 3 (orbit 246)
04/12/94 11:33:08	0:01:28		-30.0	326.9	2930.1							S30D							
04/12/94 11:49:40	0:18:00		-40.0	326.8	2882.3							S40D							
04/12/94 11:51:17	0:19:37		-41.0	326.8	2872.5						PMK	AOS							
																			Standard Prep1 Script
04/12/94 12:04:51	0:33:11	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/12/94 12:05:35	0:33:55		-50.0	326.7	2759.1							S50D							
04/12/94 12:10:00	0:38:20												SSDR to IDLE - downlink complete						Ground Command
04/12/94 12:20:27	0:48:47		-60.0	326.6	2575.8							S60D							
04/12/94 12:23:00	0:51:20												Use inertial pointing to rotate s/c about X axis						Ground Command- rotate s/c to clear ST-B view (no matches)
																			Standard Prep2 Script
04/12/94 12:29:50	0:58:10	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/12/94 12:33:58	1:02:18		-70.0	326.6	2351.8							S70D							
																			Err:508
04/12/94 12:40:10	1:08:30	0											Msg "WARNING: 2kbps in 1 min.."						
04/12/94 12:40:35	1:08:55	25											LWIR camera and cryocooler ON						
04/12/94 12:41:10	1:09:30	35											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/12/94 12:42:10	1:10:31	60											Switch to omni antennas						
04/12/94 12:43:11	1:11:31	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/12/94 12:46:00	1:14:20		-80.0	326.9	2107.2							S80D							
04/12/94 12:49:11	1:17:31	360											Initialize filters (DHU SEQT 27); Record in SSSR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 4
04/12/94 12:49:51	1:18:11	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/12/94 12:50:05	1:18:25	15																	Slew sensors to nadir at South Pole (inertial pointing)
04/12/94 12:51:36	1:19:56	90											UV & HR cameras ON						
																			Err:508
																			Err:508
04/12/94 12:54:35	1:22:56	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S						

Orbit 247 Timeline - Type B Orbit

04/12/94 12:55:36	1:23:56	60									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)							START MAPPING
04/12/94 12:56:36	1:24:56	60	-89.9	55.9	1859.1						South Pole	Set SA step rate to LO						
04/12/94 12:57:31	1:25:51		-89.0	138.6	1836.0						LDAWN							
04/12/94 13:05:50	1:34:10	554	-80.0	145.4	1620.1						S80A	Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20						
04/12/94 13:13:54	1:42:14	484	-70.0	145.6	1398.7						S70A	Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19						
04/12/94 13:16:42	1:45:02	169										Err:508						Slew to South Pole for oblique viewing
04/12/94 13:20:56	1:49:16	253									S60A	Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11						
04/12/94 13:20:57	1:49:17		-60.0	145.7	1199.6						S60A							
04/12/94 13:21:56	1:50:16	60										Record in SDR Segment 5						SSDR Segment 5
04/12/94 13:27:09	1:55:29	313	-50.0	145.7	1024.7						S50A	Load exposure table LUNARZ45S; Select DHU SEQT 11						Stop HiRes imaging
04/12/94 13:32:08	2:00:28	299										Laser Power ON						
04/12/94 13:32:39	2:00:59	31									S40A	Load EEQ_10U.UMI into SEQT 10; Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10						Resume nadir mapping UV and IR uncompressed
04/12/94 13:32:40	2:01:00		-40.0	145.7	874.3						S40A							
04/12/94 13:37:32	2:05:52		-30.2	145.6	749.9						MAD	MLOSM						
04/12/94 13:37:37	2:05:57	298	-30.0	145.7	747.7						S30A	Load exposure table LUNARZ25S; Select DHU SEQT 9						Resume compression
04/12/94 13:37:38	2:05:58		-29.9	145.6	747.4						PMK	MLOSM						Enter occultation
04/12/94 13:42:08	2:10:28	271	-20.0	145.6	643.8						S20A	Load exposure table LUNARZ15S; Select DHU SEQT 8						Start laser ranging
04/12/94 13:46:19	2:14:39	251	-10.0	145.6	561.2						S10A	Load exposure table LUNARZ05S; Select DHU SEQT 7						
04/12/94 13:50:15	2:18:35	236	0.0	145.6	498.7						Equator - A	Load exposure table LUNARZ05N; Select DHU SEQT 6						
04/12/94 13:53:59	2:22:19	224	10.0	145.6	455.3						N10A	Load exposure table LUNARZ15N; Select DHU SEQT 5						
04/12/94 13:57:37	2:25:57	218	20.0	145.6	430.1						N20A	Load exposure table LUNARZ25N						
04/12/94 14:00:53	2:29:13		29.1	145.6	422.8						Periselene							
04/12/94 14:01:12	2:29:32	215	30.0	145.6	422.8						N30A	Load exposure table LUNARZ35N						
04/12/94 14:04:47	2:33:07	215	40.0	145.6	433.3						N40A	Load exposure table LUNARZ45N						
04/12/94 14:06:36	2:34:56		45.0	145.5	446.0						PMK	MAOSM						Exit occultation
04/12/94 14:06:53	2:35:13		45.8	145.5	448.2						MAD	MAOSM						
04/12/94 14:08:25	2:36:45	218	50.0	145.6	461.6						N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6						Resume HiRes imaging

Orbit 247 Timeline - Type B Orbit

04/12/94 14:12:12	2:40:32	227								N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4						
04/12/94 14:13:12	2:41:32	60									Record in SDR Segment 6						SSDR Segment 6
04/12/94 14:16:10	2:44:30	178	70.0	145.7	574.3					N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17						
04/12/94 14:20:24	2:48:44	254	80.0	146.0	660.6					N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16						Stop laser imaging
04/12/94 14:20:54	2:49:14	30									Laser power OFF						
04/12/94 14:21:24	2:49:44	30									Load EEQ_10.UMI into SEQT 10						Restore original SEQT 10
																	Err:508
04/12/94 14:24:59	2:53:19		89.9	228.6	768.3					North Pole							
04/12/94 14:25:27	2:53:47		89.1	318.4	779.7					LDUSK							
																	Err:508
04/12/94 14:26:59	2:55:19	0									Stop Imaging - select ST-B						
04/12/94 14:27:04	2:55:24	5									Err:508						Slew sensors to Earth (inertial pointing) with waitwhileslew
Err:508	Err:508	Err:508									Wait						End of slew - wait before imaging to allow s/c to settle
04/12/94 14:30:02	2:58:22		80.0	324.6	899.2					N80D							
04/12/94 14:30:10	2:58:30	15									Select DHU SEQT 23						Earth imaging w/color HiRes
Err:508	Err:508	15									Stop imaging - select ST-B						
Err:508	Err:508	5									Slew s/c sensors to Vega (VEGAGNC12)						Slew to Vega (inertial pointing)
Err:508	Err:508	30									Park opaque filter on HiRes (DHU SEQT 27)						
Err:508	Err:508	15									Select ST-B; Activate waitwhileslew for 320 sec						
04/12/94 14:33:12	3:01:32	Err:508									Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)						Start calibration imaging
Err:508	Err:508	12									Perform LWIR imaging (DHU SEQT 25)						
Err:508	Err:508	12									Perform NIR imaging (DHU SEQT 31)						
Err:508	Err:508	6									Load exposure table LUNIRDKS1						
Err:508	Err:508	6									Load exposure table LUNIRDKS2						
Err:508	Err:508	6									Perform HiRes imaging (DHU SEQT 30)						

Orbit 247 Timeline - Type B Orbit

Err:508	Err:508	30														Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec				Slew HGA to Earth with active waitwhileslew		
04/12/94 14:35:40	3:04:00		70.0	324.9	1053.9											N70D						
04/12/94 14:37:00	3:05:20	Err:508															Switch to HGA				READY FOR DATA DUMP - Time approximate	
																					Err:508	
04/12/94 14:38:00	3:06:20																Switch to DHU mode @ 128 kbps				Ground Command	
04/12/94 14:40:00	3:08:20																Downlink SSSDR Segment 4				Ground Command	
04/12/94 14:42:00	3:10:20		60.0	324.9	1233.2											N60D						
04/12/94 14:49:13	3:17:33		50.0	324.9	1436.5											N50D						
04/12/94 14:51:14	3:19:34		47.4	324.9	1492.7											GDS	AOS					
04/12/94 14:52:00	3:20:20																Cancel L247 LHG script				Ground Command	
04/12/94 14:57:00	3:25:20																Downlink SSSDR Segment 5				Ground Command	
04/12/94 14:57:28	3:25:48		40.0	324.9	1661.4											N40D						
04/12/94 15:06:56	3:35:16		30.0	324.8	1902.7											N30D						
04/12/94 15:16:43	3:45:03		20.9	324.8	2128.3											INPM					Enter penumbra	
04/12/94 15:17:44	3:46:04		20.0	324.8	2150.4											INUM					Enter umbra	
04/12/94 15:17:47	3:46:07		20.0	324.8	2151.3											N20D						
04/12/94 15:18:00	3:46:20																Reschedule L247LHG for 15:40:00				Ground Command	
04/12/94 15:25:00	3:53:20																Uplink & load LHGSTB_22.UMI into SEQT 22				Ground Command	
04/12/94 15:30:05	3:58:25		10.0	324.7	2393.6											N10D						
																						Err:508
04/12/94 15:40:00	4:08:20	0															SSDR to IDLE; Switch to 2 kbps bypass mode					
04/12/94 15:41:00	4:09:20	60															Switch to omni antennas; Record in SSSDR Segment 7				SSDR Segment 7	
04/12/94 15:42:00	4:10:20	60															Err:508				Slew using Inertial pointing (LGH not LHG used in name)	
04/12/94 15:43:51	4:12:11		0.0	324.6	2612.0											Equator - D						
04/12/94 15:48:00	4:16:20	360															Execute STB_Images				STB uncompressed - Note: Time between events includes script duration (90 sec) and WAIT between script calls (30 sec)	
04/12/94 15:50:00	4:18:20	120															Execute STB_Images				ST-B uncompressed images	
04/12/94 15:52:00	4:20:20	120															Execute STB_Images				ST-B uncompressed images	
04/12/94 15:54:00	4:22:20	120															Execute STB_Images				ST-B uncompressed images	
04/12/94 15:56:00	4:24:20	120															Execute STB_Images				ST-B uncompressed images	
04/12/94 15:57:59	4:26:19	120															Execute STB_Images				ST-B uncompressed images	
04/12/94 15:58:56	4:27:16		-10.0	324.4	2786.3											S10D						
04/12/94 15:59:59	4:28:19	120															Execute STB_Images				ST-B uncompressed images	
04/12/94 16:01:59	4:30:19	120															Execute STB_Images				ST-B uncompressed images	
04/12/94 16:03:59	4:32:19	120															Execute STB_Images				ST-B uncompressed images	

Orbit 247 Timeline - Type B Orbit

04/12/94 16:05:49	4:34:09	110								Execute STB_Images				ST-B uncompressed images
04/12/94 16:07:29	4:35:49	100								Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec				STOP IMAGING Slew HGA back to Earth with active waitwhileslew
04/12/94 16:08:19	4:36:39		-15.9	324.4	2860.4				OUTUM					Exit umbra
04/12/94 16:09:30	4:37:50		-16.6	324.4	2867.9				OUTPM					Exit penumbra
04/12/94 16:11:00	4:39:20	210								Switch to HGA				READY FOR DATA DUMP - Time approximate
Err:508														
04/12/94 16:12:00	4:40:20									Switch to DHU mode @ 128 kbps				Ground Command
04/12/94 16:15:00	4:43:20		-20.0	324.3	2897.2				S20D					
04/12/94 16:13:00	4:41:20									Resume downlink SDR Segment 5				Ground Command
04/12/94 16:29:00	4:57:20									Uplink and schedule L248 scripts				Ground Command
04/12/94 16:30:08	4:58:28		-29.1	324.2	2931.2				Aposelene					
STB_Images Subscript														
		0								Load exposure table STBGLOW700; Select DHU SEQT 22				ST-B imaging at 700 msec LHGSTB_22.UMI loaded into SEQT 22
		10								Stop imaging - select ST-A				Update attitude
		10								Load exposure table STBGLOW400; Select DHU SEQT 22				ST-B imaging at 400 msec
		10								Stop imaging - select ST-A				Update attitude only
		10								Load exposure table STBGLOW200; Select DHU SEQT 22				ST-B imaging at 200 msec
		10								Stop imaging - select ST-A				Update attitude only
		10								Load exposure table STBGLOW100; Select DHU SEQT 22				ST-B imaging at 100 msec
		10								Stop imaging - select ST-A				Update attitude only
		10								Load exposure table STBGLOW050; Select DHU SEQT 22				ST-B imaging at 50 msec
		10								Stop imaging - select ST-A				END STB_Images

Orbit 248 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/12/94 16:30:08	0:00:00		-29.1	324.2	2931.2							Aposelene							Downlinking SSSR Segment 5 (orbit 247)
04/12/94 16:31:35	0:01:27		-30.0	324.2	2930.9							S30D							
04/12/94 16:48:08	0:18:00		-40.0	324.1	2883.1							S40D							
04/12/94 16:58:00	0:27:52												Downlink SSSR Segment 6						Ground Command
																			Standard Prep1 Script
04/12/94 17:03:20	0:33:12	0											NIR camera & cryocooler ON; SA mode to AUTO						
																			End Prep1 Script
04/12/94 17:04:04	0:33:56		-50.0	324.0	2759.9							S50D							
04/12/94 17:18:56	0:48:48		-60.0	323.9	2576.3							S60D							
04/12/94 17:23:00	0:52:52												Downlink SSSR Segment 7						Ground Command
																			Standard Prep2 Script
04/12/94 17:27:40	0:57:32	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/12/94 17:32:27	1:02:19		-70.0	323.9	2352.1							S70D							
04/12/94 17:36:00	1:05:52												SSDR to IDLE - downlink complete						Ground Command
																			Err:508
04/12/94 17:38:40	1:08:32	0											Msg "WARNING: Omni/2k in 1 min.."						
04/12/94 17:39:05	1:08:57	25											LWIR camera and cryocooler ON						
04/12/94 17:39:40	1:09:32	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/12/94 17:40:40	1:10:32	60											Switch to omni antennas						
04/12/94 17:41:40	1:11:32	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMODE=StarPointing, Index=3)						Slew to Crux
04/12/94 17:44:30	1:14:22		-80.0	324.2	2107.4							S80D							
04/12/94 17:47:40	1:17:32	360											Initialize filters (DHU SEQT 27); Record in SSSR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 1
04/12/94 17:48:20	1:18:12	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/12/94 17:48:35	1:18:27	15																Err:508	Slew sensors to nadir (inertial pointing)
04/12/94 17:50:05	1:19:57	90											UV & HR cameras ON; Activate waitwhileslew for 300 sec						
04/12/94 17:54:00	1:23:52	235											Msg "Complete: L248_Prep3"						At end of slew - time approximate
																			Err:508
																			Err:508

Orbit 248 Timeline - Type A Orbit

04/12/94 17:54:05	1:23:57	0									Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S							
04/12/94 17:54:35	1:24:27	30									Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)							START MAPPING
04/12/94 17:55:05	1:24:57	30	-89.9	52.8	1859.1						South Pole Set SA step rate to LO							
04/12/94 17:56:01	1:25:53		-89.0	135.2	1836.0						LDAWN							
04/12/94 18:04:19	1:34:11	554									S80A Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14							
04/12/94 18:04:20	1:34:12		-80.0	142.5	1620.1						S80A							
04/12/94 18:12:23	1:42:15	484	-70.0	142.8	1398.6						S70A Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13							
04/12/94 18:19:26	1:49:18	423	-60.0	142.9	1199.3						S60A Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12							
04/12/94 18:20:26	1:50:18	60										Record in SDDR Segment 2						SDDR Segment 2
04/12/94 18:25:38	1:55:30	312	-50.0	142.9	1024.3						S50A Load EEQ_11C.UMI into SEQT 11; Load exposure table LUNARZ45S; Select DHU SEQT 11							Stop HiRes imaging HiRes color planned for 50S-40S, but no data - LUNARH45S not loaded (T/L ERROR)
04/12/94 18:30:37	2:00:29	299										Laser Power ON						
04/12/94 18:31:08	2:01:00	31	-40.0	142.9	873.8						S40A Load EEQ_11.UMI into SEQT 11; Load exposure table LUNARZ35S; Select DHU SEQT 10							Restore original SEQT 11
04/12/94 18:36:06	2:05:58	298	-30.0	142.9	747.2						S30A Load EEQ_09U.UMI into SEQT 9; Load exposure table LUNARZ25S; Select DHU SEQT 9							UV and IR uncompressed
04/12/94 18:36:37	2:06:29		-28.9	142.9	734.9						MAD	MLOSM						
04/12/94 18:36:51	2:06:43		-28.4	142.9	729.2						PMK	MLOSM						
04/12/94 18:36:59	2:06:51		-28.1	142.9	726.2						GDS	MLOSM						Enter occultation
04/12/94 18:40:37	2:10:29	271	-20.0	142.9	643.2						S20A Load exposure table LUNARZ15S; Select DHU SEQT 8							Start laser ranging
04/12/94 18:44:48	2:14:40	251	-10.0	142.9	560.6						S10A Load exposure table LUNARZ05S; Select DHU SEQT 7							
04/12/94 18:48:43	2:18:35	235	0.0	142.9	498.0						Equator - A Load exposure table LUNARZ05N; Select DHU SEQT 6							
04/12/94 18:52:28	2:22:20	225	10.0	142.9	454.6						N10A Load exposure table LUNARZ15N; Select DHU SEQT 5							
04/12/94 18:56:06	2:25:58	218	20.0	142.8	429.4						N20A Load exposure table LUNARZ25N							
04/12/94 18:59:22	2:29:14		29.2	142.8	422.0						Periselene							
04/12/94 18:59:40	2:29:32	214	30.0	142.8	422.1						N30A Load exposure table LUNARZ35N							
04/12/94 19:03:15	2:33:07	215	40.0	142.8	432.5						N40A Load exposure table LUNARZ45N							
04/12/94 19:04:32	2:34:24		43.6	142.8	441.2						GDS	MAOSM						Exit occultation
04/12/94 19:04:43	2:34:35		44.1	142.8	442.5						PMK	MAOSM						
04/12/94 19:04:51	2:34:43		44.4	142.8	443.5						MAD	MAOSM						

Orbit 248 Timeline - Type A Orbit

04/12/94 19:06:53	2:36:45	218	50.0	142.9	460.7				N50A	Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6	Resume HiRes imaging
04/12/94 19:10:40	2:40:32	227	60.0	142.9	507.4				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4	
04/12/94 19:11:40	2:41:32	60								Record in SSSR Segment 3	SSDR Segment 3
04/12/94 19:14:37	2:44:29	177	70.0	143.0	573.4				N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3	
04/12/94 19:18:51	2:48:43	254	80.0	143.4	659.7				N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9	Stop laser ranging
04/12/94 19:19:21	2:49:13	30								Laser power OFF; Load EEQ_09.UMI into SEQT 09	Restore original SEQT 9
Err:508											
04/12/94 19:23:27	2:53:19		89.9	237.5	767.7				North Pole		
04/12/94 19:23:54	2:53:46		89.0	314.2	778.9				LDUSK		
Err:508											
04/12/94 19:25:27	2:55:19	0								Stop Imaging - select ST-B	
04/12/94 19:25:32	2:55:24	5								Err:508	Slew sensors to Earth (inertial pointing) with waitwhileslew
04/12/94 19:28:29	2:58:21		80.0	321.7	898.2				N80D		
Err:508	Err:508	Err:508								Load EARTH exposure table (EARTH_VIEW_ZAXIS)	
04/12/94 19:28:52	2:58:44	15								Select DHU SEQT 23	Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B	
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)	Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)	
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec	
04/12/94 19:31:52	3:01:44	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform LWIR imaging (DHU SEQT 25)	Start calibration imaging
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)	
Err:508	Err:508	6								Load exposure table LUNIRDKS1	
Err:508	Err:508	6								Load exposure table LUNIRDKS2	
Err:508	Err:508	6								Perform UV0 imaging (DHU SEQT 29)	

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Err:508	Err:508	12								Perform HiRes imaging (DHU SEQT 30)			
Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec			Slew HGA to Earth with active waitwhileslew
04/12/94 19:34:07	3:03:59		70.0	322.1	1053.0					N70D			
04/12/94 19:37:00	3:06:52	Err:508									Switch to HGA		READY FOR DATA DUMP - Time approximate
													Err:508
04/12/94 19:38:00	3:07:52										Switch to DHU mode @ 128 kbps		Ground Command
04/12/94 19:39:00	3:08:52										Downlink SSSR Segment 1		Ground Command
04/12/94 19:40:27	3:10:19		60.0	322.2	1232.3					N60D			
04/12/94 19:47:00	3:16:52										Downlink SSSR Segment 2		Ground Command
04/12/94 19:47:40	3:17:32		50.0	322.2	1435.7					N50D			
04/12/94 19:53:04	3:22:56		43.3	322.2	1584.6			MAD		LOS			
04/12/94 19:55:55	3:25:47		40.0	322.1	1660.7					N40D			
04/12/94 20:05:23	3:35:15		30.0	322.1	1902.1					N30D			
04/12/94 20:11:00	3:40:52										Update state vector (GNC53_12APR2000)		Ground Command
04/12/94 20:15:22	3:45:14		20.7	322.0	2132.7					INPM			Enter penumbra
04/12/94 20:16:13	3:46:05		20.0	322.0	2150.9					N20D			
04/12/94 20:16:24	3:46:16		19.8	322.0	2155.1					INUM			Enter umbra
04/12/94 20:22:00	3:51:52										Read dosimeter latch values		Ground Command
04/12/94 20:27:00	3:56:52										Expose dosimeter		Scheduled Command
04/12/94 20:28:31	3:58:23		10.0	321.9	2393.5					N10D			
04/12/94 20:31:00	4:00:52										Uplink and schedule L249 scripts		Ground Command
04/12/94 20:42:17	4:12:09		0.0	321.8	2612.1					Equator - D			
04/12/94 20:57:22	4:27:14		-10.0	321.7	2786.7					S10D			
04/12/94 21:06:26	4:36:18		-15.7	321.7	2858.8					OUTUM			Exit umbra
04/12/94 21:07:38	4:37:30		-16.4	321.6	2866.5					OUTPM			Exit penumbra
04/12/94 21:11:00	4:40:52										Downlink SSSR Segment 3		Ground Command
04/12/94 21:13:27	4:43:19		-20.0	321.6	2897.8					S20D			
04/12/94 21:28:37	4:58:29		-29.1	321.5	2932.0					Aposelene			

Orbit 249 Timeline - Type B Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/12/94 21:28:36	0:00:00		-29.1	321.5	2932.0							Aposelene							Downlinking SSSR Segment 3 (orbit 248)
04/12/94 21:30:01	0:01:25		-30.0	321.5	2931.7							S30D							
04/12/94 21:46:34	0:17:58		-40.0	321.4	2883.9							S40D							
04/12/94 21:49:00	0:20:23												SSDR to IDLE - downlink complete						Ground Command
																			Standard Prep1 Script
04/12/94 22:01:48	0:33:12	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/12/94 22:02:31	0:33:55		-50.0	321.3	2760.6							S50D							
04/12/94 22:13:00	0:44:23												Uplink and schedule L249 LHG script						Ground Command - scheduled time was changed to 01:07:05
04/12/94 22:17:24	0:48:47		-60.0	321.2	2577.0							S60D							
																			Standard Prep2 Script
04/12/94 22:26:48	0:58:12	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/12/94 22:30:55	1:02:19		-70.0	321.3	2352.6							S70D							
																			Err:508
04/12/94 22:37:08	1:08:32	0											Msg "WARNING: 2kbps in 1 min.."						
04/12/94 22:37:33	1:08:57	25											LWIR camera and cryocooler ON						
04/12/94 22:38:08	1:09:32	35											SSDR to IDLE; Switch to 2 kbps bypass mode						
04/12/94 22:39:08	1:10:32	60											Switch to omni antennas						
04/12/94 22:40:09	1:11:32	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/12/94 22:42:59	1:14:22		-80.0	321.6	2107.6							S80D							
04/12/94 22:46:09	1:17:32	360											Initialize filters (DHU SEQT 27); Record in SSSR Segment 4; Load Crux exposure table (LUNCRUX)						Start SSSR in Segment 4
04/12/94 22:46:48	1:18:12	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/12/94 22:47:03	1:18:27	15																	Slew sensors to nadir at South Pole (inertial pointing)
04/12/94 22:48:34	1:19:57	90											UV & HR cameras ON						
																			Err:508
																			Err:508
04/12/94 22:51:33	1:22:57	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNARH85S						

Orbit 249 Timeline - Type B Orbit

04/12/94 22:52:34	1:23:57	60														Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 21)						START MAPPING				
04/12/94 22:53:34	1:24:57	60	-89.8	47.7	1859.4											South Pole							Set SA step rate to LO			
04/12/94 22:54:29	1:25:52		-89.0	131.0	1836.0											LDAWN										
04/12/94 23:02:48	1:34:11	554														S80A									Load exposure table LUNARZ75S; Load exposure table LUNARH75S; Select DHU SEQT 20	
04/12/94 23:02:48	1:34:12		-80.0	139.6	1620.0											S80A										
04/12/94 23:10:52	1:42:15	484	-70.0	140.0	1398.4											S70A									Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 19	
04/12/94 23:13:41	1:45:04	169																							Err:508	
04/12/94 23:14:32	1:45:55															CAN	AOS								Slew to South Pole for oblique viewing	
04/12/94 23:17:54	1:49:17	253															S60A								Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 11	
04/12/94 23:17:54	1:49:18		-60.0	140.1	1199.0												S60A									
04/12/94 23:18:54	1:50:17	60																							Record in SDR Segment 5	
04/12/94 23:24:07	1:55:30	313	-50.0	140.1	1023.9												S50A								Load exposure table LUNARZ45S; Select DHU SEQT 11	
04/12/94 23:29:06	2:00:29	299																							Laser Power ON	
04/12/94 23:29:37	2:01:00	31	-40.0	140.2	873.3												S40A								Switch to lunar mapping mode (ACSMODE=LunarMapping); Load exposure table LUNARZ35S; Select DHU SEQT 10	
04/12/94 23:34:35	2:05:58	298	-30.0	140.2	746.6												S30A								Load exposure table LUNARZ25S; Select DHU SEQT 9	
04/12/94 23:36:00	2:07:23															PMK	MLOSM									
04/12/94 23:36:09	2:07:32															GDS	MLOSM									
04/12/94 23:36:58	2:08:21															CAN	MLOSM									Enter occultation
04/12/94 23:39:06	2:10:29	271	-20.0	140.1	642.6												S20A								Load exposure table LUNARZ15S; Select DHU SEQT 8	
04/12/94 23:43:15	2:14:39		-10.0	140.1	559.9												S10A									
04/12/94 23:43:17	2:14:40	251															S10A								Load EEQ_07U.UMI into SEQT 07; Load exposure table LUNARZ05S; Select DHU SEQT 7	
04/12/94 23:47:11	2:18:35		0.0	140.1	497.4												Equator - A									
04/12/94 23:47:13	2:18:36	236															MEQA								Load exposure table LUNARZ05N; Select DHU SEQT 6	
04/12/94 23:50:56	2:22:19		10.0	140.1	453.9												N10A									
04/12/94 23:50:57	2:22:20	224															N10A								Load exposure table LUNARZ15N; Select DHU SEQT 5	
04/12/94 23:54:33	2:25:57		20.0	140.1	428.7												N20A									
04/12/94 23:54:35	2:25:58	218															N20A								Load exposure table LUNARZ25N	
04/12/94 23:57:49	2:29:13		29.2	140.1	421.3												Periselene									
04/12/94 23:58:08	2:29:31		30.0	140.1	421.3												N30A									
04/12/94 23:58:10	2:29:33	215															N30A								Load exposure table LUNARZ35N	

Orbit 249 Timeline - Type B Orbit

04/13/94 00:01:42	2:33:06		40.0	140.1	431.7					N40A									
04/13/94 00:01:45	2:33:08	215								N40A	Load exposure table LUNARZ45N								
04/13/94 00:02:27	2:33:50									CAN	MAOSM								Exit occultation
04/13/94 00:02:35	2:33:58									GDS	MAOSM								
04/13/94 00:02:37	2:34:00									PMK	MAOSM								
04/13/94 00:05:20	2:36:44		50.0	140.2	459.9						N50A								
04/13/94 00:05:23	2:36:46	218									N50A	Load exposure table LUNARZ55N; Load exposure table LUNARH55N; Select DHU SEQT 6							Resume HiRes imaging
04/13/94 00:09:06	2:40:30		60.0	140.2	506.6						N60A								
04/13/94 00:09:10	2:40:33	227									N60A	Load exposure table LUNARZ65N; Load exposure table LUNARH65N; Select DHU SEQT 4							
04/13/94 00:10:10	2:41:33	60										Record in SDR Segment 6							SSDR Segment 6
04/13/94 00:12:00	2:43:23											Auxiliary oscillator B ON; Auxiliary oscillator A ON							Ground Command
04/13/94 00:13:04	2:44:28		70.0	140.3	572.6						N70A								
04/13/94 00:13:08	2:44:31	178									N70A	Load exposure table LUNARZ75N; Load exposure table LUNARH75N; Select DHU SEQT 17							
04/13/94 00:17:18	2:48:42		80.0	140.8	658.8						N80A								
04/13/94 00:17:22	2:48:45	254									N80A	Load exposure table LUNARZ85N; Load exposure table LUNARH85N; Select DHU SEQT 16							Stop laser imaging
04/13/94 00:17:52	2:49:15	30										Laser power OFF							
04/13/94 00:18:22	2:49:45	30										Load EEQ_07.UMI into SEQT 07							Restore original SEQT 7
																			Err:508
04/13/94 00:21:53	2:53:17		89.8	232.4	766.8						North Pole								
04/13/94 00:22:20	2:53:44		89.0	310.0	778.1						LDUSK								
																			Err:508
04/13/94 00:23:54	2:55:17	0										Stop Imaging - select ST-B							
04/13/94 00:23:58	2:55:22	5										Err:508							Slew sensors to Earth (inertial pointing) with waitwhileslew
04/13/94 00:26:56	2:58:19		80.0	318.8	897.4						N80D								
Err:508	Err:508	Err:508										Wait							End of slew - wait before imaging to allow s/c to settle
04/13/94 00:27:15	2:58:38	15										Select DHU SEQT 23							Earth imaging w/color HiRes
Err:508	Err:508	15										Stop imaging - select ST-B							
Err:508	Err:508	5										Slew s/c sensors to Vega (VEGAGNC12)							Slew to Vega (inertial pointing)
Err:508	Err:508	30										Park opaque filter on HiRes (DHU SEQT 27)							
Err:508	Err:508	15										Select ST-B; Activate waitwhileslew for 320 sec							

Orbit 249 Timeline - Type B Orbit

04/13/94 00:30:16	3:01:39	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform UV0 imaging (DHU SEQT 29)										Start calibration imaging
Err:508	Err:508	12								Perform LWIR imaging (DHU SEQT 25)										
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)										
Err:508	Err:508	6								Load exposure table LUNIRDKS1										
Err:508	Err:508	6								Load exposure table LUNIRDKS2										
Err:508	Err:508	6								Perform HiRes imaging (DHU SEQT 30)										
Err:508	Err:508	30								Stop imaging - select ST-B; Set SA mode to AUTO; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec										Slew HGA to Earth with active waitwhileslew
04/13/94 00:32:33	3:03:57		70.0	319.3	1052.2					N70D										
04/13/94 00:34:00	3:05:23	Err:508																		Switch to HGA
																				READY FOR DATA DUMP - Time approximate
																				Err:508
04/13/94 00:35:00	3:06:23																			Switch to DHU mode @ 128 kbps
04/13/94 00:38:53	3:10:17		60.0	319.4	1231.5					N60D										Ground Command
04/13/94 00:40:00	3:11:23																			Downlink SSSR Segment 4
04/13/94 00:46:05	3:17:28		50.0	319.4	1435.0					N50D										Ground Command
04/13/94 00:54:20	3:25:44		40.0	319.4	1660.1					N40D										Ground Command
04/13/94 00:55:00	3:26:23																			Uplink and schedule L250 scripts
04/13/94 00:58:00	3:29:23																			Downlink SSSR Segment 5
04/13/94 00:59:06	3:30:29								PMK	LOS										Ground Command
04/13/94 01:03:48	3:35:12		30.0	319.3	1901.6					N30D										Ground Command
																				Err:508
04/13/94 01:07:05	3:38:28	0																		SSDR to IDLE; Switch to 2 kbps bypass mode
04/13/94 01:08:05	3:39:28	60																		Switch to omni antennas; Record in SSSR Segment 7
04/13/94 01:09:05	3:40:28	60																		Err:508
04/13/94 01:14:01	3:45:25		20.5	319.3	2137.3					INPM										Slew using Inertial pointing
04/13/94 01:14:38	3:46:02		20.0	319.3	2150.6					N20D										Enter penumbra
04/13/94 01:15:04	3:46:28		19.6	319.3	2159.9					INUM										Enter umbra
04/13/94 01:16:39	3:48:02	454																		STB uncompressed - Note: Time between events includes script duration (90 sec) and WAIT between script calls (30 sec)
04/13/94 01:18:39	3:50:02	120																		Execute STB_Images
04/13/94 01:20:39	3:52:02	120																		Execute STB_Images
04/13/94 01:22:38	3:54:02	120																		Execute STB_Images

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04/13/94 01:24:38	3:56:02	120								Execute STB_Images				ST-B uncompressed images
04/13/94 01:26:38	3:58:02	120								Execute STB_Images				ST-B uncompressed images
04/13/94 01:26:56	3:58:20		10.0	319.2	2393.4				N10D					
Err:508	Err:508	120								Execute STB_Images				ST-B uncompressed images
Err:508	Err:508	110								Execute STB_Images				ST-B uncompressed images
Err:508	Err:508	100								Restore default exposure table (STBGLOWDEF); Select ST-B; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec				STOP IMAGING Slew HGA back to Earth with active waitwhileslew
04/13/94 01:36:00	4:07:23	Err:508								Switch to HGA				READY FOR DATA DUMP - Time approximate
														Err:508
04/13/94 01:37:00	4:08:23									Switch to DHU mode @ 128 kbps				Ground Command
04/13/94 01:40:42	4:12:06		0.0	319.1	2612.3				Equator -D					
04/13/94 01:41:00	4:12:23									Resume downlink SDR Segment 5				Ground Command
04/13/94 01:45:00	4:16:23									Schedule L250 Dump3 script				Ground Command
04/13/94 01:55:47	4:27:11		-10.0	319.0	2787.1				S10D					
04/13/94 02:04:00	4:35:23									ST-A door OPEN				Ground Command
04/13/94 02:04:31	4:35:55		-15.5	318.9	2857.0				OUTUM					Exit umbra
04/13/94 02:05:44	4:37:07		-16.2	318.9	2865.0				OUTPM					Exit penumbra
04/13/94 02:06:00	4:37:23									Select ST-A				Ground Command
04/13/94 02:11:52	4:43:16		-20.0	318.9	2898.4				S20D					
04/13/94 02:24:00	4:55:23									Auxiliary oscillator A OFF; Ranging A ON				Ground Command
04/13/94 02:27:05	4:58:28		-29.2	318.8	2932.7				Aposelene					
														STB_Images Subscript
		0								Load exposure table STBGLOW700; Select DHU SEQT 22				ST-B imaging at 700 msec LHGSTB_22.UMI loaded into SEQT 22
		10								Stop imaging - select ST-A				Update attitude
		10								Load exposure table STBGLOW400; Select DHU SEQT 22				ST-B imaging at 400 msec
		10								Stop imaging - select ST-A				Update attitude only
		10								Load exposure table STBGLOW200; Select DHU SEQT 22				ST-B imaging at 200 msec
		10								Stop imaging - select ST-A				Update attitude only
		10								Load exposure table STBGLOW100; Select DHU SEQT 22				ST-B imaging at 100 msec
		10								Stop imaging - select ST-A				Update attitude only
		10								Load exposure table STBGLOW050; Select DHU SEQT 22				ST-B imaging at 50 msec
		10								Stop imaging - select ST-A				END STB_Images

Orbit 250 Timeline - Type A Orbit

UTC TIME REFERENCE	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
04/13/94 02:27:05	0:00:00		-29.2	318.8	2932.7							Aposelene							Downlinking SSSDR Segment 5 (orbit 249)
04/13/94 02:28:30	0:01:25		-30.0	318.8	2932.4							S30D							
04/13/94 02:37:00	0:09:55												Read dosimeter latch values						Ground Command
04/13/94 02:42:00	0:14:55												Expose dosimeter						Scheduled Command
04/13/94 02:45:02	0:17:57		-40.0	318.7	2884.7							S40D							
																			Standard Prep1 Script
04/13/94 03:00:18	0:33:13	0											NIR camera & cryocooler ON; Solar Arrays mode to AUTO						
																			End Prep1 Script
04/13/94 03:00:59	0:33:54		-50.0	318.6	2761.4							S50D							
04/13/94 03:05:00	0:37:55												Downlink SSSDR Segment 6						Ground Command
04/13/94 03:08:00	0:40:55												Reuplink and schedule modified L251 scripts						Ground Command
04/13/94 03:15:53	0:48:48		-60.0	318.5	2577.6							S60D							
04/13/94 03:17:00	0:49:55										GDS	LOS							
																			Standard Prep2 Script
04/13/94 03:24:38	0:57:33	0											Laser heater ON; Open sensor door if closed						
																			End Prep2 Script
04/13/94 03:29:00	1:01:55												Downlink SSSDR Segment 7 (LHG)						Ground Command
04/13/94 03:29:23	1:02:18		-70.0	318.6	2353.0							S70D							
																			Err:508
04/13/94 03:35:38	1:08:33	0											Msg "WARNING: Omni/2k in 1 min.."						
04/13/94 03:36:03	1:08:58	25											LWIR camera and cryocooler ON						
04/13/94 03:36:38	1:09:33	35											SSDR to IDLE; Switch to 2 kbps bypass mode						Data dump stopped
04/13/94 03:37:00	1:09:55												ST-A door CLOSE						Ground Command
04/13/94 03:37:38	1:10:33	60											Switch to omni antennas						
04/13/94 03:38:38	1:11:33	60											Select ST-B; Set SA step rate to HI; Slew s/c sensors to Crux (ACSMMode=StarPointing, Index=3)						Slew to Crux
04/13/94 03:41:26	1:14:21		-80.0	319.0	2107.9							S80D							
04/13/94 03:44:38	1:17:33	360											Initialize filters (DHU SEQT 27); Record in SSSDR Segment 1; Load Crux exposure table (LUNCRUX)						Start SSSDR in Segment 1
04/13/94 03:45:18	1:18:13	40											Perform NIR imaging (DHU SEQT 31)						Dark field imaging
04/13/94 03:45:33	1:18:28	15																Err:508	Slew sensors to nadir (inertial pointing)
04/13/94 03:47:03	1:19:58	90											UV & HR cameras ON; Activate waitwhileslew for 300 sec						

Orbit 250 Timeline - Type A Orbit

04/13/94 03:51:00	1:23:55	237											Msg "Complete: L250_Prep3"				At end of slew - time approximate	
																	Err:508	
																	Err:508	
04/13/94 03:51:03	1:23:58	0											Initialize filters (DHU SEQT 28); Load exposure table LUNARZ85S; Load exposure table LUNNIR85S; Load exposure table LUNARH85S					
04/13/94 03:51:33	1:24:28	30											Switch to lunar mapping mode (ACSMODE=LunarMapping); Start Imaging (DHU SEQT 15)				START MAPPING Entire mapping orbit stored in SSDR Segment 1 because of following cmd gap	
04/13/94 03:52:03	1:24:58	30	-89.8	49.1	1859.2								South Pole Set SA step rate to LO					
04/13/94 03:52:58	1:25:53		-89.0	126.8	1835.9								LDAWN					
04/13/94 04:01:17	1:34:12	498	-80.0	136.7	1619.9								S80A Load exposure table LUNARZ75S; Load exposure table LUNNIR75S; Load exposure table LUNARH75S; Select DHU SEQT 14					
04/13/94 04:09:21	1:42:16	484	-70.0	137.2	1398.1								S70A Load exposure table LUNARZ65S; Load exposure table LUNARH65S; Select DHU SEQT 13					
04/13/94 04:16:23	1:49:18	422	-60.0	137.3	1198.6								S60A Load exposure table LUNARZ55S; Load exposure table LUNARH55S; Select DHU SEQT 12					
04/13/94 04:22:35	1:55:30	372	-50.0	137.4	1023.4								S50A Load exposure table LUNARZ45S; Select DHU SEQT 11				Stop HiRes imaging	
04/13/94 04:27:34	2:00:29	299																Laser Power ON
04/13/94 04:28:06	2:01:01	32	-40.0	137.4	872.8								S40A Load exposure table LUNARZ35S; Select DHU SEQT 10					
04/13/94 04:33:03	2:05:58	297	-30.0	137.4	746.1								S30A Load exposure table LUNARZ25S; Select DHU SEQT 9					
04/13/94 04:36:20	2:09:15												CAN MLOSM				Enter occultation	
04/13/94 04:37:34	2:10:29	271	-20.0	137.4	642.0								S20A Load exposure table LUNARZ15S; Select DHU SEQT 8				Start laser ranging	
04/13/94 04:41:45	2:14:40	251	-10.0	137.4	559.3								S10A Load exposure table LUNARZ05S; Select DHU SEQT 7					
04/13/94 04:45:40	2:18:35	235	0.0	137.4	496.7								Equator - A Load exposure table LUNARZ05N; Select DHU SEQT 6					
04/13/94 04:49:24	2:22:19	224	10.0	137.4	453.2								N10A Load exposure table LUNARZ15N; Select DHU SEQT 5					
04/13/94 04:53:02	2:25:57	218	20.0	137.4	428.0								N20A Load exposure table LUNARZ25N					
04/13/94 04:56:17	2:29:12		29.2	137.4	420.5								Periselene					
04/13/94 04:56:36	2:29:31	214	30.0	137.4	420.6								N30A Load exposure table LUNARZ35N					
04/13/94 05:00:10	2:33:05	214	40.0	137.4	430.9								N40A Load exposure table LUNARZ45N					
04/13/94 05:00:26	2:33:21												CAN MAOSM				Exit occultation	
04/13/94 05:03:49	2:36:44	219	50.0	137.5	459.2								N50A Load exposure table LUNARZ55N; Load exposure table LUNNIR55N; Load exposure table LUNARH55N; Select DHU SEQT 6				Resume HiRes imaging	

Orbit 250 Timeline - Type A Orbit

04/13/94 05:07:35	2:40:30	226	60.0	137.5	505.9				N60A	Load exposure table LUNARZ65N; Load exposure table LUNNIR65N; Load exposure table LUNARH65N; Select DHU SEQT 4			
04/13/94 05:11:32	2:44:27	237	70.0	137.7	571.8				N70A	Load exposure table LUNARZ75N; Load exposure table LUNNIR75N; Load exposure table LUNARH75N; Select DHU SEQT 3			
04/13/94 05:15:46	2:48:41	254	80.0	138.2	658.0				N80A	Load exposure table LUNARZ85N; Load exposure table LUNNIR85N; Load exposure table LUNARH85N; Select DHU SEQT 9			Stop laser ranging
04/13/94 05:16:16	2:49:11	30								Laser power OFF; Load EEQ_11.UMI into SEQT 11			Original SEQT already loaded
													Err:508
04/13/94 05:20:20	2:53:15		89.8	229.2	766.0				North Pole				
04/13/94 05:20:47	2:53:42		89.0	305.7	777.3				LDUSK				
													Err:508
04/13/94 05:22:21	2:55:16	0								Stop Imaging - select ST-B			
04/13/94 05:22:26	2:55:21	5								Err:508			Slew sensors to Earth (inertial pointing) with waitwhileslew
04/13/94 05:25:22	2:58:17		80.0	315.9	896.6				N80D				
Err:508	Err:508	Err:508								Load EARTH exposure table (EARTH_VIEW_AXIS)			
04/13/94 05:25:47	2:58:42	15								Select DHU SEQT 23			Earth imaging w/color HiRes
Err:508	Err:508	15								Stop imaging - select ST-B			
Err:508	Err:508	5								Slew s/c sensors to Vega (VEGAGNC12)			Slew to Vega (inertial pointing)
Err:508	Err:508	30								Park opaque filter on HiRes (DHU SEQT 27)			
Err:508	Err:508	15								Select ST-B; Activate waitwhileslew for 310 sec			
04/13/94 05:28:44	3:01:39	Err:508								Set SA mode to MANUAL; Load Vega exposure tables (LUNVEGA); Perform LWIR imaging (DHU SEQT 25)			Start calibration imaging
Err:508	Err:508	12								Perform NIR imaging (DHU SEQT 31)			
Err:508	Err:508	6								Load exposure table LUNIRDKS1			
Err:508	Err:508	6								Load exposure table LUNIRDKS2			
Err:508	Err:508	6								Perform UV0 imaging (DHU SEQT 29)			
Err:508	Err:508	12								Perform HiRes imaging (DHU SEQT 30)			

Orbit 250 Timeline - Type A Orbit

Err:508	Err:508	30								Set SA mode to AUTO; Stop imaging - select ST-B; UV & HR cameras OFF; IR cameras & cryocoolers OFF; Slew s/c HGA to Earth (ACSMODE=EarthPointing, Center); Activate waitwhileslew for 360 sec				Slew HGA to Earth with active waitwhileslew
04/13/94 05:30:59	3:03:54		70.0	316.5	1051.4				N70D					
04/13/94 05:35:00	3:07:55	Err:508								Switch to HGA				READY FOR DATA DUMP - Time approximate
														Err:508
04/13/94 05:36:00	3:08:55									Switch to DHU mode @ 128 kbps				Ground Command
04/13/94 05:37:19	3:10:14		60.0	316.6	1230.8				N60D					
04/13/94 05:40:00	3:12:55							GS3	AOS					
04/13/94 05:42:00	3:14:55									Uplink SEQT FEQ_11.UMI and FEQ_31.UMI				Ground Command
04/13/94 05:44:00	3:16:55									Resume downlink SSSDR Segment 7				Ground Command
04/13/94 05:44:31	3:17:26		50.0	316.6	1434.3				N50D					
04/13/94 05:46:00	3:18:55									Uplink and schedule L251 scripts				Ground Command
04/13/94 05:49:00	3:21:55									Downlink SSSDR Segment 1 (orb 250)				Ground Command
														Dump Script 1
04/13/94 05:50:00	3:22:55	0								Select SSSDR Segment 1				
04/13/94 05:50:01	3:22:56	1								SSDR to PLAY - begin data downlink				Blind Downlink
														End Dump Script 1
04/13/94 05:52:46	3:25:41		40.0	316.6	1659.5				N40D					
04/13/94 06:02:15	3:35:10		30.0	316.6	1901.2				N30D					
04/13/94 06:05:00	3:37:55							CAN	LoSupport					End of CAN support No DSN station coverage
														Dump Script 2
04/13/94 06:05:00	3:37:55	0								SSDR to IDLE - playback paused				
04/13/94 06:10:00	3:42:55							GS4	AOS					
04/13/94 06:12:41	3:45:36		20.3	316.5	2142.1				INPM					Enter penumbra
04/13/94 06:13:04	3:45:59		20.0	316.5	2150.3				N20D					
04/13/94 06:13:45	3:46:40		19.4	316.5	2165.0				INUM					Enter umbra
04/13/94 06:15:00	3:47:55	600								SSDR to PLAY - resume data playback				Blind Downlink to AF Groundstations
														End Dump Script 2
04/13/94 06:25:22	3:58:17		10.0	316.5	2393.3				N10D					
														Dump Script 3
04/13/94 06:35:00	4:07:55	0								SSDR to IDLE - playback paused				
04/13/94 06:39:09	4:12:04		0.0	316.4	2612.5				Equator - D					
04/13/94 06:40:00	4:12:55							GS6	AOS					
04/13/94 06:45:00	4:17:55	600								SSDR to PLAY - resume data playback				Blind Downlink to AF Groundstations
														End Dump Script 3
04/13/94 06:54:14	4:27:09		-10.0	316.3	2787.5				S10D					
04/13/94 07:02:37	4:35:32		-15.3	316.2	2855.2				OUTUM					Exit umbra
04/13/94 07:03:51	4:36:46		-16.0	316.2	2863.4				OUTPM					Exit penumbra

Orbit 250 Timeline - Type A Orbit

04/13/94 07:10:20	4:43:15		-20.0	316.2	2899.0					S20D				
04/13/94 07:25:32	4:58:27		-29.2	316.1	2933.4					Aposelene				

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UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event
05/04/94 03:24:15			50.0	221.7	413.1							
05/04/94 03:27:37											MAD	MAOSM
05/04/94 03:33:00												
05/04/94 03:59:09												
05/04/94 04:06:16												
05/04/94 04:08:00												
05/04/94 04:24:00												
05/04/94 04:29:00												
05/04/94 04:35:00												
05/04/94 04:38:00												
05/04/94 04:58:14												
05/04/94 04:58:14												
05/04/94 05:02:00												
05/04/94 05:06:16												
05/04/94 05:43:29												
05/04/94 07:13:54											PMK	AOS
05/04/94 10:05:35											GDS	AOS
05/04/94 12:46:58											MAD	LOS
05/04/94 12:57:00												

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05/04/94 16:26:00											
05/04/94 16:33:40									CAN	AOS	
05/04/94 17:41:00											
05/04/94 17:55:36									PMK	LOS	
05/04/94 18:16:35											
05/04/94 18:29:13											
05/04/94 18:51:00											
05/04/94 18:56:00											
05/04/94 19:10:05											
05/04/94 19:44:37											
05/04/94 19:46:00											
05/04/94 19:47:20											
05/04/94 20:21:33									GDS	LOS	
05/04/94 21:45:00											
05/04/94 22:00:00											

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S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
LOD burn						End of Lunar Mapping, start of phasing loops
Update state vector (GNC53_04MAY0328)						Ground Command
Turn ON NIR, LWIR Cameras						Ground Command
Upload M-Set of Sequence Tables						Ground Command
Load Lunar Mosaic Setup Script (Did not get loaded)						Error on uplink
HKP soft reset						Ground Command
Turn OFF NIR, LWIR Cameras						Ground Command
Open ST-B door						Ground Command
Activate ST-B (DHUSEL2)						Ground Command
Slew s/c to LOD burn attitude (GNC12LODRW)						Ground Command
Slew s/c HGA to Earth (GNC13EARTH)						Ground Command
Slew s/c to LOD burn attitude (GNC12LODRW)						Ground Command
Switch to HGA Switch to DHU mode @ 128 kbps						Ground Command
Downlink SDR Segment 0						Ground Command
Upload M-Set of Sequence Tables						Ground Command
Ranging A ON Ranging B Off						Ground Command

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Turn Ranging B ON						Ground Command
Set Data Link Rate to 2kbps						Ground Command
Reset Housekeeping Processor						Ground Command, Stopped receiving TLM
Set Data Link Rate to 8 kbps						Ground Command
Upload DHU Code Ver. 2.49						Ground Command
Reset SIP						Ground Command
Upload M-Set of Sequence Tables						Ground Command
Upload Exposure Settings (EXPDAY5)						Ground Command
Turn ON STA and STB						Ground Command
Activate Startracker B (DHUSEL2)						Ground Command
Switch to High Gain Transmitter						Ground Command
Activate Startracker B (DHUSEL2)						Ground Command

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UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event
05/05/94 00:47:29	0:00:00											
05/05/94 01:11:22	0:23:53											
05/05/94 01:18:26	0:30:57											
05/05/94 01:26:33	0:39:04											
05/05/94 01:35:19	0:47:50											
05/05/94 01:42:04	0:54:35											
05/05/94 01:47:48	1:00:19											
05/05/94 02:06:06	1:18:37											
05/05/94 02:06:54	1:19:25											
05/05/94 02:08:11	1:20:42											
05/05/94 02:09:03	1:21:34											
05/05/94 02:11:08	1:23:39											
05/05/94 02:25:02	1:37:33											
05/05/94 02:27:01	1:39:32											
05/05/94 02:27:36	1:40:07											
05/05/94 02:28:28	1:40:59											
05/05/94 02:29:22	1:41:52											
05/05/94 02:30:00	1:42:31											
05/05/94 02:30:56	1:43:27											
05/05/94 02:31:21	1:43:52											
05/05/94 02:31:45	1:44:16											
05/05/94 02:36:20	1:48:51											
05/05/94 02:38:00	1:50:31										MAD	AOS
05/05/94 03:08:00	2:20:31											

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05/05/94 03:09:08	2:21:39								
05/05/94 03:19:00	2:31:31								
05/05/94 03:21:00	2:33:30							CAN	LOS
05/05/94 03:26:24	2:38:55								
05/05/94 03:28:15	2:40:46								
05/05/94 03:28:29	2:41:00								
05/05/94 03:29:10	2:41:41								
05/05/94 03:30:52	2:43:23								
05/05/94 03:31:39	2:44:10								
05/05/94 03:32:28	2:44:59								
05/05/94 03:32:52	2:45:23								
05/05/94 03:34:41	2:47:12								
05/05/94 03:37:22	2:49:53								
05/05/94 03:41:53	2:54:24								
05/05/94 04:06:17	3:18:48								
05/05/94 04:07:05	3:19:36								
05/05/94 04:09:29	3:22:00								
05/05/94 04:10:29	3:22:59								
05/05/94 04:13:12	3:25:43								
05/05/94 04:13:55	3:26:26								
05/05/94 04:30:29	3:43:00								
05/05/94 04:32:13	3:44:44								
05/05/94 04:39:28	3:51:59								
05/05/94 04:39:51	3:52:22								
05/05/94 04:40:40	3:53:11								
05/05/94 04:41:04	3:53:35								
05/05/94 05:02:22	4:14:53								
05/05/94 05:03:10	4:15:41								
05/05/94 05:04:00	4:16:30								
05/05/94 05:04:24	4:16:54								

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05/05/94 05:05:14	4:17:45									
05/05/94 05:09:56	4:22:27									
05/05/94 05:11:20	4:23:51									
05/05/94 05:41:30	4:54:01									
05/05/94 05:42:20	4:54:51									
05/05/94 05:43:28	4:55:59									
05/05/94 05:44:40	4:57:11									
05/05/94 05:47:51	5:00:22									
05/05/94 06:01:06	5:13:36									
05/05/94 06:04:05	5:16:36									
05/05/94 06:05:00	5:17:30									
05/05/94 06:05:40	5:18:11									
05/05/94 06:21:28	5:33:59									
05/05/94 06:22:07	5:34:38									
05/05/94 06:24:44	5:37:15									
05/05/94 06:26:34	5:39:05									
05/05/94 06:28:33	5:41:04									
05/05/94 06:33:38	5:46:09									
05/05/94 06:41:56	5:54:26									
05/05/94 06:42:46	5:55:17									
05/05/94 06:50:13	6:02:44									
05/05/94 06:51:01	6:03:32									
05/05/94 06:51:50	6:04:21									
05/05/94 06:52:14	6:04:45									
05/05/94 07:32:00	6:44:31								PMK	AOS
05/05/94 07:33:21	6:45:52									
05/05/94 07:34:08	6:46:39									
05/05/94 07:34:56	6:47:27									

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05/05/94 07:35:18	6:47:49								
05/05/94 07:36:18	6:48:48								
05/05/94 08:00:13	7:12:44								
05/05/94 07:36:18	6:48:48								
05/05/94 07:59:59	7:12:30								
05/05/94 08:00:13	7:12:44								
05/05/94 08:01:06	7:13:37								
05/05/94 08:00:27	7:12:58								
05/05/94 08:01:06	7:13:37								
05/05/94 08:01:19	7:13:50								
05/05/94 08:30:51	7:43:22								
05/05/94 08:31:19	7:43:50								
05/05/94 08:32:25	7:44:55								
05/05/94 08:32:38	7:45:09								
05/05/94 09:12:30	8:25:01								
05/05/94 09:12:44	8:25:15								
05/05/94 09:13:22	8:25:53								
05/05/94 09:13:36	8:26:07								
05/05/94 09:30:15	8:42:46								
05/05/94 09:30:29	8:43:00								
05/05/94 09:31:07	8:43:38								
05/05/94 09:31:20	8:43:51								
05/05/94 10:04:58	9:17:29								
05/05/94 10:05:25	9:17:55								
05/05/94 10:06:03	9:18:34								
05/05/94 10:06:16	9:18:47								
05/05/94 10:21:00	9:33:31							GDS	AOS
05/05/94 10:30:00	9:42:31								

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05/05/94 10:30:28	9:42:59								
05/05/94 10:31:06	9:43:36								
05/05/94 10:31:19	9:43:50								
05/05/94 11:09:09	10:21:40								
05/05/94 11:09:36	10:22:06								
05/05/94 11:10:14	10:22:45								
05/05/94 11:10:27	10:22:58								
05/05/94 11:31:25	10:43:56								
05/05/94 11:31:52	10:44:23								
05/05/94 11:32:30	10:45:01								
05/05/94 11:32:44	10:45:15								
05/05/94 11:35:19	10:47:50								
05/05/94 11:36:44	10:49:15								
05/05/94 11:37:16	10:49:47								
05/05/94 12:32:58	11:45:28								
	23:12:31								
	23:12:31								
	23:12:31								
05/05/94 13:04:00	12:16:31								
05/05/94 13:08:00	12:20:31								
05/05/94 13:20:00	12:32:31								
05/05/94 13:34:00	12:46:31						MAD	LOS	
05/05/94 14:58:00	14:10:31								
05/05/94 16:56:00	16:08:31						CAN	AOS	
05/05/94 18:42:00	17:54:31						PMK	LOS	
05/05/94 20:43:00	19:55:31								
05/05/94 21:30:00	20:42:31						GDS	LOS	

S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
						BEGIN AUTOEXPOSURE/LIMB DETECTION EXPERIMENT
Turn ON NIR, LWIR Cameras						
Set Data Rate to 2 kbps						
Switch to Omni Transmitter						
Open Sensor Door						
Turn ON Hires, UV/VIS Sensor						
Upload Exposure Settings (LUNARZ85S)						
Activate Autoexposure, UV/VIS, Filter 6, Hires, Filter 5, NIR, filter 1, LWIR						
Initialize Filter Wheels (DHUSEL26)						
Activate Startracker B (DHUSEL2)						
Record to SSDR Segment 1						
DHUSEL22						
Activate Startracker B (DHUSEL2)						
DHUSEL22						
DHUSEL15						
DHUSEL16						
DHUSEL17						Uncompressed LWIR
Activate Startracker B (DHUSEL2)						
						38 Min Coverage gap
Reset Filter Wheels (DHUSEL27)						
Activate Startracker B (DHUSEL2)						
Turn OFF NIR, Hires, LWIR Cameras						
Deactivate Autoexposure						
Upload Sequence Table (MEQ-UV03)						

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Turn ON LWIR, NIR cooler								
Upload Exposure Settings (LUNARH85S)								
Activate Autoexposure (UV/VIS, Filter 5, Hires, Filter 5, NIR, Filter 1, LWIR)								
Re-initialize Filter Wheels (DHUSEL26)								
DHUSEL22								
DHUSEL15								
DHUSEL16								
Activate Startracker B (DHUSEL2)								
Deactivate Autoexposure UV/VIS0								
DHUSEL22								
Activate Startracker B (DHUSEL2)								
Activate Autoexposure UVVIS, Filter 6								
Upload Sequence Table (IEQ_22)								
DHUSEL22								
Reset Filter Wheels (DHUSEL27)								
Activate Startracker B (DHUSEL2)								
Deactivate Autoexposure for UV/VIS, Hires, NIR, LWIR								
Turn OFF LWIR, NIR cooler								
Re-initialize Filter Wheels (DHUSEL28)								
Activate Startracker B (DHUSEL2)								
Activate Limb Detection, UV/VIS, Filter 1								
DHUSEL3								
Activate Startracker B (DHUSEL2)								
Deactivate Limb Detection, UV/VIS								
Activate Limb Detection, UV/VIS, Filter 1								
DHUSEL3								
Activate Startracker B (DHUSEL2)								

UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event	S/C Command Activities
05/06/94 00:00:00	0:00:00												Flat Field Test is planned
05/06/94 03:06:00	3:06:00										MAD	AOS	
05/06/94 03:51:00	3:51:00										CAN	LOS	
05/06/94 06:01:00	6:01:00												All cameras ON
05/06/94 06:17:00	6:17:00												Set downlink rate to 2 Kbps
05/06/94 06:19:00	6:19:00												Slew s/c Sensors to 5 degrees off axis from Sun (SAFERW)
05/06/94 06:23:00	6:23:00												Record in SSDR Segment 1
05/06/94 06:24:00	6:24:00												Load Exposure Table (LUNARZ85S) (LUNVEGA)
05/06/94 06:25:38	6:25:38												DHUSEL29
05/06/94 06:26:10	6:26:10												DHUSEL31
05/06/94 06:26:36	6:26:36												Activate ST-B (DHUSEL2);
05/06/94 06:29:00	6:29:00												Load Exposure Table (EARTH_VIEW_AXIS)
05/06/94 06:30:00	6:30:00												DHUSEL16
05/06/94 06:31:00	6:31:00												Activate ST-B (DHUSEL2);
05/06/94 06:32:00	6:32:00												Slew s/c Sensors to Earth (SAFERW)
05/06/94 06:38:00	6:38:00												Open sensor door

05/06/94 06:40:00	6:40:00										Enable auto-exposure
05/06/94 06:54:00	6:54:00										Initialize filters (DHUSEL26)
05/06/94 06:55:00	6:55:00										DHUSEL22
05/06/94 06:58:00	6:58:00										PARK filters (DHUSEL27); Activate ST-B (DHUSEL2);
05/06/94 07:09:00	7:09:00										All cameras OFF
05/06/94 08:06:18	8:06:18								PMK	AOS	
05/06/94 10:56:00	10:56:00								GDS	AOS	
05/06/94 11:18:00	11:18:00										Slew s/c HGA to Earth (GNC13EARTH)
05/06/94 11:23:00	11:23:00										Switch to DHU mode @ 128 kbps
05/06/94 11:48:00	11:48:00										Downlink SDR Segment 1
05/06/94 14:47:00	14:47:00								MAD	LOS	
05/06/94 18:26:00	18:26:00								CAN	AOS	
05/06/94 18:32:00	18:32:00										Ranging A OFF Ranging B OFF
05/06/94 20:12:00	20:12:00								PMK	LOS	
05/06/94 22:56:00	22:56:00								GDS	LOS	
05/06/94 22:41:00	22:41:00										Update state vector (GNC53_06MAY2000)
05/06/94 23:45:00	23:45:00										Ranging B ON

UV/Vis	HiRes	NIR	LWIR	Laser	Comment
					No scheduled SCL scripts, all ground commands.
					10 Min Coverage gap
					Flat Field and Autoexposure Test
					S/C is to point the +Z axis to within 5 degree from the Sun, where images will be taken of the inside of the closed sensor door.
					Sensor door is closed, at the end of the slew, warming of the door apparently caused the door to warp, giving a false 'open' indication. Onboard software then fired jets to attempt to remove the Sun from the sensor FOV.
					UV Uncompressed
					NIR Uncompressed
					UV and NIR Compressed

					All Sensors Compressed
					End Flat Field and Autoexposure Test
					2hr 20 Min Coverage gap
					2hr 20 Min Coverage gap

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UTC Time	Orbit Time (h:mm:ss)	Time Since Previous Event (sec)	Lat. (deg)	Long. (deg)	Altitude (km)	POMONKEY	GOLDSTONE	CANBERRA	MADRID	Sun Shadow	Site	Orbital Event
05/07/94 00:56:07												
05/07/94 02:54:00												
05/07/94 03:23:00												
05/07/94 03:25:00												
05/07/94 04:00:45												
05/07/94 04:03:05												
05/07/94 04:05:15												
05/07/94 04:12:00											MAD	AOS
05/07/94 04:17:14												
05/07/94 04:19:20												
05/07/94 04:21:57												
05/07/94 04:23:15												
05/07/94 04:23:29												
05/07/94 04:24:48												
05/07/94 04:30:00												
05/07/94 04:35:36												
05/07/94 04:36:28												
05/07/94 04:39:00												
05/07/94 04:43:57												
05/07/94 04:54:00											CAN	LOS

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05/07/94 04:59:00										
05/07/94 05:54:26										
05/07/94 07:20:00										
05/07/94 07:20:00										
05/07/94 07:48:00										
05/07/94 08:34:30										
05/07/94 09:35:00								PMK	AOS	
05/07/94 09:40:16										
05/07/94 09:47:00										
05/07/94 09:51:00										
05/07/94 09:52:14										
05/07/94 09:55:53										
05/07/94 09:58:23										
05/07/94 09:59:15										
05/07/94 10:04:14										
05/07/94 10:09:14										
05/07/94 10:09:40										
05/07/94 10:11:00										
05/07/94 10:13:08										
05/07/94 10:24:09										
05/07/94 10:30:55										
05/07/94 10:30:00										
05/07/94 10:42:37										
05/07/94 10:43:00										
05/07/94 10:43:26										

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05/07/94 14:08:07										
05/07/94 14:12:22										
05/07/94 14:14:33										
05/07/94 14:19:56										
05/07/94 14:28:59										
05/07/94 14:38:30										
05/07/94 14:38:45										
05/07/94 14:39:26										
05/07/94 14:39:48										
05/07/94 14:52:55										
05/07/94 14:54:00										
05/07/94 15:55:16										
05/07/94 16:02:00										
05/07/94 16:02:32										
05/07/94 16:14:57										
05/07/94 17:01:02										
05/07/94 17:17:51										
05/07/94 17:29:50										
05/07/94 17:32:56										
05/07/94 19:03:10										
05/07/94 19:05:00								MAD	LOS	
05/07/94 19:46:32										
05/07/94 19:46:56										
05/07/94 19:47:09										
05/07/94 19:47:12										
05/07/94 21:04:07										
05/07/94 21:06:16										
05/07/94 21:06:59										
05/07/94 21:08:04										
05/07/94 21:11:58										
05/07/94 21:12:29										
05/07/94 21:13:11										
05/07/94 23:53:35										

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S/C Command Activities	UV/Vis	HiRes	NIR	LWIR	Laser	Comment
Turn ON Omni Ranging						
Switch to Omni						
Slew S/C to point High Gain Antenna toward Earth						
Switch to High Gain Transmitter						
Switch to Omni Transmitter						
						BEGIN EARTH MOSAIC TEST
Upload Sequence Tables (MOS_HIRES, MOS_UV_NIR)						
Upload Exposure Settings (EARTH_VIEW_ZAXIS)						
Slew S/C to Point Sensors to Earth (GNC12)						
Reccord to SSSDR Segment 1						
DHUSEL16						No Data
Activate Startracker B (DHUSEL2)						
Turn ON UV/VIS, Hires Cameras						
DHUSEL16						
DHUSEL17						
Activate Startracker B (DHUSEL2)						
Slew S/C High Gain Antenna toward Earth						
Switch to High Gain Transmitter						
Download Segment 1						
Set Data Link Rate to 8 kbps						
Switch to Omni Transmitter						
						10 Min Coverage gap

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Switch to High Gain Transmitter									
Set Data Link Rate to 64 kbps									
									END EARTH OBSERVATIONS
Switch to Omni Transmitter									
Set Data Link Rate to 8 kbps									
Slew S/C to Point High Gain Antenna toward Earth									
Download SDR Segment 1									
Switch to Omni Transmitter									
									BEGIN EARTH MOSAIC TEST #2
Slew S/C to Point Cameras toward Earth									
Upload Exposure Settings (EARTH_VIEW_ZAXIS)									
Turn ON NIR, LWIR Cameras									
Record to SDR Segment 2									
Set Filter Wheels (DHUSEL28)									
DHUSEL16									
DHUSEL17									
Reset Filter Wheels (DHUSEL27)									
Activate Startracker B (DHUSEL2)									
Slew S/C to Point High Gain toward Earth									
Switch to High Gain Transmitter									
Download Segment 1									
Download Segment 2									
Turn OFF LWIR, UVVIS, Hires, NIR									
Set Data Rate to 2 kbps									
Slew S/C to Point Cameras toward Earth									
Switch to Omni Transmitter									
									END EARTH MOSAIC TEST #2
									BEGIN CENTROIDING/TRACKING TEST WITH MOON

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Upload Sequence Table (MEQ_UV_B)									
Upload Exposure Parameters (LUNARZ85S)									
Set Data Link Rate to 64 kbps									
Slew S/C to point Cameras toward Moon									
Switch to Omni Transmitter									
Turn ON UVVIS Camera									
Record to SSDR Segment 3									
DHUSEL9									
Request UV Imag, filter 4									
DHUSEL2									
Download SSDR Segment 3									
Record to SSDR Segment 3									
DHUSEL9									
DHUSEL2									
Upload Sequence Table (MEQ_UV_B)									
DHUSEL9									
DHUSEL2									
Upload Exposure Settings (LUNARZ85S)									
DHUSEL9									
PROCESSOR CRASH									
CRASH OF HKP									
DURING SHORT LOSS OF CONTACT ACS JETS FIRED, EXHAUSTING ATTITUDE & CONTROL FUEL SUPPLY, LEAVING S/C TUMBLING AT 80 REV/MIN.									
IMAGES SHOW START OF TUMBLE, RUN UNTIL 13:42									
RESET HKP									
RESET DHU									
Upload DHU Code Ver. 2.49									

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Upload Sequence Table Set M									
Upload DHU Compression Tables									
Upload Exposure Settings (EXPDAY5)									
Activate Startracker B (DHUSEL2)									
TURN OFF and ON IMU B									
Reset Filter Wheels (DHUSEL28)									
Activate Startracker B (DHUSEL2)									
Reset Filter Wheels (DHUSEL27)									
Activate Startracker B (DHUSEL2)									
DHUSELNO									
Turn OFF Startracker A and B									
Download SDR Segment 3									
Download SDR Segment 1									
Download SDR Segment 3									
Download SDR Segment 3									
Download SDR Segment 1									
Download SDR Segment 2									
Turn OFF Laser Heater									
Download SDR Segment 3									
Download last part of Segment 3									
Turn ON Hires, UV/VIS, NIR Cameras									
Reset Filter Wheels (DHUSEL27)									
DHUSELNO									
Turn OFF Hires, UV/VIS, NIR Cameras									
Upload Sequence Table (SEQ_ST32)									
Turn ON Startracker A & B									
Record to SDR Segment 4									
DHUSEL21									Uncompressed Startracker A & B Images
DHUSELNO									
Turn OFF Startracker A & B									
Download SDR Segment 4									
Upload Sequence Table (SEQ_STS3)									

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Turn ON Startracker B									
DHUSEL22								Uncompressed Startracker B Images	
DHUSELNO									
Record to SDR Segment 5									
DHUSEL22								Uncompressed Startracker B Images	
DHUSELNO									
Turn OFF Startracker B									
Download SDR Segment 5									