NIMS GUIDE TO THE E16 ORBIT

Original: July 1998

Revised: May 2000

E16 Encounter starts 07/20/98, **E16 Playback starts 07/29/98**

VERSION DATE: 000501

Foreword to the Revised Edition

This document was originally published by the NIMS team as a preview to data acquisition for one orbit. It has has been revised and corrected after data receipt and systematic processing for inclusion on the CD-ROMs containing NIMS Experimental Data Records (EDRs) and Systematic Data Products (Cubes). It is also available on the NIMS website in both PostScript (PS) and Portable Document Format (PDF) form. Some material in the original document has been omitted, and a chapter added describing the data actually returned.

The aim of this guide is to provide detailed information on the various NIMS observations and calibrations. Also included in this document is background information on the orbit. A brief overview of the guide is given below. Please refer to the beginning of each chapter for a detailed list of contents.

Chapter 1 gives a brief introduction to the orbit. Chapter 2 gives an overview and summarizes the NIMS science objectives using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry. Chapter 4 summarizes the NIMS observations in terms of a comprehensive sequence summary and a NIMS Observation Table (Obstab). Chapter 5 is a collection of the Detailed Observation Designs made up of OAPEL forms and POINTER plots. Chapter 6 contains plots of the NIMS wavelength edit tables used. Chapter 7 summarizes the NIMS data return from the orbit.

For more information, please refer to the Galileo Orbit Planning Guide (OPG) and the Galileo Orbit Activity Plan (OAP) for this orbit. Both of these documents are produced by the Galileo Project.

For more information on the NIMS instrument, please refer to the NIMS instrument paper: R.W. Carlson, P.R. Weissman, W.D. Smythe, J.C. Mahoney and the NIMS Science and Engineering Teams, "Near-infrared Mapping Spectrometer Experiment on Galileo", Space Science Reviews, Vol 60, pp 457-502, 1992.

Acknowledgements

The NIMS observations in this guide were designed by the NIMS Science Coordinators: Kevin Baines, John Hui, Rosaly Lopes-Gautier, Adriana Ocampo and Marcia Segura. Materials were also provided by Elias Barbinis, Paul Herrera, Bob Mehlman, Jim Shirley, Al Stevenson and Bill Smythe. Some figures and plots produced by various members of the Galileo Project were incorporated into this guide. Frank Leader provided some materials and edited the guide under the direction of Bob Mehlman and Bill Smythe.

Foreword

This document serves as a guide to the E16 Orbit for the NIMS Team. The aim of this guide is to provide detailed information on the various NIMS E16 observations and calibrations. Also included in this document is background information on the E16 orbit. This guide was produced before the start of the E16 orbit. After analysis of the NIMS E16 data is complete, it will be revised and corrected. A brief overview of the guide is given below. Please refer to the beginning of each chapter for a detailed list of contents.

Chapter 1 gives a brief introduction to the E16 orbit. Chapter 2 gives an overview of the E16 orbit and summarizes the NIMS science objectives for the E16 orbit using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry for the E16 orbit. Chapter 4 summarizes the NIMS E16 observations in terms of a comprehensive sequence summary and a NIMS Observation Table (Obstab). Chapter 5 is a collection of the Detailed Observation Designs made up of OAPEL forms and POINTER plots. Chapter 6 contains plots of the NIMS wavelength edit tables used during the E16 orbit.

For more information on the E16 orbit, please refer to the Galileo Orbit Planning guide and the Galileo Orbit Activity Plan for the E16 Orbit. Both of these documents are produced by the Galileo Project.

For more information on the NIMS instrument, please refer to the NIMS instrument paper: R.W. Carlson, P.R. Weissman, W.D. Smythe, J.C. Mahoney and the NIMS Science and Engineering Teams, "Near-infrared Mapping Spectrometer Experiment on Galileo", Space Science Reviews, Vol 60, pp 457-502, 1992.

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Chapter 1 - Introduction

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Introduction

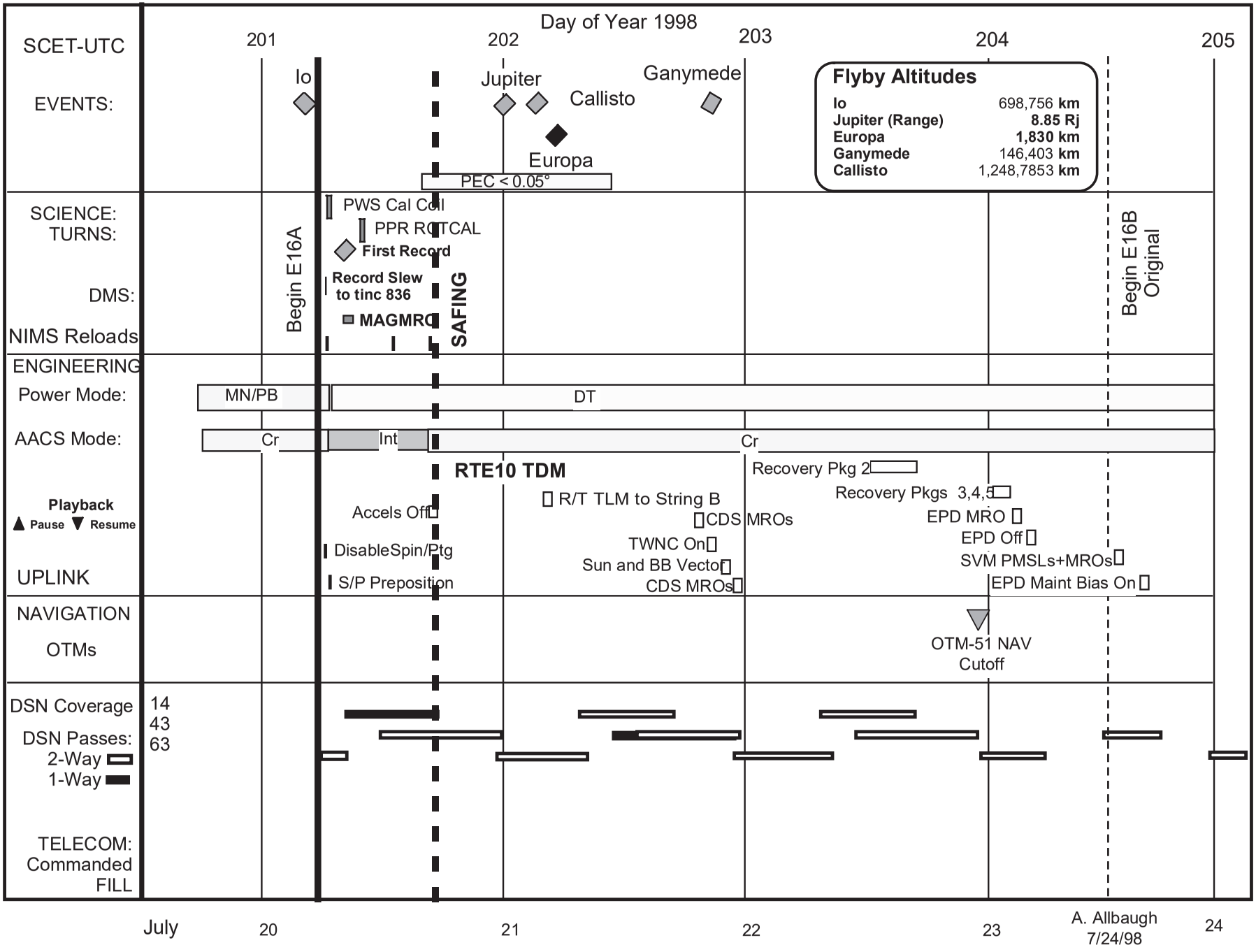
This E16 orbit is the sixteenth of twenty-five orbits in Galileo's Tour of the Jovian system and the fifth orbit in the Galileo Europa Mission (GEM). This orbit has a targetted satellite flyby of Europa. NIMS will make observations of Jupiter, Io, Europa and Ganymede in this orbit.

There are 13 autonomous reloads of the NIMS RAM code from CDS planned during the E16A encounter period, one just before each science observation. These reloads are in response to the on-going flight-anomalies where the NIMS RAM code takes some bit hits and halts the instrument during when the spacecraft is close to Jupiter. NIMS personnel will monitior the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

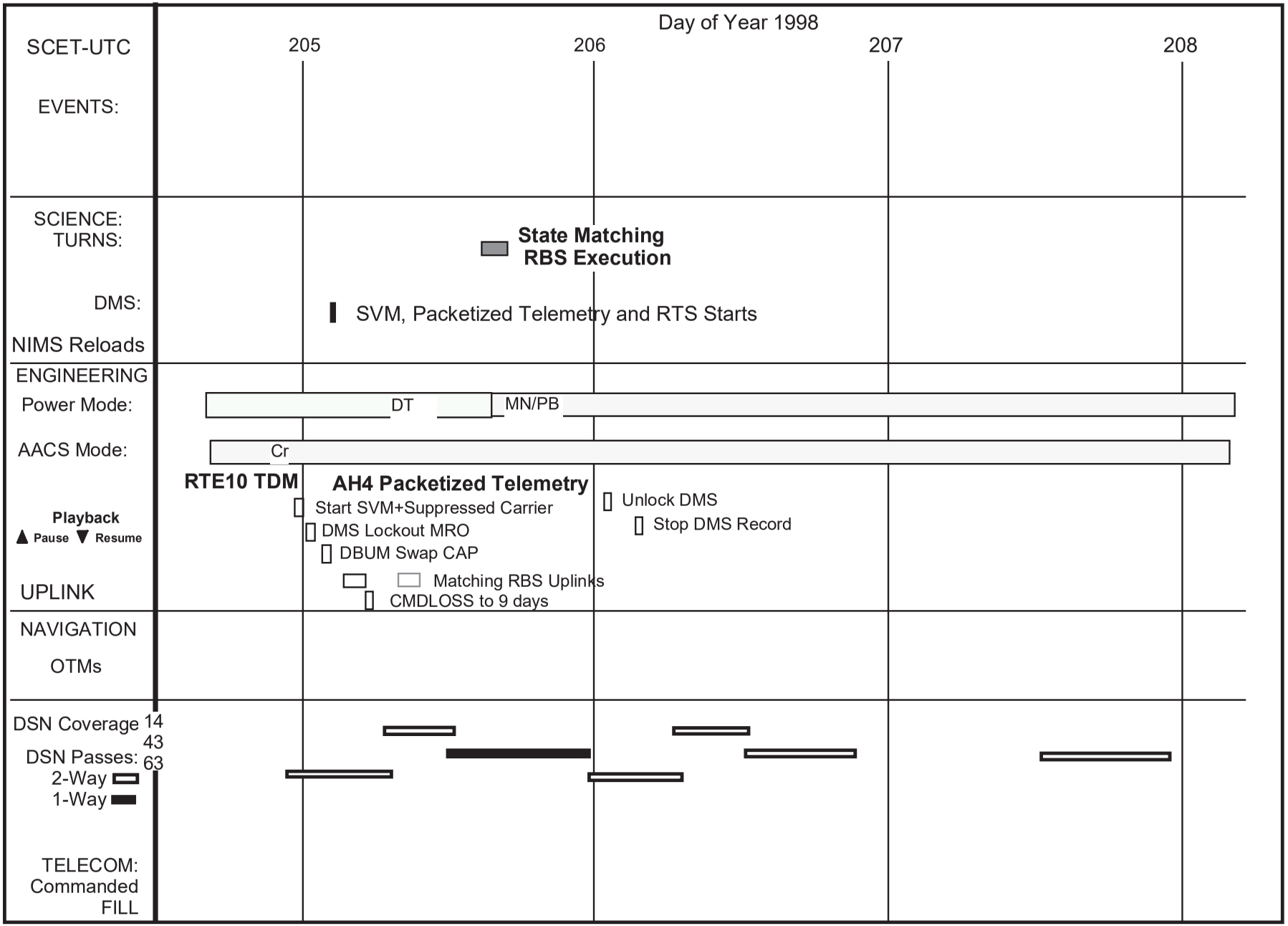
The E16 orbit is divided into 2 sequence loads: one Encounter Load (E16A) and one Orbital Cruise Load (E16B). The E16A load begins on D201 (07/20/98) and ends on D208 (07/27/98). This load contains the flybys of Jupiter, Europa, Io and Ganymede. The Cruise Load E16B runs from D209 to D268. Playback of the recorded data takes place during the Cruise phase, E16B. A high-level overview timeline of the E16 orbit can be found on the following five pages.

Due to spacecraft safing during the inbound segment of the E16 encounter, a large portion of the E16 encounter sequence was lost. Additional NIMS calibration observations were added after the fact to take advantage of the extra tape and bits to ground. Many E15 observations were not recorded over in E16 as planned. Therefore, these E15 observations were available for playback during E16 cruise.

E16A Safing Recovery Overview Part 1



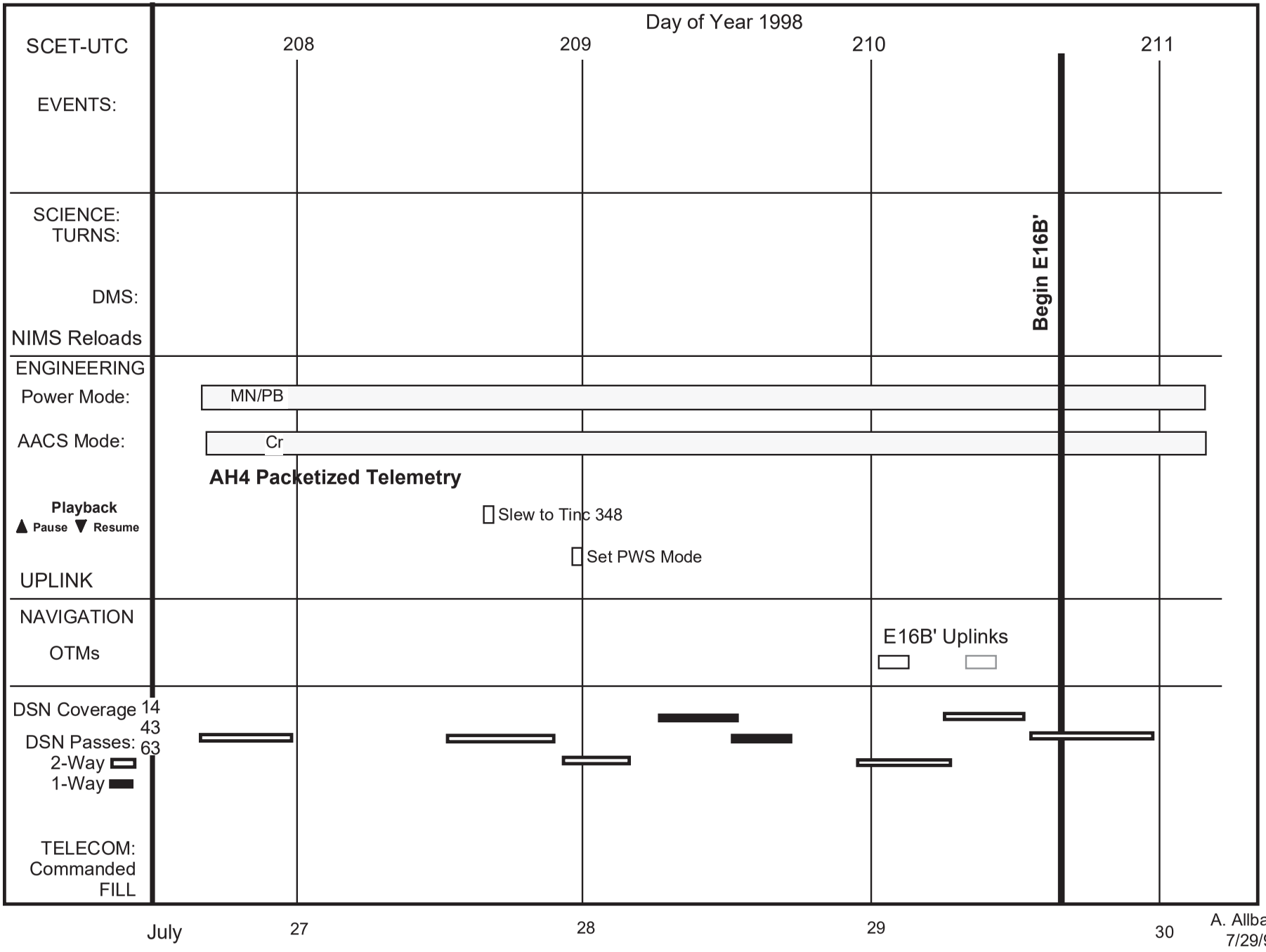
E16A Safing Recovery Overview Part 2



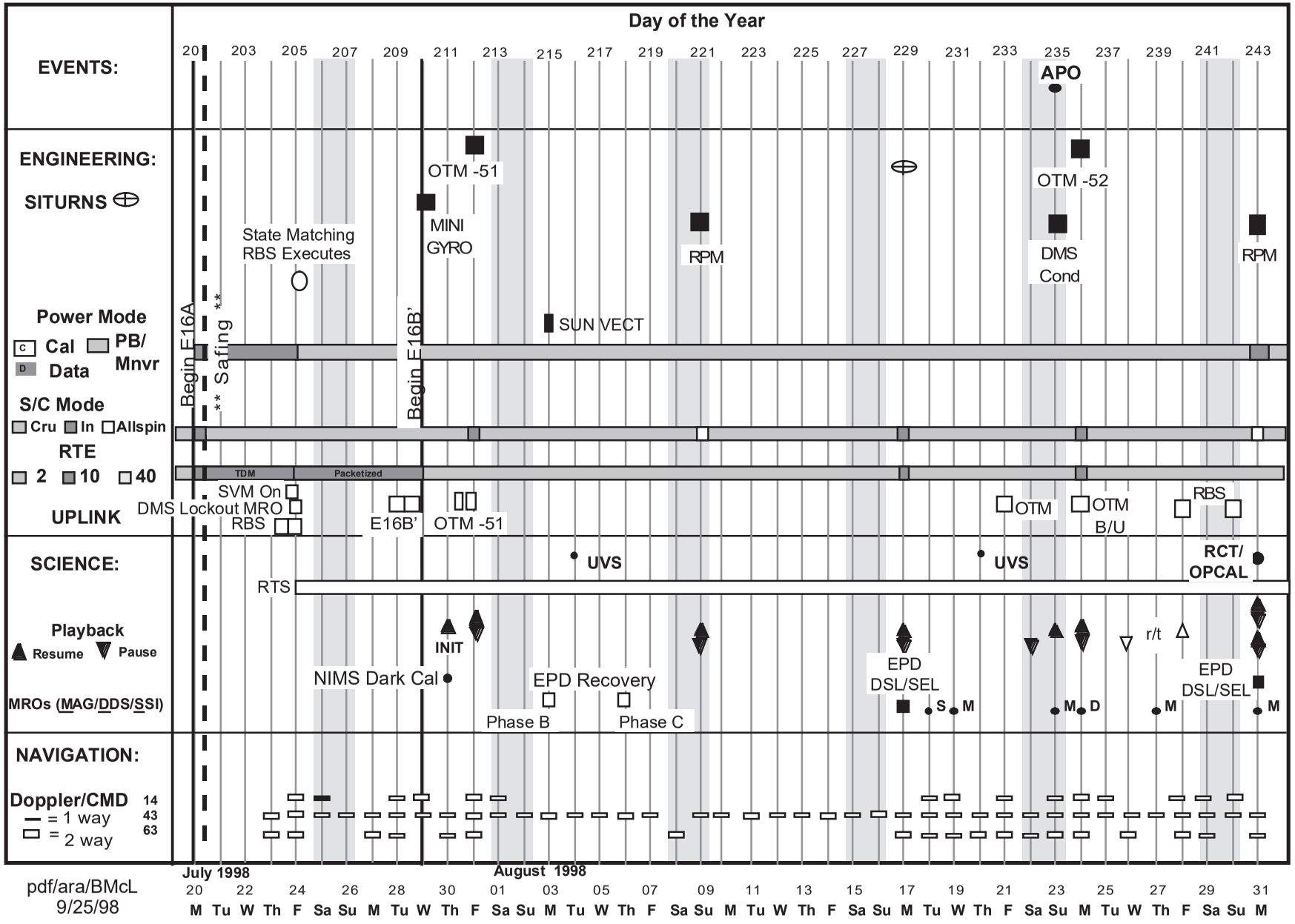
A. Allbaugh
7/28/98

1-04

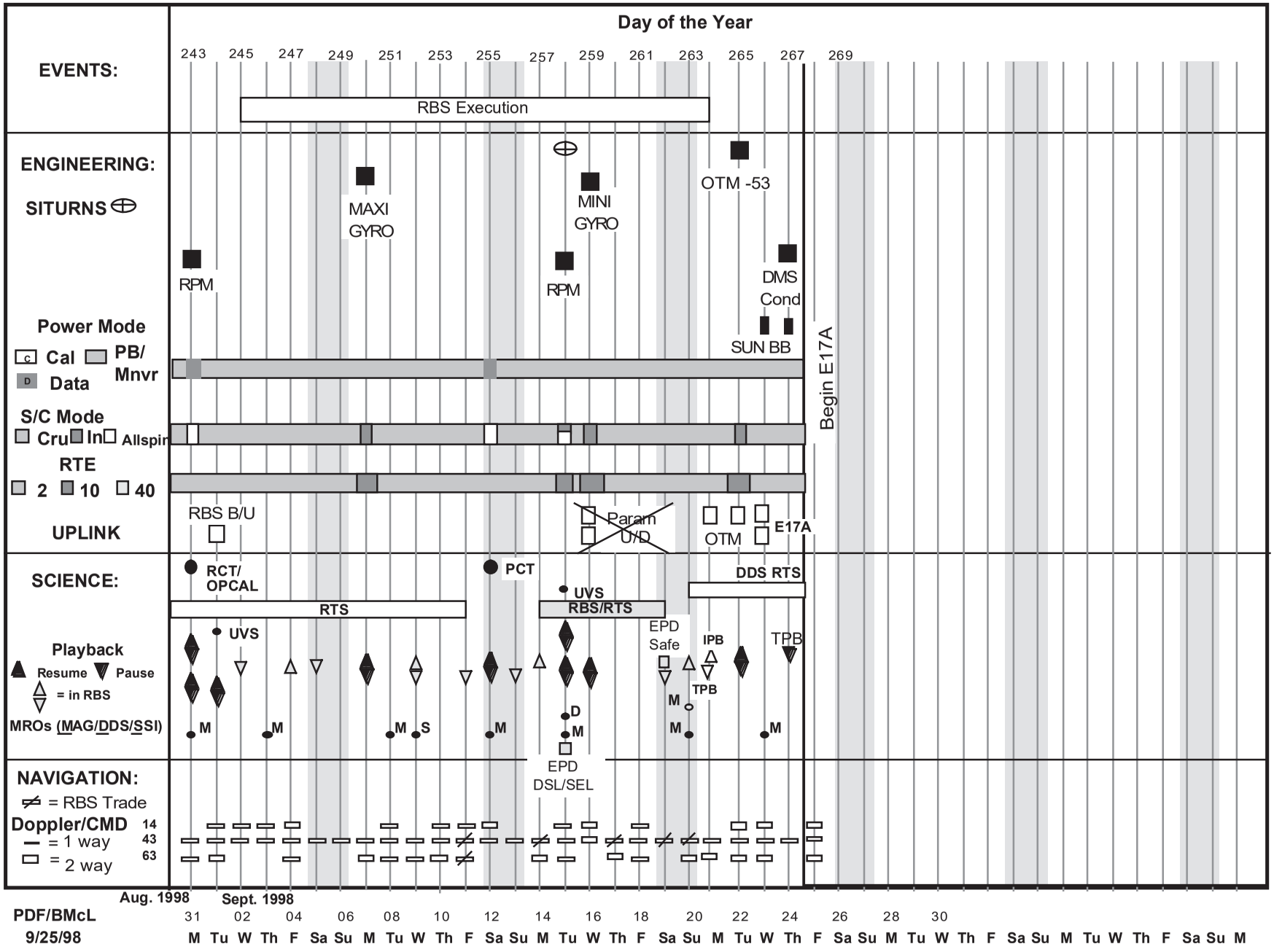
E16A Safing Recovery Overview Part 3



E16 Orbit Overview (Part 1)



E16 Orbit Overview (Part 2)



The following table lists the major events during E16, including NIMS Real Time observations, in UTC.

07/20/98	98-201/04:55:21	Io Closest Approach
07/20/98	98-201/05:00:00	E16 Encounter Start
07/20/98	98-201/05:57:12	NIMS RAM Reload 01
07/20/98	98-201/11:46:06	NIMS RAM Reload 02
07/20/98	98-201/11:53:57	NIMS R/T Jupiter 01
07/20/98	98-201/16:09:46	NIMS RAM Reload 03
07/20/98	98-201/17:35:42	SPACECRAFT SAFED
07/29/98	98-210/18:54:55	Start E16 Playback
07/30/98	98-211/13:40:04	NIMS RAM Reload 04
08/31/98	98-243/21:00:32	NIMS R/T RCT CAL
09/12/98	98-255/00:00:34	NIMS R/T PCT CAL
09/24/98	98-267/08:26:57	End E16 Playback

Chapter 2 - Orbit Overview

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Introduction to Chapter 2

This chapter gives an overview of the NIMS observations in the E16 Orbit.

The text on page 3 summarizes the NIMS science objectives for E16. The NIMS calibrations are discussed on page 3. Early data return and E16 playback are also discussed on page 3.

The table on page 4 is a time-ordered listing of the NIMS Oapels for E16.

The plot on page 5 shows the geometry of the NIMS E16 observations using a north trajectory pole view projection. The plot on page 6 shows the geometry of the NIMS E16 calibrations.

The spreadsheet on page 7 summarizes the various inputs for the NIMS E16 Observations. The spreadsheet on pages 8 and 9 summarizes the resource usage for the NIMS E16 observations.

The table on page 10 lists various NIMS E16 observing parameters: target latitude/longitude, range, cone angle, incidence angle (light), emission angle (view) and phase angle.

The timeline on page 11 shows the placement of the E16 observations for all intruments during the E16 Encounter Period.

The tapemap on page 12 shows the placement of the E16 observations on the spacecraft's tape recorder.

The timeline on pages 13 through 21 shows the preliminary E16 playback schedule.

The NIMS E16 mosaic designs are summarized on page 22 and 23 in time-order.

NIMS E16 SCIENCE OVERVIEW

Jupiter Science

There are five Jupiter observations in E16. Three are realtime and two are recorded. The three realtime observations look at the North Equatorial Belt at about +7 degrees latitude. The two recorded observations look at the white oval region in the southern hemisphere.

Io Science

There is one INHRSPEC high spatial and spectral resolution Io observation in E16. INHRSPEC01, centered at 225 W. longitude, consists of a single scans across the half-lit disk.

Europa Science

There are five Europa observations planned for E16: Four regional observations and one half-disk global observation. ENSUCOMP01 looks at the Aegnor linea terrain near -41 degrees latitude, 188 degrees West longitude. ENSUCOMP02 looks at the Taliesin crater region near -21 degrees latitude, 141 degrees West longitude. ENSUCOMP03 looks at the Thrace macula region near -43 degrees latitude, 175 degrees West longitude. ENSUCOMP04 looks at the Wedge terrain near -7 degrees latitude, 196 degrees West longitude. ENGLOBAL01 covers pole to pole 140 to 240 degrees West longitude.

Ganymede Science

GNGLOBAL01 covers longitudes 230 to 360, pole to pole.

Callisto Science

Callisto was not observed in E16.

Calibration

There are three NIMS calibration observations planned for E16: one RCT cal, one PCT cal and one OPCAL.

Early Data Return

There are six realtime observations in E16: Three 408 wavelength Jupiter observations (JUPRTS), one RCT calibration, one PCT calibration and one OPCAL.

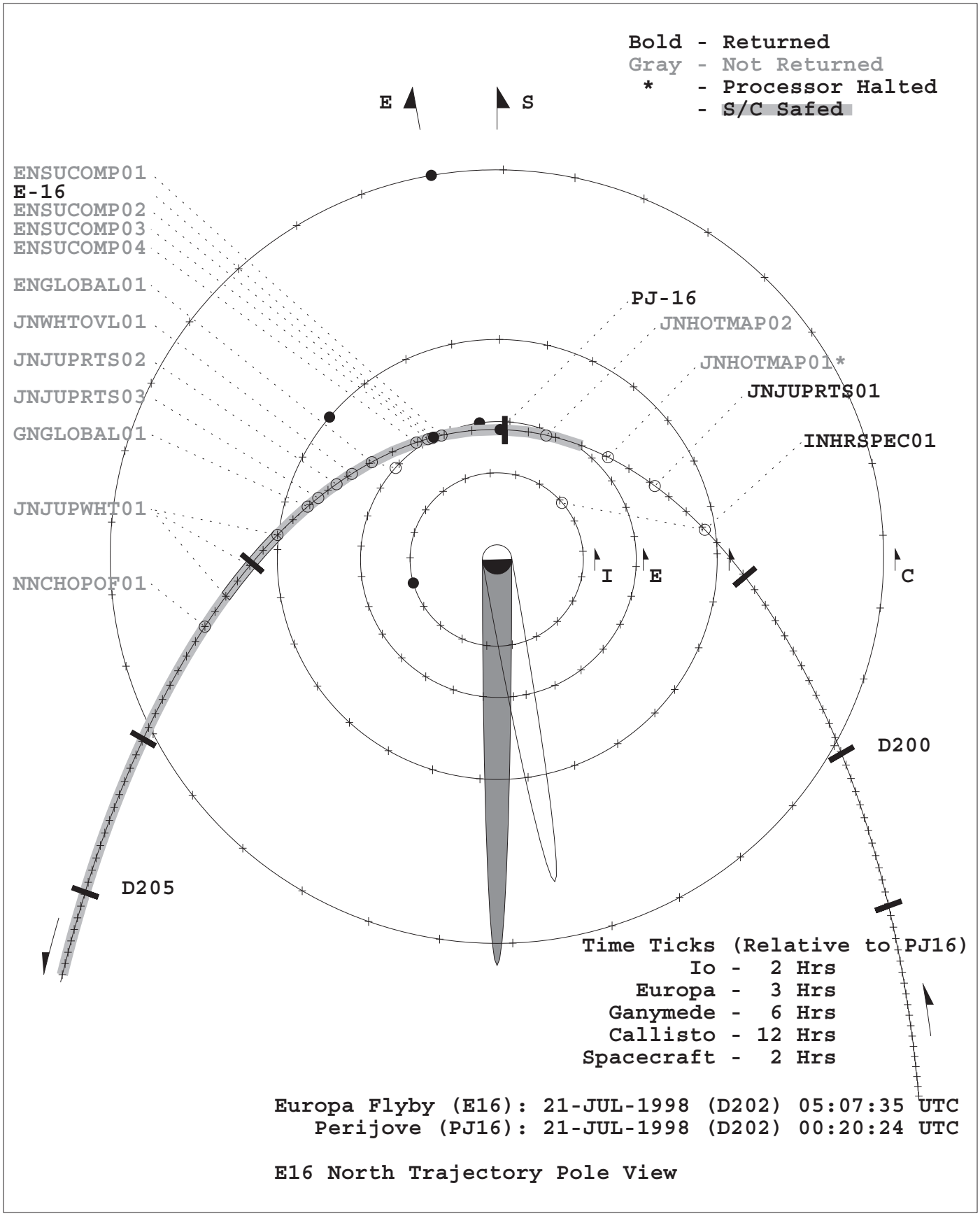
E16 Playback

E16 playback is split into two passes through the tape.

E16 Time-Ordered Listing

OAPEL	Start (UTC)	End (UTC)	Duration
16NNHRSPEC01-	98-201/05:57:01	98-201/05:59:03	000/00:02:01
16INHRSPEC01*	98-201/05:59:03	98-201/06:10:10	000/00:11:07
16NNJUPRTS01-	98-201/11:45:52	98-201/11:48:54	000/00:03:02
16JNJUPRTS01*	98-201/11:48:54	98-201/12:13:10	000/00:24:16
16NNHOTMAP01-	98-201/16:07:44	98-201/16:11:47	000/00:04:02
16JNHOTMAP01-	98-201/16:11:47	98-201/16:52:14	000/00:40:26
16NNHOTMAP02-	98-201/20:58:56	98-201/21:02:59	000/00:04:02
16JNHOTMAP02-	98-201/21:02:59	98-201/21:29:16	000/00:26:17
16NNSUCOMP01-	98-202/04:28:53	98-202/04:32:56	000/00:04:02
16ENSUCOMP01-	98-202/04:32:56	98-202/05:00:14	000/00:27:18
16NNSUCOMP02-	98-202/05:10:20	98-202/05:14:23	000/00:04:02
16ENSUCOMP02-	98-202/05:14:23	98-202/05:33:36	000/00:19:12
16ENSUCOMP03-	98-202/05:33:36	98-202/05:49:46	000/00:16:10
16NNSUCOMP04-	98-202/06:22:08	98-202/06:26:10	000/00:04:02
16ENSUCOMP04-	98-202/06:26:10	98-202/06:49:26	000/00:23:15
16NNGLOBAL01-	98-202/10:03:34	98-202/10:07:36	000/00:04:02
16ENGLOBAL01-	98-202/10:07:36	98-202/11:04:14	000/00:56:37
16NNWHTOVL01-	98-202/11:55:48	98-202/11:57:49	000/00:02:01
16JNWHTOVL01-	98-202/11:57:49	98-202/12:38:16	000/00:40:26
16NNJUPRTS02-	98-202/13:26:48	98-202/13:28:49	000/00:02:01
16JNJUPRTS02*	98-202/13:28:49	98-202/13:51:04	000/00:22:14
16NNJUPRTS03-	98-202/15:20:02	98-202/15:24:05	000/00:04:02
16JNJUPRTS03*	98-202/15:24:05	98-202/15:52:24	000/00:28:18
16NNGLOBAL02-	98-202/16:33:51	98-202/16:35:52	000/00:02:01
16GNGLOBAL01*	98-202/16:35:52	98-202/17:44:38	000/01:08:45
16NNJUPWHT01-	98-202/20:25:24	98-202/20:27:25	000/00:02:01
16JNJUPWHT01-	98-202/20:27:25	98-203/04:53:59	000/08:26:34
16NNCHOPOF01-	98-203/08:21:16	98-203/08:31:22	000/00:10:06
16HNDARKCL01-	98-211/13:39:50	98-211/14:00:00	000/00:20:10
16NNCHOPOF02-	98-211/14:01.26	98-211/14:10:06	000/00:10:06
16NNRCTRLT01-	98-243/21:00:32	98-244/10:16:17	000/13:15:44
16NNPCTRLT01-	98-255/00:00:34	98-255/07:50:44	000/07:50:10

NIMS E16 OBSERVATIONS



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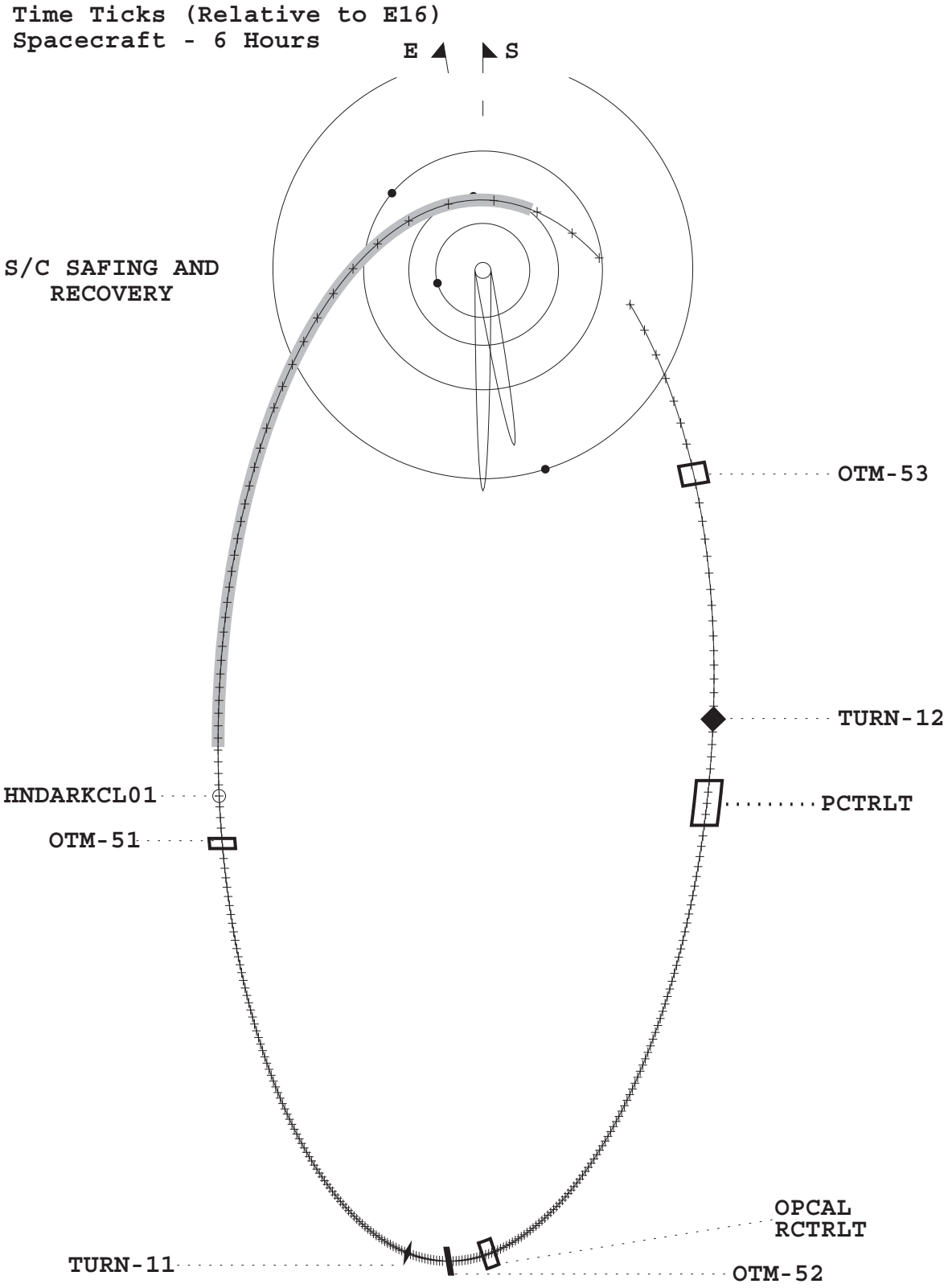
NIMS E16 CRUISE CALIBRATIONS

Europa Flyby (E16): 21-JUL-1998 (D202) 05:07:35 UTC
Perijove (PJ16): 21-JUL-1998 (D202) 00:20:24 UTC
Apojove (AJ16): 23-Aug-1998 (D235) 16:00:00 UTC



E16 North Trajectory Pole View, Perijove to Perijove

E16 NIMS INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
16NNHRSPEC01	NIMS Software Reload								
16INHRSPEC01	Io Monitoring at High Spectral Resolution	E16ILM243C	E16ILM228C	LM	2	0	4	LPU	DA
16NNJUPRTS01	NIMS Software Reload								
16JNJUPRTS01	Jupiter Realtime Observation	E16JLM442/MB	R/T	LM	2	0	4	R/T	DB
16NNHOTMAP01	NIMS Software Reload								
16JNHOTMAP01	NIMS Jupiter Hotmap	E16JHT238A		LM	2	0	4	LPU	DC
16NNHOTMAP02	NIMS Software Reload								
16JNHOTMAP02	NIMS Software Reload	E16JHT238A		LM	2	0	4	LPU	DD
16NNSUCOMP01	NIMS Software Reload								
16ENSUCOMP01	Europa Surface Composition	E16ELM442	E16ELM360	LM	4	0	4	MPW	DE
16NNSUCOMP02	NIMS Software Reload								
16ENSUCOMP02	Europa Surface Composition	E16ELM442	E16ELM360	LM	3	0	4	MPW	DF
16ENSUCOMP03	Europa Surface Composition	E16ELM442	E16ELM360	LM	3	0	4	MPW	DG
16NNSUCOMP04	NIMS Software Reload								
16ENSUCOMP04	Europa Surface Composition	E16ELM243C	E16B_ELM228C_0	LM	3	0	4	LPU	DH
16NNGLOBAL01	NIMS Software Reload								
16ENGLOBAL01	Europa Global Observation	E16ELM243C	E16B_ELM228C_0	LM	3	0	4	LPU	DI
16NNWHTOVL01	NIMS Software Reload								
16JNWHTOVL01	Jupiter White Oval	E16JSB253B	E16JSB253B	LM	2	0	4	LPU	EA
16NNJUPRTS02	NIMS Software Reload								
16JNJUPRTS02	Jupiter Realtime Observation	E16JLM442/MB	R/T	LM	4	0	4	R/T	DJ
16NNJUPRTS03	NIMS Software Reload								
16JNJUPRTS03	Jupiter Realtime Observation	E16JLM442/MB	R/T	LM	2	0	4	R/T	DK
16NNGLOBAL01	NIMS Software Reload								
16GNGLOBAL01	Ganymede Global Map	E16GLM243K	E16GLM228K	LM	3	0	4	LPU	DL
16JNJUPWHT01	NIMS Software Reload								
16JNJUPWHT01	Ride-along with SSI	E16JFE442A	E16JFE360A	LM	2	0	4	MPW	DM
16HNDARKCL01-	Dark Calibration	HN442	HN408	LM	1,2,3,4	0	4	MPW	DA
16NNRCTRLT01-	NIMS RCT Real-Time Calibration	E14RCT252	R/T	LM	1	0	4	R/T	XE
14NNPCTRLT01-	NIMS Real-Time PCT Calibration	E14PCT252	R/T	LM	4	0	4	R/T	FB

E16 RESOURCES

Activity ID	Mode	Record Mode	Obs. Cost (tracks)	Obs. Cost (ticks)	Number Wavelengths Returned	Obs Record (sec.)	Obs PB (sec.)	Selected Bits to Tape sBOT (MBITS)	Bits to Tape MBOT (Mbit)	Mode Cycle time (sec)
16INHRSPEC01	LM	LPU	0.0077	45	228	184	179.33	1.11	1.13	8.667
16JNJUPRTS01	LM				360					
16JNHOTMAP01	LM	LPU	0.0594	346	228	1468.68	1464	9.03	9.06	8.667
16JNHOTMAP02	LM	LPU	0.0322	187	228	791	778.68	4.80	4.88	8.667
16ENSUCOMP01	LM	MPW	0.1724	1004	360	1140	1145.67	13.20	13.13	8.667
16ENSUCOMP02	LM	MPW	0.1353	788	360	894	899.67	10.36	10.30	8.667
16ENSUCOMP03	LM	MPW	0.1374	801	360	908	779.67	8.98	10.46	8.667
16ENSUCOMP04	LM	LPU	0.0395	230	228	974	978.33	6.03	6.01	8.667
16ENGLOBAL01	LM	LPU	0.1004	585	228	2487	2458.68	15.17	15.34	8.667
16JNWHTOVL01	LM	LPU	0.0282	164		693			4.27	8.667
16JNJUPRTS02	LM				360					
16JNJUPRTS03	LM				360					
16GNGLOBAL01	LM	LPU	0.1433	835	228	3555	1801.33	11.11	21.93	8.667
16JNJUPWHT01	LM	MPW			360					
16NNRCTRLT01	LM	R/T								
16NNPCTRLT01	LM	R/T								
Total			**0.7565**	4987						

E16 RESOURCES

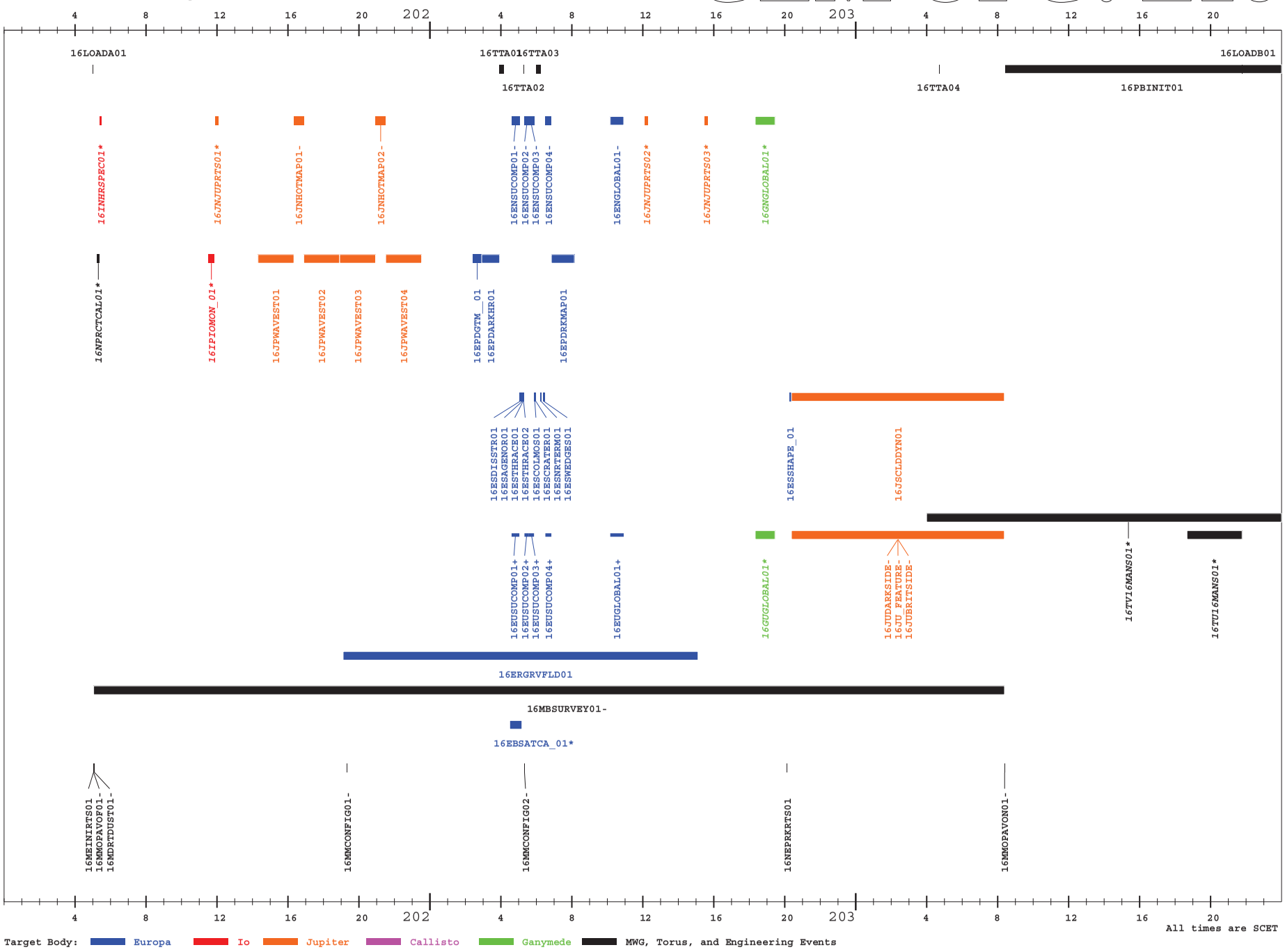
Activity ID	AACS Mbits c 2.5	Thold	Comp	Total BTG Mbits (w/4% overhead)	Data Reduction Factor (sBOT/BTG)	Pass
16INHRSPEC01	0.01	0	1.2	0.8177	1.4	1
16JNJUPRTS01						
16JNHOTMAP01	0.08	0	1.25	6.4086	1.4	1,2
16JNHOTMAP02	0.04	0	1.25	3.4086	1.4	1,2
16ENSUCOMP01	0.07	0	1.3	7.6140	1.7	1,2
16ENSUCOMP02	0.05	0	1.3	5.9791	1.7	1,2
16ENSUCOMP03	0.04	0	1.3	5.1816	1.7	1,2
16ENSUCOMP04	0.06	0	1.3	4.1179	1.5	1,2
16ENGLOBAL01	0.14	0	1.4	9.6096	1.6	1,2
16JNWHTOVL01		0				
16JNJUPRTS02						
16JNJUPRTS03						
16GNGLOBAL01	0.10	0	2	4.9282	2.3	1,2
16JNJUPWHT01		0				
16NNRCTRLT01				0.14		
16NNPCTRLT01				0.20		
			Total	48.4053		
			Alloc	47.9480		
			Over/u	0.4573		

NIMS E16 OBSERVING GEOMETRY

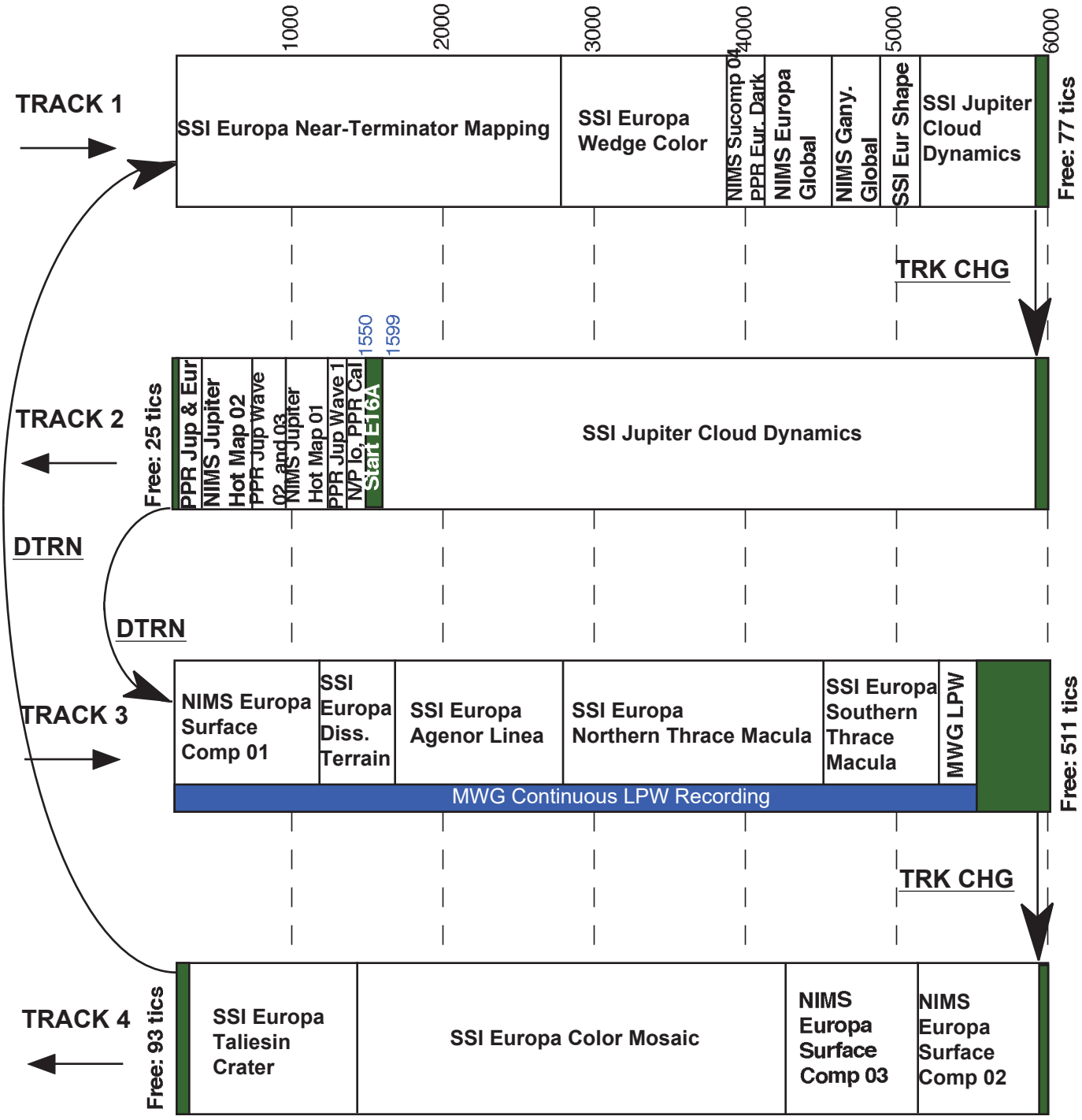
OAPEL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
16INHRSPEC01	-90 to +90	140 to 320	700K	70	23 to 170	0 to 90	100
16JNJUPRTS01	+6 to +8	316 to 337	770K	106	62 to 88	8 to 27	62
16JNHOTMAP01	+0 to +10	122 to 144	660K	127	64 to 86	22 to 44	42
16JNHOTMAP02	+3 to +13	263 to 273	580K	152	33 to 44	11 to 27	18
16ENSUCOMP01	-19 to -16	253 to 263	5K	74 to 124	47 to 58	11 to 43	48 to 96
16ENSUCOMP02	-45 to -40	178 to 191	8K	128 to 140	46 to 53	46 to 50	50 to 61
16ENSUCOMP03	-50 to -40	168 to 186	13K	126	51 to 61	48 to 54	63
16ENSUCOMP04	-12 to +5	147 to 190	34K	118 to 121	26 to 69	5 to 45	70
16ENGLOBAL01	-90 to +90	116 to 252	125K	119	13 to 103	13 to 90	71
16JNWHTOVL01	-40 to -25	0 to 30	780K	127	48 to 58	36 to 47	62
16JNJUPRTS02	-10 to +10	350 to 10	816K	127	98 to 106	35 to 44	63
16JNJUPRTS03	-10 to +10	120 to 144	870K	116	36 to 51	23 to 38	74
16GNGLOBAL01	-90 to +90	220 to 40	183K	126 to 135	10 to 120	9 to 90	35
16JNJUPWHT01	-40 TO -30	355 TO 20	1100K	101	39 TO 56	53 TO 74	89

E16 ENCOUNTER
Plot Time: 98-201/00:00:00.000 to 98-204/00:00:00.000
Date of Plot: 17-Sep-97 8:27:24

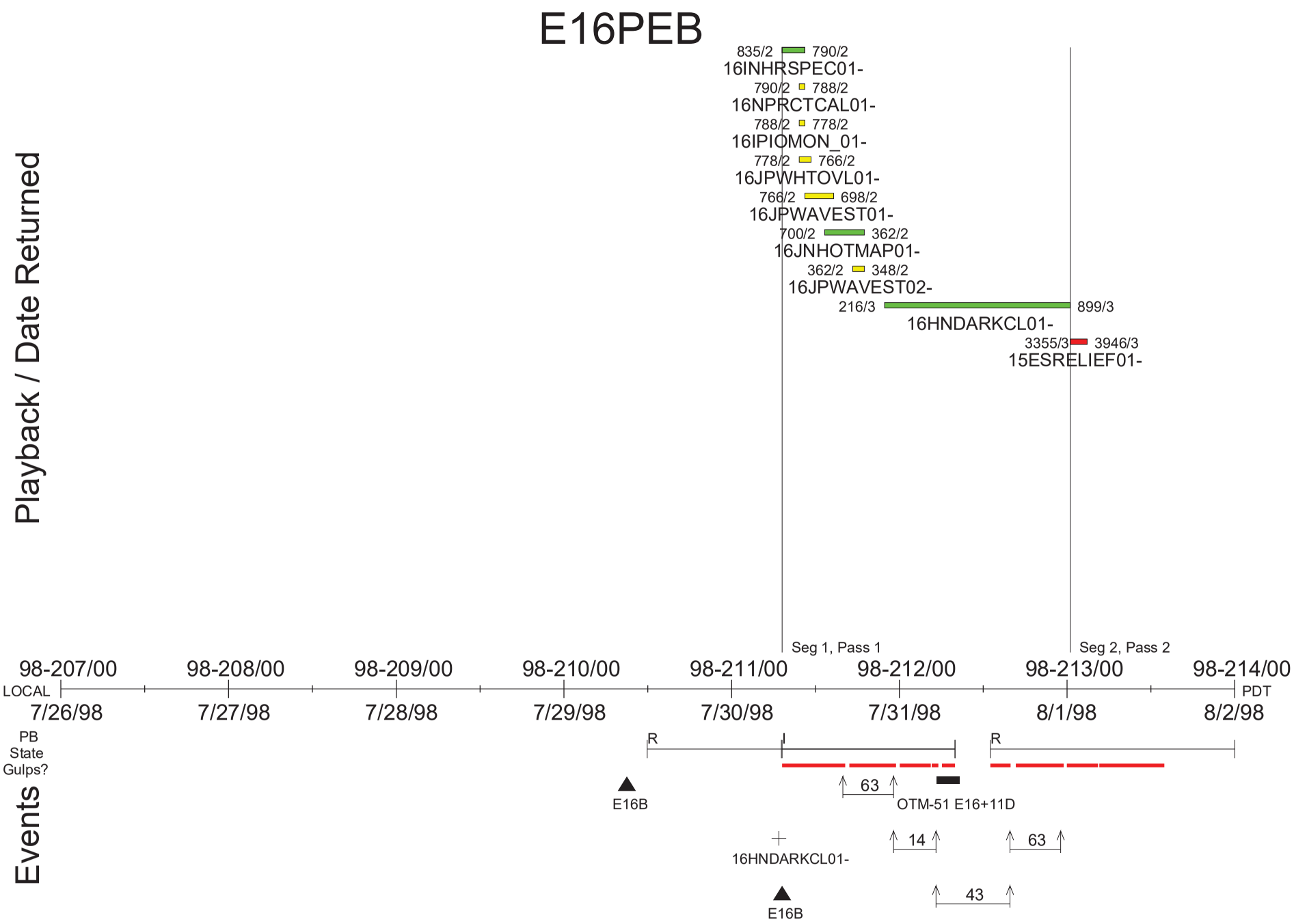
GEM OPG: E16



E16 HIGH-LEVEL TAPEMAP



J. Gross, 8/13/97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778/2
16IPIOMON_01-
778/2
766/2
16JPWHTOVL01-
766/2
698/2
16JPWAVEST01-
700/2
362/2
16JNHOTMAP01-
362/2
348/2
16JPWAVEST02-
216/3
899/3
16HNDARKCL01-
3355/3
3946/3
15ESRELIEF01-
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Seg 2, Pass 2
98-207/00
98-208/00
98-209/00
98-210/00
98-211/00
98-212/00
98-213/00
98-214/00
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7/26/98
7/27/98
7/28/98
7/29/98
7/30/98
7/31/98
8/1/98
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R
I
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E16B
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63
16HNDARKCL01-
43
E16B
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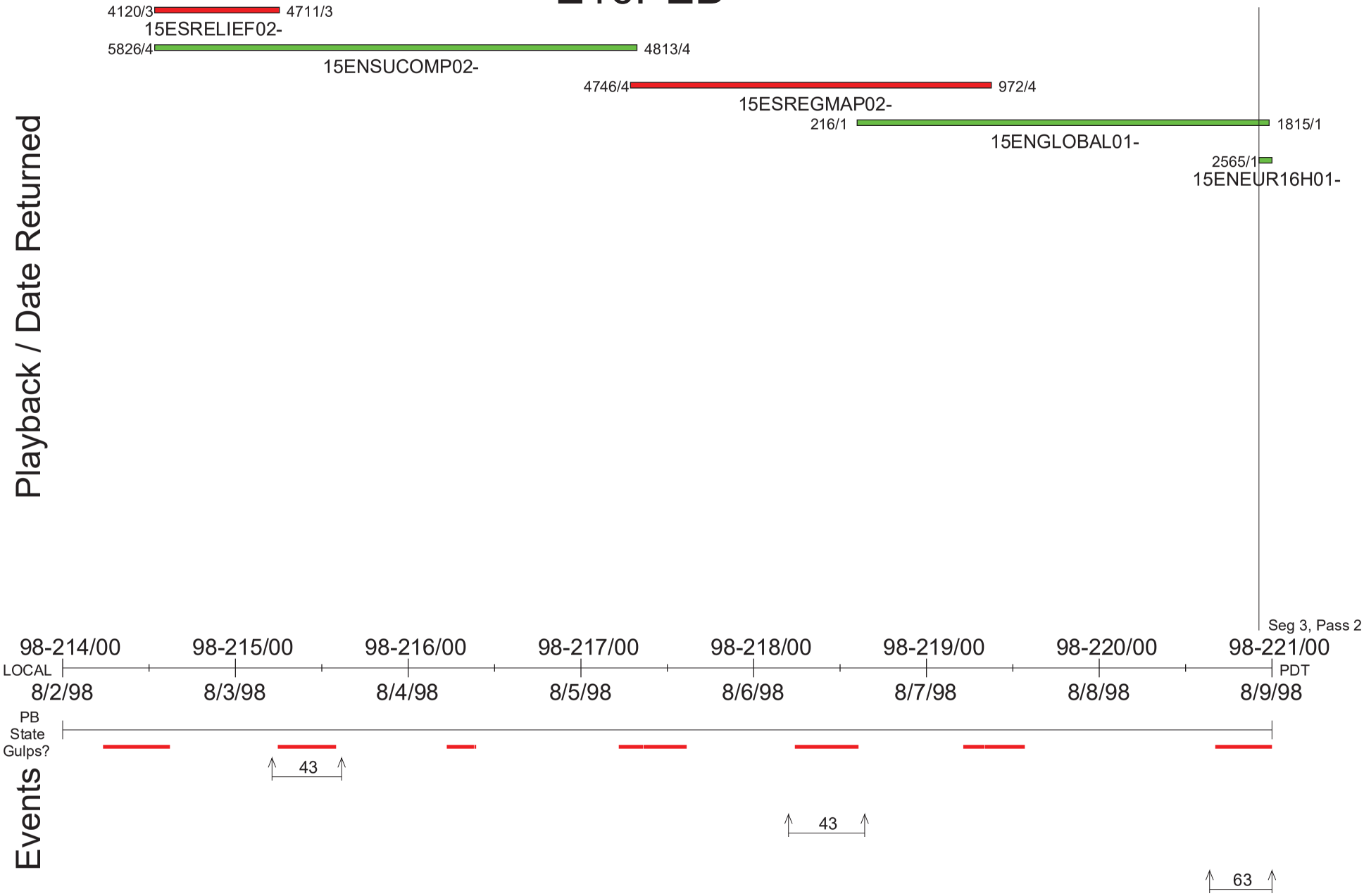
E16PEB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5826/4
4813/4
15ENSUCOMP02-
4746/4
972/4
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216/1
1815/1
15ENGLOBAL01-
2565/1
15ENEUR16H01-
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98-216/00
98-217/00
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98-220/00
98-221/00
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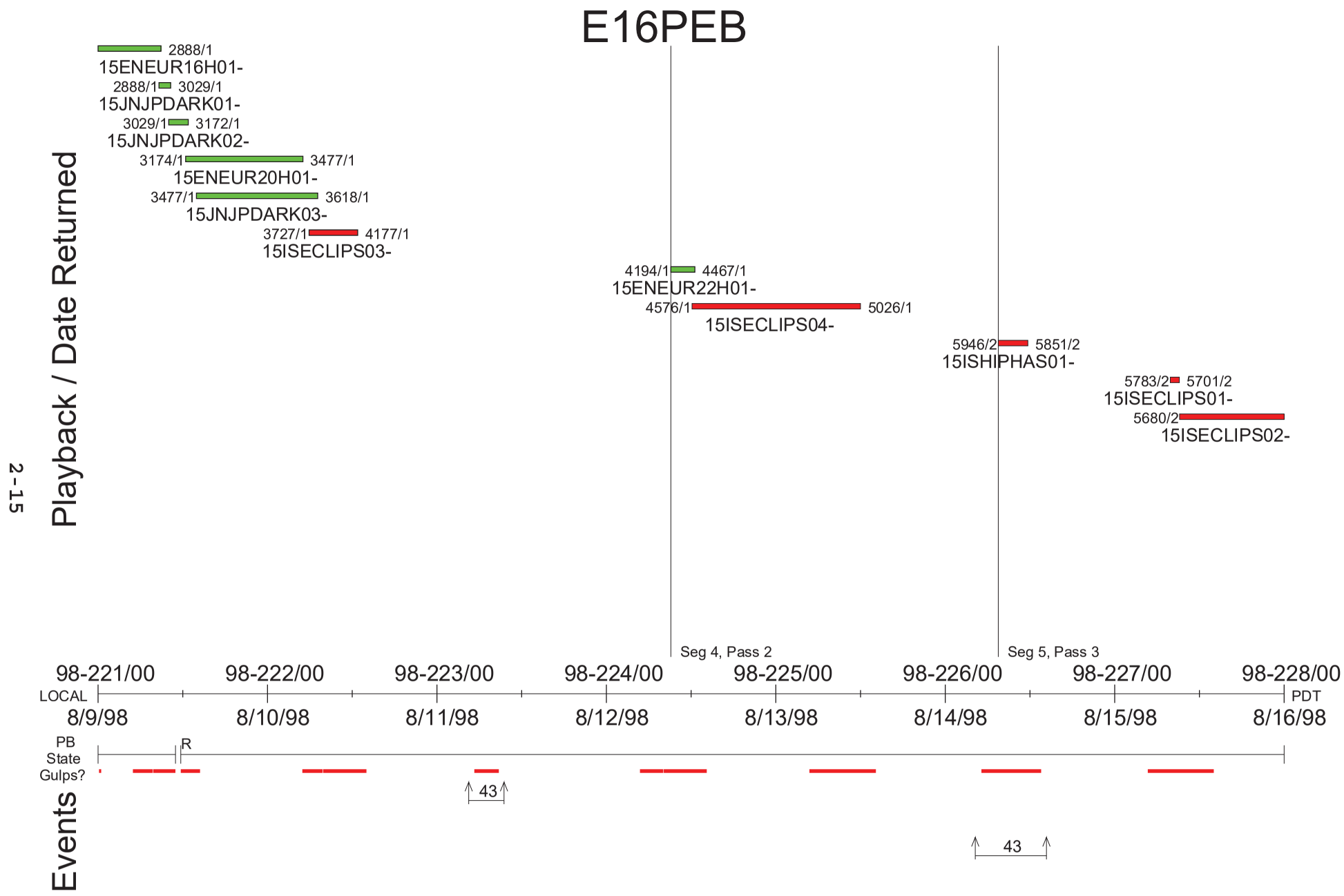
43
43
63
Events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3029/1 3172/1
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3174/1 3477/1
15ENEUR20H01-
3477/1 3618/1
15JNJPDARK03-
3727/1 4177/1
15ISECLIPS03-
4194/1 4467/1
15ENEUR22H01-
4576/1 5026/1
15ISECLIPS04-
5946/2 5851/2
15ISHIPHAS01-
5783/2 5701/2
15ISECLIPS01-
5680/2
15ISECLIPS02-
Seg 4, Pass 2
Seg 5, Pass 3
98-221/00
98-222/00
98-223/00
98-224/00
98-225/00
98-226/00
98-227/00
98-228/00
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PDT
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8/10/98
8/11/98
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8/13/98
8/14/98
8/15/98
8/16/98
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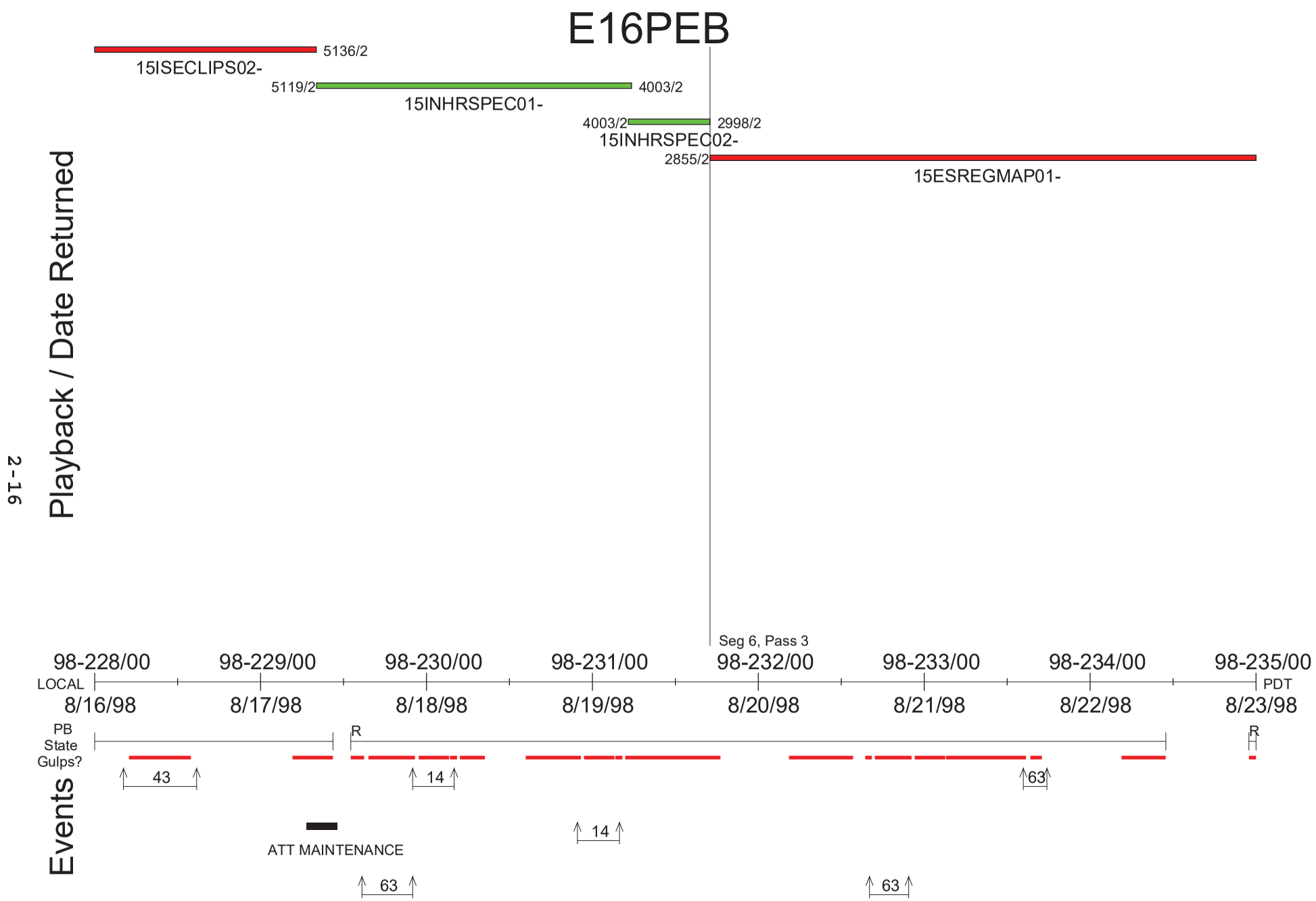
R
43
43
Events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5119/2
4003/2
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4003/2
2998/2
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2855/2
15ESREGMAP01-
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98-232/00
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98-235/00
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63
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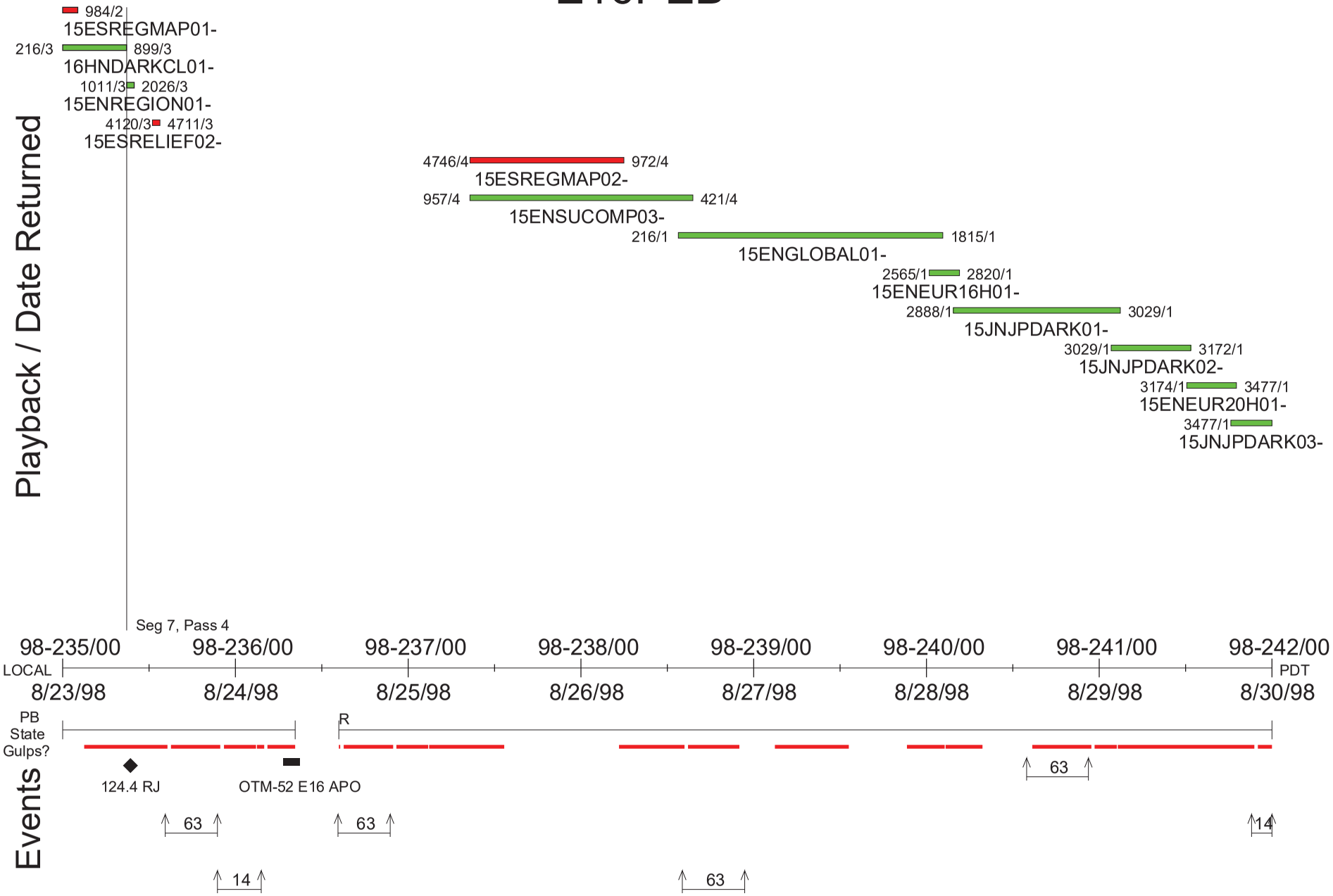
63
63

E16PEB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4746/4
972/4
15ESREGMAP02-
957/4
421/4
15ENSUCOMP03-
216/1
1815/1
15ENGLOBAL01-
2565/1
2820/1
15ENEUR16H01-
2888/1
3029/1
15JNJPDARK01-
3029/1
3172/1
15JNJPDARK02-
3174/1
3477/1
15ENEUR20H01-
3477/1
15JNJPDARK03-
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98-237/00
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98-239/00
98-240/00
98-241/00
98-242/00
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8/24/98
8/25/98
8/26/98
8/27/98
8/28/98
8/29/98
8/30/98
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124.4 RJ
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63
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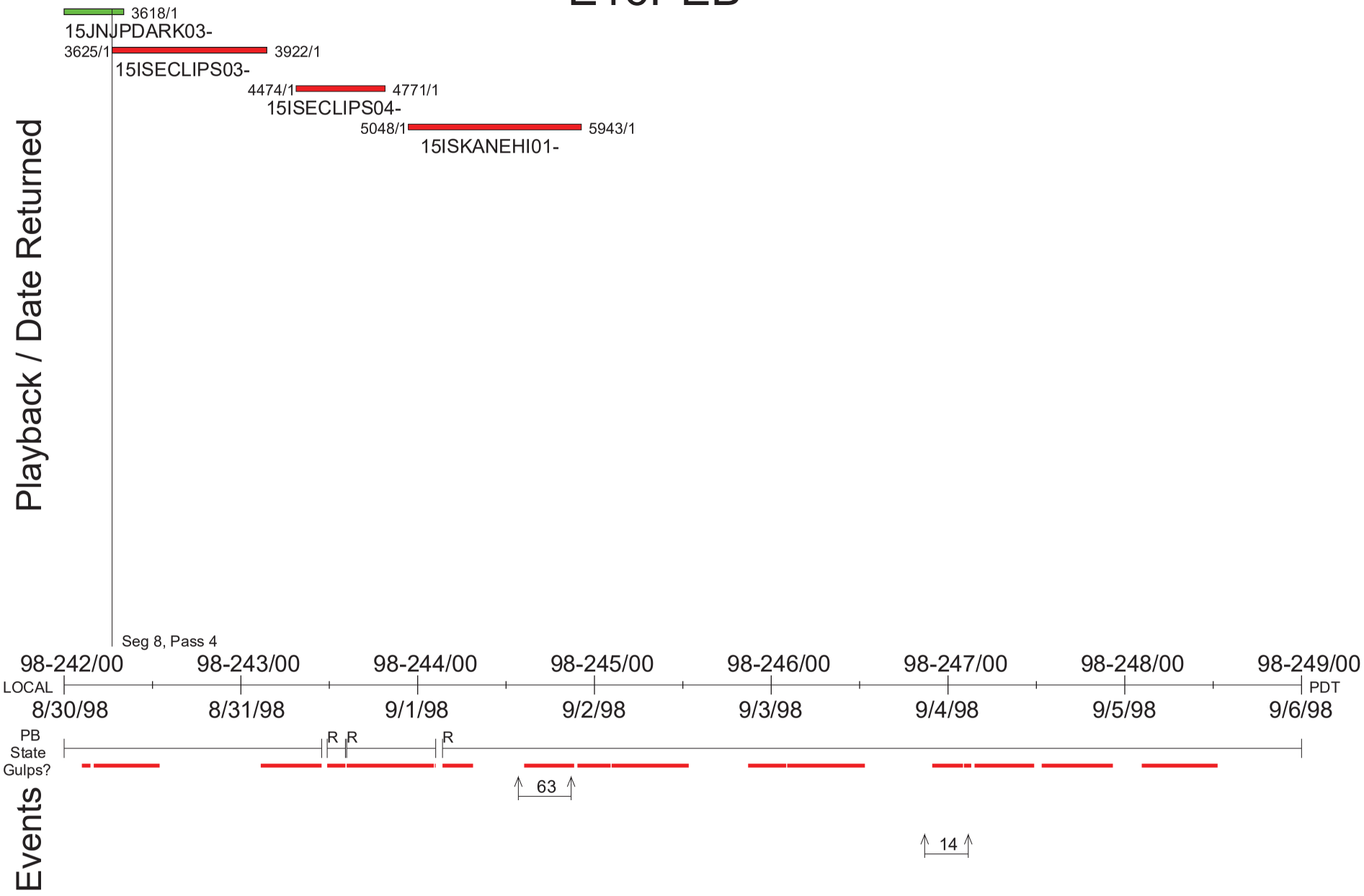
14
63
Events

E16PEB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4771/1
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5048/1
5943/1
15ISKANEHI01-
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98-246/00
98-247/00
98-248/00
98-249/00
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8/31/98
9/1/98
9/2/98
9/3/98
9/4/98
9/5/98
9/6/98
PB State Gulps?
R
R
R
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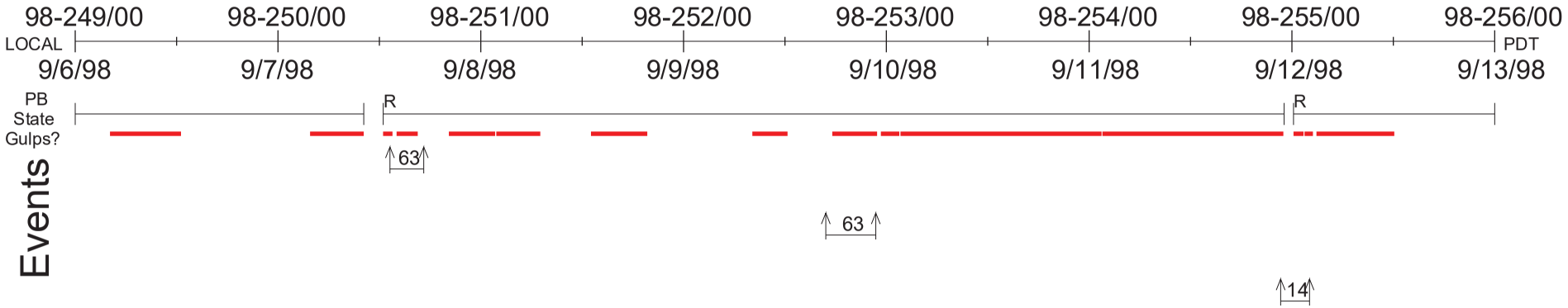
E16PEB

Playback / Date Returned

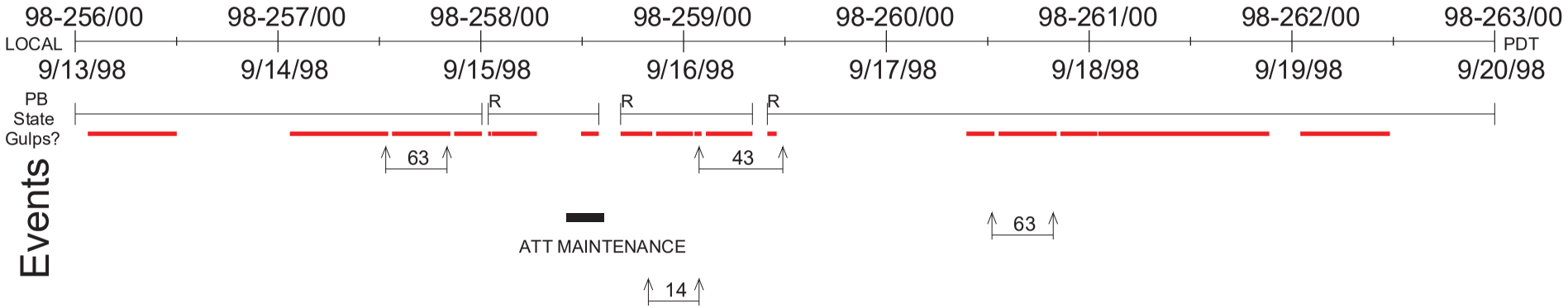
2-19



E16PEB

Playback / Date Returned

2-20

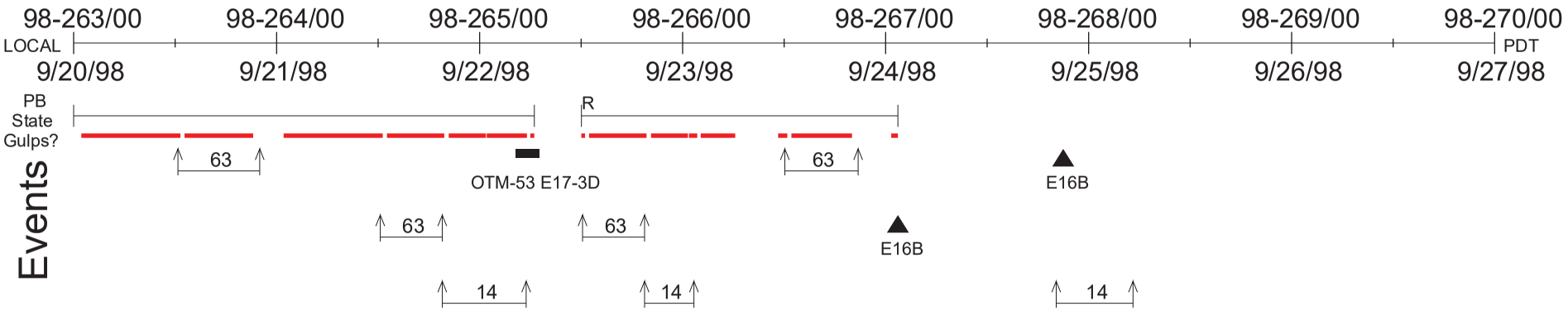


Events

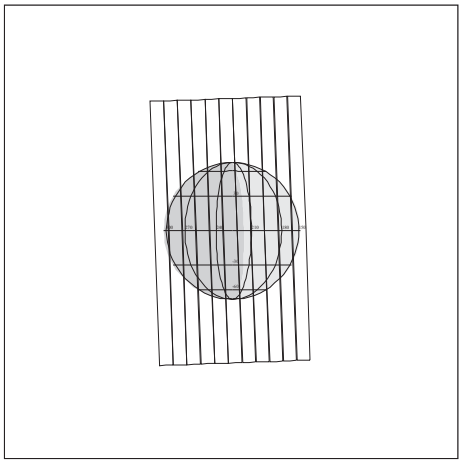
E16PEB

Playback / Date Returned

2-21



E16 NIMS A



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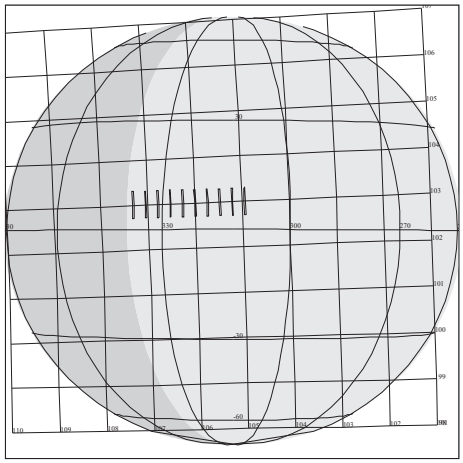

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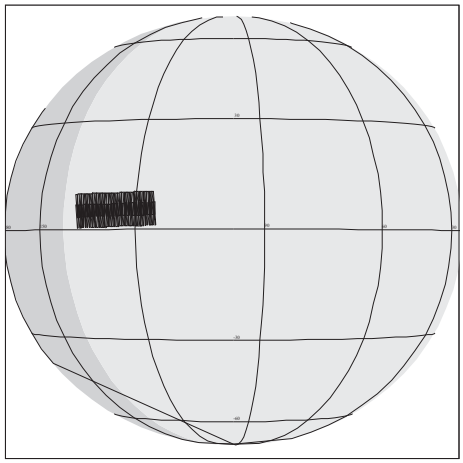
98-201 11:48:54



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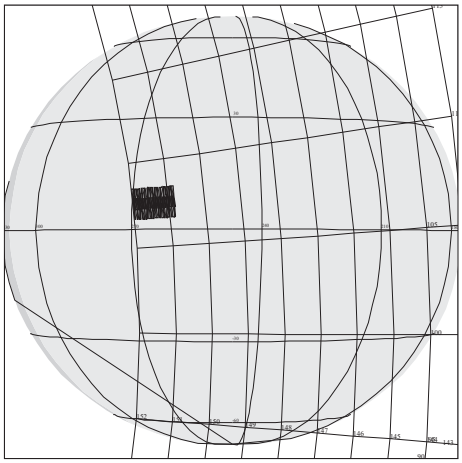
98-201 16:11:47



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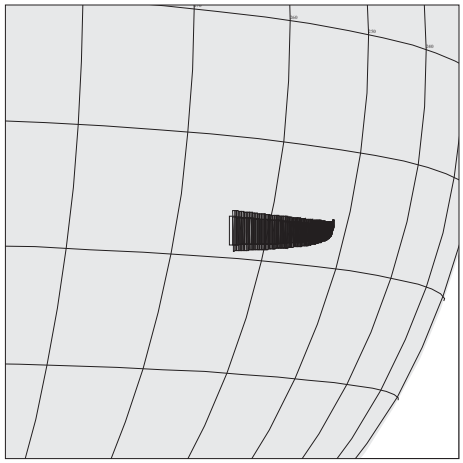
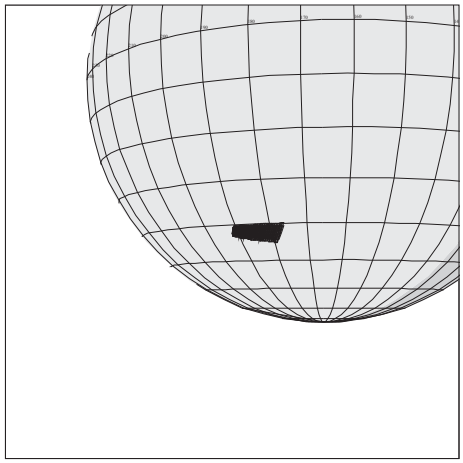


16ENSUCOMP01
98-202 04:32:56



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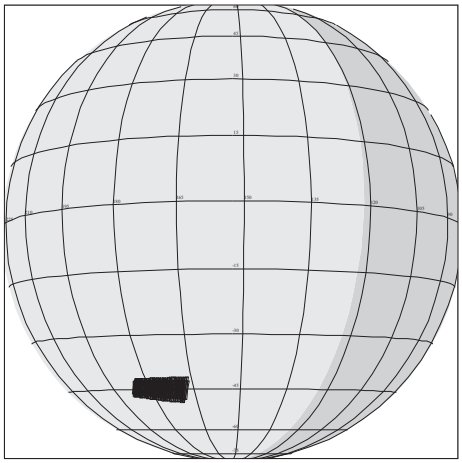

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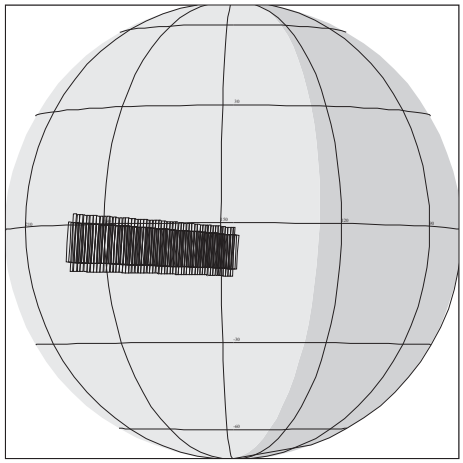

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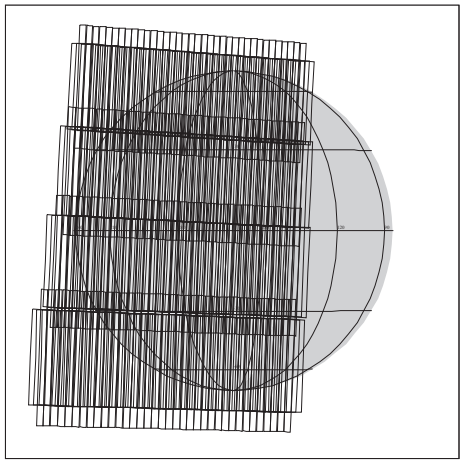

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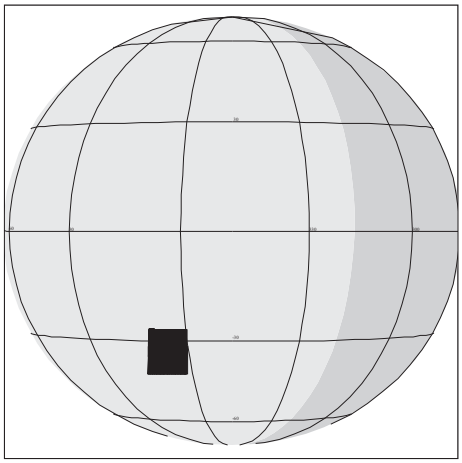
E16 NIMS B



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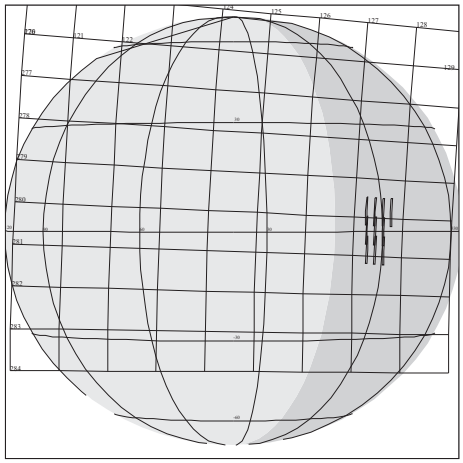
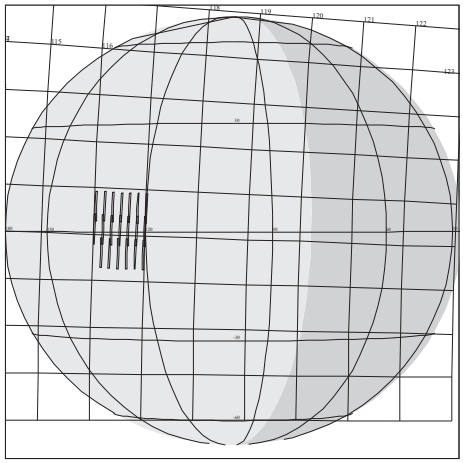


16JNJUPRTS02
98-202 13:28:49



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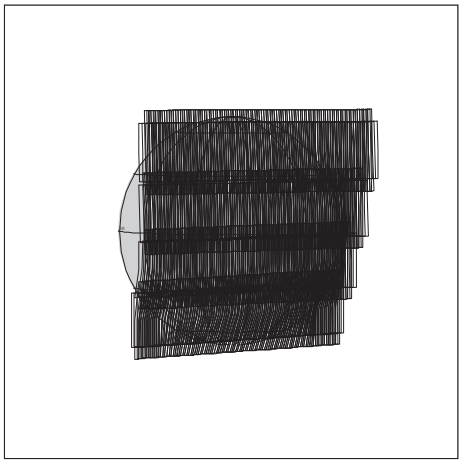

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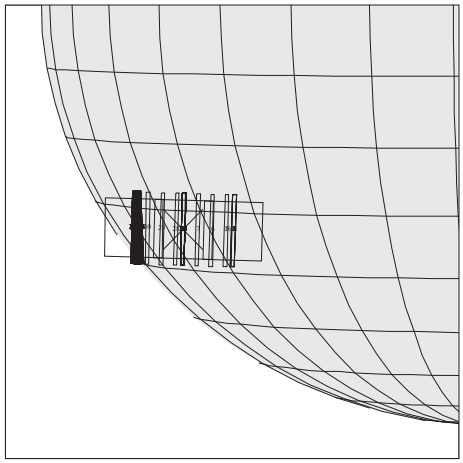
98-202 16:35:52



16JNJUPWHT01
98-202 20:27:25

Chapter 3 - Orbit Geometries

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Introduction to Chapter 3

This chapter contains diagrams of various aspects of geometry for the E16 Orbit.

The figure on page 3 is a North Trajectory Pole View of the E16 Orbit from apoapsis to apoapsis.

The figure on page 4 is a North Trajectory Pole View of the E16 Orbit from +/- 5 days of Europa closest approach.

The figure on page 5 is a North Trajectory Pole View of the E16 Orbit from +/- 2 days of Europa closest approach.

The figure on page 6 is a North Trajectory Pole View of the E16 Orbit from +/- 1 day of Europa closest approach.

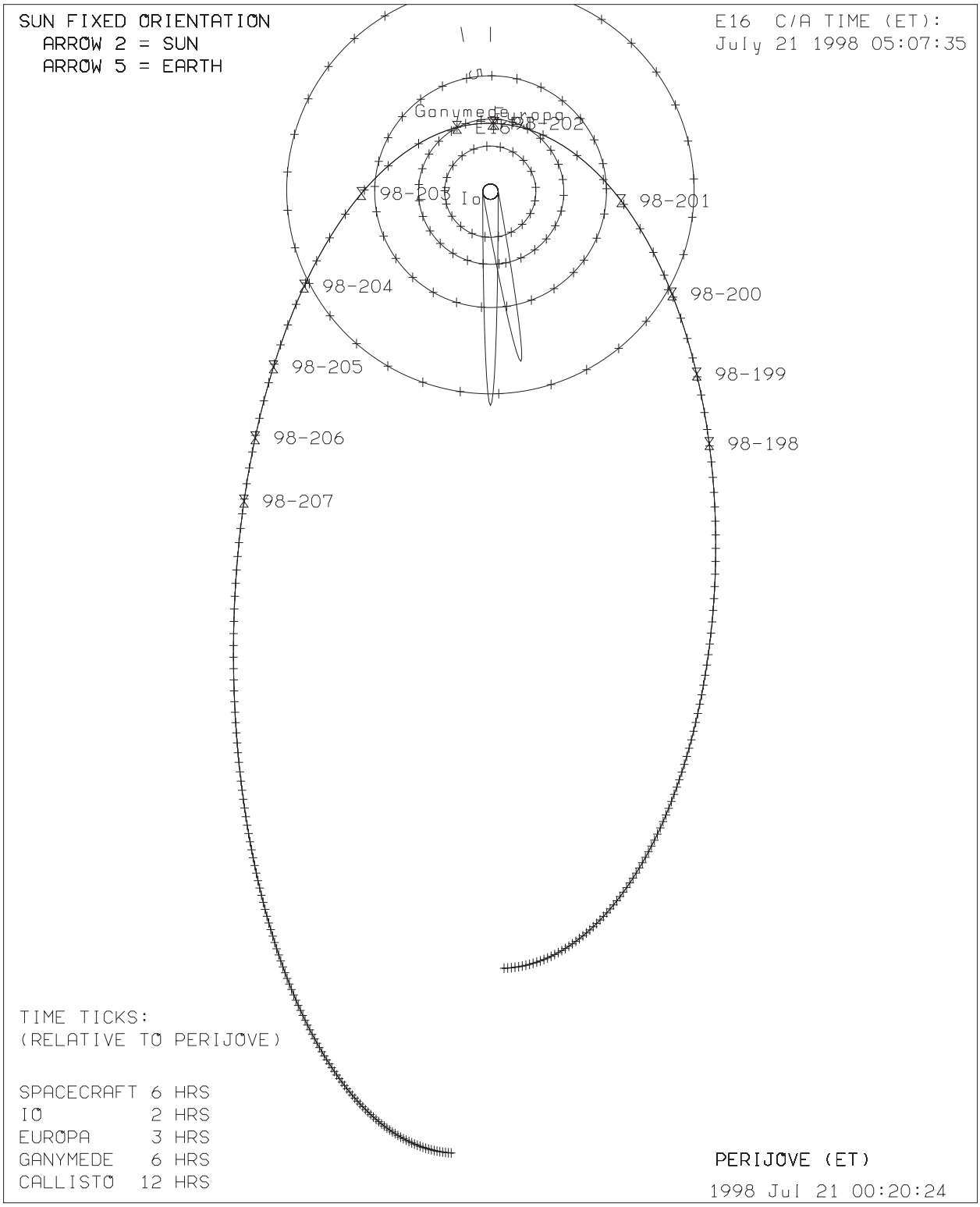
The figure on page 7 is a North Trajectory Pole View of the E16 Orbit from +/- 6 hours of Europa closest approach.

The figure on page 8 is a North Trajectory Pole View of the E16 Orbit from +/- 1 hour of Europa closest approach.

The figure on page 9 shows the spacecraft’s groundtrack on Europa at Europa closest approach.

The figure on page 10 shows the spacecraft’s groundtrack on Jupiter at Jupiter closest approach.

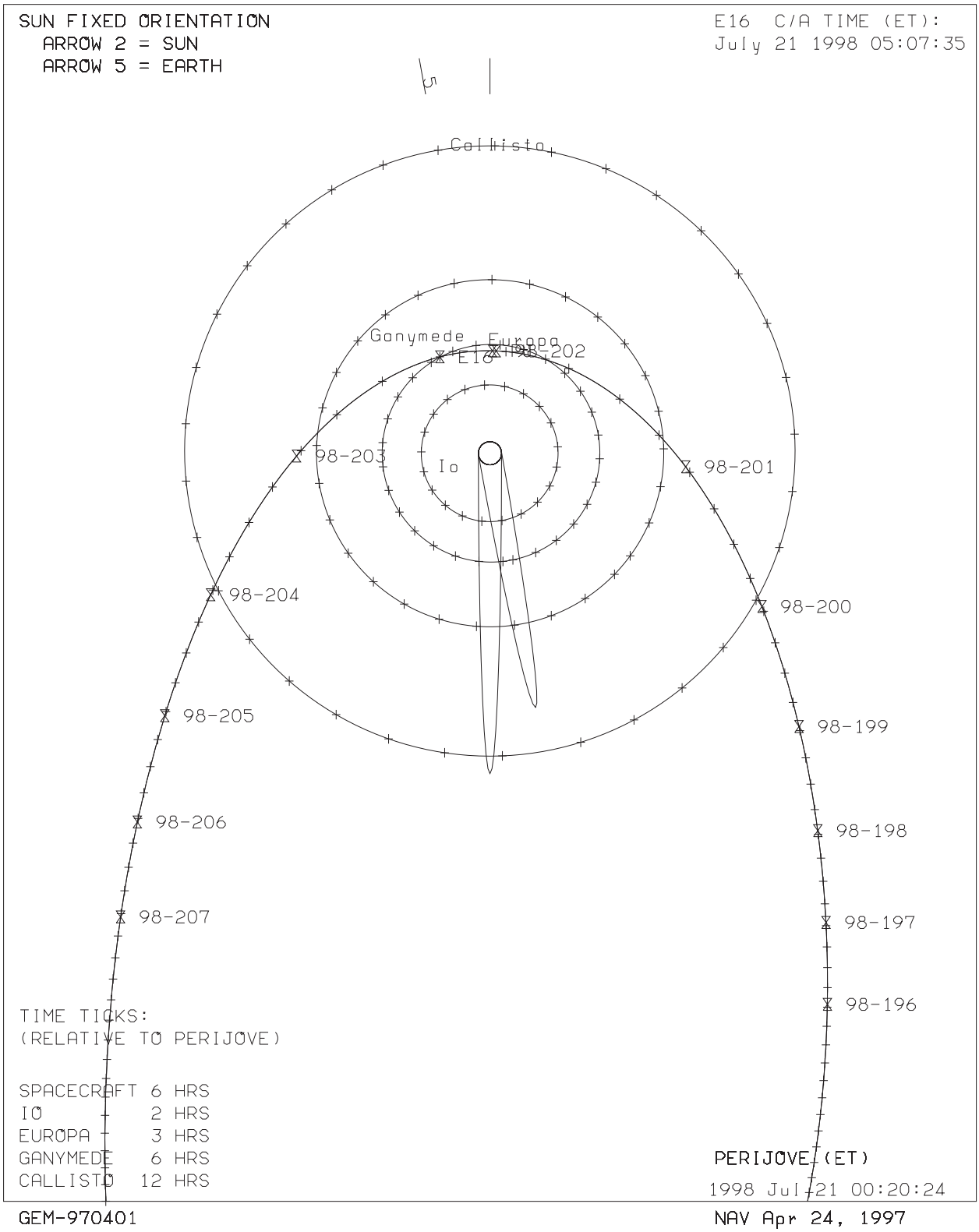
JUPITER 16: N. TRAJ. POLE VIEW (APO TO APO)



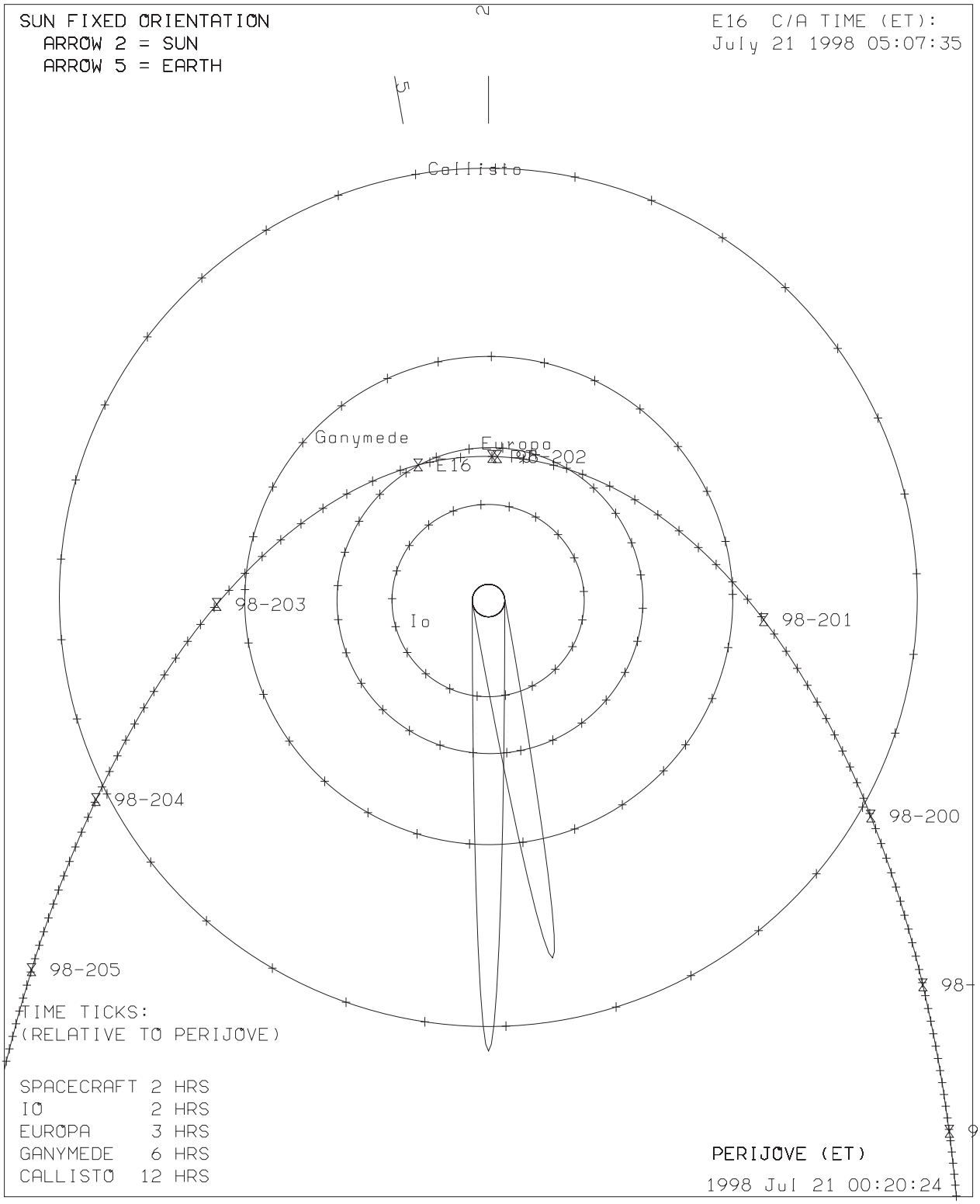
GEM-970401

NAV Apr 24, 1997

JUPITER 16: N. TRAJ. POLE VIEW (+/- 5 DAYS)



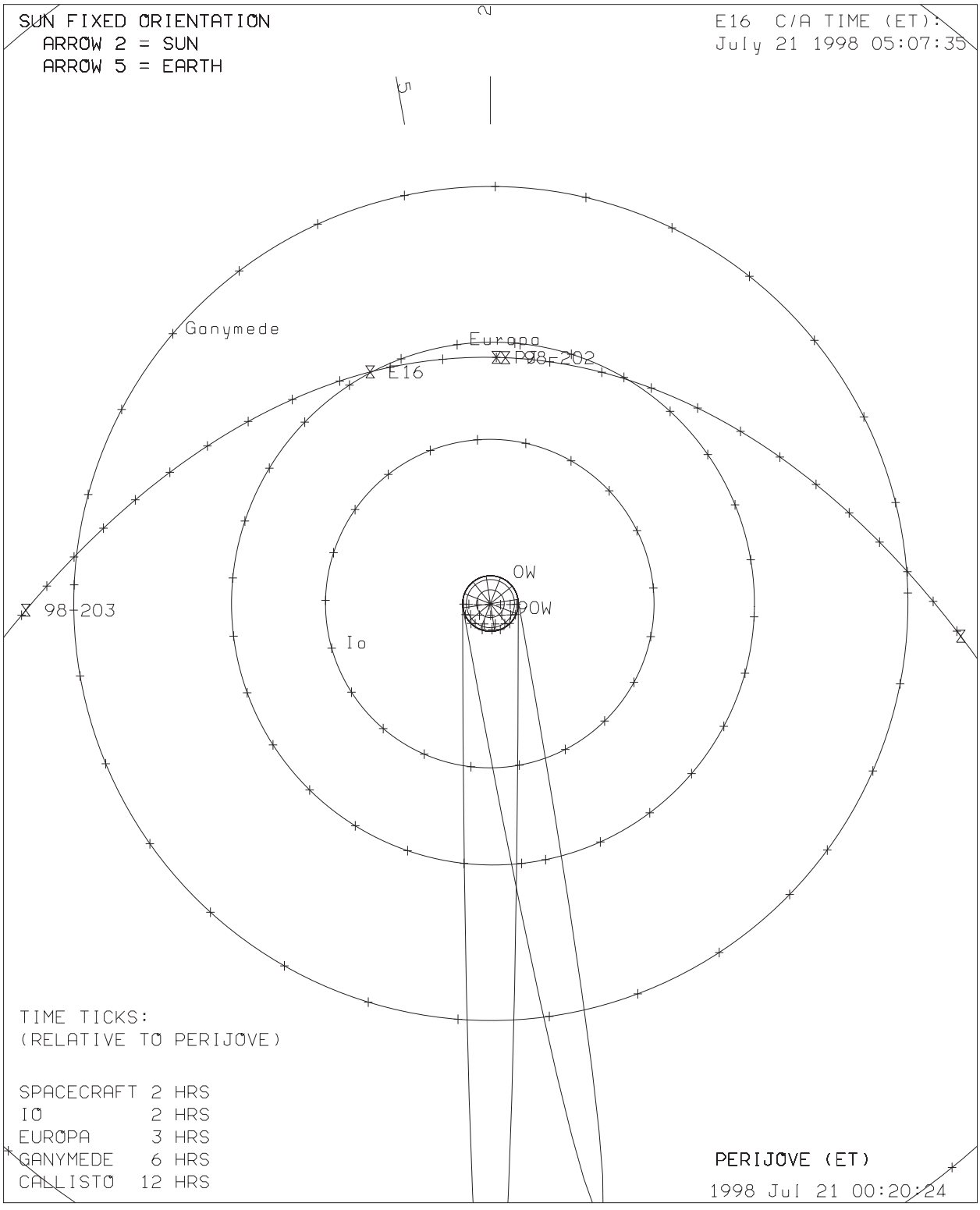
JUPITER 16: N. TRAJ. POLE VIEW (+/- 2 DAYS)



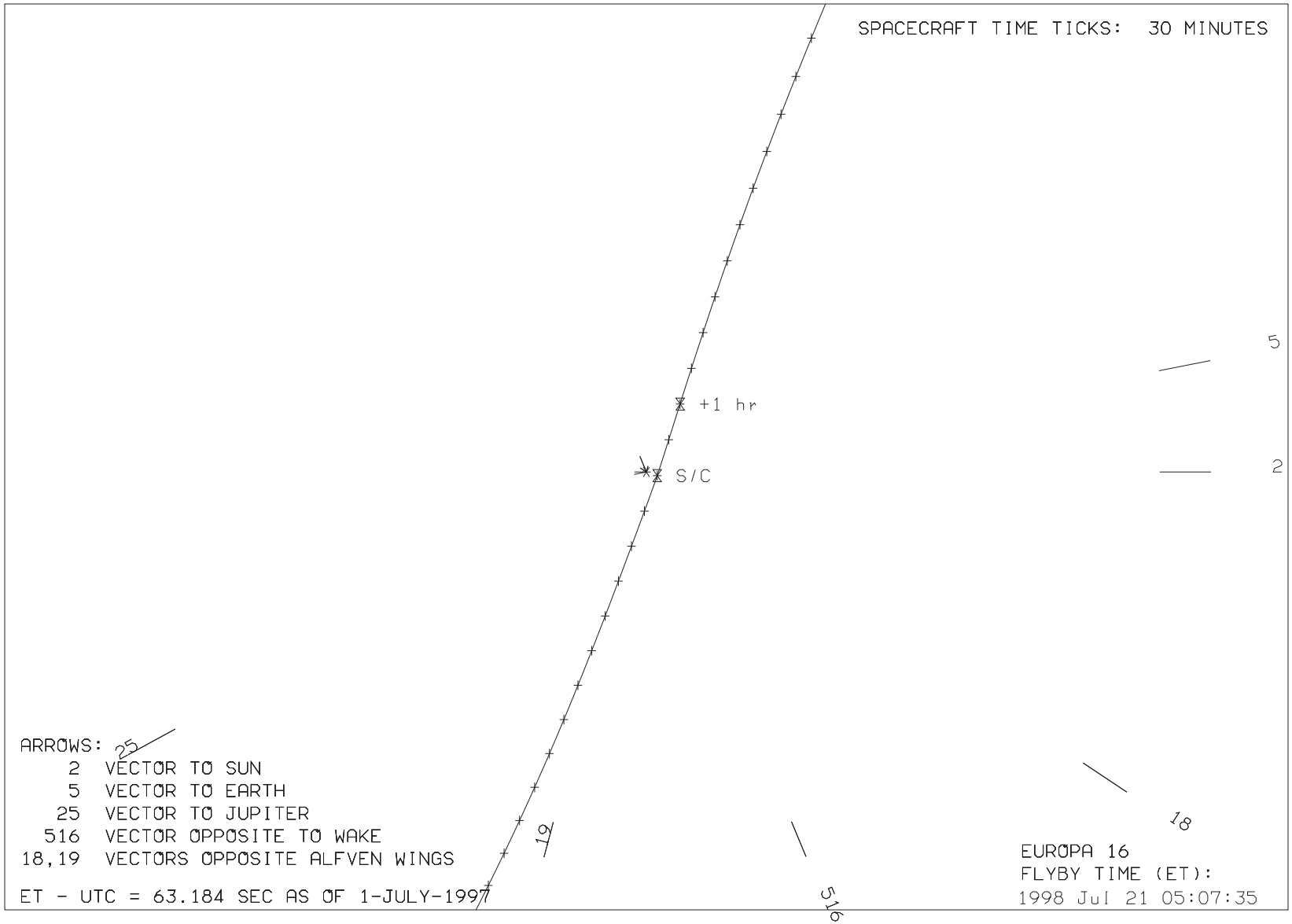
GEM-970401

NAV Apr 24, 1997

JUPITER 16: N. TRAJ. POLE VIEW (+/- 1 DAY)

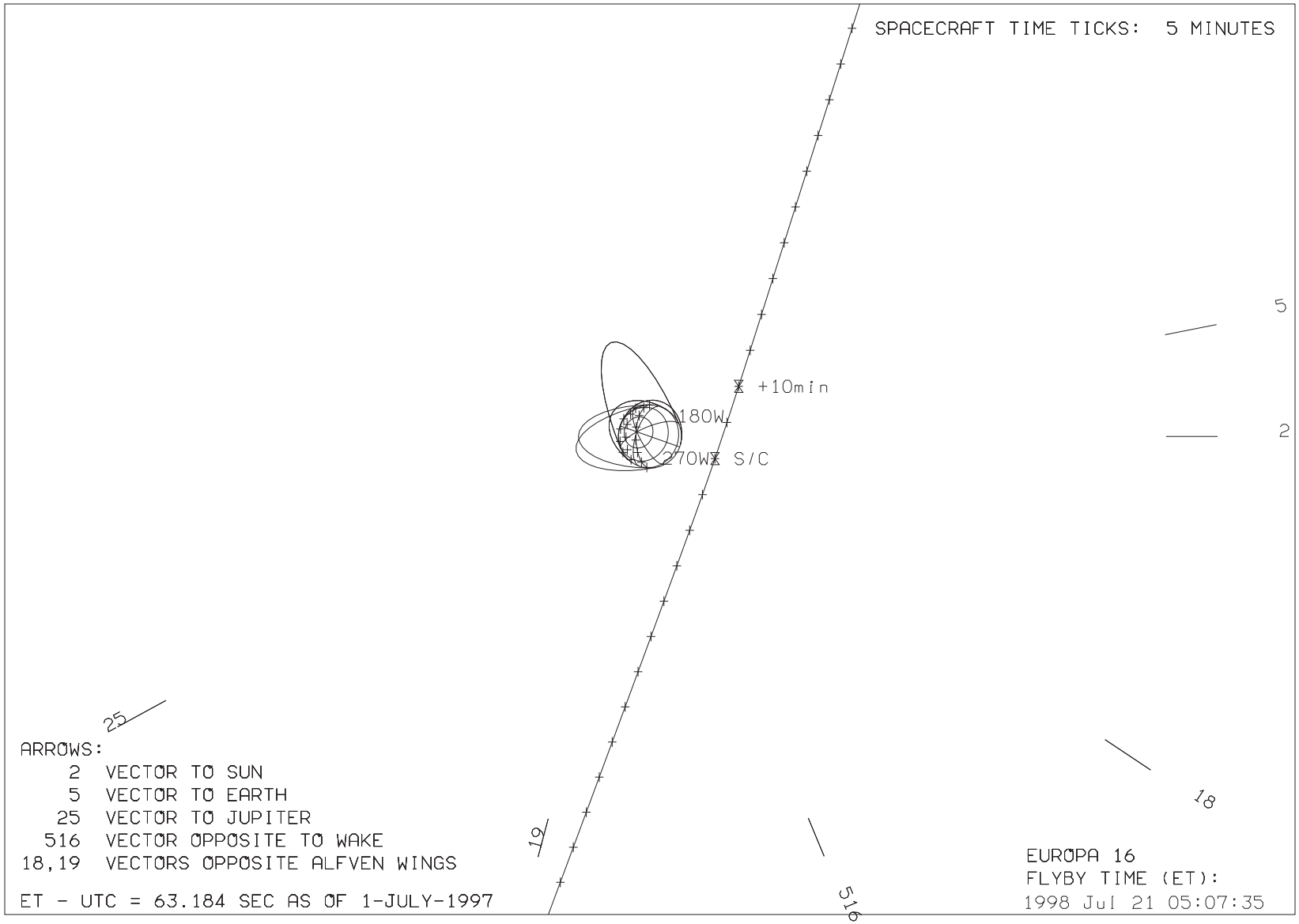


EUROPA 16: N. TRAJ POLE VIEW (+/- 6 HRS)



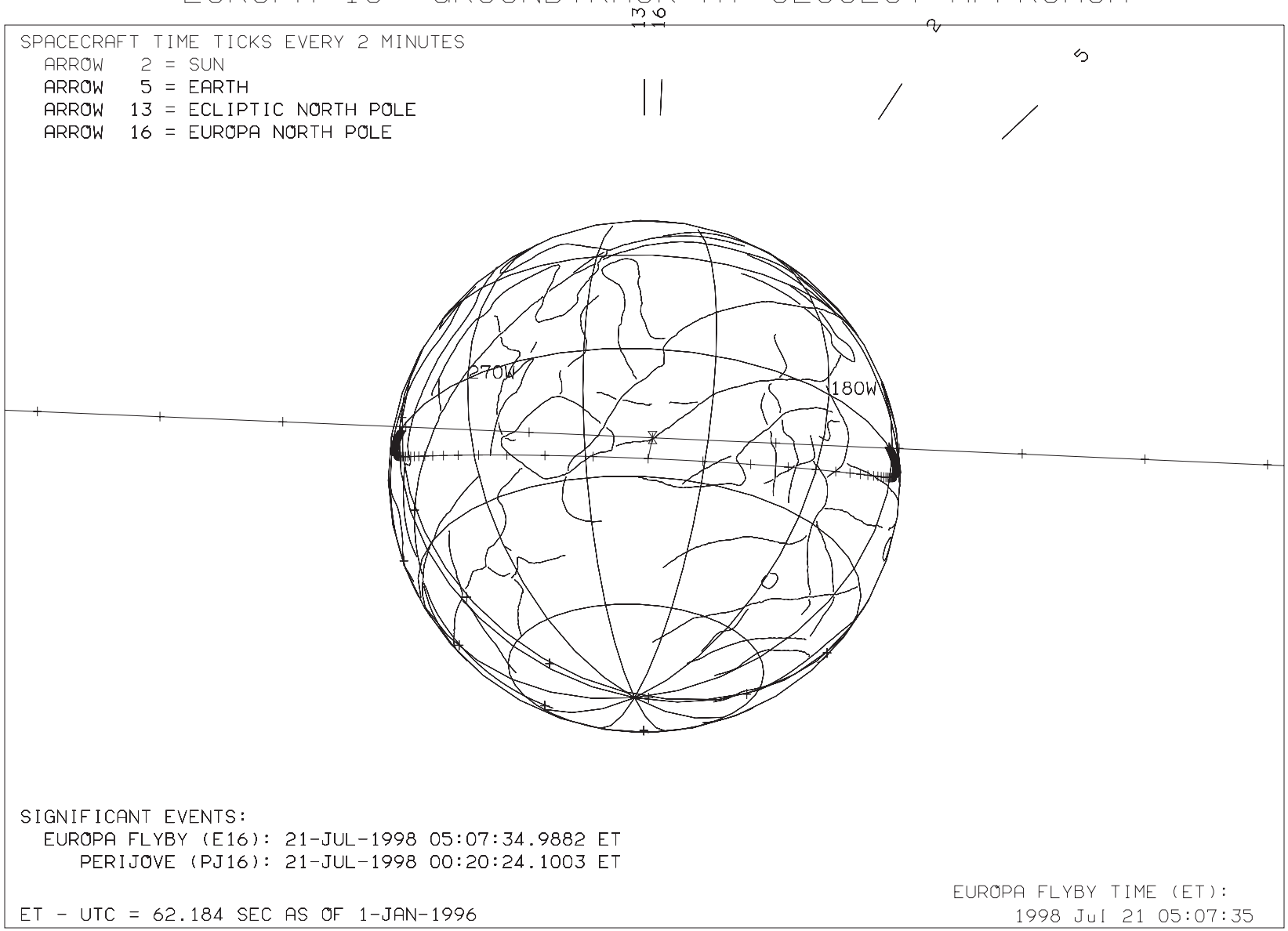
NAV 4/30/97

EUROPA 16: N. TRAJ POLE VIEW (+/- 1 HR)



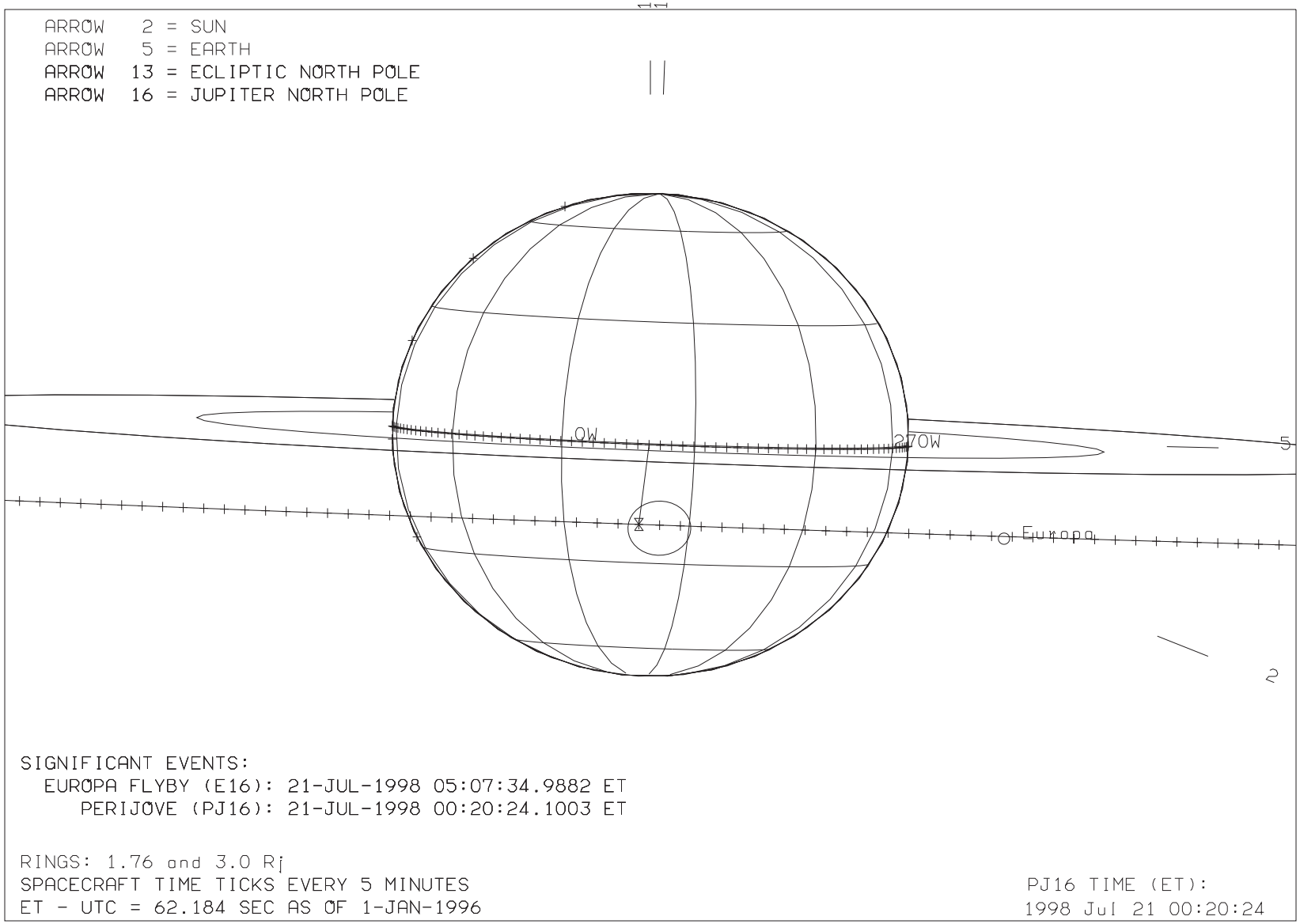
NAV 4/30/97

EUROPA 16: GROUNDTRACK AT CLOSEST APPROACH



NAV Apr 6, 1997

JUPITER 16: GROUNDTRACK AT CLOSEST APPROACH



SIGNIFICANT EVENTS:
EUROPA FLYBY (E16): 21-JUL-1998 05:07:34.9882 ET
PERIJOVE (PJ16): 21-JUL-1998 00:20:24.1003 ET

RINGS: 1.76 and 3.0 Rj
SPACECRAFT TIME TICKS EVERY 5 MINUTES
ET - UTC = 62.184 SEC AS OF 1-JAN-1996

PJ16 TIME (ET):
1998 Jul 21 00:20:24

NAV Apr 6, 1997

Chapter 4 - NIMS Observation Summaries

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Introduction to Chapter 4

This chapter summarizes the NIMS E16 observations in terms of a comprehensive sequence summary, Individual Obstab Summaries and a NIMS Obstab (Observation Table).

The NIMS Sequence Summary is a time-ordered listing of all spacecraft activity pertinent to NIMS operations for the E16 Sequence. The information in this summary is derived from the E16 SEFs (Spacecraft Event File) and PBTs (Playback Tables) with inputs from the NIMS Science Coordinators regarding the start time and duration of the NIMS observations. There are twelve columns of information in this table:

1) Line - Line Count.
2) YR - Year.
3) DOY - Day of Year.
4) Time - SCET Time (UTC).
5) PSID - Parameter Set ID of the SEF line.
6) Command - Command name from the SEF.
7) Parameters - Parameters from the above Command Line.
8) Description - Description of the above Command for NIMS.
9) GCM - NIMS Gain, Chopper mode, Instrument Mode.
   Gain = 1,2,3 or 4.
   Chopper Mode = R (Reference) or 6 (63Hz).
   Instrement Mode = 0-15
10) GO - NIMS Grating Offset.
11) GS - NIMS Grating Start Position.
12) RIM,MF,I - SCLK of the Command Line (RIM:MF:RTI)

An additional line is inserted into this table at the start and stop times of each NIMS Observation (Oapel) to bracket the commands which affect each NIMS Observation. The NIMS Playback Select and DeSelect times are also inserted into this table to correlate the playback requests with the observations.

The Individual Obstab Summaries are expansions of the NIMS Obstab to one page per Obstab entry for ease in reading the NIMS Obstab.

The NIMS Obstab (Observation Table) is a time-ordered listing of the NIMS obsrvation parameters for use by downlink data processing of the NIMS E16 data. It is also derived from the E16 SEFs and PBTs. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry.

			Sequence:	E16A-AR		Created: 09/16/98	Begin: 96-201/05:00:00 Finish: 98-209/00:00:00				
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
1	98	201	05:00:00.000	20A3EW	37A	CMD,37A,20A3EW,,	NIMS Power ON	4O0	4	0	4,569,926:59:9
2	98	201	05:00:00.000	20A3EZ	37C2PR	CMD,37C2PR,20A3E	Optics Heater 2 OFF (primary relay)	4O0	4	0	4,569,926:59:9
3	98	201	05:00:00.000	20A3FB	37F2PR	CMD,37F2PR,20A3F	Shield Flash Heater OFF (primary relay)	4O0	4	0	4,569,926:59:9
4	98	201	05:00:00.000	20A3FD	40HRPR	CMD,40HRPR,20A3F	RCT Heater OFF (primary relay)	4O0	4	0	4,569,926:59:9
5	98	201	05:00:00.000	20A3EY	37C1PR	CMD,37C1PR,20A3E	Optics Heater 1 OFF (primary relay)	4O0	4	0	4,569,926:59:9
6	98	201	05:00:00.000	20A3FF	40T2	CMD,40T2,20A3FF,	PCT Heater 2 ON	4O0	4	0	4,569,926:59:9
7	98	201	05:00:00.000	20A3FE	40T1P	CMD,40T1P,20A3FE	PCT Heater 1 ON (primary relay)	4O0	4	0	4,569,926:59:9
8	98	201	05:00:00.000	20A3FA	37F1PR	CMD,37F1PR,20A3F	Radiator Flash Heater OFF (primary relay)	4O0	4	0	4,569,926:59:9
9	98	201	05:00:00.000	20A3EX	37HR	CMD,37HR,20A3EX,	Replacement Heaters OFF	4O0	4	0	4,569,926:59:9
10	98	201	05:00:00.066		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,569,926:60:0
11	98	201	05:01:00.066	20OA6A	6HICON			4O0	4	0	4,569,927:59:0
12	98	201	05:01:00.733	41AA99A	POWER	PWR MODE change	Change to Data Taking Mode	4O0	4	0	4,569,927:60:0
13	98	201	05:01:04.733	41AA3A	40T1PR		1 PCT Heater 1 OFF (primary relay)	4O0	4	0	4,569,927:66:0
14	98	201	05:01:14.733	41AA3B	40T1PR		2 PCT Heater 1 OFF (primary relay)	4O0	4	0	4,569,927:81:0
15	98	201	05:01:24.733	41AA3C	40T2R		1 PCT Heater 2 OFF	4O0	4	0	4,569,928:05:0
16	98	201	05:01:34.733	41AA3D	40T2R		2 PCT Heater 2 OFF	4O0	4	0	4,569,928:20:0
17	98	201	05:02:10.733	488AA6A	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	4O0	4	0	4,569,928:74:0
18	98	201	05:03:21.400	432JA6B	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	4O0	4	0	4,569,929:89:0
19	98	201	05:03:22.066	432JA431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	4O0	4	0	4,569,929:90:0
20	98	201	05:03:22.733	432JA6C	6RTSL1		R/T Select of DDS and	4O0	4	0	4,569,930:00:0
21	98	201	05:03:22.733	432JA6D	6RTSL2	NIMNCG,AACSEL,RT	AACS SELECT	4O0	4	0	4,569,930:00:0
22	98	201	05:05:13.400	175TZ422A6A	6DMSC	R28,1	DMS Control	4O0	4	0	4,569,931:75:0
23	98	201	05:05:13.400		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,569,931:75:0
24	98	201	05:05:20.066		DMS:	: *RUNUP	R28, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,569,931:85:0
25	98	201	05:05:23.400	175TZ176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	4O0	4	0	4,569,931:90:0
26	98	201	05:05:24.066		DMS:	: *RECORD	R28, TRACK 1, FWD, TIC * 203.62 +/-	4O0	4	0	4,569,932:00:0
27	98	201	05:05:24.066		DMS:	: *AT_SPD	R28, TRACK 1, FWD, TIC 203.62 +/-	4O0	4	0	4,569,932:00:0
28	98	201	05:15:10.066	20UC4A	7SCAN	NORM,244.467,-23	Check S/P Position	4O0	4	0	4,569,941:60:0
29	98	201	05:17:24.066	175TZ422A6B	6DMSC	RDY,0	DMS Control Tape stop	4O0	4	0	4,569,943:79:0
30	98	201	05:17:24.066		DMS:	: *RUNDOWN	R28, TRACK 1, FWD, TIC * 836.44 +/-	4O0	4	0	4,569,943:79:0
31	98	201	05:17:25.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 836.74 +/-	4O0	4	0	4,569,943:80:8
32	98	201	05:20:34.066	465KA6A	6DMSC	RDY,2	DMS Control Tape stop	4O0	4	0	4,569,947:00:0
33	98	201	05:20:34.066		DMS:	: READY	RDY, TRACK *2, *REV, TIC 836.74 +/-	4O0	4	0	4,569,947:00:0
34	98	201	05:30:20.066	444UA443A4B	7MODE	INT	AACS INERTIAL MODE	4O0	4	0	4,569,956:60:0
35	98	201	05:54:54.066	176DA6A	6TMREC	NRC	NO RECORD Record Mode Change	4O0	4	0	4,569,980:87:0
36	98	201	05:57:01.932	16NNHRSPEC01-		-----START------		4O0	4	0	: :
37	98	201	05:57:12.066	20DA5A	37PL		Program Load (halts microprocessor & unwri	260	4	0	4,569,983:21:0
38	98	201	05:57:13.400	20DA5B	37MRL		Memory Realocate (software operates from R	260	4	0	4,569,983:23:0
39	98	201	05:57:14.733	20DA6A	6MCOPY	NIMS	NIMS,1000,LLM1A,7300,77F7	260	4	0	4,569,983:25:0
40	98	201	05:57:24.733	20DA6B	6MCOPY	NIMS	NIMS,1598,LLM1A,77F8,781D	260	4	0	4,569,983:40:0
41	98	201	05:57:40.066	20DA5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,569,983:63:0
42	98	201	05:58:02.733	20DA5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,569,984:06:0
43	98	201	05:58:52.066	20DA4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,569,984:80:0
44	98	201	05:59:03.266	16NNHRSPEC01-		-----STOP-------		2R0	4	0	: :
45	98	201	05:59:03.266	16INHRSPEC01*		-----START------		2R0	4	0	: :
46	98	201	06:00:56.066	125DA4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R0	4	0	4,569,986:84:0
47	98	201	06:00:56.066	125DA	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	4,569,986:84:0
48	98	201	06:01:56.733	125DA4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	2R0	4	0	4,569,987:84:0
49	98	201	06:01:56.733	125DA11A	NIMSINIT	GE	##### GROUP END INIT	2R0	4	0	4,569,987:84:0
50	98	201	06:02:00.733	165DA4A	7SCAN	NORM,244.466999,	Check S/P Position	2R0	4	0	4,569,987:90:0
51	98	201	06:03:58.066	127DA	NIMSTAB	GS	%%%%% GROUP START TAB	2R0	4	0	4,569,989:84:0
52	98	201	06:03:58.066	127DA4A	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,569,989:84:0
53	98	201	06:03:58.733	127DA4B	37ETB	07,C7,02,25,80,0	Loads wavelength edit table	2R3	4	0	4,569,989:85:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	98	201	06:04:06.733	127DA11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,569,990:06:0	
55	98	201	06:05:52.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 836.74 +/-	2R3	4	0	4,569,991:73:0	
56	98	201	06:05:52.066	175DA422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,569,991:73:0	
57	98	201	06:05:53.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 836.86 +/-	2R3	4	0	4,569,991:75:1	
58	98	201	06:05:54.733	117DA	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,569,991:77:0	
59	98	201	06:05:58.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 838.09 +/-	2R3	4	0	4,569,991:83:0	
60	98	201	06:05:59.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 838.15 +/-	2R3	4	0	4,569,991:84:8	
61	98	201	06:06:00.733	175DA176A6A	6TMREC	**LPU**	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	2R3	4	0	4,569,991:86:0	
62	98	201	06:06:01.333		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 838.03 +/-	2R3	4	0	4,569,991:86:9	
63	98	201	06:06:01.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC 838.03 +/-	2R3	4	0	4,569,991:86:9	
64	98	201	06:06:02.733	165DA4B	7VECT		Inert vect update UTC	2R3	4	0	4,569,991:89:0	
65	**98**	**201**	**06:06:04.066**	**16INHRSPEC01-**	**NIMPBK**	**301DA**	**IO HIGH RES SURFACE MONITORING**	**2R3**	**4**	**0**	: :	
66	98	201	06:06:04.066	117DA105A106A4A	**7STRP**	**-0.0054,0.0,0,0,**	**Slew =,0.03**	2R3	4	0	4,569,992:00:0	
67	**98**	**201**	**06:06:04.066**	**16INHRSPEC01-**	**NIMPBK**	**301FA**	**IO HIGH RES SURFACE MONITORING**	**2R3**	**4**	**0**	: :	
68	**98**	**201**	**06:09:05.400**	**16INHRSPEC01-**	**DESELC**	**300DA**	**IO HIGH RES SURFACE MONITORING**	**2R3**	**4**	**0**	: :	
69	**98**	**201**	**06:09:05.400**	**16INHRSPEC01-**	**DESELC**	**300FA**	**IO HIGH RES SURFACE MONITORING**	**2R3**	**4**	**0**	: :	
70	98	201	06:09:06.066	117DA11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,569,995:00:0	
71	98	201	06:09:15.400		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 792.55 +/-	2R3	4	0	4,569,995:14:0	
72	98	201	06:09:15.400	175DA422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,569,995:14:0	
73	98	201	06:09:15.400	175DA6A	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	4,569,995:14:0	
74	98	201	06:09:16.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 792.49 +/-	2R3	4	0	4,569,995:15:8	
75	**98**	**201**	**06:10:10.599**	**16INHRSPEC01***		**-----STOP-------**		**2R3**	**4**	**0**	: :	
76	98	201	07:42:10.733	488AA6B	6TMSED	NORM,EL4	Sci, Eng, and D/L Chan	2R3	4	0	4,570,087:05:0	
77	98	201	08:46:10.733	488AA6C	6TMSED	NORM,EL6	Sci, Eng, and D/L Chan	2R3	4	0	4,570,150:32:0	
78	98	201	09:00:00.066	488AA6D	6TMSED	NORM,GL6	Sci, Eng, and D/L Chan	2R3	4	0	4,570,164:02:0	
79	98	201	09:00:00.733	282NC432A431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R3	4	0	4,570,164:03:0	
80	98	201	09:00:01.400	282NC432A6A	6RTSL1		R/T Select of DDS and	2R3	4	0	4,570,164:04:0	
81	98	201	09:42:24.733	488AA6E	6TMSED	FILL,GL6	Sci, Eng, and D/L Chan	2R3	4	0	4,570,205:88:0	
82	98	201	10:09:14.066	488AB6A	6TMSED	NORM,GL6	Sci, Eng, and D/L Chan	2R3	4	0	4,570,232:45:0	
83	98	201	11:12:26.066	192GB4A	**7CONE**	**17.4,0.0**	Check S/P Position	2R3	4	0	4,570,295:00:0	
84	98	201	11:19:30.733	176GB6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,570,302:00:0	
85	98	201	11:21:45.400	176GB6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	4,570,304:20:0	
86	98	201	11:21:47.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,304:23:0	
87	98	201	11:21:47.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 792.49 +/-	2R3	4	0	4,570,304:23:0	
88	98	201	11:21:48.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 792.61 +/-	2R3	4	0	4,570,304:25:1	
89	98	201	11:21:54.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 793.84 +/-	2R3	4	0	4,570,304:33:0	
90	98	201	11:21:55.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 793.90 +/-	2R3	4	0	4,570,304:34:8	
91	98	201	11:21:56.666		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 793.78 +/-	2R3	4	0	4,570,304:36:9	
92	98	201	11:21:57.400		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 793.61 +/-	2R3	4	0	4,570,304:38:0	
93	98	201	11:22:08.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,304:55:0	
94	98	201	11:22:08.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 790.95 +/-	2R3	4	0	4,570,304:55:0	
95	98	201	11:22:09.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 790.89 +/-	2R3	4	0	4,570,304:56:8	
96	98	201	11:27:35.400	165GC4A	7SCAN	NORM,249.709999,	Check S/P Position	2R3	4	0	4,570,309:90:0	
97	98	201	11:30:38.066	176GC6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,570,313:00:0	
98	98	201	11:31:29.400	117GC	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,570,313:77:0	
99	98	201	11:31:37.400	165GC4B	7VECT		Inert vect update UTC	2R3	4	0	4,570,313:89:0	
100	98	201	11:31:38.733	117GC105A106A4A	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,314:00:0	
101	98	201	11:32:52.066	117GC105A106A4B	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,315:19:0	
102	98	201	11:33:02.066	117GC105A106A4C	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,315:34:0	
103	98	201	11:34:15.400	117GC105A106A4D	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,316:53:0	
104	98	201	11:34:25.400	117GC105A106A4E	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,316:68:0	
105	98	201	11:35:38.733	117GC105A106A4F	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,317:87:0	
106	98	201	11:35:48.733	117GC105A106A4G	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,318:11:0	
107	98	201	11:37:02.066	117GC105A106A4H	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,319:30:0	
108	98	201	11:37:12.066	117GC105A106A4I	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,319:45:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	98	201	11:38:25.400	117GC105A106A4J	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,320:64:0	
110	98	201	11:38:35.400	117GC105A106A4K	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,320:79:0	
111	98	201	11:39:48.733	117GC105A106A4L	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,322:07:0	
112	98	201	11:39:58.733	117GC105A106A4M	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,322:22:0	
113	98	201	11:41:12.066	117GC105A106A4N	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,323:41:0	
114	98	201	11:41:22.066	117GC105A106A4O	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,323:56:0	
115	98	201	11:42:35.400	117GC105A106A4P	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,324:75:0	
116	98	201	11:42:45.400	117GC105A106A4Q	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,324:90:0	
117	98	201	11:43:58.733	117GC105A106A4R	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,326:18:0	
118	98	201	11:44:08.733	117GC105A106A4S	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,326:33:0	
119	98	201	11:44:32.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,326:68:0	
120	98	201	11:44:32.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 790.89 +/-	2R3	4	0	4,570,326:68:0	
121	98	201	11:44:33.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 791.01 +/-	2R3	4	0	4,570,326:70:1	
122	98	201	11:44:38.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 792.25 +/-	2R3	4	0	4,570,326:78:0	
123	98	201	11:44:39.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 792.31 +/-	2R3	4	0	4,570,326:79:8	
124	98	201	11:44:41.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 792.19 +/-	2R3	4	0	4,570,326:81:9	
125	98	201	11:45:00.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 787.80 +/-	2R3	4	0	4,570,327:19:0	
126	98	201	11:45:22.066	117GC105A106A4T	7STRP	0.0,-0.0007,0,0,	Slew =12.01	2R3	4	0	4,570,327:52:0	
127	98	201	11:45:22.733	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,327:53:0	
128	98	201	11:45:22.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 782.48 +/-	2R3	4	0	4,570,327:53:0	
129	98	201	11:45:23.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 782.42 +/-	2R3	4	0	4,570,327:54:8	
130	98	201	11:45:32.066	117GC105A106A4U	7STRP	0.0085,0.0,0,0,0	Slew =,0.12	2R3	4	0	4,570,327:67:0	
131	**98**	**201**	**11:45:52.066**	**16NNJUPRTS01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
132	98	201	11:46:45.400	117GC11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,570,328:86:0	
133	**98**	**201**	**11:47:06.733**	**20DB5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**4,570,329:27:0**	
134	**98**	**201**	**11:47:08.066**	**20DB5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**4,570,329:29:0**	
135	**98**	**201**	**11:47:09.400**	**20DB6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**4,570,329:31:0**	
136	**98**	**201**	**11:47:19.400**	**20DB6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**4,570,329:46:0**	
137	**98**	**201**	**11:47:29.400**	**20DB5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,570,329:61:0**	
138	**98**	**201**	**11:47:49.400**	**20DB5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,570,330:00:0**	
139	98	201	11:47:49.400	176GC6B	6TMREC	**NRC**	NO RECORD Record Mode Change	260	4	0	4,570,330:00:0	
140	98	201	11:47:51.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	260	4	0	4,570,330:03:0	
141	98	201	11:47:51.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 782.42 +/-	260	4	0	4,570,330:03:0	
142	98	201	11:47:52.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 782.54 +/-	260	4	0	4,570,330:05:1	
143	**98**	**201**	**11:47:58.066**	**20DB4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,570,330:13:0**	
144	98	201	11:47:58.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 783.78 +/-	2R0	4	0	4,570,330:13:0	
145	98	201	11:47:59.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 783.84 +/-	2R0	4	0	4,570,330:14:8	
146	98	201	11:48:00.666		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 783.72 +/-	2R0	4	0	4,570,330:16:9	
147	98	201	11:48:01.400		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 783.55 +/-	2R0	4	0	4,570,330:18:0	
148	98	201	11:48:13.400		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 780.73 +/-	2R0	4	0	4,570,330:36:0	
149	98	201	11:48:13.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0	4,570,330:36:0	
150	98	201	11:48:14.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 780.67 +/-	2R0	4	0	4,570,330:37:8	
151	**98**	**201**	**11:48:54.066**	**16JNJUPRTS01***		**-----START------**		**2R0**	**4**	**0**	**: :**	
152	**98**	**201**	**11:48:54.066**	**16NNJUPRTS01-**		**-----STOP-------**		**2R0**	**4**	**0**	**: :**	
153	98	201	11:49:46.066	125DB	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	4,570,331:84:0	
154	**98**	**201**	**11:49:46.066**	**125DB4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R0**	**4**	**0**	**4,570,331:84:0**	
155	**98**	**201**	**11:50:46.733**	**125DB4B**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R0**	**4**	**0**	**4,570,332:84:0**	
156	98	201	11:50:46.733	125DB11A	NIMSINIT	GE	##### GROUP END INIT	2R0	4	0	4,570,332:84:0	
157	98	201	11:50:50.733	165DB4A	7SCAN	NORM,286.099998,	Check S/P Position	2R0	4	0	4,570,332:90:0	
158	98	201	11:52:48.066	127DB	NIMSTAB	GS	%%%%% GROUP START TAB	2R0	4	0	4,570,334:84:0	
159	**98**	**201**	**11:52:48.066**	**127DB4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,570,334:84:0**	
160	**98**	**201**	**11:52:48.733**	**127DB4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,570,334:85:0**	
161	98	201	11:52:56.733	127DB11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,570,335:06:0	
162	**98**	**201**	**11:53:57.400**	**432DB6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**2R3**	**4**	**0**	**4,570,336:06:0**	
163	98	201	11:54:44.733	117DB	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,570,336:77:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	98	201	11:54:52.733	165DB4B	7VECT		Inert vect update UTC	2R3	4	0	4,570,336:89:0	
165	98	201	11:54:54.066	117DB105A106A4A	**7STRP**	**-0.036016,0.0,0,**	**Slew =,0.06**	2R3	4	0	4,570,337:00:0	
166	**98**	**201**	**12:04:02.733**	**432DZ6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**2R3**	**4**	**0**	**4,570,346:04:0**	
167	98	201	12:05:00.733	117DB11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,570,347:00:0	
168	**98**	**201**	**12:13:10.066**	**16JNJUPRTS01***		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
169	98	201	12:30:10.733	488AB6B	6TMSED	NORM,GL7	Sci, Eng, and D/L Chan	2R3	4	0	4,570,371:81:0	
170	98	201	13:15:46.733	165GD4A	7SCAN	NORM,289.485996,	Check S/P Position	2R3	4	0	4,570,416:90:0	
171	98	201	13:18:49.400	176GD6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,570,420:00:0	
172	98	201	13:19:40.733	117GD	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,570,420:77:0	
173	98	201	13:19:50.066	117GD105A106A4A	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,421:00:0	
174	98	201	13:20:20.066	117GD105A106A4B	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,421:45:0	
175	98	201	13:20:26.733	117GD105A106A4C	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,421:55:0	
176	98	201	13:20:56.733	117GD105A106A4D	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,422:09:0	
177	98	201	13:21:03.400	117GD105A106A4E	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,422:19:0	
178	98	201	13:21:33.400	117GD105A106A4F	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,422:64:0	
179	98	201	13:21:40.066	117GD105A106A4G	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,422:74:0	
180	98	201	13:22:10.066	117GD105A106A4H	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,423:28:0	
181	98	201	13:22:16.733	117GD105A106A4I	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,423:38:0	
182	98	201	13:22:46.733	117GD105A106A4J	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,423:83:0	
183	98	201	13:22:53.400	117GD105A106A4K	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,424:02:0	
184	98	201	13:23:23.400	117GD105A106A4L	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,424:47:0	
185	98	201	13:23:30.066	117GD105A106A4M	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,424:57:0	
186	98	201	13:24:00.066	117GD105A106A4N	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,425:11:0	
187	98	201	13:24:06.733	117GD105A106A4O	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,425:21:0	
188	98	201	13:24:36.733	117GD105A106A4P	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,425:66:0	
189	98	201	13:24:43.400	117GD105A106A4Q	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,425:76:0	
190	98	201	13:25:13.400	117GD105A106A4R	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,426:30:0	
191	98	201	13:25:20.066	117GD105A106A4S	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,426:40:0	
192	98	201	13:25:50.066	117GD105A106A4T	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,426:85:0	
193	98	201	13:25:56.733	117GD105A106A4U	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,427:04:0	
194	98	201	13:26:26.733	117GD105A106A4V	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,427:49:0	
195	98	201	13:26:33.400	117GD105A106A4W	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,427:59:0	
196	98	201	13:27:03.400	117GD105A106A4X	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,428:13:0	
197	98	201	13:27:10.066	117GD105A106A4Y	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,428:23:0	
198	98	201	13:27:40.066	117GD105A106A4Z	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,428:68:0	
199	98	201	13:27:46.733	117GD105A106A4AA	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,428:78:0	
200	98	201	13:28:16.733	117GD105A106A4AB	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,429:32:0	
201	98	201	13:28:23.400	117GD105A106A4AC	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,429:42:0	
202	98	201	13:28:53.400	117GD105A106A4AD	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,429:87:0	
203	98	201	13:29:00.066	117GD105A106A4AE	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,430:06:0	
204	98	201	13:29:30.066	117GD105A106A4AF	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,430:51:0	
205	98	201	13:29:36.733	117GD105A106A4AG	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,430:61:0	
206	98	201	13:30:06.733	117GD105A106A4AH	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,431:15:0	
207	98	201	13:30:13.400	117GD105A106A4AI	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,431:25:0	
208	98	201	13:30:43.400	117GD105A106A4AJ	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,431:70:0	
209	98	201	13:30:50.066	117GD105A106A4AK	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,431:80:0	
210	98	201	13:31:20.066	117GD105A106A4AL	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,432:34:0	
211	98	201	13:31:24.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,432:40:0	
212	98	201	13:31:24.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 780.67 +/-	2R3	4	0	4,570,432:40:0	
213	98	201	13:31:25.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 780.79 +/-	2R3	4	0	4,570,432:42:1	
214	98	201	13:31:26.733	117GD105A106A4AM	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,432:44:0	
215	98	201	13:31:30.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 782.03 +/-	2R3	4	0	4,570,432:50:0	
216	98	201	13:31:31.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 782.09 +/-	2R3	4	0	4,570,432:51:8	
217	98	201	13:31:33.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 781.97 +/-	2R3	4	0	4,570,432:53:9	
218	98	201	13:31:49.400		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 778.20 +/-	2R3	4	0	4,570,432:78:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	98	201	13:31:56.733	117GD105A106A4AN	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,432	89:0
220	98	201	13:32:03.400	117GD105A106A4AO	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,433	08:0
221	98	201	13:32:12.066	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,433	21:0
222	98	201	13:32:12.066		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 772.89 +/-	2R3	4	0	4,570,433	21:0
223	98	201	13:32:13.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 772.83 +/-	2R3	4	0	4,570,433	22:8
224	98	201	13:32:33.400	117GD105A106A4AP	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,433	53:0
225	98	201	13:32:40.066	117GD105A106A4AQ	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,433	63:0
226	98	201	13:33:10.066	117GD105A106A4AR	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,434	17:0
227	98	201	13:33:16.733	117GD105A106A4AS	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,434	27:0
228	98	201	13:33:46.066	488AB6C	6TMSED	FILL,GL7	Sci, Eng, and D/L Chan	2R3	4	0	4,570,434	71:0
229	98	201	13:33:46.733	117GD105A106A4AT	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,434	72:0
230	98	201	13:33:53.400	117GD105A106A4AU	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,434	82:0
231	98	201	13:34:23.400	117GD105A106A4AV	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,435	36:0
232	98	201	13:34:30.066	117GD105A106A4AW	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,435	46:0
233	98	201	13:35:00.066	117GD105A106A4AX	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,436	00:0
234	98	201	13:35:06.733	117GD105A106A4AY	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,436	10:0
235	98	201	13:35:36.733	117GD105A106A4AZ	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,436	55:0
236	98	201	13:35:43.400	117GD105A106A4BA	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,436	65:0
237	98	201	13:36:13.400	117GD105A106A4BB	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,437	19:0
238	98	201	13:36:20.066	117GD105A106A4BC	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,437	29:0
239	98	201	13:36:50.066	117GD105A106A4BD	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,437	74:0
240	98	201	13:36:56.733	117GD105A106A4BE	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,437	84:0
241	98	201	13:37:26.733	117GD105A106A4BF	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,438	38:0
242	98	201	13:37:33.400	117GD105A106A4BG	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,438	48:0
243	98	201	13:38:03.400	117GD105A106A4BH	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,439	02:0
244	98	201	13:38:10.066	117GD105A106A4BI	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,439	12:0
245	98	201	13:38:40.066	117GD105A106A4BJ	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,439	57:0
246	98	201	13:38:46.733	117GD105A106A4BK	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,439	67:0
247	98	201	13:39:16.733	117GD105A106A4BL	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,440	21:0
248	98	201	13:39:23.400	117GD105A106A4BM	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,440	31:0
249	98	201	13:39:53.400	117GD105A106A4BN	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,440	76:0
250	98	201	13:40:00.066	117GD105A106A4BO	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,440	86:0
251	98	201	13:40:30.066	117GD105A106A4BP	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,441	40:0
252	98	201	13:40:36.733	117GD105A106A4BQ	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,441	50:0
253	98	201	13:41:06.733	117GD105A106A4BR	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,442	04:0
254	98	201	13:41:13.400	117GD105A106A4BS	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,442	14:0
255	98	201	13:41:43.400	117GD105A106A4BT	7STRP	0.0012,0.00001,0	Slew =12.01	2R3	4	0	4,570,442	59:0
256	98	201	13:41:50.066	117GD105A106A4BU	7STRP	0.0,-0.015001,0,	Slew =0,0.7	2R3	4	0	4,570,442	69:0
257	98	201	13:42:20.066	117GD11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,570,443	23:0
258	98	201	13:42:31.400	176GD6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	4,570,443	40:0
259	98	201	13:42:33.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,443	43:0
260	98	201	13:42:33.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 772.83 +/-	2R3	4	0	4,570,443	43:0
261	98	201	13:42:34.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 772.95 +/-	2R3	4	0	4,570,443	45:1
262	98	201	13:42:40.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 774.18 +/-	2R3	4	0	4,570,443	53:0
263	98	201	13:42:41.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 774.24 +/-	2R3	4	0	4,570,443	54:8
264	98	201	13:42:42.666		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 774.12 +/-	2R3	4	0	4,570,443	56:9
265	98	201	13:42:43.400		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 773.95 +/-	2R3	4	0	4,570,443	58:0
266	98	201	13:43:03.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,443	88:0
267	98	201	13:43:03.400		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 769.26 +/-	2R3	4	0	4,570,443	88:0
268	98	201	13:43:04.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 769.20 +/-	2R3	4	0	4,570,443	89:8
269	98	201	13:58:18.733	488AB6D	6TMSED	NORM,GL7	Sci, Eng, and D/L Chan	2R3	4	0	4,570,459	05:0
270	98	201	14:17:27.400	165GE4A	7SCAN	NORM,294.078999,	Check S/P Position	2R3	4	0	4,570,477	90:0
271	98	201	14:20:30.066	176GE6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,570,481	00:0
272	98	201	14:21:21.400	117GE	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,570,481	77:0
273	98	201	14:21:30.733	117GE105A106A4A	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,482	00:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	98	201	14:22:42.066	117GE105A106A4B	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,483	16:0
275	98	201	14:22:47.400	117GE105A106A4C	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,483	24:0
276	98	201	14:23:58.733	117GE105A106A4D	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,484	40:0
277	98	201	14:24:04.066	117GE105A106A4E	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,484	48:0
278	98	201	14:25:15.400	117GE105A106A4F	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,485	64:0
279	98	201	14:25:20.733	117GE105A106A4G	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,485	72:0
280	98	201	14:26:32.066	117GE105A106A4H	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,486	88:0
281	98	201	14:26:37.400	117GE105A106A4I	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,487	05:0
282	98	201	14:27:48.733	117GE105A106A4J	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,488	21:0
283	98	201	14:27:54.066	117GE105A106A4K	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,488	29:0
284	98	201	14:29:05.400	117GE105A106A4L	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,489	45:0
285	98	201	14:29:10.733	117GE105A106A4M	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,489	53:0
286	98	201	14:30:22.066	117GE105A106A4N	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,490	69:0
287	98	201	14:30:27.400	117GE105A106A4O	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,490	77:0
288	98	201	14:31:38.733	117GE105A106A4P	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,492	02:0
289	98	201	14:31:44.066	117GE105A106A4Q	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,492	10:0
290	98	201	14:32:55.400	117GE105A106A4R	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,493	26:0
291	98	201	14:33:00.733	117GE105A106A4S	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,493	34:0
292	98	201	14:33:04.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,493	40:0
293	98	201	14:33:04.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 769.20 +/-	2R3	4	0	4,570,493	40:0
294	98	201	14:33:06.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 769.32 +/-	2R3	4	0	4,570,493	42:1
295	98	201	14:33:11.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 770.56 +/-	2R3	4	0	4,570,493	50:0
296	98	201	14:33:12.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 770.62 +/-	2R3	4	0	4,570,493	51:8
297	98	201	14:33:14.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 770.50 +/-	2R3	4	0	4,570,493	53:9
298	98	201	14:33:30.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 766.73 +/-	2R3	4	0	4,570,493	78:0
299	98	201	14:33:52.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 761.42 +/-	2R3	4	0	4,570,494	21:0
300	98	201	14:33:52.733	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,494	21:0
301	98	201	14:33:53.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 761.36 +/-	2R3	4	0	4,570,494	22:8
302	98	201	14:34:12.066	117GE105A106A4T	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,494	50:0
303	98	201	14:34:17.400	117GE105A106A4U	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,494	58:0
304	98	201	14:35:28.733	117GE105A106A4V	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,495	74:0
305	98	201	14:35:34.066	117GE105A106A4W	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,495	82:0
306	98	201	14:36:45.400	117GE105A106A4X	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,497	07:0
307	98	201	14:36:50.733	117GE105A106A4Y	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,497	15:0
308	98	201	14:38:02.066	117GE105A106A4Z	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,498	31:0
309	98	201	14:38:07.400	117GE105A106A4AA	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,498	39:0
310	98	201	14:39:18.733	117GE105A106A4AB	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,499	55:0
311	98	201	14:39:24.066	117GE105A106A4AC	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,499	63:0
312	98	201	14:40:35.400	117GE105A106A4AD	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,500	79:0
313	98	201	14:40:40.733	117GE105A106A4AE	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,500	87:0
314	98	201	14:41:52.066	117GE105A106A4AF	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,502	12:0
315	98	201	14:41:57.400	117GE105A106A4AG	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,502	20:0
316	98	201	14:43:08.733	117GE105A106A4AH	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,503	36:0
317	98	201	14:43:14.066	117GE105A106A4AI	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,503	44:0
318	98	201	14:44:25.400	117GE105A106A4AJ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,504	60:0
319	98	201	14:44:30.733	117GE105A106A4AK	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,504	68:0
320	98	201	14:45:42.066	117GE105A106A4AL	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,505	84:0
321	98	201	14:45:47.400	117GE105A106A4AM	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,506	01:0
322	98	201	14:46:06.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,506	30:0
323	98	201	14:46:06.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 761.36 +/-	2R3	4	0	4,570,506	30:0
324	98	201	14:46:08.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 761.48 +/-	2R3	4	0	4,570,506	32:1
325	98	201	14:46:13.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 762.71 +/-	2R3	4	0	4,570,506	40:0
326	98	201	14:46:14.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 762.77 +/-	2R3	4	0	4,570,506	41:8
327	98	201	14:46:16.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 762.65 +/-	2R3	4	0	4,570,506	43:9
328	98	201	14:46:32.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 758.89 +/-	2R3	4	0	4,570,506	68:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	98	201	14:46:54.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 753.58 +/-	2R3	4	0	4,570,507:11:0	
330	98	201	14:46:54.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,507:11:0	
331	98	201	14:46:55.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 753.52 +/-	2R3	4	0	4,570,507:12:8	
332	98	201	14:46:58.733	117GE105A106A4AN	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,507:17:0	
333	98	201	14:47:04.066	117GE105A106A4AO	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,507:25:0	
334	98	201	14:48:15.400	117GE105A106A4AP	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,508:41:0	
335	98	201	14:48:20.733	117GE105A106A4AQ	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,508:49:0	
336	98	201	14:49:32.066	117GE105A106A4AR	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,509:65:0	
337	98	201	14:49:37.400	117GE105A106A4AS	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,509:73:0	
338	98	201	14:50:48.733	117GE105A106A4AT	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,510:89:0	
339	98	201	14:50:54.066	117GE105A106A4AU	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,511:06:0	
340	98	201	14:52:05.400	117GE105A106A4AV	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,512:22:0	
341	98	201	14:52:10.733	117GE105A106A4AW	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,512:30:0	
342	98	201	14:53:22.066	117GE105A106A4AX	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,513:46:0	
343	98	201	14:53:27.400	117GE105A106A4AY	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,513:54:0	
344	98	201	14:54:38.733	117GE105A106A4AZ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,514:70:0	
345	98	201	14:54:44.066	117GE105A106A4BA	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,514:78:0	
346	98	201	14:55:55.400	117GE105A106A4BB	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,516:03:0	
347	98	201	14:56:00.733	117GE105A106A4BC	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,516:11:0	
348	98	201	14:57:12.066	117GE105A106A4BD	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,517:27:0	
349	98	201	14:57:17.400	117GE105A106A4BE	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,517:35:0	
350	98	201	14:58:28.733	117GE105A106A4BF	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,518:51:0	
351	98	201	14:58:34.066	117GE105A106A4BG	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,518:59:0	
352	98	201	14:59:08.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 753.52 +/-	2R3	4	0	4,570,519:20:0	
353	98	201	14:59:08.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,519:20:0	
354	98	201	14:59:10.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 753.64 +/-	2R3	4	0	4,570,519:22:1	
355	98	201	14:59:15.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 754.87 +/-	2R3	4	0	4,570,519:30:0	
356	98	201	14:59:16.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 754.93 +/-	2R3	4	0	4,570,519:31:8	
357	98	201	14:59:18.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 754.81 +/-	2R3	4	0	4,570,519:33:9	
358	98	201	14:59:34.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 751.05 +/-	2R3	4	0	4,570,519:58:0	
359	98	201	14:59:45.400	117GE105A106A4BH	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,519:75:0	
360	98	201	14:59:50.733	117GE105A106A4BI	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,519:83:0	
361	98	201	14:59:56.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 745.73 +/-	2R3	4	0	4,570,520:01:0	
362	98	201	14:59:56.733	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,520:01:0	
363	98	201	14:59:57.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 745.67 +/-	2R3	4	0	4,570,520:02:8	
364	98	201	15:00:00.066	488AB6E	6TMSED	NORM,EL7	Sci, Eng, and D/L Chan	2R3	4	0	4,570,520:06:0	
365	98	201	15:00:00.733	282ND432A431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R3	4	0	4,570,520:07:0	
366	98	201	15:00:01.400	282ND432A6A	6RTSL1		R/T Select of DDS and	2R3	4	0	4,570,520:08:0	
367	98	201	15:01:02.066	117GE105A106A4BJ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,521:08:0	
368	98	201	15:01:07.400	117GE105A106A4BK	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,521:16:0	
369	98	201	15:02:18.733	117GE105A106A4BL	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,522:32:0	
370	98	201	15:02:24.066	117GE105A106A4BM	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,522:40:0	
371	98	201	15:03:35.400	117GE105A106A4BN	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,523:56:0	
372	98	201	15:03:40.733	117GE105A106A4BO	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,523:64:0	
373	98	201	15:04:52.066	117GE105A106A4BP	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,524:80:0	
374	98	201	15:04:57.400	117GE105A106A4BQ	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,524:88:0	
375	98	201	15:06:08.733	117GE105A106A4BR	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,526:13:0	
376	98	201	15:06:14.066	117GE105A106A4BS	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,526:21:0	
377	98	201	15:07:25.400	117GE105A106A4BT	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,527:37:0	
378	98	201	15:07:30.733	117GE105A106A4BU	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,527:45:0	
379	98	201	15:08:42.066	117GE105A106A4BV	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,528:61:0	
380	98	201	15:08:47.400	117GE105A106A4BW	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,528:69:0	
381	98	201	15:09:58.733	117GE105A106A4BX	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,529:85:0	
382	98	201	15:10:04.066	117GE105A106A4BY	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,530:02:0	
383	98	201	15:11:15.400	117GE105A106A4BZ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,531:18:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	98	201	15:11:20.733	117GE105A106A4CA	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,531	26:0
385	98	201	15:12:11.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,532	11:0
386	98	201	15:12:11.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 745.67 +/-	2R3	4	0	4,570,532	11:0
387	98	201	15:12:12.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 745.79 +/-	2R3	4	0	4,570,532	13:1
388	98	201	15:12:18.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 747.03 +/-	2R3	4	0	4,570,532	21:0
389	98	201	15:12:19.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 747.09 +/-	2R3	4	0	4,570,532	22:8
390	98	201	15:12:20.666		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 746.97 +/-	2R3	4	0	4,570,532	24:9
391	98	201	15:12:32.066	117GE105A106A4CB	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,532	42:0
392	98	201	15:12:36.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 743.36 +/-	2R3	4	0	4,570,532	48:0
393	98	201	15:12:37.400	117GE105A106A4CC	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,532	50:0
394	98	201	15:12:58.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 738.05 +/-	2R3	4	0	4,570,532	82:0
395	98	201	15:12:58.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,532	82:0
396	98	201	15:12:59.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 737.99 +/-	2R3	4	0	4,570,532	83:8
397	98	201	15:13:48.733	117GE105A106A4CD	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,533	66:0
398	98	201	15:13:54.066	117GE105A106A4CE	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,533	74:0
399	98	201	15:15:05.400	117GE105A106A4CF	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,534	90:0
400	98	201	15:15:10.733	117GE105A106A4CG	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,535	07:0
401	98	201	15:16:22.066	117GE105A106A4CH	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,536	23:0
402	98	201	15:16:27.400	117GE105A106A4CI	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,536	31:0
403	98	201	15:17:38.733	117GE105A106A4CJ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,537	47:0
404	98	201	15:17:44.066	117GE105A106A4CK	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,537	55:0
405	98	201	15:18:55.400	117GE105A106A4CL	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,538	71:0
406	98	201	15:19:00.733	117GE105A106A4CM	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,538	79:0
407	98	201	15:20:12.066	117GE105A106A4CN	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,540	04:0
408	98	201	15:20:17.400	117GE105A106A4CO	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,540	12:0
409	98	201	15:21:28.733	117GE105A106A4CP	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,541	28:0
410	98	201	15:21:34.066	117GE105A106A4CQ	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,541	36:0
411	98	201	15:22:45.400	117GE105A106A4CR	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,542	52:0
412	98	201	15:22:50.733	117GE105A106A4CS	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,542	60:0
413	98	201	15:24:02.066	117GE105A106A4CT	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,543	76:0
414	98	201	15:24:07.400	117GE105A106A4CU	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,543	84:0
415	98	201	15:25:13.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,545	01:0
416	98	201	15:25:13.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 737.99 +/-	2R3	4	0	4,570,545	01:0
417	98	201	15:25:14.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 738.11 +/-	2R3	4	0	4,570,545	03:1
418	98	201	15:25:18.733	117GE105A106A4CV	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,545	09:0
419	98	201	15:25:20.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 739.34 +/-	2R3	4	0	4,570,545	11:0
420	98	201	15:25:21.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 739.40 +/-	2R3	4	0	4,570,545	12:8
421	98	201	15:25:22.666		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 739.28 +/-	2R3	4	0	4,570,545	14:9
422	98	201	15:25:24.066	117GE105A106A4CW	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,545	17:0
423	98	201	15:25:38.733		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 735.51 +/-	2R3	4	0	4,570,545	39:0
424	98	201	15:26:01.400		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 730.20 +/-	2R3	4	0	4,570,545	73:0
425	98	201	15:26:01.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,545	73:0
426	98	201	15:26:02.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 730.14 +/-	2R3	4	0	4,570,545	74:8
427	98	201	15:26:35.400	117GE105A106A4CX	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,546	33:0
428	98	201	15:26:40.733	117GE105A106A4CY	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,546	41:0
429	98	201	15:27:52.066	117GE105A106A4CZ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,547	57:0
430	98	201	15:27:57.400	117GE105A106A4DA	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,547	65:0
431	98	201	15:29:08.733	117GE105A106A4DB	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,548	81:0
432	98	201	15:29:14.066	117GE105A106A4DC	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,548	89:0
433	98	201	15:30:25.400	117GE105A106A4DD	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,550	14:0
434	98	201	15:30:30.733	117GE105A106A4DE	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,550	22:0
435	98	201	15:31:42.066	117GE105A106A4DF	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,551	38:0
436	98	201	15:31:47.400	117GE105A106A4DG	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,551	46:0
437	98	201	15:32:58.733	117GE105A106A4DH	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,552	62:0
438	98	201	15:33:04.066	117GE105A106A4DI	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,552	70:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	98	201	15:34:15.400	117GE105A106A4DJ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,553:86:0	
440	98	201	15:34:20.733	117GE105A106A4DK	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,554:03:0	
441	98	201	15:35:32.066	117GE105A106A4DL	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,555:19:0	
442	98	201	15:35:37.400	117GE105A106A4DM	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,555:27:0	
443	98	201	15:36:48.733	117GE105A106A4DN	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,556:43:0	
444	98	201	15:36:54.066	117GE105A106A4DO	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,556:51:0	
445	98	201	15:38:05.400	117GE105A106A4DP	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,557:67:0	
446	98	201	15:38:10.733	117GE105A106A4DQ	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,557:75:0	
447	98	201	15:38:15.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,557:82:0	
448	98	201	15:38:15.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 730.14 +/-	2R3	4	0	4,570,557:82:0	
449	98	201	15:38:16.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 730.26 +/-	2R3	4	0	4,570,557:84:1	
450	98	201	15:38:22.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 731.50 +/-	2R3	4	0	4,570,558:01:0	
451	98	201	15:38:23.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 731.56 +/-	2R3	4	0	4,570,558:02:8	
452	98	201	15:38:24.666		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 731.44 +/-	2R3	4	0	4,570,558:04:9	
453	98	201	15:38:40.733		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 727.67 +/-	2R3	4	0	4,570,558:29:0	
454	98	201	15:39:03.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,558:63:0	
455	98	201	15:39:03.400		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 722.36 +/-	2R3	4	0	4,570,558:63:0	
456	98	201	15:39:04.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 722.30 +/-	2R3	4	0	4,570,558:64:8	
457	98	201	15:39:22.066	117GE105A106A4DR	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,559:00:0	
458	98	201	15:39:27.400	117GE105A106A4DS	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,559:08:0	
459	98	201	15:40:38.733	117GE105A106A4DT	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,560:24:0	
460	98	201	15:40:44.066	117GE105A106A4DU	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,560:32:0	
461	98	201	15:41:55.400	117GE105A106A4DV	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,561:48:0	
462	98	201	15:42:00.733	117GE105A106A4DW	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,561:56:0	
463	98	201	15:43:12.066	117GE105A106A4DX	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,562:72:0	
464	98	201	15:43:17.400	117GE105A106A4DY	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,562:80:0	
465	98	201	15:44:28.733	117GE105A106A4DZ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,564:05:0	
466	98	201	15:44:34.066	117GE105A106A4EA	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,564:13:0	
467	98	201	15:45:45.400	117GE105A106A4EB	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,565:29:0	
468	98	201	15:45:50.733	117GE105A106A4EC	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,565:37:0	
469	98	201	15:47:02.066	117GE105A106A4ED	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,566:53:0	
470	98	201	15:47:07.400	117GE105A106A4EE	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,566:61:0	
471	98	201	15:48:18.733	117GE105A106A4EF	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,567:77:0	
472	98	201	15:48:24.066	117GE105A106A4EG	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,567:85:0	
473	98	201	15:49:35.400	117GE105A106A4EH	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,569:10:0	
474	98	201	15:49:40.733	117GE105A106A4EI	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,569:18:0	
475	98	201	15:50:52.066	117GE105A106A4EJ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,570:34:0	
476	98	201	15:50:57.400	117GE105A106A4EK	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,570:42:0	
477	98	201	15:51:18.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 722.30 +/-	2R3	4	0	4,570,570:73:0	
478	98	201	15:51:18.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,570:73:0	
479	98	201	15:51:19.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 722.42 +/-	2R3	4	0	4,570,570:75:1	
480	98	201	15:51:24.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 723.65 +/-	2R3	4	0	4,570,570:83:0	
481	98	201	15:51:25.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 723.71 +/-	2R3	4	0	4,570,570:84:8	
482	98	201	15:51:27.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 723.59 +/-	2R3	4	0	4,570,570:86:9	
483	98	201	15:51:42.733		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 719.98 +/-	2R3	4	0	4,570,571:19:0	
484	98	201	15:52:05.400		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 714.67 +/-	2R3	4	0	4,570,571:53:0	
485	98	201	15:52:05.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,571:53:0	
486	98	201	15:52:06.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 714.61 +/-	2R3	4	0	4,570,571:54:8	
487	98	201	15:52:08.733	117GE105A106A4EL	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,571:58:0	
488	98	201	15:52:14.066	117GE105A106A4EM	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,571:66:0	
489	98	201	15:53:25.400	117GE105A106A4EN	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,572:82:0	
490	98	201	15:53:30.733	117GE105A106A4EO	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,572:90:0	
491	98	201	15:54:42.066	117GE105A106A4EP	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,574:15:0	
492	98	201	15:54:47.400	117GE105A106A4EQ	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,574:23:0	
493	98	201	15:55:58.733	117GE105A106A4ER	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,575:39:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	98	201	15:56:04.066	117GE105A106A4ES	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,575	47:0
495	98	201	15:57:15.400	117GE105A106A4ET	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,576	63:0
496	98	201	15:57:20.733	117GE105A106A4EU	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,576	71:0
497	98	201	15:58:32.066	117GE105A106A4EV	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,577	87:0
498	98	201	15:58:37.400	117GE105A106A4EW	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,578	04:0
499	98	201	15:59:48.733	117GE105A106A4EX	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,579	20:0
500	98	201	15:59:54.066	117GE105A106A4EY	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,579	28:0
501	98	201	16:01:05.400	117GE105A106A4EZ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,580	44:0
502	98	201	16:01:10.733	117GE105A106A4FA	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,580	52:0
503	98	201	16:02:22.066	117GE105A106A4FB	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,581	68:0
504	98	201	16:02:27.400	117GE105A106A4FC	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,581	76:0
505	98	201	16:03:38.733	117GE105A106A4FD	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,583	01:0
506	98	201	16:03:44.066	117GE105A106A4FE	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,583	09:0
507	98	201	16:04:20.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 714.61 +/-	2R3	4	0	4,570,583	63:0
508	98	201	16:04:20.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,583	63:0
509	98	201	16:04:21.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 714.73 +/-	2R3	4	0	4,570,583	65:1
510	98	201	16:04:26.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 715.96 +/-	2R3	4	0	4,570,583	73:0
511	98	201	16:04:27.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 716.02 +/-	2R3	4	0	4,570,583	74:8
512	98	201	16:04:29.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 715.90 +/-	2R3	4	0	4,570,583	76:9
513	98	201	16:04:45.400		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 712.14 +/-	2R3	4	0	4,570,584	10:0
514	98	201	16:04:55.400	117GE105A106A4FF	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,584	25:0
515	98	201	16:05:00.733	117GE105A106A4FG	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,584	33:0
516	98	201	16:05:08.066	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,584	44:0
517	98	201	16:05:08.066		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 706.83 +/-	2R3	4	0	4,570,584	44:0
518	98	201	16:05:09.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 706.77 +/-	2R3	4	0	4,570,584	45:8
519	98	201	16:06:12.066	117GE105A106A4FH	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,585	49:0
520	98	201	16:06:17.400	117GE105A106A4FI	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,585	57:0
521	98	201	16:07:28.733	117GE105A106A4FJ	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,586	73:0
522	98	201	16:07:34.066	117GE105A106A4FK	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,586	81:0
523	**98**	**201**	**16:07:44.733**	**16NNHOTMAP01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
524	98	201	16:08:45.400	117GE105A106A4FL	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,588	06:0
525	98	201	16:08:50.733	117GE105A106A4FM	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,588	14:0
526	**98**	**201**	**16:09:46.066**	**20DC5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**4,570,589**	**06:0**
527	**98**	**201**	**16:09:47.400**	**20DC5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**4,570,589**	**08:0**
528	**98**	**201**	**16:09:48.733**	**20DC6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**4,570,589**	**10:0**
529	**98**	**201**	**16:09:55.400**	**20DC5D**	**37MN**		**Memory Normal (software operates from ROM)**	**2R3**	**4**	**0**	**4,570,589**	**20:0**
530	**98**	**201**	**16:09:58.733**	**20DC6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**4,570,589**	**25:0**
531	98	201	16:10:02.066	117GE105A106A4FN	7STRP	0.0015,0.00009,0	Slew =12.01	2R3	4	0	4,570,589	30:0
532	98	201	16:10:07.400	117GE105A106A4FO	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R3	4	0	4,570,589	38:0
533	**98**	**201**	**16:10:08.733**	**20DC5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,570,589**	**40:0**
534	**98**	**201**	**16:10:51.400**	**20DC4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,570,590**	**13:0**
535	98	201	16:11:18.733	117GE105A106A4FP	7STRP	0.0015,0.00009,0	Slew =12.01	2R0	4	0	4,570,590	54:0
536	98	201	16:11:24.066	117GE105A106A4FQ	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R0	4	0	4,570,590	62:0
537	**98**	**201**	**16:11:47.400**	**16JNHOTMAP01-**		**-----START------**		**2R0**	**4**	**0**	**: :**	
538	**98**	**201**	**16:11:47.400**	**16NNHOTMAP01-**		**-----STOP-------**		**2R0**	**4**	**0**	**: :**	
539	98	201	16:12:35.400	117GE105A106A4FR	7STRP	0.0015,0.00009,0	Slew =12.01	2R0	4	0	4,570,591	78:0
540	98	201	16:12:40.733	117GE105A106A4FS	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R0	4	0	4,570,591	86:0
541	**98**	**201**	**16:13:40.066**	**125DC4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R0**	**4**	**0**	**4,570,592**	**84:0**
542	98	201	16:13:40.066	125DC	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	4,570,592	84:0
543	98	201	16:13:52.066	117GE105A106A4FT	7STRP	0.0015,0.00009,0	Slew =12.01	2R0	4	0	4,570,593	11:0
544	98	201	16:13:57.400	117GE105A106A4FU	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R0	4	0	4,570,593	19:0
545	98	201	16:14:40.733	125DC11A	NIMSINIT	GE	##### GROUP END INIT	2R0	4	0	4,570,593	84:0
546	**98**	**201**	**16:14:40.733**	**125DC4B**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R0**	**4**	**0**	**4,570,593**	**84:0**
547	98	201	16:15:08.733	117GE105A106A4FV	7STRP	0.0015,0.00009,0	Slew =12.01	2R0	4	0	4,570,594	35:0
548	98	201	16:15:14.066	117GE105A106A4FW	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R0	4	0	4,570,594	43:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	98	201	16:16:25.400	117GE105A106A4FX	7STRP	0.0015,0.00009,0	Slew =12.01	2R0	4	0	4,570,595:59:0	
550	98	201	16:16:30.733	117GE105A106A4FY	7STRP	0.0,0.038022,0,0	Slew =,0.66	2R0	4	0	4,570,595:67:0	
551	98	201	16:17:22.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 706.77 +/-	2R0	4	0	4,570,596:53:0	
552	98	201	16:17:22.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R0	4	0	4,570,596:53:0	
553	98	201	16:17:23.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 706.89 +/-	2R0	4	0	4,570,596:55:1	
554	98	201	16:17:28.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 708.12 +/-	2R0	4	0	4,570,596:63:0	
555	98	201	16:17:29.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 708.18 +/-	2R0	4	0	4,570,596:64:8	
556	98	201	16:17:31.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 708.06 +/-	2R0	4	0	4,570,596:66:9	
557	98	201	16:17:42.066	117GE11A	**CSMOS**	GE	***** GROUP END CSMOS	2R0	4	0	4,570,596:83:0	
558	98	201	16:17:42.733	127DC	NIMSTAB	GS	%%%%% GROUP START TAB	2R0	4	0	4,570,596:84:0	
559	**98**	**201**	**16:17:42.733**	**127DC4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,570,596:84:0**	
560	**98**	**201**	**16:17:43.400**	**127DC4B**	**37ETB**		**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,570,596:85:0**	
561	98	201	16:17:47.400		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 704.30 +/-	2R3	4	0	4,570,597:00:0	
562	98	201	16:17:47.400	176GE6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	4,570,597:00:0	
563	98	201	16:17:51.400	127DC11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,570,597:06:0	
564	98	201	16:18:09.400		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 699.14 +/-	2R3	4	0	4,570,597:33:0	
565	98	201	16:18:09.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,597:33:0	
566	98	201	16:18:10.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 699.08 +/-	2R3	4	0	4,570,597:34:8	
567	98	201	16:18:47.400	165DC4A	7SCAN	NORM,307.081997,	Check S/P Position	2R3	4	0	4,570,597:90:0	
568	98	201	16:22:38.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 699.08 +/-	2R3	4	0	4,570,601:73:0	
569	98	201	16:22:38.733	175DC422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,601:73:0	
570	98	201	16:22:40.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 699.20 +/-	2R3	4	0	4,570,601:75:1	
571	98	201	16:22:41.400	117DC	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,570,601:77:0	
572	98	201	16:22:45.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 700.43 +/-	2R3	4	0	4,570,601:83:0	
573	98	201	16:22:46.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 700.49 +/-	2R3	4	0	4,570,601:84:8	
574	98	201	16:22:47.400	175DC176A6A	6TMREC	**LPU**	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	2R3	4	0	4,570,601:86:0	
575	98	201	16:22:48.000		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 700.37 +/-	2R3	4	0	4,570,601:86:9	
576	98	201	16:22:48.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC 700.37 +/-	2R3	4	0	4,570,601:86:9	
577	98	201	16:22:49.400	165DC4B	7VECT		Inert vect update UTC	2R3	4	0	4,570,601:89:0	
578	98	201	16:22:50.733	117DC105A106A4A	**7STRP**	**-0.021203,0.0,0,**	**Slew =,0.03**	2R3	4	0	4,570,602:00:0	
579	98	201	16:26:58.733	488AC6A	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	2R3	4	0	4,570,606:08:0	
580	**98**	**201**	**16:30:00.066**	**16JNHOTMAP01-**	**NIMPBK**	**301DB**	**JUPITER HOT MAP OBSERVATION**	**2R3**	**4**	**0**	**: :**	
581	**98**	**201**	**16:31:10.066**	**16JNHOTMAP01-**	**DESELC**	**300DB**	**JUPITER HOT MAP OBSERVATION**	**2R3**	**4**	**0**	**: :**	
582	98	201	16:34:42.066	117DC105A106A4B	**7STRP**	**0.034013,-0.004,**	**Slew =12.01**	2R3	4	0	4,570,613:66:0	
583	98	201	16:34:50.066	117DC105A106A4C	**7STRP**	**-0.021203,0.0,0,**	**Slew =,0.03**	2R3	4	0	4,570,613:78:0	
584	98	201	16:46:41.400	117DC11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,570,625:53:0	
585	98	201	16:46:46.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 363.17 +/-	2R3	4	0	4,570,625:61:0	
586	98	201	16:46:46.733	175DC422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,625:61:0	
587	98	201	16:46:46.733	175DC6A	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	4,570,625:61:0	
588	98	201	16:46:47.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 363.11 +/-	2R3	4	0	4,570,625:62:8	
589	98	201	16:48:11.400	444UD443A4A	**7MODE**	**CRU**	AACS CRUISE MODE	2R3	4	0	4,570,627:06:0	
590	**98**	**201**	**16:52:14.066**	**16JNHOTMAP01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
591	98	201	16:55:11.400	165GF4A	7SCAN	NORM,303.334,-20	Check S/P Position	2R3	4	0	4,570,633:90:0	
592	98	201	16:58:14.066	176GF6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,570,637:00:0	
593	98	201	16:59:05.400	117GF	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,570,637:77:0	
594	98	201	16:59:14.733	117GF105A106A4A	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,638:00:0	
595	98	201	17:00:33.400	117GF105A106A4B	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,639:27:0	
596	98	201	17:00:40.066	117GF105A106A4C	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,639:37:0	
597	98	201	17:01:58.733	117GF105A106A4D	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,640:64:0	
598	98	201	17:02:05.400	117GF105A106A4E	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,640:74:0	
599	98	201	17:03:24.066	117GF105A106A4F	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,642:10:0	
600	98	201	17:03:30.733	117GF105A106A4G	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,642:20:0	
601	98	201	17:04:49.400	117GF105A106A4H	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,643:47:0	
602	98	201	17:04:56.066	117GF105A106A4I	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,643:57:0	
603	98	201	17:06:14.733	117GF105A106A4J	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,644:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	98	201	17:06:21.400	117GF105A106A4K	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,645	03:0
605	98	201	17:07:40.066	117GF105A106A4L	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,646	30:0
606	98	201	17:07:46.733	117GF105A106A4M	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,646	40:0
607	98	201	17:09:05.400	117GF105A106A4N	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,647	67:0
608	98	201	17:09:12.066	117GF105A106A4O	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,647	77:0
609	98	201	17:10:30.733	117GF105A106A4P	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,649	13:0
610	98	201	17:10:37.400	117GF105A106A4Q	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,649	23:0
611	98	201	17:10:48.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 363.11 +/-	2R3	4	0	4,570,649	40:0
612	98	201	17:10:48.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,649	40:0
613	98	201	17:10:50.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 363.23 +/-	2R3	4	0	4,570,649	42:1
614	98	201	17:10:55.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 364.46 +/-	2R3	4	0	4,570,649	50:0
615	98	201	17:10:56.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 364.52 +/-	2R3	4	0	4,570,649	51:8
616	98	201	17:10:58.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 364.40 +/-	2R3	4	0	4,570,649	53:9
617	98	201	17:11:14.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 360.64 +/-	2R3	4	0	4,570,649	78:0
618	98	201	17:11:36.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 355.33 +/-	2R3	4	0	4,570,650	21:0
619	98	201	17:11:36.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,650	21:0
620	98	201	17:11:37.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 355.27 +/-	2R3	4	0	4,570,650	22:8
621	98	201	17:11:56.066	117GF105A106A4R	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,650	50:0
622	98	201	17:12:02.733	117GF105A106A4S	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,650	60:0
623	98	201	17:13:21.400	117GF105A106A4T	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,651	87:0
624	98	201	17:13:28.066	117GF105A106A4U	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,652	06:0
625	98	201	17:14:46.733	117GF105A106A4V	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,653	33:0
626	98	201	17:14:53.400	117GF105A106A4W	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,653	43:0
627	98	201	17:16:12.066	117GF105A106A4X	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,654	70:0
628	98	201	17:16:18.733	117GF105A106A4Y	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,654	80:0
629	98	201	17:17:37.400	117GF105A106A4Z	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,656	16:0
630	98	201	17:17:44.066	117GF105A106A4AA	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,656	26:0
631	98	201	17:19:02.733	117GF105A106A4AB	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,657	53:0
632	98	201	17:19:09.400	117GF105A106A4AC	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,657	63:0
633	98	201	17:20:28.066	117GF105A106A4AD	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,658	90:0
634	98	201	17:20:34.733	117GF105A106A4AE	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,659	09:0
635	98	201	17:21:53.400	117GF105A106A4AF	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,660	36:0
636	98	201	17:22:00.066	117GF105A106A4AG	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,660	46:0
637	98	201	17:23:18.733	117GF105A106A4AH	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,661	73:0
638	98	201	17:23:25.400	117GF105A106A4AI	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,661	83:0
639	98	201	17:23:50.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 355.27 +/-	2R3	4	0	4,570,662	30:0
640	98	201	17:23:50.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,662	30:0
641	98	201	17:23:52.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 355.39 +/-	2R3	4	0	4,570,662	32:1
642	98	201	17:23:57.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 356.62 +/-	2R3	4	0	4,570,662	40:0
643	98	201	17:23:58.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 356.68 +/-	2R3	4	0	4,570,662	41:8
644	98	201	17:24:00.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 356.56 +/-	2R3	4	0	4,570,662	43:9
645	98	201	17:24:16.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 352.80 +/-	2R3	4	0	4,570,662	68:0
646	98	201	17:24:38.733	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,663	11:0
647	98	201	17:24:38.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 347.48 +/-	2R3	4	0	4,570,663	11:0
648	98	201	17:24:39.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 347.42 +/-	2R3	4	0	4,570,663	12:8
649	98	201	17:24:44.066	117GF105A106A4AJ	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,663	19:0
650	98	201	17:24:50.733	117GF105A106A4AK	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,663	29:0
651	98	201	17:26:09.400	117GF105A106A4AL	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,664	56:0
652	98	201	17:26:16.066	117GF105A106A4AM	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,664	66:0
653	98	201	17:27:34.733	117GF105A106A4AN	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,666	02:0
654	98	201	17:27:41.400	117GF105A106A4AO	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,666	12:0
655	98	201	17:29:00.066	117GF105A106A4AP	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,667	39:0
656	98	201	17:29:06.733	117GF105A106A4AQ	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,667	49:0
657	98	201	17:30:25.400	117GF105A106A4AR	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,668	76:0
658	98	201	17:30:32.066	117GF105A106A4AS	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,668	86:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	98	201	17:31:50.733	117GF105A106A4AT	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,670	22:0
660	98	201	17:31:57.400	117GF105A106A4AU	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,670	32:0
661	98	201	17:33:16.066	117GF105A106A4AV	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,671	59:0
662	98	201	17:33:22.733	117GF105A106A4AW	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,671	69:0
663	98	201	17:34:41.400	117GF105A106A4AX	7STRP	0.0018,0.0001,0,	Slew =12.01	2R3	4	0	4,570,673	05:0
664	98	201	17:34:48.066	117GF105A106A4AY	7STRP	-0.001,0.037525,	Slew =0,0.7	2R3	4	0	4,570,673	15:0
665	98	201	17:35:46.066	117GF11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,570,674	11:0
666	98	201	17:35:46.066	176GF6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	4,570,674	11:0
667	98	201	17:35:48.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,570,674	14:0
668	98	201	17:35:48.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 347.42 +/-	2R3	4	0	4,570,674	14:0
669	98	201	17:35:49.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 347.54 +/-	2R3	4	0	4,570,674	16:1
670	98	201	17:35:54.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 348.78 +/-	2R3	4	0	4,570,674	24:0
671	98	201	17:35:55.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 348.84 +/-	2R3	4	0	4,570,674	25:8
672	98	201	17:35:57.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC * 348.72 +/-	2R3	4	0	4,570,674	27:9
673	98	201	17:35:58.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 348.55 +/-	2R3	4	0	4,570,674	29:0
674	98	201	17:36:18.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 343.70 +/-	2R3	4	0	4,570,674	60:0
675	98	201	17:36:18.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,570,674	60:0
676	98	201	17:36:19.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 343.64 +/-	2R3	4	0	4,570,674	61:8
677	**98**	**201**	**20:58:56.733**	**16NNHOTMAP02-**		**-----START------**					:	:
678	**98**	**201**	**21:02:59.400**	**16NNHOTMAP02-**		**-----STOP-------**					:	:
679	**98**	**201**	**21:02:59.400**	**16JNHOTMAP02-**		**-----START------**					:	:
680	**98**	**201**	**21:29:16.733**	**16JNHOTMAP02-**		**-----STOP-------**					:	:
681	**98**	**202**	**04:28:53.400**	**16NNSUCOMP01-**		**-----START------**					:	:
682	**98**	**202**	**04:32:56.067**	**16NNSUCOMP01-**		**-----STOP-------**					:	:
683	**98**	**202**	**04:32:56.067**	**16ENSUCOMP01-**		**-----START------**					:	:
684	**98**	**202**	**04:35:40.000**	**16NNDAC___01-**		**-----START------**					:	:
685	**98**	**202**	**04:35:48.733**	**33B4A**	**37IST**	**0,2,0,OFF,0,1,2**	**Gain State 3**				**4,571,326**	**83:0**
686	**98**	**202**	**04:36:40.000**	**16NNDAC___01-**		**-----STOP-------**					:	:
687	**98**	**202**	**05:00:14.067**	**16ENSUCOMP01-**		**-----STOP-------**					:	:
688	**98**	**202**	**05:10:20.733**	**16NNSUCOMP02-**		**-----START------**					:	:
689	**98**	**202**	**05:14:23.399**	**16ENSUCOMP02-**		**-----START------**					:	:
690	**98**	**202**	**05:14:23.399**	**16NNSUCOMP02-**		**-----STOP-------**					:	:
691	**98**	**202**	**05:33:36.066**	**16ENSUCOMP03-**		**-----START------**					:	:
692	**98**	**202**	**05:33:36.066**	**16ENSUCOMP02-**		**-----STOP-------**					:	:
693	**98**	**202**	**05:34:27.000**	**16NNDAC___02-**		**-----START------**					:	:
694	**98**	**202**	**05:34:27.400**	**33A4A**	**37IOP**	**4,0**	**Long Spectrometer, Grating Start Position**				**4,571,384**	**83:0**
695	**98**	**202**	**05:34:28.000**	**16NNDAC___02-**		**-----STOP-------**					:	:
696	**98**	**202**	**05:49:46.733**	**16ENSUCOMP03-**		**-----STOP-------**					:	:
697	**98**	**202**	**06:22:08.066**	**16NNSUCOMP04-**		**-----START------**					:	:
698	**98**	**202**	**06:26:10.733**	**16NNSUCOMP04-**		**-----STOP-------**					:	:
699	**98**	**202**	**06:26:10.733**	**16ENSUCOMP04-**		**-----START------**					:	:
700	**98**	**202**	**06:49:26.066**	**16ENSUCOMP04-**		**-----STOP-------**					:	:
701	**98**	**202**	**10:03:34.066**	**16NNGLOBAL01-**		**-----START------**					:	:
702	**98**	**202**	**10:07:36.733**	**16NNGLOBAL01-**		**-----STOP-------**					:	:
703	**98**	**202**	**10:07:36.733**	**16ENGLOBAL01-**		**-----START------**					:	:
704	**98**	**202**	**11:04:14.066**	**16ENGLOBAL01-**		**-----STOP-------**					:	:
705	**98**	**202**	**11:55:48.066**	**16NNWHTOVL01-**		**-----START------**					:	:
706	**98**	**202**	**11:57:49.399**	**16NNWHTOVL01-**		**-----STOP-------**					:	:
707	**98**	**202**	**11:57:49.399**	**16JNWHTOVL01-**		**-----START------**					:	:
708	**98**	**202**	**12:38:16.066**	**16JNWHTOVL01-**		**-----STOP-------**					:	:
709	**98**	**202**	**13:26:48.066**	**16NNJUPRTS02-**		**-----START------**					:	:
710	**98**	**202**	**13:28:49.399**	**16NNJUPRTS02-**		**-----STOP-------**					:	:
711	**98**	**202**	**13:28:49.399**	**16JNJUPRTS02***		**-----START------**					:	:
712	**98**	**202**	**13:51:04.066**	**16JNJUPRTS02***		**-----STOP-------**					:	:
713	**98**	**202**	**15:20:02.732**	**16NNJUPRTS03-**		**-----START------**					:	:

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	98	202	15:24:05.399	16NNJUPRTS03-		-----STOP-------					: :	
715	98	202	15:24:05.399	16JNJUPRTS03*		-----START------					: :	
716	98	202	15:52:24.066	16JNJUPRTS03*		-----STOP-------					: :	
717	98	202	16:33:51.400	16NNGLOBAL02-		-----START------					: :	
718	98	202	16:35:52.734	16NNGLOBAL02-		-----STOP-------					: :	
719	98	202	16:35:52.734	16GNGLOBAL01*		-----START------					: :	
720	98	202	17:44:38.067	16GNGLOBAL01*		-----STOP-------					: :	
721	98	202	20:25:24.066	16NNJUPWHT01-		-----START------					: :	
722	98	202	20:27:25.399	16NNJUPWHT01-		-----STOP-------					: :	
723	98	202	20:27:25.399	16JNJUPWHT01-		-----START------					: :	
724	98	202	20:32:10.733	33C4A	37IOP	5,1	Short Map, Grating Start Position =01				4,572,272:70:0	
725	98	202	20:32:19.000	16NNDAC___03-		-----START------					: :	
726	98	202	20:32:20.733	33D4A	37ETB	04,C4,0F,FF,FF	Loads wavelength edit table				4,572,272:85:0	
727	98	202	20:32:21.000	16NNDAC___03-		-----STOP-------					: :	
728	98	203	04:53:59.399	16JNJUPWHT01-		-----STOP-------					: :	
729	98	203	08:21:16.066	16NNCHOPOF01-		-----START------					: :	
730	98	203	08:31:22.732	16NNCHOPOF01-		-----STOP-------					: :	
731	98	205	15:12:01.266	20ZS6A	6CKSUM	MAG,4040,46F0					4,576,228:60:0	
732	98	205	15:12:41.266	20ZS6B	6MROH	12	read from LLM1A12,2282,0,A1				4,576,229:29:0	
733	98	205	15:12:41.266	20ZS6B	6MROH	12,2282,0,A10	read from LLM1A12,2282,0,A1				4,576,229:29:0	
734	98	205	15:19:59.933	20ZU3Q	37HR	1	Replacement Heaters OFF				4,576,236:50:0	
735	98	205	15:20:01.933	20ZU3S	37HR	2	Replacement Heaters OFF				4,576,236:53:0	
736	98	205	15:20:27.933	20ZU3R	37A	1	NIMS Power ON	260	4	0	4,576,237:01:0	
737	98	205	15:20:29.933	20ZU3T	37A	2	NIMS Power ON	260	4	0	4,576,237:04:0	
738	98	205	15:22:29.266	20ZU4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,576,239:01:0	
739	98	205	15:52:59.933	41V99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	2R0	4	0	4,576,269:17:0	
740	98	205	15:54:53.933	41V3G	40T1P	1	PCT Heater 1 ON (primary relay)	2R0	4	0	4,576,271:06:0	
741	98	205	15:55:03.933	41V3H	40T1P	2	PCT Heater 1 ON (primary relay)	2R0	4	0	4,576,271:21:0	
742	98	205	15:55:13.933	41V3I	40T2	1	PCT Heater 2 ON	2R0	4	0	4,576,271:36:0	
743	98	205	15:55:23.933	41V3J	40T2	2	PCT Heater 2 ON	2R0	4	0	4,576,271:51:0	
744	98	205	16:00:03.933	20RA6A	6MROH	44,2266,0,A10	read from LLM2A44,2266,0,A1	2R0	4	0	4,576,276:16:0	
745	98	205	16:02:03.933	20RA6B	6MROH	45,2255,0,B10	read from LLM2B45,2255,0,B1	2R0	4	0	4,576,278:14:0	
746	98	208	19:36:05.733		DMS:	: *SLEW-TIC	P7, TRACK *1, *FWD, TIC 343.64 +/-	2R0	4	0	4,580,762:33:0	
747	98	208	19:36:05.733		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 343.64 +/-	2R0	4	0	4,580,762:33:0	
748	98	208	19:36:12.400		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 343.64 +/-	2R0	4	0	4,580,762:43:0	
749	98	208	19:36:13.800		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 343.76 +/-	2R0	4	0	4,580,762:45:1	
750	98	208	19:36:21.866		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC * 345.94 +/-	2R0	4	0	4,580,762:57:2	
751	98	208	19:36:23.066		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 346.00 +/-	2R0	4	0	4,580,762:59:0	
752	98	208	23:59:59.733		DMS:	: READY	RDY, TRACK 1, FWD, TIC 346.00 +/-	2R0	4	0	4,581,023:33:0	
753	98	209	00:00:00.000	20A3EW	37A	Final Condition	NIMS Power ON	2R0	4	0	4,581,023:33:4	
754	98	209	00:00:00.000	20A3EX	37HR	Final Condition	Replacement Heaters OFF	2R0	4	0	4,581,023:33:4	
755	98	209	00:00:00.000	20A3EY	37C1PR	Final Condition	Optics Heater 1 OFF (primary relay)	2R0	4	0	4,581,023:33:4	
756	98	209	00:00:00.000	20A3EZ	37C2PR	Final Condition	Optics Heater 2 OFF (primary relay)	2R0	4	0	4,581,023:33:4	
757	98	209	00:00:00.000	20A3FA	37F1PR	Final Condition	Radiator Flash Heater OFF (primary relay)	2R0	4	0	4,581,023:33:4	
758	98	209	00:00:00.000	20A3FB	37F2PR	Final Condition	Shield Flash Heater OFF (primary relay)	2R0	4	0	4,581,023:33:4	
759	98	209	00:00:00.000	20A3FD	40HRPR	Final Condition	RCT Heater OFF (primary relay)	2R0	4	0	4,581,023:33:4	
760	98	209	00:00:00.000	20A3FE	40T1P	Final Condition	PCT Heater 1 ON (primary relay)	2R0	4	0	4,581,023:33:4	
761	98	209	00:00:00.000	20A3FF	40T2	Final Condition	PCT Heater 2 ON	2R0	4	0	4,581,023:33:4	

			Sequence:	E16B-AR		Created: 10/14/98	Begin: 98-209/00:00:00 Finish: 98-268/04:00:00					
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1	98	208	23:59:59.733		DMS:	: READY	RDY, TRACK 1, FWD, TIC 346.00 +/-	2R0	4	0	4,581,023:33:0	
2	**98**	**209**	**00:00:00.000**	**20A3FF**	**40T2**	**CMD,40T2,20A3FF,**	**PCT Heater 2 ON**	**2R0**	**4**	**0**	**4,581,023:33:4**	
3	**98**	**209**	**00:00:00.000**	**20A3EW**	**37A**	**CMD,37A,20A3EW,,**	**NIMS Power ON**	**2R0**	**4**	**0**	**4,581,023:33:4**	
4	**98**	**209**	**00:00:00.000**	**20A3EX**	**37HR**	**CMD,37HR,20A3EX,**	**Replacement Heaters OFF**	**2R0**	**4**	**0**	**4,581,023:33:4**	
5	**98**	**209**	**00:00:00.000**	**20A3EY**	**37C1PR**	**CMD,37C1PR,20A3E**	**Optics Heater 1 OFF (primary relay)**	**2R0**	**4**	**0**	**4,581,023:33:4**	
6	**98**	**209**	**00:00:00.000**	**20A3EZ**	**37C2PR**	**CMD,37C2PR,20A3E**	**Optics Heater 2 OFF (primary relay)**	**2R0**	**4**	**0**	**4,581,023:33:4**	
7	**98**	**209**	**00:00:00.000**	**20A3FA**	**37F1PR**	**CMD,37F1PR,20A3F**	**Radiator Flash Heater OFF (primary relay)**	**2R0**	**4**	**0**	**4,581,023:33:4**	
8	**98**	**209**	**00:00:00.000**	**20A3FB**	**37F2PR**	**CMD,37F2PR,20A3F**	**Shield Flash Heater OFF (primary relay)**	**2R0**	**4**	**0**	**4,581,023:33:4**	
9	**98**	**209**	**00:00:00.000**	**20A3FD**	**40HRPR**	**CMD,40HRPR,20A3F**	**RCT Heater OFF (primary relay)**	**2R0**	**4**	**0**	**4,581,023:33:4**	
10	**98**	**209**	**00:00:00.000**	**20A3FE**	**40T1P**	**CMD,40T1P,20A3FE**	**PCT Heater 1 ON (primary relay)**	**2R0**	**4**	**0**	**4,581,023:33:4**	
11	**98**	**210**	**16:00:59.666**	**432NA6B**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**2R0**	**4**	**0**	**4,583,397:89:0**	
12	98	210	16:01:00.333	432NA431A6A	6RCDSL	DDSDSL,PLSDSL,EP	Record Deselect (DDS o	2R0	4	0	4,583,397:90:0	
13	**98**	**210**	**16:01:01.000**	**432NA6D**	**6RTSL2**	**NIMNCG,AACSEL,RT**	**AACS SELECT**	**2R0**	**4**	**0**	**4,583,398:00:0**	
14	98	210	16:01:01.000	432NA6C	6RTSL1		R/T Select of DDS and	2R0	4	0	4,583,398:00:0	
15	98	210	16:01:22.333	488AA6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,583,398:32:0	
16	98	210	17:05:00.333	488AA6B	6TMSED	NORM,AH7	Sci, Eng, and D/L Chan	2R0	4	0	4,583,461:26:0	
17	98	210	17:08:45.666	176SH6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2R0	4	0	4,583,465:00:0	
18	98	210	17:39:00.333	20SQ4I	**7MODE**	**INT**	AACS INERTIAL MODE	2R0	4	0	4,583,494:83:0	
19	98	210	17:54:00.333	20SQ4K	7SLEW	INIT,POS,17.45	Stator movement	2R0	4	0	4,583,509:68:0	
20	98	210	18:06:00.333	20SQ4L	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	4,583,521:56:0	
21	98	210	18:13:00.333	20SQ4M	7SLEW	INIT,NEG,17.45	Stator movement	2R0	4	0	4,583,528:49:0	
22	98	210	18:25:00.333	20SQ4N	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	4,583,540:37:0	
23	98	210	18:37:00.333	20SQ4AH	**7MODE**	**CRU**	AACS CRUISE MODE	2R0	4	0	4,583,552:25:0	
24	98	210	18:53:04.333	20ST4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2R0	4	0	4,583,568:15:0	
25	98	210	18:53:54.333	20ST4B	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	4,583,568:90:0	
26	98	210	18:54:55.666	176SJ6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2R0	4	0	4,583,570:00:0	
27	98	210	19:13:00.333	488AA6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,583,587:80:0	
28	98	210	20:51:30.333	488AA6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,583,685:27:0	
29	98	210	21:57:38.333	488AB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,583,750:64:0	
30	98	210	22:08:18.333	488AB6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R0	4	0	4,583,761:23:0	
31	98	210	22:08:48.333	488AB6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2R0	4	0	4,583,761:68:0	
32	98	210	22:29:38.333	488AB6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,583,782:32:0	
33	98	211	11:41:54.266	488AC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,584,565:83:0	
34	98	211	12:49:22.266	488AC6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,584,632:58:0	
35	98	211	13:17:02.266		DMS:	: READY	RDY, TRACK *2, *REV, TIC 346.00 +/-	2R0	4	0	4,584,660:00:0	
36	98	211	13:17:02.266	465KA6A	6DMSC	RDY,2	DMS Control Tape stop	2R0	4	0	4,584,660:00:0	
37	98	211	13:18:56.933	465KB6A	6DTRN	CMD,6DTRN,465KB6	DMS TRACK TURNAROUND	2R0	4	0	4,584,661:81:0	
38	98	211	13:18:56.933		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 346.00 +/-	2R0	4	0	4,584,661:81:0	
39	98	211	13:18:56.933		DMS:	: *DMS-TURN	P7, TRACK 2, REV, TIC 346.00 +/-	2R0	4	0	4,584,661:81:0	
40	98	211	13:18:58.333		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 346.12 +/-	2R0	4	0	4,584,661:83:1	
41	98	211	13:19:03.600		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 347.35 +/-	2R0	4	0	4,584,662:00:0	
42	98	211	13:19:04.800		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC * 347.41 +/-	2R0	4	0	4,584,662:01:8	
43	98	211	13:19:06.200		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC * 347.29 +/-	2R0	4	0	4,584,662:03:9	
44	98	211	13:29:35.133		DMS:	: *REVERSE	P7, TRACK 2, REV, TIC * 199.87 +/-	2R0	4	0	4,584,672:37:3	
45	98	211	13:29:36.333		DMS:	: *TURNARND	P7, TRACK *3, *FWD, TIC * 199.81 +/-	2R0	4	0	4,584,672:39:1	
46	98	211	13:29:36.333		DMS:	: *RUNUP	P7, TRACK 3, FWD, TIC 199.81 +/-	2R0	4	0	4,584,672:39:1	
47	98	211	13:29:37.733		DMS:	: *AT_SPD	P7, TRACK 3, FWD, TIC * 199.93 +/-	2R0	4	0	4,584,672:41:2	
48	98	211	13:29:49.733		DMS:	: *AUTOSTOP	P7, TRACK 3, FWD, TIC * 202.06 +/-	2R0	4	0	4,584,672:59:2	
49	98	211	13:29:50.933		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 202.12 +/-	2R0	4	0	4,584,672:61:0	
50	98	211	13:37:07.600		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 202.12 +/-	2R0	4	0	4,584,679:79:0	
51	98	211	13:37:07.600	465KC6A	6DMSC	P7,3	DMS Control Tape P/B 7.68kbps	2R0	4	0	4,584,679:79:0	
52	98	211	13:37:14.266		DMS:	: *RUNUP	P7, TRACK *3, FWD, TIC 202.12 +/-	2R0	4	0	4,584,679:89:0	
53	98	211	13:37:15.666		DMS:	: *P_SLEW	P7, TRACK 3, FWD, TIC * 202.24 +/-	2R0	4	0	4,584,680:00:1	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	98	211	13:37:15.666		DMS:	: *AT_SPD	P7, TRACK 3, FWD, TIC 202.24 +/-	2R0	4	0	4,584,680:00:1	
55	98	211	13:38:16.266		DMS:	**: *RUNDOWN**	P7, TRACK 3, FWD, TIC * 216.45 +/-	2R0	4	0	4,584,681:00:0	
56	98	211	13:38:16.266	465KC6B	6DMSC	RDY,3	DMS Control Tape stop	2R0	4	0	4,584,681:00:0	
57	98	211	13:38:17.466		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 216.51 +/-	2R0	4	0	4,584,681:01:8	
58	**98**	**211**	**13:39:50.000**	**16HNDARKCL01-**		**-----START------**		**2R0**	**4**	**0**	**: :**	
59	**98**	**211**	**13:40:04.933**	**20DA5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**260**	**4**	**0**	**4,584,682:72:0**	
60	**98**	**211**	**13:40:06.266**	**20DA5B**	**37MRL**		**Memory Realocate (software operates from R**	**260**	**4**	**0**	**4,584,682:74:0**	
61	**98**	**211**	**13:40:07.600**	**20DA6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**260**	**4**	**0**	**4,584,682:76:0**	
62	**98**	**211**	**13:40:17.600**	**20DA6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**260**	**4**	**0**	**4,584,683:00:0**	
63	**98**	**211**	**13:40:27.600**	**20DA5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,584,683:15:0**	
64	**98**	**211**	**13:40:47.600**	**20DA5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,584,683:45:0**	
65	**98**	**211**	**13:41:02.933**	**20DA4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,584,683:68:0**	
66	98	211	13:42:14.266	125DA	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	4,584,684:84:0	
67	**98**	**211**	**13:42:14.266**	**125DA4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R0**	**4**	**0**	**4,584,684:84:0**	
68	**98**	**211**	**13:43:14.933**	**125DA4B**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R0**	**4**	**0**	**4,584,685:84:0**	
69	98	211	13:43:14.933	125DA11A	NIMSINIT	GE	##### GROUP END INIT	2R0	4	0	4,584,685:84:0	
70	98	211	13:45:10.266		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 216.51 +/-	2R0	4	0	4,584,687:75:0	
71	98	211	13:45:10.266	175DA422A6A	6DMSC	R28,3	DMS Control	2R0	4	0	4,584,687:75:0	
72	98	211	13:45:16.266	127DA	NIMSTAB	GS	%%%%% GROUP START TAB	2R0	4	0	4,584,687:84:0	
73	**98**	**211**	**13:45:16.266**	**127DA4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,584,687:84:0**	
74	**98**	**211**	**13:45:16.933**	**127DA4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,584,687:85:0**	
75	98	211	13:45:16.933		DMS:	: *RUNUP	R28, TRACK *3, FWD, TIC 216.51 +/-	2R3	4	0	4,584,687:85:0	
76	98	211	13:45:20.266	175DA176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,584,687:90:0	
77	98	211	13:45:20.933		DMS:	**: *RECORD**	R28, TRACK 3, FWD, TIC * 218.01 +/-	2R3	4	0	4,584,688:00:0	
78	**98**	**211**	**13:45:20.933**	**16HNDARKCL01-**	**NIMPBK**	**301DE**	**DARK OBSERVATION**	**2R3**	**4**	**0**	**: :**	
79	98	211	13:45:20.933		DMS:	: *AT_SPD	R28, TRACK 3, FWD, TIC 218.01 +/-	2R3	4	0	4,584,688:00:0	
80	98	211	13:45:54.933	127DA11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,584,688:51:0	
81	**98**	**211**	**13:47:17.600**	**125DB4A**	**37IST**	**0,2,0,OFF,0,1,1**	**Gain State 4**	**4R3**	**4**	**0**	**4,584,689:84:0**	
82	98	211	13:47:17.600	125DB11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,584,689:84:0	
83	98	211	13:47:17.600	125DB	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,584,689:84:0	
84	**98**	**211**	**13:49:18.933**	**125DC4A**	**37IST**	**0,2,0,OFF,0,1,2**	**Gain State 3**	**3R3**	**4**	**0**	**4,584,691:84:0**	
85	98	211	13:49:18.933	125DC	NIMSINIT	GS	##### GROUP START INIT	3R3	4	0	4,584,691:84:0	
86	98	211	13:49:18.933	125DC11A	NIMSINIT	GE	##### GROUP END INIT	3R3	4	0	4,584,691:84:0	
87	98	211	13:51:20.266	125DD11A	NIMSINIT	GE	##### GROUP END INIT	3R3	4	0	4,584,693:84:0	
88	**98**	**211**	**13:51:20.266**	**125DD4A**	**37IST**	**0,2,0,OFF,0,1,3**	**Gain State 1**	**1R3**	**4**	**0**	**4,584,693:84:0**	
89	98	211	13:51:20.266	125DD	NIMSINIT	GS	##### GROUP START INIT	1R3	4	0	4,584,693:84:0	
90	**98**	**211**	**13:53:18.266**	**16HNDARKCL01-**	**NIMPBK**	**301ER**	**DARK OBSERVATION**	**1R3**	**4**	**0**	**: :**	
91	**98**	**211**	**13:53:25.600**	**16HNDARKCL01-**	**DESELC**	**300DE**	**DARK OBSERVATION**	**1R3**	**4**	**0**	**: :**	
92	**98**	**211**	**13:57:27.600**	**16HNDARKCL01-**	**DESELC**	**300ER**	**DARK OBSERVATION**	**1R3**	**4**	**0**	**: :**	
93	98	211	13:58:18.266		DMS:	**: *RUNDOWN**	R28, TRACK 3, FWD, TIC * 901.21 +/-	1R3	4	0	4,584,700:74:0	
94	98	211	13:58:18.266	175DA422A6B	6DMSC	RDY,0	DMS Control Tape stop	1R3	4	0	4,584,700:74:0	
95	98	211	13:58:19.466		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 901.51 +/-	1R3	4	0	4,584,700:75:8	
96	**98**	**211**	**14:00:00.000**	**16HNDARKCL01-**		**-----STOP-------**		**1R3**	**4**	**0**	**: :**	
97	**98**	**211**	**14:01:26.066**	**16NNCHOPOF02-**		**-----START------**		**1R3**	**4**	**0**	**: :**	
98	98	211	14:01:26.933	127DN	NIMSTAB	GS	%%%%% GROUP START TAB	1R3	4	0	4,584,703:84:0	
99	**98**	**211**	**14:01:26.933**	**127DN4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**1R0**	**4**	**0**	**4,584,703:84:0**	
100	**98**	**211**	**14:01:27.600**	**127DN4B**	**37ETB**	**04,C4,02,00,00**	**Loads wavelength edit table**	**1R0**	**4**	**0**	**4,584,703:85:0**	
101	98	211	14:02:05.600	127DN11A	NIMSTAB	GE	%%%%% GROUP END TAB	1R0	4	0	4,584,704:51:0	
102	98	211	14:03:28.266	125DN	NIMSINIT	GS	##### GROUP START INIT	1R0	4	0	4,584,705:84:0	
103	**98**	**211**	**14:03:28.266**	**125DN4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**160**	**4**	**0**	**4,584,705:84:0**	
104	**98**	**211**	**14:04:28.933**	**125DN4B**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**1O0**	**4**	**0**	**4,584,706:84:0**	
105	98	211	14:05:29.600	125DN11A	NIMSINIT	GE	##### GROUP END INIT	1O0	4	0	4,584,707:84:0	
106	**98**	**211**	**14:05:29.600**	**125DN4C**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**1O0**	**4**	**0**	**4,584,707:84:0**	
107	**98**	**211**	**14:05:30.000**	**16NNCHOPOF02-**		**-----STOP-------**		**1O0**	**4**	**0**	**: :**	
108	98	211	14:07:35.600		DMS:	: READY	RDY, TRACK *2, *REV, TIC 901.51 +/-	1O0	4	0	4,584,710:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	98	211	14:07:35.600	465KD6A	6DMSC	RDY,2	DMS Control Tape stop	1O0	4	0	4,584,710:00:0	
110	98	211	14:10:08.266	20WA4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	4,584,712:47:0	
111	98	211	14:10:58.266	20WA4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,584,713:31:0	
112	98	211	14:12:38.933	176SA6A	6TMREC	**IPB**	INITIATE PLAYBACK (PB CONTROL) Record Mod	1O0	4	0	4,584,715:00:0	
113	98	211	20:47:14.266	488AD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,585,105:23:0	
114	98	211	21:57:38.266	488AD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,585,174:80:0	
115	98	211	22:14:42.266	488AD6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,585,191:69:0	
116	98	211	23:15:10.266	488AD6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,585,251:51:0	
117	98	211	23:44:16.933	488AD6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,585,280:32:0	
118	98	211	23:50:42.266	488AE6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,585,286:64:0	
119	98	212	05:12:50.266	488AE6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,585,605:27:0	
120	98	212	05:34:10.266	488AE6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,585,626:36:0	
121	98	212	06:29:38.266	488AF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,585,681:23:0	
122	98	212	06:31:32.933	488AF6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,585,683:13:0	
123	98	212	07:03:22.266	488AF6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,585,714:56:0	
124	98	212	11:29:47.533	488AF6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,585,978:10:0	
125	98	212	11:32:34.200	488AF6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,585,980:78:0	
126	98	212	11:37:52.866	488AG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,585,986:10:0	
127	98	212	12:35:07.533	488AG6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,586,042:66:0	
128	98	212	12:55:46.200	488AG6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,586,063:13:0	
129	98	212	13:05:56.866	488AG6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,586,073:19:0	
130	98	212	14:53:00.200	488AG6E	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	1O0	4	0	4,586,179:08:0	
131	98	212	14:57:58.200	176SB6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	4,586,184:00:0	
132	98	212	15:09:00.200	20AA4C	7STAT	17.45,269.0167,2	Stator inertial point	1O0	4	0	4,586,194:83:0	
133	98	212	15:30:00.200	474AA416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	1O0	4	0	4,586,215:62:0	
134	98	212	15:32:00.200	474AA416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	4,586,217:60:0	
135	98	212	15:32:20.200	20AA4D	7STAT	17.45,269.0167,2	Stator inertial point	1O0	4	0	4,586,217:90:0	
136	98	212	15:36:14.200	474AA416A4E	7BURN	69.016697,21.599	ALERT -- Thruster fire	1O0	4	0	4,586,221:77:0	
137	98	212	16:35:32.200	20AA4F	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,586,280:45:0	
138	98	212	16:40:24.200	20AA4G	**7MODE**	**CRU**	AACS CRUISE MODE	1O0	4	0	4,586,285:28:0	
139	98	212	17:59:56.200	20AB4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	4,586,363:88:0	
140	98	212	18:00:46.200	20AB4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,586,364:72:0	
141	98	212	18:01:59.533	176AA6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	4,586,366:00:0	
142	98	212	20:01:00.200	488AH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,586,483:64:0	
143	98	212	20:01:18.200	176SC6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	4,586,484:00:0	
144	98	212	20:53:38.200	488AH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,586,535:69:0	
145	98	212	21:53:22.200	488AH6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,586,594:76:0	
146	98	212	22:14:42.200	488AH6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,586,615:85:0	
147	98	212	22:55:05.533	488AH6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,586,655:80:0	
148	98	212	23:39:11.533	488AI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,586,699:45:0	
149	98	212	23:40:02.200	488AI6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,586,700:30:0	
150	98	213	05:12:50.200	488AI6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,587,029:43:0	
151	98	213	05:40:34.200	488AJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,587,056:82:0	
152	98	213	06:31:27.533	488AJ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,587,107:21:0	
153	98	213	06:58:17.533	488AJ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,587,133:70:0	
154	98	213	08:05:38.200	488AJ6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,587,200:34:0	
155	98	213	11:26:22.200	488AJ6E	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,587,398:82:0	
156	98	213	11:28:18.200	488AK6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,587,400:74:0	
157	98	213	11:37:04.200	488AK6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,587,409:44:0	
158	98	213	12:40:50.200	488AK6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,587,472:50:0	
159	98	213	20:42:58.133	488AL6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,587,949:35:0	
160	98	213	20:55:16.800	488AL6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,587,961:51:0	
161	98	214	11:32:08.133	488AM6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,588,828:71:0	
162	98	214	12:36:34.133	488AM6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,588,892:46:0	
163	98	214	20:38:42.133	488AN6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,589,369:31:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	98	214	21:46:58.133	488AN6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,589,436:78:0	
165	98	214	21:53:22.133	488AN6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	1O0	4	0	4,589,443:17:0	
166	98	214	21:54:06.800	488AN6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	1O0	4	0	4,589,443:84:0	
167	98	214	22:14:42.133	488AN6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,589,464:26:0	
168	98	215	00:00:00.133	481UC4A	7VECT		Inert vect update UTC	1O0	4	0	4,589,568:39:0	
169	98	215	11:28:06.733	488AO6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,590,248:89:0	
170	98	215	12:21:38.066	488AO6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,590,301:83:0	
171	98	215	12:26:17.400	488AO6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,590,306:47:0	
172	98	215	12:53:07.400	488AO6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,590,333:05:0	
173	98	215	13:35:12.066	31OB6B	6MROH	12	read from LLM1A12,2282,0,A2	1O0	4	0	4,590,374:61:0	
174	98	215	14:02:42.066	31OB6E	6MROH	12	read from LLM1A12,2282,0,A2	1O0	4	0	4,590,401:79:0	
175	98	215	20:42:58.066	488AP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,590,797:67:0	
176	98	215	20:59:02.733	488AP6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,590,813:58:0	
177	98	215	21:06:26.066	488AP6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,590,820:86:0	
178	98	216	11:22:18.000	488AQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,591,667:37:0	
179	98	216	12:21:38.000	488AQ6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,591,726:08:0	
180	98	216	16:07:28.000	488AQ6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,591,949:40:0	
181	98	216	16:09:54.000	488AQ6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,591,951:77:0	
182	98	216	16:11:34.000	488AQ6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,591,953:45:0	
183	98	216	16:26:24.000	488AR6A	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,591,968:15:0	
184	98	216	16:26:58.000	488AR6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,591,968:66:0	
185	98	217	11:17:22.000	488AS6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,593,086:64:0	
186	98	217	12:15:14.000	488AS6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,593,143:85:0	
187	98	217	15:37:36.000	488AS6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,593,344:07:0	
188	98	217	15:40:02.000	488AS6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,593,346:44:0	
189	98	217	15:41:42.000	488AS6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,593,348:12:0	
190	98	217	17:07:30.000	488AT6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,593,432:90:0	
191	98	217	20:32:17.933	488AT6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,593,635:49:0	
192	98	217	21:32:01.933	488AT6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,593,694:56:0	
193	98	217	21:38:25.933	488AT6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,593,700:86:0	
194	98	217	21:41:25.266	488AT6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,593,703:82:0	
195	98	217	21:51:13.933	488AU6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,593,713:55:0	
196	98	218	11:13:20.600	488AV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,594,506:82:0	
197	98	218	12:06:41.933	488AV6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,594,559:61:0	
198	98	218	12:16:03.933	488AV6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,594,568:85:0	
199	98	218	12:42:53.266	488AV6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,594,595:42:0	
200	98	218	20:38:41.933	488AW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,595,066:04:0	
201	98	218	21:32:01.933	488AW6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	1O0	4	0	4,595,118:72:0	
202	98	218	21:33:45.266	488AW6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	1O0	4	0	4,595,120:45:0	
203	98	218	21:42:41.933	488AW6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	1O0	4	0	4,595,129:31:0	
204	98	218	21:57:37.933	488AW6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,595,144:10:0	
205	98	219	11:07:31.200	488AX6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,595,925:29:0	
206	98	219	12:06:41.866	488AX6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,595,983:77:0	
207	98	219	15:03:27.866	488AX6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,596,158:61:0	
208	98	219	15:05:53.866	488AX6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,596,161:07:0	
209	98	219	15:07:33.866	488AX6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,596,162:66:0	
210	98	219	17:22:25.866	488AY6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,596,296:10:0	
211	98	219	20:23:45.866	488AY6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,596,475:41:0	
212	98	219	20:39:55.866	488AY6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,596,491:40:0	
213	98	219	20:42:57.866	488AY6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,596,494:40:0	
214	98	220	21:30:17.133	488AZ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,597,965:38:0	
215	98	220	21:40:33.800	488AZ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,597,975:53:0	
216	98	220	22:39:29.800	488AZ6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,598,033:79:0	
217	98	220	23:01:37.800	488AZ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,598,055:69:0	
218	98	220	23:06:56.466	488AZ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,598,061:01:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	98	221	05:53:21.800	488BA6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,598,462:88:0	
220	98	221	07:08:01.800	488BA6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,598,536:74:0	
221	98	221	07:26:40.466	488BA6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,598,555:23:0	
222	98	221	07:35:45.800	488BA6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,598,564:22:0	
223	98	221	11:02:40.466	488BA6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,598,768:80:0	
224	98	221	11:56:01.800	488BB6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,598,821:59:0	
225	98	221	14:44:15.800	488BB6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,598,988:03:0	
226	98	221	14:46:41.800	488BB6C	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,598,990:40:0	
227	98	221	14:48:21.800	488BB6D	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,598,992:08:0	
228	98	221	17:28:49.733	488BB6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,599,150:72:0	
229	98	221	17:57:21.066	176ST6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	4,599,179:00:0	
230	98	221	18:01:59.733	20UQ4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,599,183:54:0	
231	98	221	18:02:59.733	20UQ4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	1O0	4	0	4,599,184:53:0	
232	98	221	18:04:59.733	20UQ4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	4,599,186:51:0	
233	98	221	18:10:29.733	20UQ4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	1O0	4	0	4,599,192:00:0	
234	98	221	18:10:30.400	20UQ4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	1O0	4	0	4,599,192:01:0	
235	98	221	18:10:50.400	20UQ4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	1O0	4	0	4,599,192:31:0	
236	98	221	18:10:51.066	20UQ4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	1O0	4	0	4,599,192:32:0	
237	98	221	18:11:11.066	20UQ4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	1O0	4	0	4,599,192:62:0	
238	98	221	18:11:11.733	20UQ4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	1O0	4	0	4,599,192:63:0	
239	98	221	18:11:21.733	20UQ4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	1O0	4	0	4,599,192:78:0	
240	98	221	18:11:22.400	20UQ4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	1O0	4	0	4,599,192:79:0	
241	98	221	18:11:32.400	20UQ4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	1O0	4	0	4,599,193:03:0	
242	98	221	18:11:33.066	20UQ4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	1O0	4	0	4,599,193:04:0	
243	98	221	18:13:19.733	20UQ4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	1O0	4	0	4,599,194:73:0	
244	98	221	18:13:20.400	20UQ4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	1O0	4	0	4,599,194:74:0	
245	98	221	18:13:40.400	20UQ4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	1O0	4	0	4,599,195:13:0	
246	98	221	18:13:41.066	20UQ4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	1O0	4	0	4,599,195:14:0	
247	98	221	18:14:01.066	20UQ4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	1O0	4	0	4,599,195:44:0	
248	98	221	18:14:01.733	20UQ4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	1O0	4	0	4,599,195:45:0	
249	98	221	18:14:11.733	20UQ4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	1O0	4	0	4,599,195:60:0	
250	98	221	18:14:12.400	20UQ4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	1O0	4	0	4,599,195:61:0	
251	98	221	18:14:22.400	20UQ4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	1O0	4	0	4,599,195:76:0	
252	98	221	18:14:23.066	20UQ4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	1O0	4	0	4,599,195:77:0	
253	98	221	18:15:19.733	20UQ4Z	**7MODE**	**CRU**	AACS CRUISE MODE	1O0	4	0	4,599,196:71:0	
254	98	221	18:40:03.733	20UJ4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	4,599,221:22:0	
255	98	221	18:40:53.733	20UJ4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,599,222:06:0	
256	98	221	18:42:51.066	176SU6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	4,599,224:00:0	
257	98	221	20:17:21.733	488BC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,599,317:43:0	
258	98	221	21:19:13.733	488BC6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,599,378:60:0	
259	98	221	21:26:43.066	488BC6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,599,386:06:0	
260	98	221	21:36:17.733	488BC6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,599,395:49:0	
261	98	222	10:57:44.400	488BD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,600,188:16:0	
262	98	222	11:56:01.733	488BD6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,600,245:75:0	
263	98	222	14:48:31.733	488BD6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,600,416:39:0	
264	98	222	14:50:57.733	488BD6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,600,418:76:0	
265	98	222	14:52:37.733	488BD6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,600,420:44:0	
266	98	222	17:18:09.733	488BE6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,600,564:38:0	
267	98	222	20:13:05.733	488BE6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,600,737:39:0	
268	98	222	21:00:49.733	488BE6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,600,784:58:0	
269	98	222	21:04:17.733	488BE6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,600,788:06:0	
270	98	223	10:53:41.666	488BF6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,601,608:32:0	
271	98	223	11:41:05.666	488BF6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,601,655:21:0	
272	98	223	11:50:41.666	488BF6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,601,664:66:0	
273	98	223	12:17:31.000	488BF6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,601,691:23:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	98	223	15:45:59.666	488BF6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,601,897	40:0
275	98	224	10:47:52.933	488BG6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,603,026	71:0
276	98	224	11:45:21.600	488BG6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,603,083	57:0
277	98	224	15:03:27.600	488BG6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,603,279	50:0
278	98	224	15:05:53.600	488BG6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,603,281	87:0
279	98	224	15:07:33.600	488BG6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	1O0	4	0	4,603,283	55:0
280	98	224	16:44:01.600	488BH6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,603,379	01:0
281	98	224	20:04:33.600	488BH6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,603,577	31:0
282	98	224	21:08:33.600	488BH6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,603,640	58:0
283	98	224	21:13:00.933	488BH6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,603,645	04:0
284	98	224	21:17:05.600	488BH6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	1O0	4	0	4,603,649	07:0
285	98	224	21:32:01.600	488BI6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,603,663	77:0
286	98	225	10:42:56.933	488BJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,604,446	07:0
287	98	225	11:45:21.600	488BJ6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,604,507	73:0
288	98	225	19:58:09.533	488BK6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,604,995	17:0
289	98	225	21:04:17.533	488BK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,605,060	54:0
290	98	225	21:10:33.533	488BK6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,605,066	72:0
291	98	225	21:12:49.533	488BK6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	1O0	4	0	4,605,069	03:0
292	98	225	21:23:29.533	488BK6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,605,079	53:0
293	98	226	10:38:54.866	488BL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,605,866	24:0
294	98	226	11:30:25.533	488BL6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,605,917	19:0
295	98	226	11:40:29.533	488BL6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,605,927	15:0
296	98	226	12:07:19.533	488BL6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,605,953	64:0
297	98	226	20:04:33.533	488BM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,606,425	63:0
298	98	226	20:34:49.533	488BM6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,606,455	57:0
299	98	226	20:40:49.533	488BM6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,606,461	51:0
300	98	227	10:38:05.466	488BN6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,607,289	57:0
301	98	227	11:41:05.466	488BN6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,607,351	85:0
302	98	227	19:49:37.466	488BO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,607,835	09:0
303	98	227	20:53:37.466	488BO6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,607,898	36:0
304	98	227	21:02:07.466	488BO6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,607,906	73:0
305	98	227	21:10:41.466	488BO6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,607,915	25:0
306	98	228	10:34:02.733	488BP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,608,709	73:0
307	98	228	11:26:09.400	488BP6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,608,761	31:0
308	98	228	11:30:21.400	488BP6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,608,765	45:0
309	98	228	11:57:11.400	488BP6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,608,792	03:0
310	98	228	19:49:37.400	488BQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,609,259	25:0
311	98	228	20:49:21.400	488BQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,609,318	32:0
312	98	228	20:55:44.066	488BQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,609,324	60:0
313	98	228	20:57:53.400	488BQ6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	1O0	4	0	4,609,326	72:0
314	98	228	21:08:33.400	488BQ6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,609,337	31:0
315	98	229	10:28:12.066	488BR6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,610,128	18:0
316	98	229	11:36:49.400	488BR6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,610,196	06:0
317	98	229	17:23:00.000	488BS6A	6TMSED	NORM,AH7	Sci, Eng, and D/L Chan	1O0	4	0	4,610,538	40:0
318	98	229	17:27:36.666	176TF6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	4,610,543	00:0
319	98	229	17:36:00.000	20WC4C	7STAT	17.45,175.70,3.1	Stator inertial point	1O0	4	0	4,610,551	27:0
320	98	229	17:55:02.000	490UA412A4B	**7MODE**	**INT**	AACS INERTIAL MODE	1O0	4	0	4,610,570	11:0
321	98	229	18:00:00.000	490UA412A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	4,610,575	03:0
322	98	229	18:00:20.000	20WC4D	7STAT	17.45,175.70,3.1	Stator inertial point	1O0	4	0	4,610,575	33:0
323	98	229	18:04:10.000	490UA412A4E	7VECT		Inert vect update UTC	1O0	4	0	4,610,579	14:0
324	98	229	18:04:14.000	490UA412A4F	7TURN	2,RTH	ALERT Thruster	1O0	4	0	4,610,579	20:0
325	98	229	18:08:02.000	490UA412A406A4A	7STAR	16,217,100.73	Star catalog update	1O0	4	0	4,610,582	89:0
326	98	229	18:08:04.000	490UA412A406A4B	7STAR	2,178,256.88	Star catalog update	1O0	4	0	4,610,583	01:0
327	98	229	18:08:06.000	490UA412A406A4C	7STAR	3,111,99.056999,	Star catalog update	1O0	4	0	4,610,583	04:0
328	98	229	18:08:08.000	490UA412A406A4D	7STAR	4,0,0.0,0.0	Star catalog update	1O0	4	0	4,610,583	07:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	98	229	18:08:10.000	490UA412A406A4E	7STAR	5,0,0.0,0.0	Star catalog update	1O0	4	0	4,610,583	10:0
330	98	229	18:08:12.000	490UA412A406A4F	7STAR	6,0,0.0,0.0	Star catalog update	1O0	4	0	4,610,583	13:0
331	98	229	18:18:06.000	20WC4F	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,610,592	85:0
332	98	229	18:26:10.000	490UA412A4G	**7MODE**	**CRU**	AACS CRUISE MODE	1O0	4	0	4,610,600	83:0
333	98	229	19:28:17.333	488BS6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	1O0	4	0	4,610,662	32:0
334	98	229	19:33:59.333	432ND431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	1O0	4	0	4,610,667	90:0
335	98	229	19:34:00.000	432ND6A	6RTSL1		R/T Select of DDS and	1O0	4	0	4,610,668	00:0
336	98	229	19:55:00.000	488BS6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,610,688	70:0
337	98	229	20:00:04.000	20TA4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	4,610,693	71:0
338	98	229	20:00:54.000	20TA4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,610,694	55:0
339	98	229	20:02:18.666	176TG6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	4,610,696	00:0
340	98	229	20:42:57.333	488BS6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,610,736	18:0
341	98	229	21:06:25.333	488BS6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,610,759	37:0
342	98	229	21:58:53.333	488BT6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,610,811	27:0
343	98	229	22:27:59.333	488BT6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,610,840	07:0
344	98	229	22:36:01.333	488BT6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,610,848	02:0
345	98	230	04:13:05.333	488BU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,611,181	35:0
346	98	230	05:17:05.333	488BU6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,611,244	62:0
347	98	230	05:20:14.666	488BU6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,611,247	73:0
348	98	230	05:52:04.000	488BU6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,611,279	25:0
349	98	230	10:16:25.333	488BV6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,611,540	66:0
350	98	230	10:23:16.000	488BV6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,611,547	45:0
351	98	230	11:25:13.333	488BV6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,611,608	70:0
352	98	230	11:45:21.333	488BV6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,611,628	62:0
353	98	230	11:49:56.000	488BV6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,611,633	19:0
354	98	230	15:27:22.666	488BW6A	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,611,848	24:0
355	98	230	15:29:21.333	488BW6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,611,850	20:0
356	98	230	20:44:11.333	488BW6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,612,161	54:0
357	98	230	21:21:21.333	488BW6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,612,198	32:0
358	98	231	03:53:53.266	488BX6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,612,586	52:0
359	98	231	04:15:13.266	488BX6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,612,607	61:0
360	98	231	05:02:09.266	488BX6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,612,654	08:0
361	98	231	05:20:11.933	488BX6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,612,671	85:0
362	98	231	05:47:01.266	488BX6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,612,698	42:0
363	98	231	10:11:29.933	488BY6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,612,960	03:0
364	98	231	10:18:19.933	488BY6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,612,966	72:0
365	98	231	11:20:10.600	488BY6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,613,027	87:0
366	98	231	11:41:05.266	488BY6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,613,048	58:0
367	98	231	11:45:08.600	488BY6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,613,052	59:0
368	98	231	19:24:01.266	488BZ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,613,506	44:0
369	98	231	20:34:25.266	488BZ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,613,576	10:0
370	98	231	21:17:05.266	488BZ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,613,618	28:0
371	98	232	01:31:32.600	488CA6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,613,869	88:0
372	98	232	10:13:23.200	488CB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,614,386	07:0
373	98	232	11:26:09.200	488CB6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,614,458	04:0
374	98	232	19:13:21.200	488CC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,614,920	10:0
375	98	232	20:34:25.200	488CC6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,615,000	26:0
376	98	232	20:42:26.533	488CC6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,615,008	20:0
377	98	232	20:51:29.200	488CC6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,615,017	15:0
378	98	232	22:14:18.533	488CC6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,615,099	07:0
379	98	232	22:27:29.200	488CD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,615,112	10:0
380	98	232	23:25:04.533	488CD6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,615,169	06:0
381	98	232	23:51:54.533	488CD6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,615,195	55:0
382	98	233	03:49:37.200	488CD6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,615,430	64:0
383	98	233	04:21:37.200	488CD6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,615,462	32:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	98	233	05:10:04.533	488CE6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,615,510	25:0
385	98	233	05:36:54.533	488CE6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,615,536	74:0
386	98	233	07:46:25.200	488CE6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,615,664	82:0
387	98	233	10:02:52.533	488CE6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,615,799	78:0
388	98	233	10:05:05.200	488CE6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,615,802	04:0
389	98	233	10:08:27.200	488CF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,615,805	34:0
390	98	233	11:26:09.200	488CF6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,615,882	20:0
391	98	233	19:04:49.133	488CG6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,616,335	77:0
392	98	233	20:23:45.133	488CG6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,616,413	83:0
393	98	233	20:47:13.133	488CG6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,616,437	11:0
394	98	233	21:43:38.466	488CG6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,616,492	84:0
395	98	233	22:12:44.466	488CG6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,616,521	64:0
396	98	233	22:21:05.133	488CH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,616,529	87:0
397	98	234	00:01:09.800	488CH6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,616,628	85:0
398	98	234	00:03:29.133	488CH6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,616,631	21:0
399	98	234	10:04:23.800	488CI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,617,225	49:0
400	98	234	10:17:53.133	488CI6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,617,238	80:0
401	98	234	11:32:33.133	488CI6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,617,312	66:0
402	98	234	17:56:02.466	176SN6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	4,617,692	00:0
403	98	234	18:02:06.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 901.51 +/-	1O0	4	0	4,617,698	00:0
404	98	234	18:02:06.466		DMS:	: *SLEW-TIC	P7, TRACK *1, *FWD, TIC 901.51 +/-	1O0	4	0	4,617,698	00:0
405	98	234	18:02:06.466	465SA6A	6DMST	5000	DMS Slew to TIC	1O0	4	0	4,617,698	00:0
406	98	234	18:02:13.133		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 901.51 +/-	1O0	4	0	4,617,698	10:0
407	98	234	18:02:14.533		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 901.63 +/-	1O0	4	0	4,617,698	12:1
408	98	234	18:54:09.133	488CJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,617,749	43:0
409	98	234	20:19:29.133	488CJ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,617,833	79:0
410	98	234	21:17:05.133	488CJ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,617,890	76:0
411	98	234	22:53:31.200		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *4997.94 +/-	1O0	4	0	4,617,986	19:2
412	98	234	22:53:32.400		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	1O0	4	0	4,617,986	21:0
413	98	234	23:55:47.733	465SB6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	1O0	4	0	4,618,047	73:0
414	98	234	23:55:47.733		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	1O0	4	0	4,618,047	73:0
415	98	234	23:55:49.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	1O0	4	0	4,618,047	75:1
416	98	234	23:55:54.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	1O0	4	0	4,618,047	83:0
417	98	234	23:55:55.600		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	1O0	4	0	4,618,047	84:8
418	98	234	23:55:59.466		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	1O0	4	0	4,618,047	90:6
419	98	234	23:55:59.466		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	1O0	4	0	4,618,047	90:6
420	98	235	00:21:39.733		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 255.79 +/-	1O0	4	0	4,618,073	35:0
421	98	235	00:21:39.733	465SB6B	6DMSC	RDY,4	DMS Control Tape stop	1O0	4	0	4,618,073	35:0
422	98	235	00:21:40.933		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	1O0	4	0	4,618,073	36:8
423	98	235	02:20:28.400	465SC6A	6DTRN	CMD,6DTRN,465SC6	DMS TRACK TURNAROUND	1O0	4	0	4,618,190	81:0
424	98	235	02:20:28.400		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	1O0	4	0	4,618,190	81:0
425	98	235	02:20:28.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	1O0	4	0	4,618,190	81:0
426	98	235	02:20:29.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	1O0	4	0	4,618,190	83:1
427	98	235	02:20:35.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	1O0	4	0	4,618,191	00:0
428	98	235	02:20:36.266		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	1O0	4	0	4,618,191	01:8
429	98	235	02:20:37.666		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	1O0	4	0	4,618,191	03:9
430	98	235	02:24:38.333		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	1O0	4	0	4,618,195	00:9
431	98	235	02:24:39.533		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	1O0	4	0	4,618,195	02:7
432	98	235	02:24:39.533		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	1O0	4	0	4,618,195	02:7
433	98	235	02:24:40.933		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	1O0	4	0	4,618,195	04:8
434	98	235	02:24:52.933		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	1O0	4	0	4,618,195	22:8
435	98	235	02:24:54.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	1O0	4	0	4,618,195	24:6
436	98	235	02:30:31.066		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	1O0	4	0	4,618,200	75:0
437	98	235	02:30:31.066	465SD6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	1O0	4	0	4,618,200	75:0
438	98	235	02:30:37.733		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	1O0	4	0	4,618,200	85:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	98	235	02:30:41.600		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	1O0	4	0	4,618,200:90:8	
440	98	235	02:30:41.600		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	1O0	4	0	4,618,200:90:8	
441	98	235	03:02:25.066		DMS:	**: *RUNDOWN**	P100, TRACK 1, FWD, TIC *6063.01 +/-	1O0	4	0	4,618,232:34:0	
442	98	235	03:02:25.066	465SD6B	6DMSC	RDY,1	DMS Control Tape stop	1O0	4	0	4,618,232:34:0	
443	98	235	03:02:26.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	1O0	4	0	4,618,232:35:8	
444	98	235	03:18:01.066	465SE6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	1O0	4	0	4,618,247:73:0	
445	98	235	03:18:01.066		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	1O0	4	0	4,618,247:73:0	
446	98	235	03:18:02.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	1O0	4	0	4,618,247:75:1	
447	98	235	03:18:07.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	1O0	4	0	4,618,247:83:0	
448	98	235	03:18:08.933		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	1O0	4	0	4,618,247:84:8	
449	98	235	03:18:12.800		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	1O0	4	0	4,618,247:90:6	
450	98	235	03:18:12.800		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	1O0	4	0	4,618,247:90:6	
451	98	235	03:43:13.066	488CK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,618,272:66:0	
452	98	235	03:50:09.066	465SF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	1O0	4	0	4,618,279:53:0	
453	98	235	03:50:09.066		DMS:	**: *RUNDOWN**	P100, TRACK 2, REV, TIC * 164.96 +/-	1O0	4	0	4,618,279:53:0	
454	98	235	03:50:10.266		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	1O0	4	0	4,618,279:54:8	
455	98	235	03:50:14.133		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	1O0	4	0	4,618,279:60:6	
456	98	235	03:50:14.133		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	1O0	4	0	4,618,279:60:6	
457	98	235	04:17:21.066	488CK6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,618,306:44:0	
458	98	235	04:22:09.733		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC *6062.38 +/-	1O0	4	0	4,618,311:22:0	
459	98	235	04:22:09.733	465SF6B	6DMSC	RDY,3	DMS Control Tape stop	1O0	4	0	4,618,311:22:0	
460	98	235	04:22:10.933		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	1O0	4	0	4,618,311:23:8	
461	98	235	04:36:53.066	465SG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	1O0	4	0	4,618,325:73:0	
462	98	235	04:36:53.066		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	1O0	4	0	4,618,325:73:0	
463	98	235	04:36:54.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	1O0	4	0	4,618,325:75:1	
464	98	235	04:36:59.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	1O0	4	0	4,618,325:83:0	
465	98	235	04:37:00.933		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	1O0	4	0	4,618,325:84:8	
466	98	235	04:37:04.800		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	1O0	4	0	4,618,325:90:6	
467	98	235	04:37:04.800		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	1O0	4	0	4,618,325:90:6	
468	98	235	05:09:00.400		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 166.38 +/-	1O0	4	0	4,618,357:52:0	
469	98	235	05:09:00.400	465SH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	1O0	4	0	4,618,357:52:0	
470	98	235	05:09:01.600		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	1O0	4	0	4,618,357:53:8	
471	98	235	05:09:05.466		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	1O0	4	0	4,618,357:59:6	
472	98	235	05:09:05.466		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	1O0	4	0	4,618,357:59:6	
473	98	235	05:10:06.400	465SH6B	6DMSC	RDY,3	DMS Control Tape stop	1O0	4	0	4,618,358:60:0	
474	98	235	05:10:06.400		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC * 358.52 +/-	1O0	4	0	4,618,358:60:0	
475	98	235	05:10:07.600		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	1O0	4	0	4,618,358:61:8	
476	98	235	05:24:36.400		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	1O0	4	0	4,618,373:00:0	
477	98	235	05:24:36.400	465SI6A	6DMSC	RDY,4	DMS Control Tape stop	1O0	4	0	4,618,373:00:0	
478	98	235	05:25:30.400		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	1O0	4	0	4,618,373:81:0	
479	98	235	05:25:30.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	1O0	4	0	4,618,373:81:0	
480	98	235	05:25:30.400	465SJ6A	6DTRN	CMD,6DTRN,465SJ6	DMS TRACK TURNAROUND	1O0	4	0	4,618,373:81:0	
481	98	235	05:25:31.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	1O0	4	0	4,618,373:83:1	
482	98	235	05:25:37.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	1O0	4	0	4,618,374:00:0	
483	98	235	05:25:38.266		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	1O0	4	0	4,618,374:01:8	
484	98	235	05:25:39.666		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	1O0	4	0	4,618,374:03:9	
485	98	235	05:37:05.466		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	1O0	4	0	4,618,385:31:6	
486	98	235	05:37:06.666		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	1O0	4	0	4,618,385:33:4	
487	98	235	05:37:06.666		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	1O0	4	0	4,618,385:33:4	
488	98	235	05:37:08.066		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	1O0	4	0	4,618,385:35:5	
489	98	235	05:37:20.066		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	1O0	4	0	4,618,385:53:5	
490	98	235	05:37:21.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	1O0	4	0	4,618,385:55:3	
491	98	235	05:55:03.733	20UG4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	4,618,403:11:0	
492	98	235	05:55:53.733	20UG4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,618,403:86:0	
493	98	235	05:57:58.400	176SO6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	4,618,406:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	98	235	09:51:25.733	488CL6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,618,636	81:0
495	98	235	09:54:25.066	488CL6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,618,639	77:0
496	98	235	09:59:26.400	488CL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,618,644	74:0
497	98	235	10:11:29.066	488CL6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,618,656	66:0
498	98	235	11:36:49.066	488CL6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,618,741	11:0
499	98	235	18:39:13.066	488CM6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,619,158	80:0
500	98	235	20:13:05.066	488CM6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,619,251	65:0
501	98	235	20:19:29.066	488CM6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,619,258	04:0
502	98	235	20:42:57.066	488CM6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,619,281	23:0
503	98	235	21:33:32.400	488CM6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,619,331	26:0
504	98	235	22:02:38.400	488CN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,619,360	06:0
505	98	235	22:42:25.066	488CN6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,619,399	37:0
506	98	236	03:34:41.066	488CN6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,619,688	42:0
507	98	236	03:56:01.066	488CN6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,619,709	51:0
508	98	236	04:53:31.733	488CO6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,619,766	40:0
509	98	236	05:14:57.000	488CO6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,619,787	57:0
510	98	236	05:24:32.333	488CO6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,619,797	10:0
511	98	236	09:51:29.000	488CO6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,620,061	11:0
512	98	236	09:54:25.000	488CO6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,620,064	02:0
513	98	236	09:59:30.333	488CP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,620,069	05:0
514	98	236	10:11:29.000	488CP6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,620,080	82:0
515	98	236	10:59:53.666	488CP6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,620,128	71:0
516	98	236	11:26:43.000	488CP6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,620,155	28:0
517	98	236	11:47:29.000	488CP6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,620,175	77:0
518	98	236	15:13:00.333	488CQ6A	6TMSED	NORM,AH7	Sci, Eng, and D/L Chan	1O0	4	0	4,620,379	10:0
519	98	236	15:17:57.000	176SD6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	4,620,384	00:0
520	98	236	15:29:00.333	20BA4C	7STAT	17.45,266.8195,1	Stator inertial point	1O0	4	0	4,620,394	85:0
521	98	236	15:50:00.333	474BB416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	1O0	4	0	4,620,415	64:0
522	98	236	15:52:00.333	474BB416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	4,620,417	62:0
523	98	236	15:52:20.333	20BA4D	7STAT	17.45,266.8195,1	Stator inertial point	1O0	4	0	4,620,418	01:0
524	98	236	15:56:14.333	474BB416A4E	7BURN	Z,266.8195,19.76	ALERT -- Thruster fire	1O0	4	0	4,620,421	79:0
525	98	236	16:08:15.000	20BA4F	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,620,433	68:0
526	98	236	16:14:07.000	20BA4G	**7MODE**	**CRU**	AACS CRUISE MODE	1O0	4	0	4,620,439	50:0
527	98	236	16:38:23.000	20BA4J	7STAT	17.45,266.8195,1	Stator inertial point	1O0	4	0	4,620,463	50:0
528	98	236	16:41:23.000	20BA4K	**7MODE**	**INT**	AACS INERTIAL MODE	1O0	4	0	4,620,466	47:0
529	98	236	16:43:23.666	474BB416A4G	7BURN	LAT,266.8195,19.	ALERT -- Thruster fire	1O0	4	0	4,620,468	46:0
530	98	236	16:55:28.333	20BA4M	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,620,480	41:0
531	98	236	17:00:20.333	20BA4N	**7MODE**	**CRU**	AACS CRUISE MODE	1O0	4	0	4,620,485	24:0
532	98	236	18:07:52.333	20BB4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	4,620,552	05:0
533	98	236	18:08:42.333	20BB4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,620,552	80:0
534	98	236	18:10:50.333	432BB431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	1O0	4	0	4,620,554	90:0
535	98	236	18:10:51.000	432BB6A	6RTSL1		R/T Select of DDS and	1O0	4	0	4,620,555	00:0
536	98	236	18:20:01.000	488CQ6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	1O0	4	0	4,620,564	06:0
537	98	236	20:08:49.000	488CQ6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	1O0	4	0	4,620,671	61:0
538	98	236	20:19:29.000	488CQ6D	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	1O0	4	0	4,620,682	20:0
539	98	236	20:42:57.000	488CQ6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	1O0	4	0	4,620,705	39:0
540	98	236	21:21:00.333	488CR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,620,743	06:0
541	98	236	21:21:57.000	176SE6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	4,620,744	00:0
542	98	236	21:33:28.333	488CR6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,620,755	36:0
543	98	236	22:02:34.333	488CR6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,620,784	16:0
544	98	236	22:57:21.000	488CR6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,620,838	32:0
545	98	237	03:34:41.000	488CS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,621,112	58:0
546	98	237	04:17:21.000	488CS6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,621,154	76:0
547	98	237	04:54:50.333	488CS6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,621,191	83:0
548	98	237	05:21:40.333	488CS6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,621,218	41:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	98	237	09:46:42.333	488CT6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,621,480	52:0
550	98	237	09:50:09.000	488CT6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,621,483	89:0
551	98	237	09:54:33.666	488CT6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,621,488	31:0
552	98	237	10:07:13.000	488CT6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,621,500	78:0
553	98	237	12:02:25.000	488CT6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,621,614	72:0
554	98	237	17:58:40.933	488CU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,621,967	13:0
555	98	237	20:04:32.933	488CU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,622,091	57:0
556	98	237	20:19:28.933	488CU6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	1O0	4	0	4,622,106	36:0
557	98	237	20:20:37.600	488CU6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	1O0	4	0	4,622,107	48:0
558	98	237	20:40:48.933	488CU6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,622,127	45:0
559	98	238	09:49:36.933	488CV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,622,907	57:0
560	98	238	10:02:56.933	488CV6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,622,920	74:0
561	98	238	12:17:20.933	488CV6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,623,053	67:0
562	98	238	17:28:48.933	488CW6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,623,361	71:0
563	98	238	19:53:52.933	488CW6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,623,505	23:0
564	98	238	20:08:48.933	488CW6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,623,520	02:0
565	98	238	20:36:32.866	488CW6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,623,547	41:0
566	98	238	21:23:22.200	488CW6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,623,593	69:0
567	98	238	21:52:28.866	488CX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,623,622	50:0
568	98	238	23:46:24.866	488CX6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,623,735	21:0
569	98	239	02:24:16.866	488CX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,623,891	33:0
570	98	239	05:00:32.200	488CY6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,624,045	82:0
571	98	239	09:44:39.533	488CY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,624,326	82:0
572	98	239	09:56:32.866	488CY6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,624,338	60:0
573	98	239	12:42:56.866	488CZ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,624,503	21:0
574	98	239	16:54:40.866	488CZ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,624,752	18:0
575	98	239	19:49:36.866	488DA6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,624,925	19:0
576	98	239	20:08:48.866	488DA6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,624,944	18:0
577	98	239	20:12:48.200	488DA6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,624,948	13:0
578	98	239	20:21:36.866	488DA6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,624,956	78:0
579	98	240	03:34:41.533	488DB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,625,385	16:0
580	98	240	04:17:20.800	488DB6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,625,427	33:0
581	98	240	09:31:50.133	488DB6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,625,738	36:0
582	98	240	09:35:12.800	488DC6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,625,741	67:0
583	98	240	09:39:42.800	488DC6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,625,746	17:0
584	98	240	09:52:16.800	488DC6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,625,758	56:0
585	98	240	13:21:20.800	488DC6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,625,965	35:0
586	98	240	14:47:02.800	488DC6E	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	4,626,050	13:0
587	98	240	14:48:48.800	488DD6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,626,051	81:0
588	98	240	20:06:30.133	488DD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,626,366	08:0
589	98	240	20:47:12.800	488DD6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,626,406	32:0
590	98	240	21:13:17.466	488DE6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,626,432	13:0
591	98	240	21:42:23.466	488DE6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,626,460	84:0
592	98	241	04:38:40.800	488DF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,626,872	58:0
593	98	241	05:54:39.466	488DF6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,626,947	71:0
594	98	241	06:21:29.466	488DF6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,626,974	29:0
595	98	241	09:26:30.133	488DF6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,627,157	27:0
596	98	241	09:28:48.800	488DF6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,627,159	53:0
597	98	241	09:34:44.800	488DG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,627,165	41:0
598	98	241	09:52:16.800	488DG6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,627,182	72:0
599	98	241	19:38:56.733	488DH6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,627,763	01:0
600	98	241	19:53:52.733	488DH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,627,777	71:0
601	98	241	20:13:04.733	488DH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,627,796	70:0
602	98	241	21:27:44.733	488DH6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,627,870	56:0
603	98	242	03:15:28.733	488DI6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,628,214	48:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	98	242	03:43:12.733	488DI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,628,241:87:0	
605	98	242	04:33:13.400	488DI6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,628,291:38:0	
606	98	242	05:02:19.400	488DI6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,628,320:18:0	
607	98	242	05:42:40.733	488DI6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,628,360:10:0	
608	98	242	09:24:32.733	488DJ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,628,579:49:0	
609	98	242	09:48:00.733	488DJ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,628,602:68:0	
610	98	242	10:34:35.400	488DJ6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,628,648:74:0	
611	98	242	11:01:25.400	488DJ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,628,675:32:0	
612	98	242	19:34:40.666	488DK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,629,182:88:0	
613	98	242	19:53:52.666	488DK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,629,201:87:0	
614	98	242	19:57:56.000	488DK6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,629,205:88:0	
615	98	242	20:06:40.666	488DK6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,629,214:56:0	
616	98	243	09:24:50.666	488DL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,630,004:01:0	
617	98	243	09:41:36.666	488DL6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,630,020:54:0	
618	98	243	17:57:28.000	176SV6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	4,630,511:00:0	
619	98	243	18:02:00.000	20UR4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,630,515:44:0	
620	98	243	18:03:00.000	20UR4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	1O0	4	0	4,630,516:43:0	
621	98	243	18:05:00.000	20UR4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	4,630,518:41:0	
622	98	243	18:10:30.000	20UR4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	1O0	4	0	4,630,523:81:0	
623	98	243	18:10:30.666	20UR4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	1O0	4	0	4,630,523:82:0	
624	98	243	18:10:50.666	20UR4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	1O0	4	0	4,630,524:21:0	
625	98	243	18:10:51.333	20UR4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	1O0	4	0	4,630,524:22:0	
626	98	243	18:11:11.333	20UR4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	1O0	4	0	4,630,524:52:0	
627	98	243	18:11:12.000	20UR4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	1O0	4	0	4,630,524:53:0	
628	98	243	18:11:22.000	20UR4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	1O0	4	0	4,630,524:68:0	
629	98	243	18:11:22.666	20UR4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	1O0	4	0	4,630,524:69:0	
630	98	243	18:11:32.666	20UR4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	1O0	4	0	4,630,524:84:0	
631	98	243	18:11:33.333	20UR4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	1O0	4	0	4,630,524:85:0	
632	98	243	18:13:20.000	20UR4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	1O0	4	0	4,630,526:63:0	
633	98	243	18:13:20.666	20UR4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	1O0	4	0	4,630,526:64:0	
634	98	243	18:13:40.666	20UR4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	1O0	4	0	4,630,527:03:0	
635	98	243	18:13:41.333	20UR4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	1O0	4	0	4,630,527:04:0	
636	98	243	18:14:01.333	20UR4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	1O0	4	0	4,630,527:34:0	
637	98	243	18:14:02.000	20UR4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	1O0	4	0	4,630,527:35:0	
638	98	243	18:14:12.000	20UR4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	1O0	4	0	4,630,527:50:0	
639	98	243	18:14:12.666	20UR4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	1O0	4	0	4,630,527:51:0	
640	98	243	18:14:22.666	20UR4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	1O0	4	0	4,630,527:66:0	
641	98	243	18:14:23.333	20UR4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	1O0	4	0	4,630,527:67:0	
642	98	243	18:15:20.000	20UR4Z	**7MODE**	**CRU**	AACS CRUISE MODE	1O0	4	0	4,630,528:61:0	
643	98	243	18:30:49.333	432NF431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	1O0	4	0	4,630,543:90:0	
644	98	243	18:30:50.000	432NF6A	6RTSL1		R/T Select of DDS and	1O0	4	0	4,630,544:00:0	
645	98	243	18:40:04.000	20UK4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	4,630,553:12:0	
646	98	243	18:40:54.000	20UK4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,630,553:87:0	
647	98	243	18:42:58.000	176SW6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	4,630,556:00:0	
648	98	243	19:30:24.666	488DM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,630,602:84:0	
649	98	243	19:49:36.666	488DM6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	4,630,621:83:0	
650	98	243	20:06:40.666	488DM6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,630,638:72:0	
651	98	243	21:00:32.666	41XE99A	**POWER**	**PWR MODE change**	Change to Calib/Decon Mode	1O0	4	0	4,630,692:06:0	
652	**98**	**243**	**21:00:32.666**	**16NNRCTRLT01-**		**-----START------**		**1O0**	**4**	**0**	**: :**	
653	**98**	**243**	**21:00:36.666**	**41XE3I**	**40T1PR**		**1 PCT Heater 1 OFF (primary relay)**	**1O0**	**4**	**0**	**4,630,692:12:0**	
654	**98**	**243**	**21:00:46.666**	**41XE3J**	**40T1PR**		**2 PCT Heater 1 OFF (primary relay)**	**1O0**	**4**	**0**	**4,630,692:27:0**	
655	**98**	**243**	**21:00:56.666**	**41XE3K**	**40T2R**		**1 PCT Heater 2 OFF**	**1O0**	**4**	**0**	**4,630,692:42:0**	
656	**98**	**243**	**21:01:06.666**	**41XE3L**	**40T2R**		**2 PCT Heater 2 OFF**	**1O0**	**4**	**0**	**4,630,692:57:0**	
657	98	243	21:11:36.000	176XU6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	4,630,703:00:0	
658	98	243	21:14:42.000	20XE4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	4,630,706:06:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	98	243	21:17:04.666	488DM6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,630,708:38:0	
660	98	243	21:18:48.666	20DX4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	4,630,710:12:0	
661	98	243	21:19:38.666	20DX4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	4,630,710:87:0	
662	98	243	21:21:42.666	176XV6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	4,630,713:00:0	
663	**98**	**243**	**21:22:43.333**	**185XE10A3A**	**40HRP**	**1**	**RCT Heater ON (primary relay)**	**1O0**	**4**	**0**	**4,630,714:00:0**	
664	**98**	**243**	**21:22:48.666**	**185XE10B3A**	**40HRP**	**2**	**RCT Heater ON (primary relay)**	**1O0**	**4**	**0**	**4,630,714:08:0**	
665	98	244	04:15:12.600	488DN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,631,121:87:0	
666	98	244	05:23:28.600	488DN6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,631,189:43:0	
667	98	244	09:11:37.266	488DN6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	4,631,415:10:0	
668	98	244	09:13:52.600	488DN6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	4,631,417:31:0	
669	98	244	09:17:29.933	125XE	NIMSINIT	GS	##### GROUP START INIT	1O0	4	0	4,631,420:84:0	
670	**98**	**244**	**09:17:29.933**	**125XE4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**160**	**4**	**0**	**4,631,420:84:0**	
671	**98**	**244**	**09:18:30.600**	**125XE4B**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**1R0**	**4**	**0**	**4,631,421:84:0**	
672	**98**	**244**	**09:19:31.266**	**125XE4C**	**37IST**	**0,2,0,OFF,0,1,3**	**Gain State 1**	**1R0**	**4**	**0**	**4,631,422:84:0**	
673	98	244	09:19:52.600	488DN6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1R0	4	0	4,631,423:25:0	
674	98	244	09:20:31.933	125XE11A	NIMSINIT	GE	##### GROUP END INIT	1R0	4	0	4,631,423:84:0	
675	**98**	**244**	**09:20:31.933**	**125XE4D**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**1R0**	**4**	**0**	**4,631,423:84:0**	
676	98	244	09:22:33.266	127XE	NIMSTAB	GS	%%%%% GROUP START TAB	1R0	4	0	4,631,425:84:0	
677	**98**	**244**	**09:22:33.266**	**127XE4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**1R3**	**4**	**0**	**4,631,425:84:0**	
678	**98**	**244**	**09:22:33.933**	**127XE4B**	**37ETB**	**0A,CA,18,03,FF,1**	**Loads wavelength edit table**	**1R3**	**4**	**0**	**4,631,425:85:0**	
679	98	244	09:22:41.933	127XE11A	NIMSTAB	GE	%%%%% GROUP END TAB	1R3	4	0	4,631,426:06:0	
680	98	244	09:26:40.600	176XE6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1R3	4	0	4,631,430:00:0	
681	98	244	09:32:44.600	192XE4A	**7CONE**	**17.0,119.7**	Check S/P Position	1R3	4	0	4,631,436:00:0	
682	**98**	**244**	**09:35:05.933**	**432XE6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**1R3**	**4**	**0**	**4,631,438:30:0**	
683	**98**	**244**	**09:36:05.266**	**432XF6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**1R3**	**4**	**0**	**4,631,439:28:0**	
684	98	244	09:37:20.600	488DO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1R3	4	0	4,631,440:50:0	
685	98	244	09:38:48.600	192XE4B	**7CONE**	**17.0,0.0**	Check S/P Position	1R3	4	0	4,631,442:00:0	
686	**98**	**244**	**09:41:09.933**	**432XU6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**1R3**	**4**	**0**	**4,631,444:30:0**	
687	**98**	**244**	**09:43:09.933**	**432XV6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**1R3**	**4**	**0**	**4,631,446:28:0**	
688	98	244	09:44:52.600	192XE4C	**7CONE**	**17.0,119.7**	Check S/P Position	1R3	4	0	4,631,448:00:0	
689	**98**	**244**	**09:46:53.933**	**185XE10C3A**	**40HRPR**	**1**	**RCT Heater OFF (primary relay)**	**1R3**	**4**	**0**	**4,631,450:00:0**	
690	**98**	**244**	**09:46:59.266**	**185XE10D3A**	**40HRPR**	**2**	**RCT Heater OFF (primary relay)**	**1R3**	**4**	**0**	**4,631,450:08:0**	
691	**98**	**244**	**09:47:13.933**	**432XW6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**1R3**	**4**	**0**	**4,631,450:30:0**	
692	**98**	**244**	**09:48:13.266**	**432XY6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**1R3**	**4**	**0**	**4,631,451:28:0**	
693	**98**	**244**	**09:49:51.266**	**125DX4A**	**37IST**	**0,2,0,OFF,0,1,1**	**Gain State 4**	**4R3**	**4**	**0**	**4,631,452:84:0**	
694	98	244	09:49:51.266	125DX	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,631,452:84:0	
695	98	244	09:49:51.266	125DX11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,631,452:84:0	
696	98	244	09:50:51.933	127DC	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	4,631,453:84:0	
697	**98**	**244**	**09:50:51.933**	**127DC4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**4R3**	**4**	**0**	**4,631,453:84:0**	
698	**98**	**244**	**09:50:52.600**	**127DC4B**	**37ETB**	**07,C7,31,80,00,0**	**Loads wavelength edit table**	**4R3**	**4**	**0**	**4,631,453:85:0**	
699	98	244	09:50:56.600	192XE4D	**7CONE**	**17.0,153.0**	Check S/P Position	4R3	4	0	4,631,454:00:0	
700	98	244	09:51:00.600	127DC11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	4,631,454:06:0	
701	**98**	**244**	**09:51:16.600**	**432DC6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**4R3**	**4**	**0**	**4,631,454:30:0**	
702	98	244	09:51:52.600	125DY	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,631,454:84:0	
703	98	244	09:51:52.600	125DY11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,631,454:84:0	
704	**98**	**244**	**09:51:52.600**	**125DY4A**	**37IST**	**0,2,1,OFF,1,0,1**	**OPCAL**	**4R3**	**4**	**0**	**4,631,454:84:0**	
705	98	244	09:53:53.933	125DE11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,631,456:84:0	
706	**98**	**244**	**09:53:53.933**	**125DE4A**	**37IST**	**0,2,1,OFF,1,0,1**	**OPCAL**	**4R3**	**4**	**0**	**4,631,456:84:0**	
707	98	244	09:53:53.933	125DE	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,631,456:84:0	
708	**98**	**244**	**09:54:17.266**	**432DE6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**4R3**	**4**	**0**	**4,631,457:28:0**	
709	98	244	09:57:56.600	127XF	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	4,631,460:84:0	
710	**98**	**244**	**09:57:56.600**	**127XF4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**4R0**	**4**	**0**	**4,631,460:84:0**	
711	**98**	**244**	**09:57:57.266**	**127XF4B**	**37ETB**	**04,C4,02,00,00**	**Loads wavelength edit table**	**4R0**	**4**	**0**	**4,631,460:85:0**	
712	98	244	09:58:05.266	127XF11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R0	4	0	4,631,461:06:0	
713	98	244	10:00:58.600	125XF	NIMSINIT	GS	##### GROUP START INIT	4R0	4	0	4,631,463:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	**98**	**244**	**10:00:58.600**	**125XF4A**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**4R0**	**4**	**0**	**4,631,463:84:0**	
715	**98**	**244**	**10:01:59.266**	**125XF4B**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**460**	**4**	**0**	**4,631,464:84:0**	
716	**98**	**244**	**10:02:59.933**	**125XF4C**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**4O0**	**4**	**0**	**4,631,465:84:0**	
717	98	244	10:02:59.933	125XF11A	NIMSINIT	GE	##### GROUP END INIT	4O0	4	0	4,631,465:84:0	
718	98	244	10:09:12.600	41XU99A	**POWER**	**PWR MODE change**	Change to Maneuver/Playback Mode	4O0	4	0	4,631,472:06:0	
719	**98**	**244**	**10:11:06.600**	**41XU3G**	**40T1P**	**1**	**PCT Heater 1 ON (primary relay)**	**4O0**	**4**	**0**	**4,631,473:86:0**	
720	**98**	**244**	**10:11:16.600**	**41XU3H**	**40T1P**	**2**	**PCT Heater 1 ON (primary relay)**	**4O0**	**4**	**0**	**4,631,474:10:0**	
721	**98**	**244**	**10:11:26.600**	**41XU3I**	**40T2**	**1**	**PCT Heater 2 ON**	**4O0**	**4**	**0**	**4,631,474:25:0**	
722	**98**	**244**	**10:11:36.600**	**41XU3J**	**40T2**	**2**	**PCT Heater 2 ON**	**4O0**	**4**	**0**	**4,631,474:40:0**	
723	**98**	**244**	**10:16:17.332**	**16NNRCTRLT01-**		**-----STOP-------**		**4O0**	**4**	**0**	**: :**	
724	98	244	10:19:23.266	20DB4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	4,631,482:12:0	
725	98	244	10:20:13.266	20DB4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,631,482:87:0	
726	98	244	10:22:17.266	176XF6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,631,485:00:0	
727	98	244	14:31:06.600	488DO6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,631,731:08:0	
728	98	244	14:33:52.600	488DO6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,631,733:75:0	
729	98	244	19:51:40.600	488DP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,632,048:12:0	
730	98	244	20:17:20.600	488DP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,632,073:47:0	
731	98	244	20:58:06.600	488DP6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,632,113:76:0	
732	98	244	21:27:12.600	488DP6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,632,142:56:0	
733	98	245	02:54:08.600	488DQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,632,465:87:0	
734	98	245	03:15:28.600	488DQ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,632,487:05:0	
735	98	245	04:02:24.600	488DQ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,632,533:43:0	
736	98	245	04:14:29.933	488DQ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,632,545:39:0	
737	98	245	04:41:19.266	488DQ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,632,571:87:0	
738	98	245	09:11:38.600	488DR6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,632,839:28:0	
739	98	245	09:13:52.600	488DR6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,632,841:47:0	
740	98	245	09:19:54.600	488DR6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,632,847:44:0	
741	98	245	09:33:04.600	488DR6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,632,860:46:0	
742	98	245	15:19:22.533	176RA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,633,203:00:0	
743	98	245	19:24:00.533	488DS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,633,444:86:0	
744	98	245	19:45:20.533	488DS6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,633,466:04:0	
745	98	245	19:48:03.200	488DS6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,633,468:66:0	
746	98	246	03:06:43.200	488DT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,633,902:52:0	
747	98	246	03:17:36.533	488DT6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,633,913:31:0	
748	98	246	03:51:44.533	488DT6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,633,947:09:0	
749	98	246	09:02:03.200	488DT6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,634,254:00:0	
750	98	246	09:05:20.533	488DT6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,634,257:23:0	
751	98	246	09:09:57.866	488DU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,634,261:75:0	
752	98	246	09:26:40.533	488DU6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,634,278:32:0	
753	98	246	12:51:28.533	488DU6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,634,480:82:0	
754	98	246	16:05:36.533	488DV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,634,672:82:0	
755	98	246	19:19:44.466	488DV6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,634,864:82:0	
756	98	246	19:38:56.466	488DV6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,634,883:81:0	
757	98	246	19:43:06.466	488DV6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,634,888:01:0	
758	98	247	03:01:45.133	488DW6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,635,321:76:0	
759	98	247	03:17:36.466	488DW6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,635,337:47:0	
760	98	247	03:29:13.133	176RB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,635,349:00:0	
761	98	247	04:08:01.800	488DW6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,635,387:35:0	
762	98	247	04:37:07.800	488DW6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,635,416:15:0	
763	98	247	04:51:28.466	488DW6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,635,430:32:0	
764	98	247	09:02:04.466	488DX6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,635,678:18:0	
765	98	247	09:05:20.466	488DX6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,635,681:39:0	
766	98	247	09:09:59.800	488DX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,635,686:03:0	
767	98	247	09:22:24.466	488DX6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,635,698:28:0	
768	98	247	10:09:24.466	488DX6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,635,744:72:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	98	247	10:36:14.466	488DY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,635,771	30:0
770	98	247	12:02:24.466	488DY6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,635,856	50:0
771	98	247	16:14:59.800	20RA6A	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,636,106	33:0
772	98	247	16:39:44.466	488DZ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,636,130	76:0
773	98	247	16:39:46.466	20RA6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,636,130	79:0
774	98	247	18:42:02.466	488DZ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,636,251	72:0
775	98	247	18:45:36.466	488DZ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,636,255	29:0
776	98	247	19:31:47.133	488DZ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,636,300	90:0
777	98	247	19:43:12.466	488DZ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,636,312	26:0
778	98	247	20:42:56.466	488EA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,636,371	33:0
779	98	248	04:19:28.400	488EB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,636,822	80:0
780	98	248	05:19:12.400	488EB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,636,881	87:0
781	98	248	05:23:09.066	488EB6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,636,885	78:0
782	98	248	05:32:00.400	488EB6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,636,894	56:0
783	98	248	09:05:01.733	488EB6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,637,105	27:0
784	98	248	09:18:08.400	488EC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,637,118	24:0
785	98	248	11:32:32.400	488EC6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,637,251	17:0
786	98	248	16:59:57.066	176RC6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,637,575	00:0
787	98	248	17:05:20.400	488ED6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,637,580	30:0
788	98	248	19:19:44.400	488ED6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,637,713	23:0
789	98	248	19:34:40.400	488ED6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,637,728	02:0
790	98	248	19:36:05.733	488ED6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,637,729	39:0
791	98	248	19:56:00.400	488ED6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,637,749	11:0
792	98	249	09:00:03.733	488EE6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,638,524	51:0
793	98	249	09:11:44.400	488EE6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,638,536	10:0
794	98	249	11:06:56.333	488EE6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,638,650	04:0
795	98	249	11:06:58.333	20RG6A	6TMSED	NORM,GL7	Sci, Eng, and D/L Chan	4O0	4	0	4,638,650	07:0
796	98	249	17:20:16.333	488EF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,639,019	25:0
797	98	249	19:15:28.333	488EF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,639,133	19:0
798	98	249	19:30:24.333	488EF6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,639,147	89:0
799	98	249	19:31:07.666	488EF6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,639,148	63:0
800	98	249	19:51:44.333	488EF6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,639,169	07:0
801	98	250	08:55:05.666	488EG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,639,943	75:0
802	98	250	08:59:19.000	176RD6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,639,948	00:0
803	98	250	09:07:28.333	488EG6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,639,956	06:0
804	98	250	10:47:44.333	488EG6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,640,055	21:0
805	98	250	17:05:00.333	488EH6A	6TMSED	NORM,AH7	Sci, Eng, and D/L Chan	4O0	4	0	4,640,428	32:0
806	98	250	17:08:41.666	176GC6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,640,432	00:0
807	98	250	17:28:48.333	488EH6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	4O0	4	0	4,640,451	81:0
808	98	250	17:34:30.333	20NY4I	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	4,640,457	48:0
809	98	250	17:49:30.266	20NY4K	7SLEW	INIT,POS,17.45	Stator movement	4O0	4	0	4,640,472	33:0
810	98	250	18:01:30.266	20NY4L	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,640,484	21:0
811	98	250	18:08:30.266	20NY4M	7SLEW	INIT,NEG,17.45	Stator movement	4O0	4	0	4,640,491	14:0
812	98	250	18:20:30.266	20NY4N	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,640,503	02:0
813	98	250	18:27:30.266	20NY4O	7SLEW	INIT,POS,4.36	Stator movement	4O0	4	0	4,640,509	86:0
814	98	250	18:39:30.266	20NY4P	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,640,521	74:0
815	98	250	18:46:30.266	20NY4Q	7SLEW	INIT,NEG,4.36	Stator movement	4O0	4	0	4,640,528	67:0
816	98	250	18:58:30.266	20NY4R	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,640,540	55:0
817	98	250	19:10:30.266	20NY4AH	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	4,640,552	43:0
818	98	250	19:13:20.266	488EH6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	4O0	4	0	4,640,555	25:0
819	98	250	19:19:44.266	488EH6D	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	4O0	4	0	4,640,561	55:0
820	98	250	19:24:04.266	20SK4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	4,640,565	81:0
821	98	250	19:24:54.266	20SK4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,640,566	65:0
822	98	250	19:26:12.266	176GD6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,640,568	00:0
823	98	250	19:28:00.266	488EH6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,640,569	71:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	98	250	19:36:48.266	488EI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,640,578:44:0	
825	98	250	20:32:54.266	488EI6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,640,633:88:0	
826	98	250	21:02:00.933	488EI6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,640,662:69:0	
827	98	250	21:32:00.266	488EI6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,640,692:38:0	
828	98	250	23:32:16.266	488EI6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,640,811:33:0	
829	98	250	23:35:44.266	488EJ6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,640,814:72:0	
830	98	251	02:40:06.933	488EJ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,640,997:13:0	
831	98	251	03:13:20.266	488EJ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,641,030:00:0	
832	98	251	08:41:50.266	488EK6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,641,354:81:0	
833	98	251	08:44:00.266	488EK6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,641,357:03:0	
834	98	251	08:50:07.600	488EK6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,641,363:08:0	
835	98	251	09:03:12.266	488EK6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,641,376:02:0	
836	98	251	10:28:32.266	488EK6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,641,460:38:0	
837	98	251	14:02:40.933	488EL6A	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,641,672:19:0	
838	98	251	14:04:00.266	488EL6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,641,673:47:0	
839	98	251	19:20:07.600	488EL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,641,986:15:0	
840	98	251	20:02:24.266	488EL6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,642,027:89:0	
841	98	251	23:59:01.600	176RE6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,642,262:00:0	
842	98	252	02:42:25.533	488EM6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,642,423:55:0	
843	98	252	02:47:44.200	488EM6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,642,428:78:0	
844	98	252	15:08:22.866	488EN6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,643,161:33:0	
845	98	252	15:59:34.866	176RF6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,643,212:00:0	
846	98	252	17:45:52.200	488EN6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,643,317:11:0	
847	98	252	19:09:04.200	488EN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,643,399:37:0	
848	98	252	19:15:28.200	488EN6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,643,405:67:0	
849	98	252	19:18:17.533	488EN6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,643,408:48:0	
850	98	252	19:28:16.200	488EO6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,643,418:36:0	
851	98	252	22:59:16.200	488EO6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,643,627:07:0	
852	98	253	00:09:13.533	488EO6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,643,696:24:0	
853	98	253	00:36:03.533	488EO6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,643,722:73:0	
854	98	253	03:15:28.200	488EP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,643,880:42:0	
855	98	253	04:47:12.200	488EP6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,643,971:17:0	
856	98	253	04:55:44.200	488EP6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,643,979:57:0	
857	98	253	05:54:13.533	488EP6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,644,037:43:0	
858	98	253	06:21:03.533	488EP6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,644,064:01:0	
859	98	253	06:46:40.200	488EQ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,644,089:31:0	
860	98	253	08:29:04.200	488EQ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,644,190:56:0	
861	98	253	08:32:14.866	488EQ6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,644,193:69:0	
862	98	253	08:35:28.200	488EQ6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,644,196:86:0	
863	98	253	08:40:10.866	488EQ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,644,201:55:0	
864	98	253	08:52:32.200	488ER6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,644,213:75:0	
865	98	253	10:02:56.133	488ER6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,644,283:41:0	
866	98	253	17:45:52.133	488ES6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,644,741:27:0	
867	98	253	19:04:48.133	488ES6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,644,819:33:0	
868	98	253	19:47:28.133	488ES6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,644,861:51:0	
869	**98**	**253**	**23:59:59.466**	**432NB6B**	**6RTDS2**	**NIMDSL,AACDSL,RT**	**NIMS R/T DESELECTAACS DESELECT**	**4O0**	**4**	**0**	**4,645,111:28:0**	
870	98	254	00:01:42.133	431MA6A	6RCSEL	DDSSEL,PLSNCG,EP	Record Select (DDS onl	4O0	4	0	4,645,113:00:0	
871	98	254	02:34:56.133	488ET6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,645,264:50:0	
872	98	254	02:54:08.133	488ET6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,645,283:49:0	
873	98	254	05:57:36.133	488ET6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,645,464:90:0	
874	98	254	06:45:08.133	176RG6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,645,512:00:0	
875	98	254	08:28:06.133	488ET6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,645,613:76:0	
876	98	254	08:29:04.133	488ET6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,645,614:72:0	
877	98	254	08:34:18.133	488EU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,645,619:88:0	
878	98	254	09:48:00.133	488EU6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,645,692:78:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
879	98	254	17:50:08.066	488EV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,646,169:63:0
880	98	254	19:00:32.066	488EV6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,646,239:29:0
881	98	254	19:43:12.066	488EV6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,646,281:47:0
882	**98**	**255**	**00:00:34.733**	**16NNPCTRLT01-**		**-----START------**		**4O0**	**4**	**0**	**: :**
883	**98**	**255**	**00:00:38.733**	**41FB3A**	**40T1PR**	**1**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**4,646,536:12:0**
884	**98**	**255**	**00:00:48.733**	**41FB3B**	**40T1PR**	**2**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**4,646,536:27:0**
885	**98**	**255**	**00:00:58.733**	**41FB3C**	**40T2R**	**1**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**4,646,536:42:0**
886	**98**	**255**	**00:01:08.733**	**41FB3D**	**40T2R**	**2**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**4,646,536:57:0**
887	98	255	04:15:12.066	488EW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,646,787:81:0
888	98	255	04:49:20.066	488EW6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,646,821:59:0
889	98	255	05:59:10.733	488EW6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,646,890:66:0
890	98	255	06:04:30.733	176FB6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,646,896:00:0
891	98	255	06:07:39.400	444FB443A4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4O0	4	0	4,646,899:10:0
892	98	255	06:11:39.400	444FB443A4B	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	4O0	4	0	4,646,903:06:0
893	98	255	06:20:39.400	444FB443A4C	**7CLK**	**17.45,0.0**	Check S/P Position	4O0	4	0	4,646,911:88:0
894	**98**	**255**	**06:23:38.733**	**125FB4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**460**	**4**	**0**	**4,646,914:84:0**
895	98	255	06:23:38.733	125FB	NIMSINIT	GS	##### GROUP START INIT	460	4	0	4,646,914:84:0
896	**98**	**255**	**06:24:39.400**	**125FB4B**	**37IST**	**1,2,0,OFF,0,1,1**	**Chopper ON, Sync, Chopper (Ref)Gain State**	**4R0**	**4**	**0**	**4,646,915:84:0**
897	**98**	**255**	**06:25:40.066**	**125FB4C**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**4R0**	**4**	**0**	**4,646,916:84:0**
898	98	255	06:25:40.066	125FB11A	NIMSINIT	GE	##### GROUP END INIT	4R0	4	0	4,646,916:84:0
899	98	255	06:26:00.066	488EW6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4R0	4	0	4,646,917:23:0
900	**98**	**255**	**06:28:42.066**	**127FB4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**4R3**	**4**	**0**	**4,646,919:84:0**
901	98	255	06:28:42.066	127FB	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	4,646,919:84:0
902	**98**	**255**	**06:28:42.733**	**127FB4B**	**37ETB**	**0A,CA,19,FF,C0,1**	**Loads wavelength edit table**	**4R3**	**4**	**0**	**4,646,919:85:0**
903	98	255	06:28:50.733	127FB11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	4,646,920:06:0
904	**98**	**255**	**06:29:06.733**	**432FB6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**4R3**	**4**	**0**	**4,646,920:30:0**
905	**98**	**255**	**06:31:06.733**	**432FC6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**4R3**	**4**	**0**	**4,646,922:28:0**
906	98	255	06:31:48.733	192FC4A	**7CONE**	**17.0,54.88**	Check S/P Position	4R3	4	0	4,646,923:00:0
907	98	255	06:31:49.400	192FC4B	**7CLK**	**17.0,244.07**	Check S/P Position	4R3	4	0	4,646,923:01:0
908	**98**	**255**	**06:35:10.733**	**432FD6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**4R3**	**4**	**0**	**4,646,926:30:0**
909	**98**	**255**	**06:45:16.066**	**432FE6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**4R3**	**4**	**0**	**4,646,936:28:0**
910	**98**	**255**	**06:45:53.400**	**127FE4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**4R0**	**4**	**0**	**4,646,936:84:0**
911	98	255	06:45:53.400	127FE	NIMSTAB	GS	%%%%% GROUP START TAB	4R0	4	0	4,646,936:84:0
912	**98**	**255**	**06:45:54.066**	**127FE4B**	**37ETB**	**04,C4,02,00,00**	**Loads wavelength edit table**	**4R0**	**4**	**0**	**4,646,936:85:0**
913	98	255	06:46:02.066	127FE11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R0	4	0	4,646,937:06:0
914	98	255	06:46:02.066	20FE4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4R0	4	0	4,646,937:06:0
915	**98**	**255**	**06:47:54.733**	**125FE4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**460**	**4**	**0**	**4,646,938:84:0**
916	98	255	06:47:54.733	125FE	NIMSINIT	GS	##### GROUP START INIT	460	4	0	4,646,938:84:0
917	**98**	**255**	**06:48:55.400**	**125FE4B**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**4O0**	**4**	**0**	**4,646,939:84:0**
918	**98**	**255**	**06:49:56.066**	**125FE4C**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**4O0**	**4**	**0**	**4,646,940:84:0**
919	98	255	06:49:56.066	125FE11A	NIMSINIT	GE	##### GROUP END INIT	4O0	4	0	4,646,940:84:0
920	98	255	06:51:08.066	444FF443A4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4O0	4	0	4,646,942:10:0
921	98	255	06:55:08.066	444FF443A4B	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	4,646,946:06:0
922	98	255	07:05:14.733	41FG99A	**POWER**	**PWR MODE change**	Change to Maneuver/Playback Mode	4O0	4	0	4,646,956:06:0
923	**98**	**255**	**07:07:08.733**	**41FG3G**	**40T1P**	**1**	**PCT Heater 1 ON (primary relay)**	**4O0**	**4**	**0**	**4,646,957:86:0**
924	**98**	**255**	**07:07:18.733**	**41FG3H**	**40T1P**	**2**	**PCT Heater 1 ON (primary relay)**	**4O0**	**4**	**0**	**4,646,958:10:0**
925	**98**	**255**	**07:07:28.733**	**41FG3I**	**40T2**	**1**	**PCT Heater 2 ON**	**4O0**	**4**	**0**	**4,646,958:25:0**
926	**98**	**255**	**07:07:38.733**	**41FG3J**	**40T2**	**2**	**PCT Heater 2 ON**	**4O0**	**4**	**0**	**4,646,958:40:0**
927	98	255	07:09:21.400	20FH4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	4,646,960:12:0
928	98	255	07:10:11.400	20FH4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,646,960:87:0
929	98	255	07:11:14.733	176FH6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,646,962:00:0
930	**98**	**255**	**07:50:44.733**	**16NNPCTRLT01-**		**-----STOP-------**		**4O0**	**4**	**0**	**: :**
931	98	255	08:22:29.400	488EW6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,647,032:42:0
932	98	255	08:29:20.066	488EX6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,647,039:21:0
933	98	255	09:29:10.733	488EX6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,647,098:38:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
934	98	255	09:50:08.066	488EX6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,647,119:13:0	
935	98	255	09:54:09.400	488EX6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,647,123:11:0	
936	98	255	17:50:08.066	488EY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,647,593:79:0	
937	98	255	19:00:32.066	488EY6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,647,663:45:0	
938	98	255	19:06:54.066	488EY6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,647,669:72:0	
939	98	255	19:09:04.066	488EY6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,647,671:85:0	
940	98	255	19:19:44.066	488EY6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,647,682:44:0	
941	98	256	08:29:21.333	488EZ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,648,463:39:0	
942	98	256	09:33:04.000	488EZ6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,648,526:40:0	
943	98	256	13:43:22.666	176RH6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,648,774:00:0	
944	98	256	17:50:08.000	488FA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,649,018:04:0	
945	98	256	18:54:08.000	488FA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,649,081:31:0	
946	98	256	19:00:32.000	488FA6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,649,087:61:0	
947	98	256	19:01:18.666	488FA6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,649,088:40:0	
948	98	256	19:21:52.000	488FA6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,649,108:70:0	
949	98	257	08:24:21.933	488FB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,649,882:61:0	
950	98	257	09:22:23.933	488FB6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,649,940:06:0	
951	98	257	17:45:51.933	488FC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,650,438:00:0	
952	**98**	**257**	**17:58:59.266**	**432RA6B**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**4O0**	**4**	**0**	**4,650,450:89:0**	
953	98	257	17:58:59.933	432RA431A6A	6RCDSL	DDSDSL,PLSDSL,EP	Record Deselect (DDS o	4O0	4	0	4,650,450:90:0	
954	98	257	17:59:00.600	432RA6C	6RTSL1		R/T Select of DDS and	4O0	4	0	4,650,451:00:0	
955	**98**	**257**	**17:59:00.600**	**432RA6D**	**6RTSL2**	**NIMNCG,AACSEL,RT**	**AACS SELECT**	**4O0**	**4**	**0**	**4,650,451:00:0**	
956	98	257	18:49:51.933	488FC6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,650,501:27:0	
957	98	257	19:06:55.933	488FC6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,650,518:16:0	
958	98	257	20:02:43.266	488FC6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,650,573:32:0	
959	98	257	20:23:43.933	488FC6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,650,594:12:0	
960	98	257	20:29:53.266	488FD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,650,600:20:0	
961	98	257	20:34:43.266	176RI6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,650,605:00:0	
962	98	258	02:05:03.933	488FD6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,650,931:65:0	
963	98	258	02:32:47.933	488FE6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,650,959:13:0	
964	98	258	03:24:06.600	488FE6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,651,009:81:0	
965	98	258	03:50:55.933	488FE6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,651,036:38:0	
966	98	258	04:47:11.933	488FE6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,651,092:06:0	
967	98	258	07:07:40.600	176SX6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,651,231:00:0	
968	98	258	07:11:59.933	20US4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,651,235:25:0	
969	98	258	07:12:59.933	20US4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	4O0	4	0	4,651,236:24:0	
970	98	258	07:14:59.933	20US4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4O0	4	0	4,651,238:22:0	
971	98	258	07:20:29.933	20US4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	4O0	4	0	4,651,243:62:0	
972	98	258	07:20:30.600	20US4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	4O0	4	0	4,651,243:63:0	
973	98	258	07:20:50.600	20US4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	4O0	4	0	4,651,244:02:0	
974	98	258	07:20:51.266	20US4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	4O0	4	0	4,651,244:03:0	
975	98	258	07:21:11.266	20US4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	4O0	4	0	4,651,244:33:0	
976	98	258	07:21:11.933	20US4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	4O0	4	0	4,651,244:34:0	
977	98	258	07:21:21.933	20US4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	4O0	4	0	4,651,244:49:0	
978	98	258	07:21:22.600	20US4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	4O0	4	0	4,651,244:50:0	
979	98	258	07:21:32.600	20US4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	4O0	4	0	4,651,244:65:0	
980	98	258	07:21:33.266	20US4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	4O0	4	0	4,651,244:66:0	
981	98	258	07:23:19.933	20US4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	4O0	4	0	4,651,246:44:0	
982	98	258	07:23:20.600	20US4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	4O0	4	0	4,651,246:45:0	
983	98	258	07:23:40.600	20US4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	4O0	4	0	4,651,246:75:0	
984	98	258	07:23:41.266	20US4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	4O0	4	0	4,651,246:76:0	
985	98	258	07:24:01.266	20US4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	4O0	4	0	4,651,247:15:0	
986	98	258	07:24:01.933	20US4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	4O0	4	0	4,651,247:16:0	
987	98	258	07:24:11.933	20US4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	4O0	4	0	4,651,247:31:0	
988	98	258	07:24:12.600	20US4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	4O0	4	0	4,651,247:32:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
989	98	258	07:24:22.600	20US4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	4O0	4	0	4,651,247:47:0	
990	98	258	07:24:23.266	20US4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	4O0	4	0	4,651,247:48:0	
991	98	258	07:25:19.933	20US4Z	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	4,651,248:42:0	
992	98	258	07:50:03.933	20UL4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	4,651,272:84:0	
993	98	258	07:50:53.933	20UL4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,651,273:68:0	
994	98	258	07:52:09.933	176SY6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,651,275:00:0	
995	98	258	07:54:10.600	432RD431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	4O0	4	0	4,651,276:90:0	
996	98	258	07:54:11.266	432RD6A	6RTSL1		R/T Select of DDS and	4O0	4	0	4,651,277:00:0	
997	98	258	08:13:11.933	488FE6E	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,651,295:73:0	
998	98	258	08:14:07.933	488FF6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,651,296:66:0	
999	98	258	08:19:23.933	488FF6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,651,301:85:0	
1000	98	258	09:18:07.933	488FF6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,651,360:02:0	
1001	98	258	13:38:23.266	488FF6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,651,617:38:0	
1002	98	258	13:40:31.933	488FF6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,651,619:49:0	
1003	98	258	18:52:04.533	488FG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,651,927:60:0	
1004	98	258	19:02:39.866	488FG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,651,938:12:0	
1005	98	258	19:43:11.866	488FG6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,651,978:20:0	
1006	98	258	20:52:59.866	488FG6D	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	4O0	4	0	4,652,047:23:0	
1007	98	258	20:57:47.866	176TH6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,652,052:00:0	
1008	98	258	21:05:59.866	20WD4C	7STAT	17.45,170.31,5.8	Stator inertial point	4O0	4	0	4,652,060:10:0	
1009	98	258	21:25:01.866	490UB412A4B	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	4,652,078:85:0	
1010	98	258	21:29:59.866	490UB412A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4O0	4	0	4,652,083:77:0	
1011	98	258	21:30:19.866	20WD4D	7STAT	17.45,170.31,5.8	Stator inertial point	4O0	4	0	4,652,084:16:0	
1012	98	258	21:34:09.866	490UB412A4E	7VECT		Inert vect update UTC	4O0	4	0	4,652,087:88:0	
1013	98	258	21:34:13.866	490UB412A4F	7TURN	2,RTH	ALERT Thruster	4O0	4	0	4,652,088:03:0	
1014	98	258	21:38:01.866	490UB412A406A4A	7STAR	11,338,218.95	Star catalog update	4O0	4	0	4,652,091:72:0	
1015	98	258	21:38:03.866	490UB412A406A4B	7STAR	2,111,99.056999,	Star catalog update	4O0	4	0	4,652,091:75:0	
1016	98	258	21:38:05.866	490UB412A406A4C	7STAR	3,295,88.964,44.	Star catalog update	4O0	4	0	4,652,091:78:0	
1017	98	258	21:38:07.866	490UB412A406A4D	7STAR	4,191,248.601,-1	Star catalog update	4O0	4	0	4,652,091:81:0	
1018	98	258	21:38:09.866	490UB412A406A4E	7STAR	5,0,0.0,0.0	Star catalog update	4O0	4	0	4,652,091:84:0	
1019	98	258	21:38:11.866	490UB412A406A4F	7STAR	6,0,0.0,0.0	Star catalog update	4O0	4	0	4,652,091:87:0	
1020	98	258	21:48:05.866	20WD4F	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,652,101:68:0	
1021	98	258	21:56:09.866	490UB412A4G	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	4,652,109:66:0	
1022	98	258	23:24:59.866	488FG6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,652,197:53:0	
1023	98	258	23:30:03.866	20TB4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	4,652,202:54:0	
1024	98	258	23:30:53.866	20TB4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,652,203:38:0	
1025	98	258	23:32:29.866	176TI6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,652,205:00:0	
1026	98	258	23:34:30.533	432RF431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	4O0	4	0	4,652,206:90:0	
1027	98	258	23:34:31.200	432RF6A	6RTSL1		R/T Select of DDS and	4O0	4	0	4,652,207:00:0	
1028	98	259	01:54:23.866	488FH6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,652,345:31:0	
1029	98	259	02:22:07.866	488FH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,652,372:70:0	
1030	98	259	03:17:42.533	488FH6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,652,427:67:0	
1031	98	259	03:38:55.866	488FH6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,652,448:66:0	
1032	98	259	03:44:55.200	488FH6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,652,454:59:0	
1033	98	259	08:06:48.533	488FI6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,652,713:60:0	
1034	98	259	08:09:51.866	488FI6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,652,716:62:0	
1035	98	259	08:17:05.200	488FI6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,652,723:75:0	
1036	98	259	08:26:55.866	488FI6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,652,733:51:0	
1037	98	259	09:07:42.533	488FI6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,652,773:81:0	
1038	98	259	09:28:47.866	488FJ6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,652,794:68:0	
1039	98	259	09:38:38.533	488FJ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,652,804:44:0	
1040	98	259	15:04:59.866	488FJ6C	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	4O0	4	0	4,653,127:23:0	
1041	98	259	15:08:47.200	176NV6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,653,131:00:0	
1042	98	259	15:38:59.866	20NV4I	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	4,653,160:80:0	
1043	98	259	15:53:59.866	20NV4K	7SLEW	INIT,POS,17.45	Stator movement	4O0	4	0	4,653,175:65:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1044	98	259	16:05:59.866	20NV4L	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,653,187:53:0	
1045	98	259	16:12:59.866	20NV4M	7SLEW	INIT,NEG,17.45	Stator movement	4O0	4	0	4,653,194:46:0	
1046	98	259	16:24:59.866	20NV4N	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,653,206:34:0	
1047	98	259	16:36:59.866	20NV4AH	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	4,653,218:22:0	
1048	98	259	16:53:03.866	20SU4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	4,653,234:12:0	
1049	98	259	16:53:53.866	20SU4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,653,234:87:0	
1050	98	259	16:54:57.200	176GF6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,653,236:00:0	
1051	98	259	17:12:59.866	488FK6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,653,253:77:0	
1052	98	259	17:24:31.866	488FK6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,653,265:23:0	
1053	98	259	18:01:12.533	488FK6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,653,301:48:0	
1054	98	259	18:07:11.866	488FK6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,653,307:41:0	
1055	98	260	16:28:33.133	488FL6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,654,634:06:0	
1056	98	260	16:28:35.133	20RB6A	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,654,634:09:0	
1057	98	260	17:20:15.800	488FL6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,654,685:19:0	
1058	98	260	17:20:17.800	20RB6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,654,685:22:0	
1059	98	260	18:34:55.800	488FL6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,654,759:05:0	
1060	98	260	18:34:57.800	20RB6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,654,759:08:0	
1061	98	260	18:58:23.800	488FL6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,654,782:24:0	
1062	98	260	19:47:40.466	488FL6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,654,831:00:0	
1063	98	260	20:16:46.466	488FM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,654,859:71:0	
1064	98	260	20:38:39.800	488FM6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,654,881:39:0	
1065	98	261	01:54:23.800	488FM6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,655,193:63:0	
1066	98	261	02:28:31.800	488FN6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,655,227:41:0	
1067	98	261	03:09:03.800	488FN6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,655,267:49:0	
1068	98	261	03:35:53.133	488FN6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,655,294:06:0	
1069	98	261	05:27:43.800	488FN6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,655,404:62:0	
1070	98	261	07:57:52.400	488FN6E	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,655,553:16:0	
1071	98	261	07:59:11.733	488FO6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,655,554:44:0	
1072	98	261	08:05:20.400	488FO6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,655,560:51:0	
1073	98	261	08:18:23.733	488FO6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,655,573:43:0	
1074	98	261	09:18:07.733	488FO6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,655,632:50:0	
1075	98	261	17:20:15.733	488FP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,656,109:35:0	
1076	98	261	18:30:39.733	488FP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,656,179:01:0	
1077	98	261	19:17:35.733	488FP6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,656,225:39:0	
1078	98	262	01:44:25.066	176RJ6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,656,608:00:0	
1079	**98**	**262**	**02:59:13.066**	**432RB6B**	**6RTDS2**	**NIMDSL,AACDSL,RT**	**NIMS R/T DESELECTAACS DESELECT**	**4O0**	**4**	**0**	**4,656,681:89:0**	
1080	98	262	03:01:15.733	431RA6A	6RCSEL	DDSSEL,PLSNCG,EP	Record Select (DDS onl	4O0	4	0	4,656,684:00:0	
1081	98	262	03:41:03.733	488FQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,656,723:33:0	
1082	98	262	04:18:55.066	488FQ6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,656,760:73:0	
1083	98	262	04:19:27.733	488FQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,656,761:31:0	
1084	98	262	04:27:59.733	488FQ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,656,769:71:0	
1085	98	262	07:59:28.400	488FQ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,656,978:85:0	
1086	98	262	09:07:27.733	488FR6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,657,046:16:0	
1087	98	262	17:20:15.666	488FS6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,657,533:51:0	
1088	98	262	18:24:15.666	488FS6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,657,596:78:0	
1089	98	262	18:34:55.666	488FS6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,657,607:37:0	
1090	98	262	18:35:45.000	488FS6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	4,657,608:20:0	
1091	98	262	18:45:35.666	488FS6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	4O0	4	0	4,657,617:87:0	
1092	98	262	19:21:51.666	488FT6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,657,653:75:0	
1093	98	262	23:59:04.333	432MC431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	4O0	4	0	4,657,927:90:0	
1094	98	262	23:59:05.000	432MC6A	6RTSL1		R/T Select of DDS and	4O0	4	0	4,657,928:00:0	
1095	98	263	07:54:29.000	488FU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,658,398:16:0	
1096	98	263	07:54:31.000	20RC6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,658,398:19:0	
1097	98	263	09:03:11.666	488FU6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,658,466:12:0	
1098	98	263	09:03:13.666	20RC6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,658,466:15:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1099	98	263	17:15:59.666	488FV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,658,953	47:0
1100	98	263	17:16:01.666	20RC6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,658,953	50:0
1101	98	263	18:24:15.666	488FV6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,659,021	03:0
1102	98	263	18:24:17.666	20RC6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,659,021	06:0
1103	98	263	18:43:27.666	488FV6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,659,040	02:0
1104	98	263	18:43:29.666	20RC6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,659,040	05:0
1105	98	263	19:37:37.666	488FV6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,659,093	54:0
1106	98	263	20:06:43.666	488FV6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,659,122	34:0
1107	98	263	20:08:47.666	488FW6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,659,124	38:0
1108	98	263	20:09:23.000	176RK6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,659,125	00:0
1109	98	264	02:30:39.600	488FX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,659,502	08:0
1110	98	264	04:00:15.600	488FX6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,659,590	64:0
1111	98	264	04:13:30.933	488FX6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,659,603	74:0
1112	98	264	04:23:43.600	488FX6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,659,613	83:0
1113	98	264	07:49:30.266	488FX6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,659,817	39:0
1114	98	264	08:58:55.600	488FY6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,659,886	08:0
1115	98	264	17:15:59.600	488FZ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,660,377	63:0
1116	98	264	18:19:59.600	488FZ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,660,440	90:0
1117	98	264	18:37:03.600	488FZ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,660,457	79:0
1118	98	264	19:32:36.266	488FZ6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,660,512	73:0
1119	98	264	20:01:42.933	488FZ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,660,541	54:0
1120	98	264	20:02:23.600	488GA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,660,542	24:0
1121	98	265	01:45:51.600	488GA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,660,881	87:0
1122	98	265	02:43:27.600	488GB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,660,938	84:0
1123	98	265	02:48:59.600	488GB6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,660,944	36:0
1124	98	265	03:20:48.933	488GB6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,660,975	79:0
1125	98	265	07:44:42.200	488GB6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,661,236	78:0
1126	98	265	07:48:31.533	488GB6E	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	4O0	4	0	4,661,240	58:0
1127	98	265	07:50:11.533	488GC6A	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	4O0	4	0	4,661,242	26:0
1128	98	265	11:49:35.533	488GC6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,661,479	05:0
1129	98	265	12:35:21.533	488GC6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,661,524	29:0
1130	98	265	12:59:54.866	488GC6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,661,548	55:0
1131	98	265	13:23:00.200	488GC6E	6TMSED	NORM,AH7	Sci, Eng, and D/L Chan	4O0	4	0	4,661,571	40:0
1132	98	265	13:27:36.866	176SF6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	4,661,576	00:0
1133	98	265	13:39:00.200	20CA4C	7STAT	17.45,261.6943,1	Stator inertial point	4O0	4	0	4,661,587	24:0
1134	98	265	14:00:00.200	474CA416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	4,661,608	03:0
1135	98	265	14:02:00.200	474CA416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4O0	4	0	4,661,610	01:0
1136	98	265	14:02:20.200	20CA4D	7STAT	17.45,261.6943,1	Stator inertial point	4O0	4	0	4,661,610	31:0
1137	98	265	14:06:14.200	474CA416A4E	7BURN	,261.694298,13.3	ALERT -- Thruster fire	4O0	4	0	4,661,614	18:0
1138	98	265	14:14:00.200	20CA4F	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,661,621	80:0
1139	98	265	14:19:52.200	20CA4G	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	4,661,627	62:0
1140	98	265	14:44:08.200	20CA4J	7STAT	17.45,261.6943,1	Stator inertial point	4O0	4	0	4,661,651	62:0
1141	98	265	14:47:08.200	20CA4K	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	4,661,654	59:0
1142	98	265	14:49:08.200	474CA416A4G	7BURN	,261.694298,13.3	ALERT -- Thruster fire	4O0	4	0	4,661,656	57:0
1143	98	265	14:56:02.866	20CA4M	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,661,663	42:0
1144	98	265	15:00:54.866	20CA4N	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	4,661,668	25:0
1145	98	265	16:08:26.866	20CB4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	4,661,735	06:0
1146	98	265	16:09:16.866	20CB4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	4,661,735	81:0
1147	98	265	16:10:24.200	176CA6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,661,737	00:0
1148	98	265	17:09:35.533	488GD6A	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	4O0	4	0	4,661,795	49:0
1149	98	265	18:15:43.533	488GD6B	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	4O0	4	0	4,661,860	86:0
1150	98	265	18:32:47.533	488GD6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	4O0	4	0	4,661,877	75:0
1151	98	265	19:01:00.200	488GD6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,661,905	66:0
1152	98	265	19:01:16.866	176SG6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	4,661,906	00:0
1153	98	265	19:27:35.533	488GD6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,661,932	02:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1154	98	265	19:53:51.533	488GE6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,661,958:00:0	
1155	98	265	19:56:04.200	488GE6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,661,960:17:0	
1156	98	266	00:00:00.200	481UD4A	7VECT		Inert vect update UTC	4O0	4	0	4,662,201:40:0	
1157	98	266	01:39:27.533	488GE6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,662,299:73:0	
1158	98	266	02:37:03.533	488GF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,662,356:70:0	
1159	98	266	02:43:57.533	488GF6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,662,363:54:0	
1160	98	266	03:15:47.533	488GF6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,662,395:07:0	
1161	98	266	07:37:41.533	488GF6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,662,654:09:0	
1162	98	266	07:44:32.200	488GF6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,662,660:79:0	
1163	98	266	08:43:57.533	488GG6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,662,719:58:0	
1164	98	266	09:03:11.533	488GG6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,662,738:60:0	
1165	98	266	09:08:22.200	488GG6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,662,743:71:0	
1166	98	266	13:13:01.533	488GG6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,662,985:68:0	
1167	98	266	13:14:55.533	488GG6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,662,987:57:0	
1168	98	266	18:17:13.466	488GH6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,663,286:55:0	
1169	98	266	18:28:31.466	488GH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,663,297:71:0	
1170	98	266	19:22:34.800	488GH6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,663,351:22:0	
1171	98	266	19:51:40.800	488GH6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,663,380:02:0	
1172	98	266	19:53:51.466	488GH6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,663,382:16:0	
1173	98	267	00:00:00.133	481UA4A	7VECT	BB1	Inert vect update UTC	4O0	4	0	4,663,625:56:0	
1174	98	267	02:19:59.466	488GI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,663,764:06:0	
1175	98	267	03:01:20.800	488GI6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,663,804:88:0	
1176	98	267	03:06:55.466	488GI6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,663,810:44:0	
1177	98	267	07:39:34.133	488GI6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,664,080:12:0	
1178	98	267	08:26:57.466	176SP6A	6TMREC	**TPB**	TERMINATE PLAYBACK (PB CONTROL) Record Mo	4O0	4	0	4,664,127:00:0	
1179	98	267	08:33:01.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,664,133:00:0	
1180	98	267	08:33:01.466		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,664,133:00:0	
1181	98	267	08:33:01.466		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,664,133:00:0	
1182	98	267	08:33:01.466	465TA6A	6DMST	5000	DMS Slew to TIC	4O0	4	0	4,664,133:00:0	
1183	98	267	08:33:08.133		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,664,133:10:0	
1184	98	267	08:33:09.533		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	4O0	4	0	4,664,133:12:1	
1185	98	267	08:48:15.466	488GJ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	4O0	4	0	4,664,148:06:0	
1186	98	267	14:14:10.266		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *4997.94 +/-	4O0	4	0	4,664,470:36:2	
1187	98	267	14:14:11.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	4O0	4	0	4,664,470:38:0	
1188	98	267	14:26:42.800		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	4O0	4	0	4,664,482:73:0	
1189	98	267	14:26:42.800	465TB6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	4O0	4	0	4,664,482:73:0	
1190	98	267	14:26:44.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	4O0	4	0	4,664,482:75:1	
1191	98	267	14:26:49.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	4O0	4	0	4,664,482:83:0	
1192	98	267	14:26:50.666		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	4O0	4	0	4,664,482:84:8	
1193	98	267	14:26:54.533		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	4O0	4	0	4,664,482:90:6	
1194	98	267	14:26:54.533		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	4O0	4	0	4,664,482:90:6	
1195	98	267	14:52:34.800	465TB6B	6DMSC	RDY,4	DMS Control Tape stop	4O0	4	0	4,664,508:35:0	
1196	98	267	14:52:34.800		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 255.79 +/-	4O0	4	0	4,664,508:35:0	
1197	98	267	14:52:36.000		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	4O0	4	0	4,664,508:36:8	
1198	98	267	16:46:07.466	488GK6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,664,620:62:0	
1199	98	267	16:50:22.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	4O0	4	0	4,664,624:81:0	
1200	98	267	16:50:22.800		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	4O0	4	0	4,664,624:81:0	
1201	98	267	16:50:22.800	465TC6A	6DTRN	CMD,6DTRN,465TC6	DMS TRACK TURNAROUND	4O0	4	0	4,664,624:81:0	
1202	98	267	16:50:24.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	4O0	4	0	4,664,624:83:1	
1203	98	267	16:50:29.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	4O0	4	0	4,664,625:00:0	
1204	98	267	16:50:30.666		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	4O0	4	0	4,664,625:01:8	
1205	98	267	16:50:32.066		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	4O0	4	0	4,664,625:03:9	
1206	98	267	16:54:32.733		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	4O0	4	0	4,664,629:00:9	
1207	98	267	16:54:33.933		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	4O0	4	0	4,664,629:02:7	
1208	98	267	16:54:33.933		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	4O0	4	0	4,664,629:02:7	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1209	98	267	16:54:35.333		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	4O0	4	0	4,664,629	04:8
1210	98	267	16:54:47.333		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	4O0	4	0	4,664,629	22:8
1211	98	267	16:54:48.533		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	4O0	4	0	4,664,629	24:6
1212	98	267	17:00:25.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,664,634	75:0
1213	98	267	17:00:25.466	465TD6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	4O0	4	0	4,664,634	75:0
1214	98	267	17:00:32.133		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,664,634	85:0
1215	98	267	17:00:36.000		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	4O0	4	0	4,664,634	90:8
1216	98	267	17:00:36.000		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	4O0	4	0	4,664,634	90:8
1217	98	267	17:32:19.466	465TD6B	6DMSC	RDY,1	DMS Control Tape stop	4O0	4	0	4,664,666	34:0
1218	98	267	17:32:19.466		DMS:	**: *RUNDOWN**	P100, TRACK 1, FWD, TIC *6063.01 +/-	4O0	4	0	4,664,666	34:0
1219	98	267	17:32:20.666		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	4O0	4	0	4,664,666	35:8
1220	98	267	17:47:55.466		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	4O0	4	0	4,664,681	73:0
1221	98	267	17:47:55.466	465TE6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	4O0	4	0	4,664,681	73:0
1222	98	267	17:47:56.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	4O0	4	0	4,664,681	75:1
1223	98	267	17:48:02.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	4O0	4	0	4,664,681	83:0
1224	98	267	17:48:03.333		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	4O0	4	0	4,664,681	84:8
1225	98	267	17:48:07.200		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	4O0	4	0	4,664,681	90:6
1226	98	267	17:48:07.200		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	4O0	4	0	4,664,681	90:6
1227	98	267	18:05:03.466	488GK6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,664,698	68:0
1228	98	267	18:14:24.800	488GK6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,664,708	00:0
1229	98	267	18:15:43.466	488GK6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	4,664,709	27:0
1230	98	267	18:20:03.466	465TF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	4O0	4	0	4,664,713	53:0
1231	98	267	18:20:03.466		DMS:	**: *RUNDOWN**	P100, TRACK 2, REV, TIC * 164.96 +/-	4O0	4	0	4,664,713	53:0
1232	98	267	18:20:04.666		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	4O0	4	0	4,664,713	54:8
1233	98	267	18:20:08.533		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	4O0	4	0	4,664,713	60:6
1234	98	267	18:20:08.533		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	4O0	4	0	4,664,713	60:6
1235	98	267	18:24:15.466	488GK6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,664,717	67:0
1236	98	267	18:52:04.133		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC *6062.38 +/-	4O0	4	0	4,664,745	22:0
1237	98	267	18:52:04.133	465TF6B	6DMSC	RDY,3	DMS Control Tape stop	4O0	4	0	4,664,745	22:0
1238	98	267	18:52:05.333		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	4O0	4	0	4,664,745	23:8
1239	98	267	19:06:47.466	465TG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	4O0	4	0	4,664,759	73:0
1240	98	267	19:06:47.466		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	4O0	4	0	4,664,759	73:0
1241	98	267	19:06:48.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	4O0	4	0	4,664,759	75:1
1242	98	267	19:06:54.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	4O0	4	0	4,664,759	83:0
1243	98	267	19:06:55.333		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	4O0	4	0	4,664,759	84:8
1244	98	267	19:06:59.200		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	4O0	4	0	4,664,759	90:6
1245	98	267	19:06:59.200		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	4O0	4	0	4,664,759	90:6
1246	98	267	19:38:54.800	465TH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	4O0	4	0	4,664,791	52:0
1247	98	267	19:38:54.800		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 166.38 +/-	4O0	4	0	4,664,791	52:0
1248	98	267	19:38:56.000		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	4O0	4	0	4,664,791	53:8
1249	98	267	19:38:59.866		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	4O0	4	0	4,664,791	59:6
1250	98	267	19:38:59.866		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	4O0	4	0	4,664,791	59:6
1251	98	267	19:40:00.800	465TH6B	6DMSC	RDY,3	DMS Control Tape stop	4O0	4	0	4,664,792	60:0
1252	98	267	19:40:00.800		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC * 358.52 +/-	4O0	4	0	4,664,792	60:0
1253	98	267	19:40:02.000		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	4O0	4	0	4,664,792	61:8
1254	98	267	19:54:30.800	465TI6A	6DMSC	RDY,4	DMS Control Tape stop	4O0	4	0	4,664,807	00:0
1255	98	267	19:54:30.800		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	4O0	4	0	4,664,807	00:0
1256	98	267	19:55:24.800		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	4O0	4	0	4,664,807	81:0
1257	98	267	19:55:24.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	4O0	4	0	4,664,807	81:0
1258	98	267	19:55:24.800	465TJ6A	6DTRN	CMD,6DTRN,465TJ6	DMS TRACK TURNAROUND	4O0	4	0	4,664,807	81:0
1259	98	267	19:55:26.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	4O0	4	0	4,664,807	83:1
1260	98	267	19:55:31.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	4O0	4	0	4,664,808	00:0
1261	98	267	19:55:32.666		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	4O0	4	0	4,664,808	01:8
1262	98	267	19:55:34.066		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	4O0	4	0	4,664,808	03:9
1263	98	267	20:06:59.866		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	4O0	4	0	4,664,819	31:6

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1264	98	267	20:07:01.066		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	4O0	4	0	4,664,819:33:4	
1265	98	267	20:07:01.066		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	4O0	4	0	4,664,819:33:4	
1266	98	267	20:07:02.466		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	4O0	4	0	4,664,819:35:5	
1267	98	267	20:07:14.466		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	4O0	4	0	4,664,819:53:5	
1268	98	267	20:07:15.666		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	4O0	4	0	4,664,819:55:3	
1269	98	268	02:20:28.733	488GL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	4,665,188:66:0	
1270	98	268	02:47:43.400	488GL6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,665,215:61:0	
1271	98	268	03:28:55.400	488GL6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,665,256:38:0	
1272	98	268	03:55:45.400	488GL6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	4,665,282:87:0	
1273	**98**	**268**	**04:00:00.000**	**20A3EW**	**37A**	**Final Condition**	**NIMS Power ON**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1274	**98**	**268**	**04:00:00.000**	**20A3EX**	**37HR**	**Final Condition**	**Replacement Heaters OFF**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1275	**98**	**268**	**04:00:00.000**	**20A3EY**	**37C1PR**	**Final Condition**	**Optics Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1276	**98**	**268**	**04:00:00.000**	**20A3EZ**	**37C2PR**	**Final Condition**	**Optics Heater 2 OFF (primary relay)**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1277	**98**	**268**	**04:00:00.000**	**20A3FA**	**37F1PR**	**Final Condition**	**Radiator Flash Heater OFF (primary relay)**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1278	**98**	**268**	**04:00:00.000**	**20A3FB**	**37F2PR**	**Final Condition**	**Shield Flash Heater OFF (primary relay)**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1279	**98**	**268**	**04:00:00.000**	**20A3FD**	**40HRPR**	**Final Condition**	**RCT Heater OFF (primary relay)**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1280	**98**	**268**	**04:00:00.000**	**20A3FE**	**40T1P**	**Final Condition**	**PCT Heater 1 ON (primary relay)**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1281	**98**	**268**	**04:00:00.000**	**20A3FF**	**40T2**	**Final Condition**	**PCT Heater 2 ON**	**4O0**	**4**	**0**	**4,665,287:13:9**	
1282	98	268	04:00:00.066		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,665,287:14:0	

16INHRSPEC01

```
OAPEL:  16INHRSPEC01              ALIAS:  16INHRSPEC01
EXT:    A                         PSID:   DA
SCLK1:  04569992:00:0             SCLK2:  04569994:90:0
SCET1:    98-201/06:06:04.066     SCET2:    98-201/06:09:05.400
TARGET: IO                        PARTITION: 1

MODE:       3                     GAIN:       2
CHOP:       1                     GRAT_OFF:   4
PTAB_A:     1 1 0 0 124           PTAB_B:     1 1 0 0 124
ECAL:       0                     OPCAL:      0
R/T:        0                     RECORD:     1

MB_DOWN:    00000                 MB_UP:      00000
COMP_FLAG:  1
EST_COMP:   2.0                   EST_COMPV:  0.3
RATE_CON1:  00000                 RATE_CON2:  65525
NWAVETOT:   228                   TLMFMT:     LPU

THRESHOLD_SEL: 2
THRESHOLD_VALUES:  030, 030, 030, 000, 030, 029, 028, 028, 029
                   028, 032, 034, 031, 031, 032, 030, 029

WETGID:     0326228001          03  26  228  001
WTGRP_SIZ:  26
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	02580	0,0010,0101,1000,0000
1	1BDFF	1,1011,1101,1111,1111
2	02580	0,0010,0101,1000,0000
3	1BDFF	1,1011,1101,1111,1111
4	02580	0,0010,0101,1000,0000
5	1BDFF	1,1011,1101,1111,1111
6	02580	0,0010,0101,1000,0000
7	1BDFF	1,1011,1101,1111,1111
8	02580	0,0010,0101,1000,0000
9	1BDFF	1,1011,1101,1111,1111
10	02580	0,0010,0101,1000,0000
11	1BDFF	1,1011,1101,1111,1111
12	02580	0,0010,0101,1000,0000
13	1BDFF	1,1011,1101,1111,1111
14	02580	0,0010,0101,1000,0000
15	1BDFF	1,1011,1101,1111,1111
16	02580	0,0010,0101,1000,0000
17	1BDFF	1,1011,1101,1111,1111
18	02580	0,0010,0101,1000,0000
19	1BDFF	1,1011,1101,1111,1111
20	02580	0,0010,0101,1000,0000
21	1BDFF	1,1011,1101,1111,1111
22	02580	0,0010,0101,1000,0000
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16INHRSPEC01

```
OAPEL:  16INHRSPEC01              ALIAS:  16INHRSPEC01
EXT:    B                         PSID:   DA
SCLK1:  04569992:00:0             SCLK2:  04569994:90:0
SCET1:    98-201/06:06:04.066     SCET2:    98-201/06:09:05.400
TARGET: IO                        PARTITION: 1

MODE:       3                     GAIN:       2
CHOP:       1                     GRAT_OFF:   4
PTAB_A:     1 1 0 0 124           PTAB_B:     1 1 0 0 124
ECAL:       0                     OPCAL:      0
R/T:        0                     RECORD:     1

MB_DOWN:    00000                 MB_UP:      00000
COMP_FLAG:  1
EST_COMP:   2.0                   EST_COMPV:  0.3
RATE_CON1:  00000                 RATE_CON2:  65525
NWAVETOT:   228                   TLMFMT:     LPU

THRESHOLD_SEL: 0
THRESHOLD_VALUES:  000, 000, 000, 000, 000, 000, 000, 000, 000
                   000, 000, 000, 000, 000, 000, 000, 000

WETGID:     0326228001          03  26  228  001
WTGRP_SIZ:  26
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	02580	0,0010,0101,1000,0000
1	1BDFF	1,1011,1101,1111,1111
2	02580	0,0010,0101,1000,0000
3	1BDFF	1,1011,1101,1111,1111
4	02580	0,0010,0101,1000,0000
5	1BDFF	1,1011,1101,1111,1111
6	02580	0,0010,0101,1000,0000
7	1BDFF	1,1011,1101,1111,1111
8	02580	0,0010,0101,1000,0000
9	1BDFF	1,1011,1101,1111,1111
10	02580	0,0010,0101,1000,0000
11	1BDFF	1,1011,1101,1111,1111
12	02580	0,0010,0101,1000,0000
13	1BDFF	1,1011,1101,1111,1111
14	02580	0,0010,0101,1000,0000
15	1BDFF	1,1011,1101,1111,1111
16	02580	0,0010,0101,1000,0000
17	1BDFF	1,1011,1101,1111,1111
18	02580	0,0010,0101,1000,0000
19	1BDFF	1,1011,1101,1111,1111
20	02580	0,0010,0101,1000,0000
21	1BDFF	1,1011,1101,1111,1111
22	02580	0,0010,0101,1000,0000
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16JNJUPRTS01

```
OAPEL:  16JNJUPRTS01            ALIAS:  16JNJUPRTS01
EXT:    R                       PSID:   DB
SCLK1:  04570336:06:0           SCLK2:  04570346:04:0
SCET1:  1998-201/11:53:57.400   SCET2:  1998-201/12:04:02.733
TARGET: JUPITER                 PARTITION: 1

MODE:       3                   GAIN:       2
CHOP:       1                   GRAT_OFF:   4
PTAB_A:     1 1 0 0 124         PTAB_B:     1 1 0 0 124
ECAL:       0                   OPCAL:      0
R/T:        1                   RECORD:     0

MB_DOWN:    11011               MB_UP:      11011
COMP_FLAG:  0
EST_COMP:   0.0                 EST_COMPV:  0.0
RATE_CON1:  00000               RATE_CON2:  00000
NWAVETOT:   408                 TLMFMT:     RT

THRESHOLD_SEL: 0
THRESHOLD_VALUES:  000, 000, 000, 000, 000, 000, 000, 000, 000
                   000, 000, 000, 000, 000, 000, 000, 000

WETGID:     0302408000          03  02  408  000
WTGRP_SIZ:  2
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1FFFF	1,1111,1111,1111,1111
1	1FFFF	1,1111,1111,1111,1111
2	1FFFF	1,1111,1111,1111,1111
3	1FFFF	1,1111,1111,1111,1111
4	1FFFF	1,1111,1111,1111,1111
5	1FFFF	1,1111,1111,1111,1111
6	1FFFF	1,1111,1111,1111,1111
7	1FFFF	1,1111,1111,1111,1111
8	1FFFF	1,1111,1111,1111,1111
9	1FFFF	1,1111,1111,1111,1111
10	1FFFF	1,1111,1111,1111,1111
11	1FFFF	1,1111,1111,1111,1111
12	1FFFF	1,1111,1111,1111,1111
13	1FFFF	1,1111,1111,1111,1111
14	1FFFF	1,1111,1111,1111,1111
15	1FFFF	1,1111,1111,1111,1111
16	1FFFF	1,1111,1111,1111,1111
17	1FFFF	1,1111,1111,1111,1111
18	1FFFF	1,1111,1111,1111,1111
19	1FFFF	1,1111,1111,1111,1111
20	1FFFF	1,1111,1111,1111,1111
21	1FFFF	1,1111,1111,1111,1111
22	1FFFF	1,1111,1111,1111,1111
23	1FFFF	1,1111,1111,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16JNHOTMAP01

OAPEL: 16JNHOTMAP01 ALIAS: 16JNHOTMAP01
EXT: A PSID: DC
SCLK1: 04570609:06:0 SCLK2: 04570610:20:0
SCET1: 98-201/16:30:00.066 SCET2: 98-201/16:31:10.066
TARGET: JUPITER PARTITION: 1

MODE: 3 GAIN: 2
CHOP: 1 GRAT_OFF: 4
PTAB_A: 1 1 0 0 124 PTAB_B: 1 1 0 0 124
ECAL: 0 OPCAL: 0
R/T: 0 RECORD: 1

MB_DOWN: 00000 MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0 EST_COMPV: 0.3
RATE_CON1: 00000 RATE_CON2: 65525
NWAVETOT: 238 TLMFMT: LPU

THRESHOLD_SEL: 0
THRESHOLD_VALUES: 000, 000, 000, 000, 000, 000, 000, 000, 000
000, 000, 000, 000, 000, 000, 000, 000

WETGID: 0326238001 03 26 238 001
WTGRP_SIZ: 26

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	19E27	1,1001,1110,0010,0111
1	19E27	1,1001,1110,0010,0111
2	19E27	1,1001,1110,0010,0111
3	19E27	1,1001,1110,0010,0111
4	19C27	1,1001,1100,0010,0111
5	19C27	1,1001,1100,0010,0111
6	19C27	1,1001,1100,0010,0111
7	19C27	1,1001,1100,0010,0111
8	1BC27	1,1011,1100,0010,0111
9	1BC27	1,1011,1100,0010,0111
10	1BC27	1,1011,1100,0010,0111
11	1BC27	1,1011,1100,0010,0111
12	1BC27	1,1011,1100,0010,0111
13	1BC27	1,1011,1100,0010,0111
14	1BC27	1,1011,1100,0010,0111
15	1BC27	1,1011,1100,0010,0111
16	1BC27	1,1011,1100,0010,0111
17	1BC27	1,1011,1100,0010,0111
18	1BC67	1,1011,1100,0110,0111
19	1BC67	1,1011,1100,0110,0111
20	13C67	1,0011,1100,0110,0111
21	13C67	1,0011,1100,0110,0111
22	13C67	1,0011,1100,0110,0111
23	13C67	1,0011,1100,0110,0111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16HNDARKCL02

OAPEL: 16HNDARKCL02 ALIAS: 16HNDARKCL01
EXT: A PSID: A
SCLK1: 04584688:00:0 SCLK2: 04584689:90:0
SCET1: 98-211/13:45:20.933 SCET2: 98-211/13:47:21.400
TARGET: SKY PARTITION: 1

MODE: 3 GAIN: 2
CHOP: 1 GRAT_OFF: 4
PTAB_A: 1 1 0 0 124 PTAB_B: 1 1 0 0 124
ECAL: 0 OPCAL: 0
R/T: 0 RECORD: 1

MB_DOWN: 00000 MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0 EST_COMPV: 0.3
RATE_CON1: 00000 RATE_CON2: 65525
NWAVETOT: 408 TLMFMT: MPW

THRESHOLD_SEL: 0
THRESHOLD_VALUES: 000, 000, 000, 000, 000, 000, 000, 000, 000
000, 000, 000, 000, 000, 000, 000, 000

WETGID: 0326408001 03 26 408 001
WTGRP_SIZ: 26

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1FFFF	1,1111,1111,1111,1111
1	1FFFF	1,1111,1111,1111,1111
2	1FFFF	1,1111,1111,1111,1111
3	1FFFF	1,1111,1111,1111,1111
4	1FFFF	1,1111,1111,1111,1111
5	1FFFF	1,1111,1111,1111,1111
6	1FFFF	1,1111,1111,1111,1111
7	1FFFF	1,1111,1111,1111,1111
8	1FFFF	1,1111,1111,1111,1111
9	1FFFF	1,1111,1111,1111,1111
10	1FFFF	1,1111,1111,1111,1111
11	1FFFF	1,1111,1111,1111,1111
12	1FFFF	1,1111,1111,1111,1111
13	1FFFF	1,1111,1111,1111,1111
14	1FFFF	1,1111,1111,1111,1111
15	1FFFF	1,1111,1111,1111,1111
16	1FFFF	1,1111,1111,1111,1111
17	1FFFF	1,1111,1111,1111,1111
18	1FFFF	1,1111,1111,1111,1111
19	1FFFF	1,1111,1111,1111,1111
20	1FFFF	1,1111,1111,1111,1111
21	1FFFF	1,1111,1111,1111,1111
22	1FFFF	1,1111,1111,1111,1111
23	1FFFF	1,1111,1111,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16HNDARKCL04

OAPEL: 16HNDARKCL04 ALIAS: 16HNDARKCL01
EXT: A PSID: A
SCLK1: 04584690:00:0 SCLK2: 04584691:90:0
SCET1: 98-211/13:47:22.066 SCET2: 98-211/13:49:22.733
TARGET: SKY PARTITION: 1

MODE: 3 GAIN: 4
CHOP: 1 GRAT_OFF: 4
PTAB_A: 1 1 0 0 124 PTAB_B: 1 1 0 0 124
ECAL: 0 OPCAL: 0
R/T: 0 RECORD: 1

MB_DOWN: 00000 MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0 EST_COMPV: 0.3
RATE_CON1: 00000 RATE_CON2: 65525
NWAVETOT: 408 TLMFMT: MPW

THRESHOLD_SEL: 0
THRESHOLD_VALUES: 000, 000, 000, 000, 000, 000, 000, 000, 000
000, 000, 000, 000, 000, 000, 000, 000

WETGID: 0326408001 03 26 408 001
WTGRP_SIZ: 26

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1FFFF	1,1111,1111,1111,1111
1	1FFFF	1,1111,1111,1111,1111
2	1FFFF	1,1111,1111,1111,1111
3	1FFFF	1,1111,1111,1111,1111
4	1FFFF	1,1111,1111,1111,1111
5	1FFFF	1,1111,1111,1111,1111
6	1FFFF	1,1111,1111,1111,1111
7	1FFFF	1,1111,1111,1111,1111
8	1FFFF	1,1111,1111,1111,1111
9	1FFFF	1,1111,1111,1111,1111
10	1FFFF	1,1111,1111,1111,1111
11	1FFFF	1,1111,1111,1111,1111
12	1FFFF	1,1111,1111,1111,1111
13	1FFFF	1,1111,1111,1111,1111
14	1FFFF	1,1111,1111,1111,1111
15	1FFFF	1,1111,1111,1111,1111
16	1FFFF	1,1111,1111,1111,1111
17	1FFFF	1,1111,1111,1111,1111
18	1FFFF	1,1111,1111,1111,1111
19	1FFFF	1,1111,1111,1111,1111
20	1FFFF	1,1111,1111,1111,1111
21	1FFFF	1,1111,1111,1111,1111
22	1FFFF	1,1111,1111,1111,1111
23	1FFFF	1,1111,1111,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16HNDARKCL03

```
OAPEL:  16HNDARKCL03            ALIAS:  16HNDARKCL01
EXT:    A                       PSID:   A
SCLK1:  04584692:00:0           SCLK2:  04584693:90:0
SCET1:    98-211/13:49:23.400   SCET2:    98-211/13:51:24.066
TARGET: SKY                     PARTITION: 1

MODE:       3                   GAIN:       3
CHOP:       1                   GRAT_OFF:   4
PTAB_A:     1 1 0 0 124         PTAB_B:     1 1 0 0 124
ECAL:       0                   OPCAL:      0
R/T:        0                   RECORD:     1

MB_DOWN:    00000               MB_UP:      00000
COMP_FLAG:  1
EST_COMP:   2.0                 EST_COMPV:  0.3
RATE_CON1:  00000               RATE_CON2:  65525
NWAVETOT:   408                 TLMFMT:     MPW

THRESHOLD_SEL: 0
THRESHOLD_VALUES:  000, 000, 000, 000, 000, 000, 000, 000, 000
                   000, 000, 000, 000, 000, 000, 000, 000

WETGID:     0326408001          03  26  408  001
WTGRP_SIZ:  26
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1FFFF	1,1111,1111,1111,1111
1	1FFFF	1,1111,1111,1111,1111
2	1FFFF	1,1111,1111,1111,1111
3	1FFFF	1,1111,1111,1111,1111
4	1FFFF	1,1111,1111,1111,1111
5	1FFFF	1,1111,1111,1111,1111
6	1FFFF	1,1111,1111,1111,1111
7	1FFFF	1,1111,1111,1111,1111
8	1FFFF	1,1111,1111,1111,1111
9	1FFFF	1,1111,1111,1111,1111
10	1FFFF	1,1111,1111,1111,1111
11	1FFFF	1,1111,1111,1111,1111
12	1FFFF	1,1111,1111,1111,1111
13	1FFFF	1,1111,1111,1111,1111
14	1FFFF	1,1111,1111,1111,1111
15	1FFFF	1,1111,1111,1111,1111
16	1FFFF	1,1111,1111,1111,1111
17	1FFFF	1,1111,1111,1111,1111
18	1FFFF	1,1111,1111,1111,1111
19	1FFFF	1,1111,1111,1111,1111
20	1FFFF	1,1111,1111,1111,1111
21	1FFFF	1,1111,1111,1111,1111
22	1FFFF	1,1111,1111,1111,1111
23	1FFFF	1,1111,1111,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16HNDARKCL01

OAPEL: 16HNDARKCL01 ALIAS: 16HNDARKCL01
EXT: A PSID: A
SCLK1: 04584694:00:0 SCLK2: 04584699:89:0
SCET1: 98-211/13:51:24.733 SCET2: 98-211/13:57:27.600
TARGET: SKY PARTITION: 1

MODE: 3 GAIN: 1
CHOP: 1 GRAT_OFF: 4
PTAB_A: 1 1 0 0 124 PTAB_B: 1 1 0 0 124
ECAL: 0 OPCAL: 0
R/T: 0 RECORD: 1

MB_DOWN: 00000 MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0 EST_COMPV: 0.3
RATE_CON1: 00000 RATE_CON2: 65525
NWAVETOT: 408 TLMFMT: MPW

THRESHOLD_SEL: 0
THRESHOLD_VALUES: 000, 000, 000, 000, 000, 000, 000, 000, 000
000, 000, 000, 000, 000, 000, 000, 000

WETGID: 0326408001 03 26 408 001
WTGRP_SIZ: 26

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1FFFF	1,1111,1111,1111,1111
1	1FFFF	1,1111,1111,1111,1111
2	1FFFF	1,1111,1111,1111,1111
3	1FFFF	1,1111,1111,1111,1111
4	1FFFF	1,1111,1111,1111,1111
5	1FFFF	1,1111,1111,1111,1111
6	1FFFF	1,1111,1111,1111,1111
7	1FFFF	1,1111,1111,1111,1111
8	1FFFF	1,1111,1111,1111,1111
9	1FFFF	1,1111,1111,1111,1111
10	1FFFF	1,1111,1111,1111,1111
11	1FFFF	1,1111,1111,1111,1111
12	1FFFF	1,1111,1111,1111,1111
13	1FFFF	1,1111,1111,1111,1111
14	1FFFF	1,1111,1111,1111,1111
15	1FFFF	1,1111,1111,1111,1111
16	1FFFF	1,1111,1111,1111,1111
17	1FFFF	1,1111,1111,1111,1111
18	1FFFF	1,1111,1111,1111,1111
19	1FFFF	1,1111,1111,1111,1111
20	1FFFF	1,1111,1111,1111,1111
21	1FFFF	1,1111,1111,1111,1111
22	1FFFF	1,1111,1111,1111,1111
23	1FFFF	1,1111,1111,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16NNRCTRLT01

OAPEL: 16NNRCTRLT01 ALIAS: LSNNRCTRTA01
EXT: R PSID: XU
SCLK1: 04631439:00:0 SCLK2: 04631439:12:0
SCET1: 1998-244/09:35:46.600 SCET2: 1998-244/09:35:54.600
TARGET: CAL PARTITION: 1

MODE: 3 GAIN: 1
CHOP: 1 GRAT_OFF: 4
PTAB_A: 1 1 0 0 124 PTAB_B: 1 1 0 0 124
ECAL: 0 OPCAL: 0
R/T: 1 RECORD: 0

MB_DOWN: 11011 MB_UP: 11011
COMP_FLAG: 0
EST_COMP: 0.0 EST_COMPV: 0.0
RATE_CON1: 00000 RATE_CON2: 00000
NWAVETOT: 252 TLMFMT: RT

THRESHOLD_SEL: 0
THRESHOLD_VALUES: 000, 000, 000, 000, 000, 000, 000, 000, 000
000, 000, 000, 000, 000, 000, 000, 000

WETGID: 0303252000 03 03 252 000
WTGRP_SIZ: 3

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	003FF	0,0000,0011,1111,1111
1	003FF	0,0000,0011,1111,1111
2	003FF	0,0000,0011,1111,1111
3	003FF	0,0000,0011,1111,1111
4	003FF	0,0000,0011,1111,1111
5	003FF	0,0000,0011,1111,1111
6	003FF	0,0000,0011,1111,1111
7	003FF	0,0000,0011,1111,1111
8	003FF	0,0000,0011,1111,1111
9	003FF	0,0000,0011,1111,1111
10	003FF	0,0000,0011,1111,1111
11	003FF	0,0000,0011,1111,1111
12	007FF	0,0000,0111,1111,1111
13	007FF	0,0000,0111,1111,1111
14	007FF	0,0000,0111,1111,1111
15	007FF	0,0000,0111,1111,1111
16	007FF	0,0000,0111,1111,1111
17	007FF	0,0000,0111,1111,1111
18	007FF	0,0000,0111,1111,1111
19	007FF	0,0000,0111,1111,1111
20	007FF	0,0000,0111,1111,1111
21	007FF	0,0000,0111,1111,1111
22	007FF	0,0000,0111,1111,1111
23	007FF	0,0000,0111,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16NNRCTRLT01

OAPEL: 16NNRCTRLT01 ALIAS: LSNNRCTRTA01
EXT: S PSID: XU
SCLK1: 04631445:00:0 SCLK2: 04631446:12:0
SCET1: 1998-244/09:41:50.600 SCET2: 1998-244/09:42:59.266
TARGET: CAL PARTITION: 1

MODE: 3 GAIN: 1
CHOP: 1 GRAT_OFF: 4
PTAB_A: 1 1 0 0 124 PTAB_B: 1 1 0 0 124
ECAL: 0 OPCAL: 0
R/T: 1 RECORD: 0

MB_DOWN: 11011 MB_UP: 11011
COMP_FLAG: 0
EST_COMP: 0.0 EST_COMPV: 0.0
RATE_CON1: 00000 RATE_CON2: 00000
NWAVETOT: 252 TLMFMT: RT

THRESHOLD_SEL: 0
THRESHOLD_VALUES: 000, 000, 000, 000, 000, 000, 000, 000, 000
000, 000, 000, 000, 000, 000, 000, 000

WETGID: 0303252000 03 03 252 000
WTGRP_SIZ: 3

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	003FF	0,0000,0011,1111,1111
1	003FF	0,0000,0011,1111,1111
2	003FF	0,0000,0011,1111,1111
3	003FF	0,0000,0011,1111,1111
4	003FF	0,0000,0011,1111,1111
5	003FF	0,0000,0011,1111,1111
6	003FF	0,0000,0011,1111,1111
7	003FF	0,0000,0011,1111,1111
8	003FF	0,0000,0011,1111,1111
9	003FF	0,0000,0011,1111,1111
10	003FF	0,0000,0011,1111,1111
11	003FF	0,0000,0011,1111,1111
12	007FF	0,0000,0111,1111,1111
13	007FF	0,0000,0111,1111,1111
14	007FF	0,0000,0111,1111,1111
15	007FF	0,0000,0111,1111,1111
16	007FF	0,0000,0111,1111,1111
17	007FF	0,0000,0111,1111,1111
18	007FF	0,0000,0111,1111,1111
19	007FF	0,0000,0111,1111,1111
20	007FF	0,0000,0111,1111,1111
21	007FF	0,0000,0111,1111,1111
22	007FF	0,0000,0111,1111,1111
23	007FF	0,0000,0111,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16NNRCTRLT01

OAPEL: 16NNRCTRLT01 ALIAS: LSNNRCTRTA01
EXT: T PSID: XU
SCLK1: 04631451:00:0 SCLK2: 04631451:12:0
SCET1: 1998-244/09:47:54.600 SCET2: 1998-244/09:48:02.600
TARGET: CAL PARTITION: 1

MODE: 3 GAIN: 1
CHOP: 1 GRAT_OFF: 4
PTAB_A: 1 1 0 0 124 PTAB_B: 1 1 0 0 124
ECAL: 0 OPCAL: 0
R/T: 1 RECORD: 0

MB_DOWN: 11011 MB_UP: 11011
COMP_FLAG: 0
EST_COMP: 0.0 EST_COMPV: 0.0
RATE_CON1: 00000 RATE_CON2: 00000
NWAVETOT: 252 TLMFMT: RT

THRESHOLD_SEL: 0
THRESHOLD_VALUES: 000, 000, 000, 000, 000, 000, 000, 000, 000
000, 000, 000, 000, 000, 000, 000, 000

WETGID: 0303252000 03 03 252 000
WTGRP_SIZ: 3

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	003FF	0,0000,0011,1111,1111
1	003FF	0,0000,0011,1111,1111
2	003FF	0,0000,0011,1111,1111
3	003FF	0,0000,0011,1111,1111
4	003FF	0,0000,0011,1111,1111
5	003FF	0,0000,0011,1111,1111
6	003FF	0,0000,0011,1111,1111
7	003FF	0,0000,0011,1111,1111
8	003FF	0,0000,0011,1111,1111
9	003FF	0,0000,0011,1111,1111
10	003FF	0,0000,0011,1111,1111
11	003FF	0,0000,0011,1111,1111
12	007FF	0,0000,0111,1111,1111
13	007FF	0,0000,0111,1111,1111
14	007FF	0,0000,0111,1111,1111
15	007FF	0,0000,0111,1111,1111
16	007FF	0,0000,0111,1111,1111
17	007FF	0,0000,0111,1111,1111
18	007FF	0,0000,0111,1111,1111
19	007FF	0,0000,0111,1111,1111
20	007FF	0,0000,0111,1111,1111
21	007FF	0,0000,0111,1111,1111
22	007FF	0,0000,0111,1111,1111
23	007FF	0,0000,0111,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16NNOPCAL_01

```
OAPEL:  16NNOPCAL_01            ALIAS:  LSNNOPCAL_01
EXT:    R                       PSID:   DC
SCLK1:  04631455:00:0           SCLK2:  04631457:12:0
SCET1:  1998-244/09:51:57.266   SCET2:  1998-244/09:54:06.600
TARGET: CAL                     PARTITION: 1

MODE:       3                   GAIN:       4
CHOP:       1                   GRAT_OFF:   4
PTAB_A:     1 1 0 0 124         PTAB_B:     1 1 0 0 124
ECAL:       0                   OPCAL:      1
R/T:        1                   RECORD:     0

MB_DOWN:    11011               MB_UP:      11011
COMP_FLAG:  0
EST_COMP:   0.0                 EST_COMPV:  0.0
RATE_CON1:  00000               RATE_CON2:  00000
NWAVETOT:   048                 TLMFMT:     RT

THRESHOLD_SEL: 0
THRESHOLD_VALUES:  000, 000, 000, 000, 000, 000, 000, 000, 000
                   000, 000, 000, 000, 000, 000, 000, 000

WETGID:     0302048000          03  02  048  000
WTGRP_SIZ:  2
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	18000	1,1000,0000,0000,0000
1	18000	1,1000,0000,0000,0000
2	18000	1,1000,0000,0000,0000
3	18000	1,1000,0000,0000,0000
4	18000	1,1000,0000,0000,0000
5	18000	1,1000,0000,0000,0000
6	18000	1,1000,0000,0000,0000
7	18000	1,1000,0000,0000,0000
8	18000	1,1000,0000,0000,0000
9	18000	1,1000,0000,0000,0000
10	18000	1,1000,0000,0000,0000
11	18000	1,1000,0000,0000,0000
12	18000	1,1000,0000,0000,0000
13	18000	1,1000,0000,0000,0000
14	18000	1,1000,0000,0000,0000
15	18000	1,1000,0000,0000,0000
16	18000	1,1000,0000,0000,0000
17	18000	1,1000,0000,0000,0000
18	18000	1,1000,0000,0000,0000
19	18000	1,1000,0000,0000,0000
20	18000	1,1000,0000,0000,0000
21	18000	1,1000,0000,0000,0000
22	18000	1,1000,0000,0000,0000
23	18000	1,1000,0000,0000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16NNPCTRLT01

OAPEL: 16NNPCTRLT01 ALIAS: LSNNPCTRLT01
EXT: R PSID: FB
SCLK1: 04646921:00:0 SCLK2: 04646922:12:0
SCET1: 1998-255/06:29:47.400 SCET2: 1998-255/06:30:56.066
TARGET: CAL PARTITION: 1

MODE: 3 GAIN: 4
CHOP: 1 GRAT_OFF: 4
PTAB_A: 1 1 0 0 124 PTAB_B: 1 1 0 0 124
ECAL: 0 OPCAL: 0
R/T: 1 RECORD: 0

MB_DOWN: 11011 MB_UP: 11011
COMP_FLAG: 0
EST_COMP: 0.0 EST_COMPV: 0.0
RATE_CON1: 00000 RATE_CON2: 00000
NWAVETOT: 252 TLMFMT: RT

THRESHOLD_SEL: 0
THRESHOLD_VALUES: 000, 000, 000, 000, 000, 000, 000, 000, 000
000, 000, 000, 000, 000, 000, 000, 000

WETGID: 0303252000 03 03 252 000
WTGRP_SIZ: 3

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1FFC0	1,1111,1111,1100,0000
1	1FFC0	1,1111,1111,1100,0000
2	1FFC0	1,1111,1111,1100,0000
3	1FFC0	1,1111,1111,1100,0000
4	1FFC0	1,1111,1111,1100,0000
5	1FFC0	1,1111,1111,1100,0000
6	1FFC0	1,1111,1111,1100,0000
7	1FFC0	1,1111,1111,1100,0000
8	1FFC0	1,1111,1111,1100,0000
9	1FFC0	1,1111,1111,1100,0000
10	1FFC0	1,1111,1111,1100,0000
11	1FFC0	1,1111,1111,1100,0000
12	1FF80	1,1111,1111,1000,0000
13	1FF80	1,1111,1111,1000,0000
14	1FF80	1,1111,1111,1000,0000
15	1FF80	1,1111,1111,1000,0000
16	1FF80	1,1111,1111,1000,0000
17	1FF80	1,1111,1111,1000,0000
18	1FF80	1,1111,1111,1000,0000
19	1FF80	1,1111,1111,1000,0000
20	1FF80	1,1111,1111,1000,0000
21	1FF80	1,1111,1111,1000,0000
22	1FF80	1,1111,1111,1000,0000
23	1FF80	1,1111,1111,1000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

16NNPCTRLT01

```
OAPEL:  16NNPCTRLT01            ALIAS:  LSNNPCTRLT01
EXT:    S                       PSID:   FB
SCLK1:  04646927:00:0           SCLK2:  04646936:12:0
SCET1:  1998-255/06:35:51.400   SCET2:  1998-255/06:45:05.400
TARGET: CAL                     PARTITION: 1

MODE:       3                   GAIN:       4
CHOP:       1                   GRAT_OFF:   4
PTAB_A:     1 1 0 0 124         PTAB_B:     1 1 0 0 124
ECAL:       0                   OPCAL:      0
R/T:        1                   RECORD:     0

MB_DOWN:    11011               MB_UP:      11011
COMP_FLAG:  0
EST_COMP:   0.0                 EST_COMPV:  0.0
RATE_CON1:  00000               RATE_CON2:  00000
NWAVETOT:   252                 TLMFMT:     RT

THRESHOLD_SEL: 0
THRESHOLD_VALUES:  000, 000, 000, 000, 000, 000, 000, 000, 000
                   000, 000, 000, 000, 000, 000, 000, 000

WETGID:     0303252000          03  03  252  000
WTGRP_SIZ:  3
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1FFC0	1,1111,1111,1100,0000
1	1FFC0	1,1111,1111,1100,0000
2	1FFC0	1,1111,1111,1100,0000
3	1FFC0	1,1111,1111,1100,0000
4	1FFC0	1,1111,1111,1100,0000
5	1FFC0	1,1111,1111,1100,0000
6	1FFC0	1,1111,1111,1100,0000
7	1FFC0	1,1111,1111,1100,0000
8	1FFC0	1,1111,1111,1100,0000
9	1FFC0	1,1111,1111,1100,0000
10	1FFC0	1,1111,1111,1100,0000
11	1FFC0	1,1111,1111,1100,0000
12	1FF80	1,1111,1111,1000,0000
13	1FF80	1,1111,1111,1000,0000
14	1FF80	1,1111,1111,1000,0000
15	1FF80	1,1111,1111,1000,0000
16	1FF80	1,1111,1111,1000,0000
17	1FF80	1,1111,1111,1000,0000
18	1FF80	1,1111,1111,1000,0000
19	1FF80	1,1111,1111,1000,0000
20	1FF80	1,1111,1111,1000,0000
21	1FF80	1,1111,1111,1000,0000
22	1FF80	1,1111,1111,1000,0000
23	1FF80	1,1111,1111,1000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

NIMS E16 OBSTAB

This is a time-ordered ASCII TABLE (listing) of GALILEO NIMS observation parameters for use by downlink data processing of the NIMS E16 data. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry. Included items come from NIMS commands in (1) the Standard Sequence Data File (SSDF) and (2) the Playback Table Update Process (PTUP), plus some items from (3) the NIMS/CDS software load.

Note that SCLK1, SCLK2, SCET1 and SCET2 of non-realtime observations reflect the amount of data actually played back, rather than the amount recorded on tape. Likewise, the wavelength edit table pointers of non-realtime observations point to the playback edit table masks, rather than the ones used during recording.

Some of these items are needed for MIPS realtime processing of NIMS data, others for NIMSMERGE generation of the EDR and still others by NIMS/ISIS and MIPS systematic processing of EDRs into cubes. Missing non-required items will not interfere with a processing step. For completeness, almost all uplinked parameters are included in the table. (Only those items which will almost certainly remain constant have been omitted; e.g. Rice decision tables.)

The source below is one of:
- SEF for the Standard Sequence Data File (SSDF), specifying parameters of one of the NIMS (37) commands
- PBK for the Playback Table Update Process (PTUP), specifying parameters of the NIMPBK SINGLE command
- S/W for the NIMS/CDS software load process
- NIMS for NIMS team systematic processing requests to MIPS

* indicates item absolutely required for UDR generation (decompression, wavelength edit processing)
\# indicates item useful for UDR generation (for checking)
unmarked items needed for cube generation or useful for general information
<tbd> indicates more details will be forthcoming

	name	nchar	columns	.description	.source
	OAPEL	12	1 - 12	.Oapel Name from SEF (no aliases yet)	SEF: activity ID, 1st 12 chars should be unique
	ALIAS	12	13 - 24	.NIMS alias name for OAPEL	NIMS:
	EXT	1	25 - 25	.Extension, for split OAPELs, A,B,C... for playback, R,S,T... for realtime. Required for realtime.	NIMS: if breaking activity into several cubes
	PSID	2	26 - 27	.Parameter Set IDentification	SEF: <tbd>
*	SCLK1	13	28 - 40	.Start time of played-back OBS in SCLK	PBK (except realtime data: SEF)
*	SCLK2	13	41 - 53	.Stop time of played-back OBS in SCLK	PBK (except realtime data: SEF)
*	PARTITION	1	54 - 54	.Partition for SCLK1 and SCLK2.	
	<spare>	9	55 - 63	.	
	TARGET	8	64 - 71	.Primary Target of OBS	SEF: translate from 3rd char in OAPEL (activity ID)

	MODE	2	72 - 73	.NIMS Instrument MODE (0-15)	SEF: 37IOP, data byte 2, bits 5-8
	GAIN	1	74 - 74	.Gain State (true value)	SEF: 37IST, data byte 3, bits 7-8 (if bit 6 = 1) 0=gs2, 1=gs4, 2=gs3, 3=gs1
	CHOP	1	75 - 75	.Chopper State (1=Ref,2=63Hz,3=FreeRun,4=Off)	SEF: 37IST, data byte 2, bits 7-8 (if bit 6 = 1) 0=63hz, 1=off, 2=ref, 3=freerun
	GRAT_OFF	1	76 - 76	.Grating Offset (0-7, default 4)	SEF: 37GOF, data byte 2, bits 5-8
	PTAB_A(6)	12	77 - 88	.First PTAB |repeat count,mirror op,autobias...	SEF: functions of MODE (from 37IOP) as modified by 37MPT, unless special sequence (modes 12-15) in which case values come from 37SS parameters <tbd>
	PTAB_B(6)	12	89 - 100	.Second PTAB |...grating start, grating delta... . |...number of grating positions)	
	ECAL	1	101 - 101	.Electronics Calibration Active (1=yes)	SEF: 37IST, data byte 3, bit 4 (1=on)
	OPCAL	1	102 - 102	.Optics Calibration active (1=yes)	SEF: 37IST, data byte 3, bit 5 (1=on)
#	REAL_TIME	1	103 - 103	.NIMS in Real-Time Telemetry (1=yes)	SEF: track RT_INST_SEL .and. 37RT
#	RECORD	1	104 - 104	.NIMS in Record Telemetry (1=yes)	SEF: track DMS status event: RECORD, REVERSE, RESUME, RUNDOWN <tbd>
*	THRESHSEL	1	105 - 105	.Threshold value select (>0 = yes)	PBK: THRESHLD_TBL > 0 (i.e. 1-3)
	<spare>	1	106 - 106	.	
#	RTISELDN	5	107 - 111	.RTI select, 5 binary bits (for mirror position blocking, down scan)	SEF: 37MB data byte 1, bits 4-8 <tbd>
#	RTISELUP	5	112 - 116	.RTI select, 5 binary bits (for mirror position blocking, up scan)	SEF: 37MB data byte 2, bits 4-8 <tbd>
	<spare>	1	117 - 117	.	
*	RICEFLAG	1	118 - 118	.Rice compression flag	PBK: 0 no compression 1 Rice compression, ref vals each mirror scan 3 Rice compression, ref vals each RIM rollover
	<spare>	1	119 - 119	.	
	ESTCOMP	3	120 - 122	.Rice estimated compression ratio (m.n)	PBK: CMPR_DVSR <tbd>
	ESTCOMPV	3	123 - 125	.Rice estimated error in compression ratio (m.n)	PBK: CMPR_UNC <tbd>
#	RATECON1	5	126 - 130	.Rate control lower limit	PBK: | S/W table entry indexed by LOSSY_COMP (1-7)
#	RATECON2	5	131 - 135	.Rate control upper limit	PBK: | or 0 if LOSSY_COMP = 0 (no rate control)
	<spare>	17	136 - 152		
	NWAVETOT	3	153 - 155	.Total number of wavelengths selected	Compute from relevant Wavelength Edit Table group
	TLMFMT	3	156 - 158	.Telemetry format (MPW et al, LPU or LNR)	SEF: 6TMREC command
	SCET1	21	159 - 179	.Start time of played-back OBS in UTC	PBK (except realtime data: SEF)
	SCET2	21	180 - 200	.Stop time of played-back OBS in UTC	PBK (except realtime data: SEF)
	<spares>	67	201 - 267	.Start time of played-back OBS in UTC	PBK (except realtime data: SEF)
*	THRESH	51	268 - 318	.Threshold values (17 3-digit values, 0-999)	PBK: S/W table indexed by THRESH_TBL > 0, else 0s

```
-------------------------------------------------------------------------------------------------------------------------------
# WETGID       10 319 - 328     .Wavelength selection group ID (unique)         PBK: WET_GID    (realtime <tbd>)
                                  Rule of formation: mmeellllnnn where
                                   mm  = instrument mode (0-15)
                                   ee  = # entries in group
                                   lll = number of wavelengths selected
                                   nnn = sequence number
* WETGRPSIZ     2 329 - 330     .# Wavelength Edit entries (1-26)               PBK: ED_GRP_LEN (realtime SEF: 37ETB <tbd>)
* WETGRP      182 331 - 512     .Wavelength Edit Table group:  WETGRPSIZ        PBK: ED_GRP     (realtime SEF: 37ETB data bytes 2..)
                                  entries, each one has 7 characters.  The
                                  first 2 characters are the repeat count
                                  (01-26).  The other 5 characters contain
                                  5 hex digits, representing the detector
                                  mask in the form BHHHH where B is 0 or 1
                                  and H has range 0-15.  (These entries are
                                  from the 37ETB instrument edit group for
                                  realtime data and from the logical AND of
                                  corresponding entries in the instrument
                                  and playback edit groups for playback data.)
--------------------------------
.The TARGET names used are:
   CAL      - N - non-science targets, usually calibration targets
   EARTH    - W - Earth
   MOON     - L - Moon
   SKY      - H - Stellar Space (space and stars)
   VENUS    - V - Venus
   GASPRA   - P - Gaspra
   IDA      - U - Ida
   JUPITER  - J - Jupiter
   IO       - I - Io
   EUROPA   - E - Europa
   GANYMEDE - G - Ganymede
   CALLISTO - C - Callisto
   J_RING   - R - Jupiter rings
   (the single letter abbreviation appears as the third character in the OAPEL name ).
-------------------------------------------------------------------------------------------------------------------------------
```

```
----------------------------------------------------------------------------------------------------------------------------------
16INHRSPEC0116INHRSPEC01ADA04569992:00:004569994:90:01         IO       3214 1 1 0 0 124 1 1 0 0 12400012 0000000000 1 2.00.3000
0065525                  228LPU  98-201/06:06:04.066  98-201/06:09:05.400
          030030030000030029028028029028032034031031032030029032622800126010258001 1BDFF0102580011BDFF0102580011BDFF0102580011BD
FF0102580011BDFF0102580011BDFF0102580011BDFF0102580011BDFF0102580011BDFF0102580011BDFF0102580011BDFF01000000100000
16INHRSPEC0116INHRSPEC01BDA04569992:00:004569994:90:01         IO       3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  228LPU  98-201/06:06:04.066  98-201/06:09:05.400
          000000000000000000000000000000000000000000000000000032622800126010258001 1BDFF0102580011BDFF0102580011BDFF0102580011BD
FF0102580011BDFF0102580011BDFF0102580011BDFF0102580011BDFF0102580011BDFF0102580011BDFF0102580011BDFF01000000100000
16JNJUPRTS0116JNJUPRTS01RDB04570336:06:004570346:04:01         JUPITER  3214 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  408RT 1998-201/11:53:57.4001998-201/12:04:02.733
          000000000000000000000000000000000000000000000000302408000 2241FFFF0200000

16JNHOTMAP0116JNHOTMAP01ADC04570609:06:004570610:20:01         JUPITER  3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  238LPU  98-201/16:30:00.066  98-201/16:31:10.066
          000000000000000000000000000000000000000000000000000032623800126011 9E270119E270119E270119E270119C270119C270119C270119C
27011BC27011BC27011BC27011BC27011BC27011BC27011BC27011BC27011BC27011BC67011BC670113C670113C670113C670113C6701000000100000
16HNDARKCL0216HNDARKCL01AA 04584688:00:004584689:90:01         SKY      3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  408MPW  98-211/13:45:20.933  98-211/13:47:21.400
          000000000000000000000000000000000000000000000000000032640800126011 FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FF
FF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF01000000100000
16HNDARKCL0416HNDARKCL01AA 04584690:00:004584691:90:01         SKY      3414 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  408MPW  98-211/13:47:22.066  98-211/13:49:22.733
          000000000000000000000000000000000000000000000000000032640800126011 FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FF
FF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF01000000100000
16HNDARKCL0316HNDARKCL01AA 04584692:00:004584693:90:01         SKY      3314 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  408MPW  98-211/13:49:23.400  98-211/13:51:24.066
          000000000000000000000000000000000000000000000000000032640800126011 FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FF
FF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF01000000100000
16HNDARKCL0116HNDARKCL01AA 04584694:00:004584699:89:01         SKY      3114 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  408MPW  98-211/13:51:24.733  98-211/13:57:27.600
          000000000000000000000000000000000000000000000000000032640800126011 FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FF
FF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF01000000100000
16NNRCTRLT01LSNNRCTRTA01RXU04631439:00:004631439:12:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  252RT 1998-244/09:35:46.6001998-244/09:35:54.600
          000000000000000000000000000000000000000000000000000303252000 312003FF12007FF0200000

16NNRCTRLT01LSNNRCTRTA01SXU04631445:00:004631446:12:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  252RT 1998-244/09:41:50.6001998-244/09:42:59.266
          000000000000000000000000000000000000000000000000000303252000 312003FF12007FF0200000

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```

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16NNRCTRLT01LSNNRCTRTA01TXU04631451:00:004631451:12:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  252RT 1998-244/09:47:54.6001998-244/09:48:02.600
          00000000000000000000000000000000000000000000000000303252000 312003FF12007FF0200000

16NNOPCAL_01LSNNOPCAL_01RDC04631455:00:004631457:12:01         CAL      3414 1 1 0 0 124 1 1 0 0 12401100 1101111011 0 0.00.0000
0000000                  048RT 1998-244/09:51:57.2661998-244/09:54:06.600
          00000000000000000000000000000000000000000000000000302048000 224180000200000

16NNPCTRLT01LSNNPCTRLT01RFB04646921:00:004646922:12:01         CAL      3414 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  252RT 1998-255/06:29:47.4001998-255/06:30:56.066
          00000000000000000000000000000000000000000000000000303252000 3121FFC0121FF800200000

16NNPCTRLT01LSNNPCTRLT01SFB04646927:00:004646936:12:01         CAL      3414 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  252RT 1998-255/06:35:51.4001998-255/06:45:05.400
          00000000000000000000000000000000000000000000000000303252000 3121FFC0121FF800200000

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Chapter 5 - Detailed Observation Designs

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Introduction to Chapter 5

Detailed Observation Designs

Each NIMS Detailed Observation Design consists of an OAPEL form and a Pointer plot. The OAPEL form is a brief description of the design of the observation. The Pointer plot is a plot of the target body with the NIMS footprint incorporated in the mosaic design superimposed on the target body. The size and orientation of the target body is plotted as it appears at the time of the first NIMS footprint plotted. For long observations, the target body may rotate or move relative to the spacecraft during the observation. Some observations, such as calibrations, do not have Pointer plots.

The Pointer plots and OAPEL forms in this chapter have been updated to report the actual data returned.

The Pointer plots have the spatial extent of the actual data returned outlined with a thick line. When no data were returned for a particular observation, its Pointer plot has a single slash across the plot with the text "NO DATA RETURNED" printed in the upper left corner of the plot.

The text of the OAPEL forms have been modified to reflect the actual NIMS instrument parameters for playback. An extra line containing one or some of the following statements has been added to the Observation Objective section of the OAPEL form to report the data retun status:

"Data Returned" == Data from this observation returned
"No Data Returned" == NO Data from this observation returned
"Processor Halted" == The NIMS Processor had halted at this time.

More information regarding NIMS data return can be found in Chapter 7 of this guide.

NIMS Software Reload

ACTIVITY ID: 16NNHRSPEC01-
START TIME: 98-201/05:57:01.932

Activity ID: Orbit 16 Target N Inst N OAPEL HRSPEC SeqNo 01 -

Title	NIMS Software Reload			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date	07/20/98	Week 29
Start	IEE+CDS 00000061:00:0	98-201/05:57:01.932		IEE+000/01:01:40.666	
End	IEE+CDS 00000063:00:0	98-201/05:59:03.266		IEE+000/01:03:42.000	
Duration	00000002:00:0	000/00:02:01.334		000/00:02:01.334	

Top Label	16NNHRSPEC01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

NIMS real-time software reload

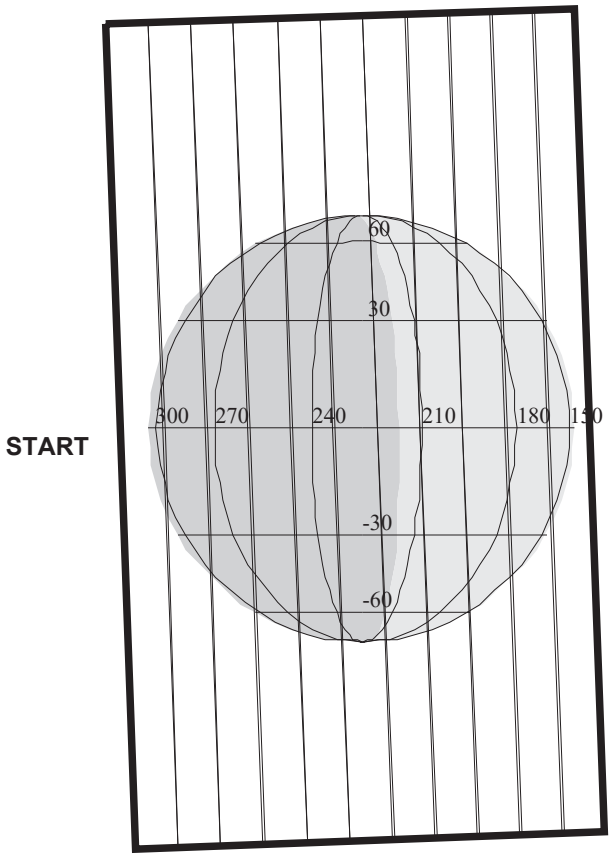
Each NIMS GEM observation will have an instrument reload before the start of each observation. Each reload has its own OAPEL form, but only this first form is included in the NIMSGUIDE.

The NIMS E16 reload OAPELS are:
16NNHRSPEC01, 16NNJUPRTS01, 16NNHOTMAP01, 16NNHOTMAP02, 16NNSUCOMP01, 16NNSUCOMP02, 16NNSUCOMP04, 16NNGLOBAL01, 16NNWHTOVL01, 16NNJUPRTS02, 16NNJUPRTS03, 16NNGLOBAL02, 16NNJUPWHT01

Design Detail

Use a standard set of commands to halt the instrument, load the software and reinitialize the instrument.

6CKSUM - Check Sum NIMS RAM 1000 - 14BC
37PL - Halt NIMS Processor
37MRL - Memory Reallocate
6MCOPY - Copy flight software from CDS to NIMS 1000
6MCOPY - Copy flight software from CDS to NIMS 1598
37IRT - Instrument Reset
37MN - Memory Normal
37IST - Chopper Reference.



165DA:TT= 0 TMC= 1 C= 2.80 XC= 0.00 BS= 0/0394 TC= 3
A= 728 pD= 536 SR=17.450 RA50=245.03 DEC50=-23.36 cone= 69.84 clock=101.10
117DA:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0394
1:#s= 1 Cs= -5.40 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 546 rD= 2

16INHRSPEC01

TARGET G3.1 lisac: 5/ 8/1998 12:38: 0

FILE:P.16INHRSPEC01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980330-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:IEE 98-201/04:54:35.402 +CDS 32:00:0 **BODY PLOT TIME:TARGET-TIME D= 536 S= 0.300**

OBSERVATION:16INHRSPEC01 **DESCRIP:Io_Monitoring_at_High_Spec_Res**

Io Monitoring at High Spectral Resolutio ACTIVITY ID: 16INHRSPEC01*
START TIME: 98-201/05:59:03.266

Activity ID: Orbit 16 Target I Inst N OAPEL HRSPEC SeqNo 01 *

Title	Io Monitoring at High Spectral ResolutioInstrument		NIMS
Requestor	NIMS-SWG/R.	Team NIMS Working Group	SWG

Time System	CDS	Load ID	Calendar Date 07/20/98 Week 29
Start	IEE+CDS 00000063:00:0	98-201/05:59:03.266	IEE+000/01:03:42.000
End	IEE+CDS 00000074:00:0	98-201/06:10:10.599	IEE+000/01:14:49.333
Duration	00000011:00:0	000/00:11:07.333	000/00:11:07.333

Top Label 16INHRSPEC01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

Io monitoring at high spectral resolution coordinated with SSI.
Phase angle is approximately 90 degrees - good nightside coverage
of Prometheus region.
TICS=45,FMT=LPU, MBTG= 0.730, PPR_RA=0.033

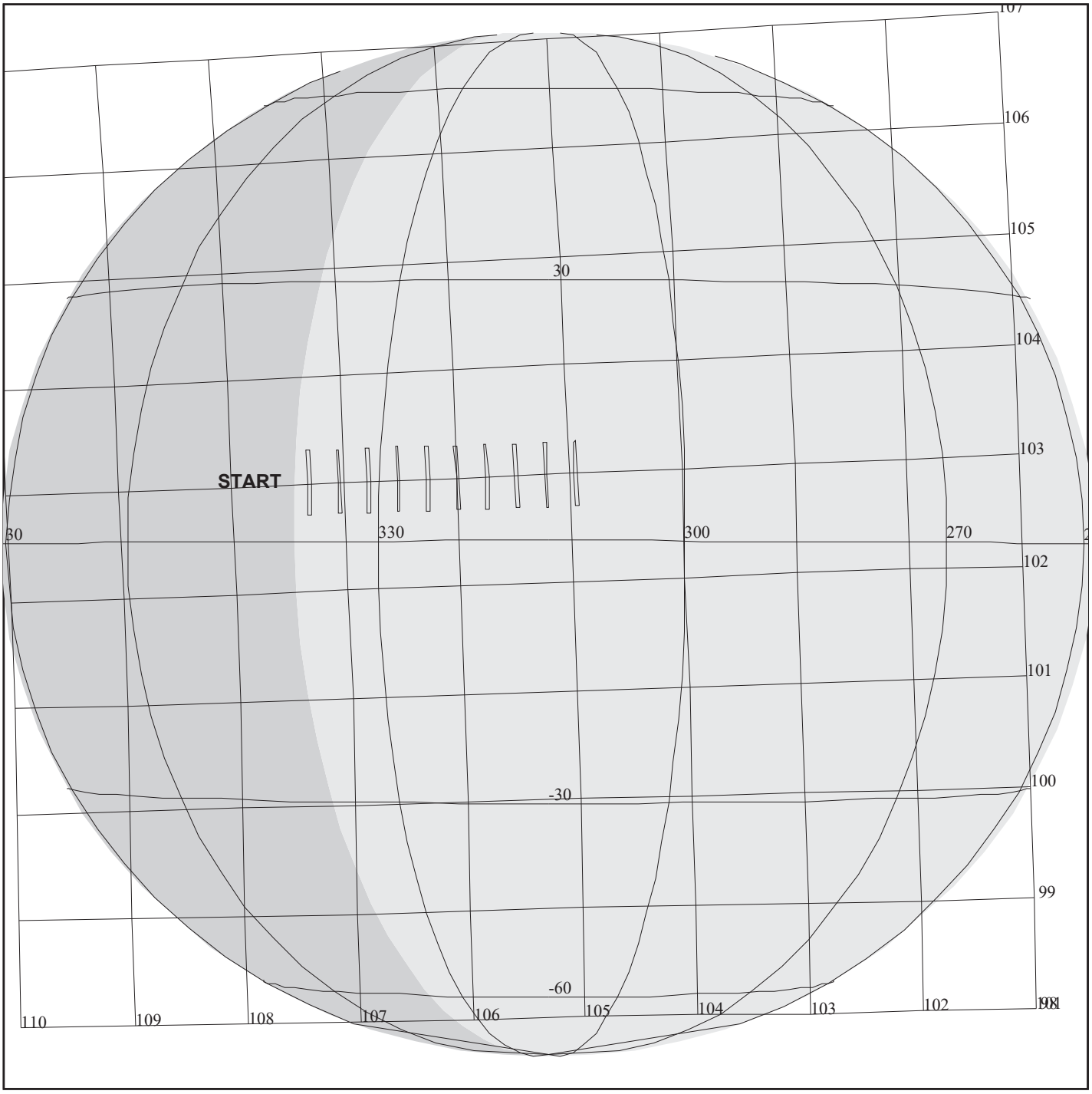
Data Returned

Design Detail

Global Mosaic in Long Map, 408 wavelengths, record mode is LPU.
Central longitude is approximately 225 degrees West.
NIMS resolution is approximately 500 km/pixel.
Cost is approximately 2.5 Mbits.

Long Map (LM), Gain 2, Grating Start 0, LPU, E16ILM243C, E16ILM228C

Galileo Activity Plan Form 07/23/98 08:42:11 rev 6/95



165DB:TT= 0 TMC= 1 C= 19.00 XC= 0.00 BS= 0/0282 TC= 1(7 325)
A= 728 pD= 1810 SR=17.450 RA50=286.10 DEC50=-23.54 cone=107.34 clock=103.02
117DB:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/0282
1:#s= 1 Cs= -36.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1820 rD= 40

16JNJUPRTS01

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16JNJUPRTS01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS: **THINNING:NIM 7**

START:JEE 98-202/00:18:08.066 -CDS 735:00:0 **BODY PLOT TIME:TARGET-TIME D= 1810 S= 1.000**

OBSERVATION:16JNJUPRTS01 **DESCRIP:Jupiter_Realtime_Observation**

Jupiter Realtime Observation

ACTIVITY ID: 16JNJUPRTS01*
START TIME: 98-201/11:48:54.066

Activity ID: Orbit 16 Target J Inst N OAPEL JUPRTS SeqNo 01 *

Title	Jupiter Realtime Observation	Instrument	NIMS
Requestor	NIMS-AWG/A. OCAMPO	Team NIMS	Working Group AWG

Time System	CDS	Load ID	Calendar Date 07/20/98 Week 29
Start	JEE-CDS 00000741:00:0	98-201/11:48:54.066	JEE-000/12:29:14.000
End	JEE-CDS 00000717:00:0	98-201/12:13:10.066	JEE-000/12:04:58.000
Duration	00000024:00:0	000/00:24:16.000	000/00:24:16.000

Top Label	16JNJUPRTS01*				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Search for Jupiter atmospheric composition and thermal variations over time.

FREE_RTS = 0.16 mbits

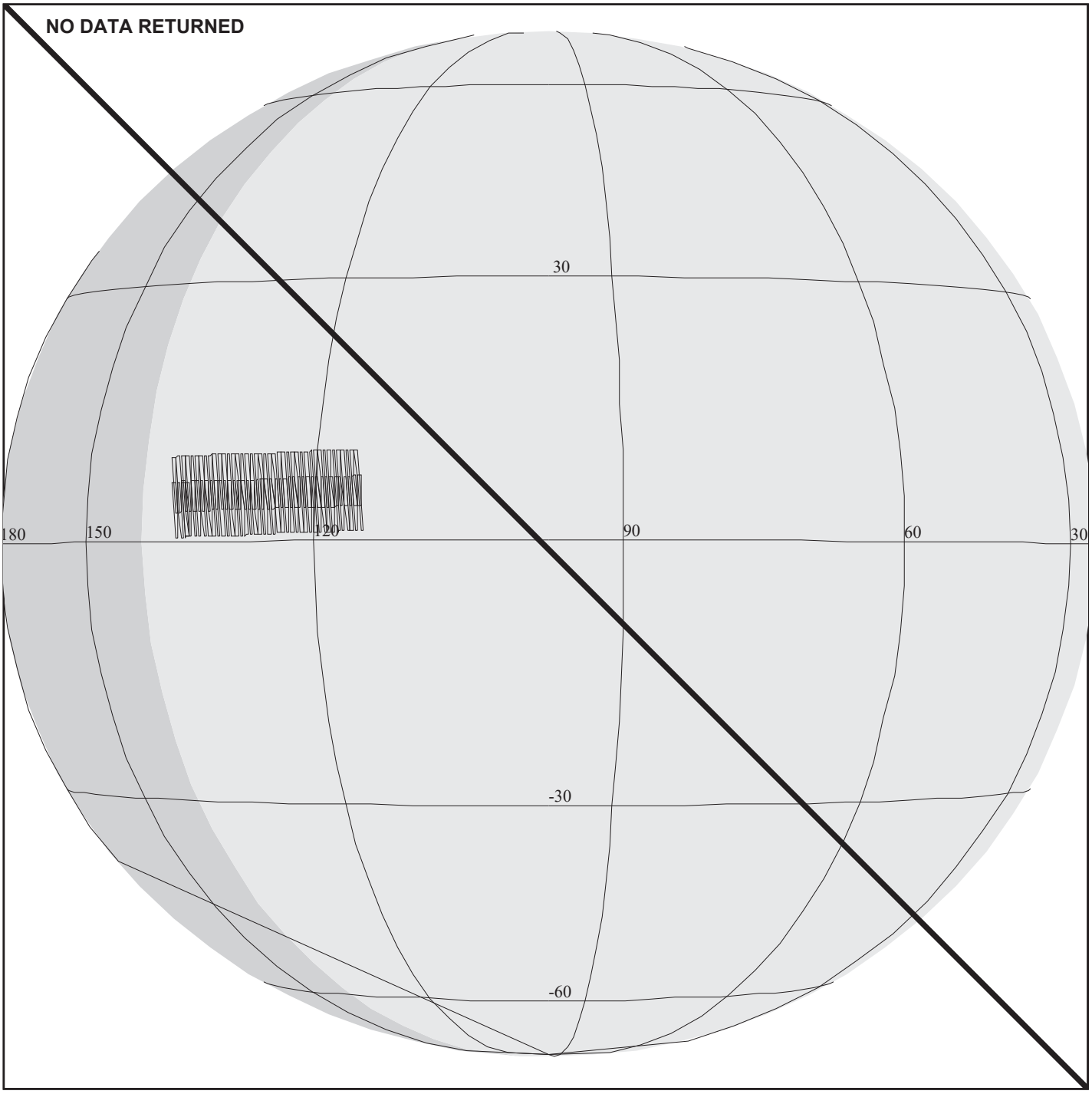
Data Returned

Design Detail

Long map. One scan ten RIMS long.
Equator - Nyquist sampling not necessary.
Longitude - not dependent. No overlap in FOV.

Long Map (LM), Gain 2, Grating Start 0, R/T, E16JLM408

Galileo Activity Plan Form 07/23/98 08:42:11 rev 6/95



165DC:TT= 0 TMC= 1 C= 17.00 XC= 3.00 BS= 0/8512 TC= 1(5 125)
A= 728 pD= 4326 SR=17.450 RA50=307.08 DEC50=-19.34 cone=127.26 clock=104.24
117DC:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/8512
1:#s= 2 Cs= -21.20 XCs= 0.00 Cr= 34.00 XCr= -4.00 sD= 2134 rD= 24

16JNHOTMAP01

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16JNHOTMAP01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:JEE 98-202/00:18:08.066 -CDS 470:00:0

BODY PLOT TIME:TARGET-TIME D= 4326 S= 1.000

OBSERVATION:16JNHOTMAP01

DESCRIP:NIMS+Jupiter_HotMap

NIMS Jupiter HotMap

ACTIVITY ID: 16JNHOTMAP01-
START TIME: 98-201/16:11:47.400

Activity ID: Orbit 16 Target J Inst N OAPEL HOTMAP SeqNo 01 -

Title	NIMS Jupiter HotMap			Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID	Calendar Date 07/20/98 Week 29
Start	JEE-CDS 00000481:00:0	98-201/16:11:47.400	JEE-000/08:06:20.666
End	JEE-CDS 00000441:00:0	98-201/16:52:14.066	JEE-000/07:25:54.000
Duration	00000040:00:0	000/00:40:26.666	000/00:40:26.666

Top Label 16JNHOTMAP01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

Long mapping of hotspot region at high spatial resolution.
Observation uses special wavelength table JHT204A
(i.e., 80 wavelengths of thermal from 4.2 to 5.2 um
plus 124wavelengths sampling reflected sunlight).

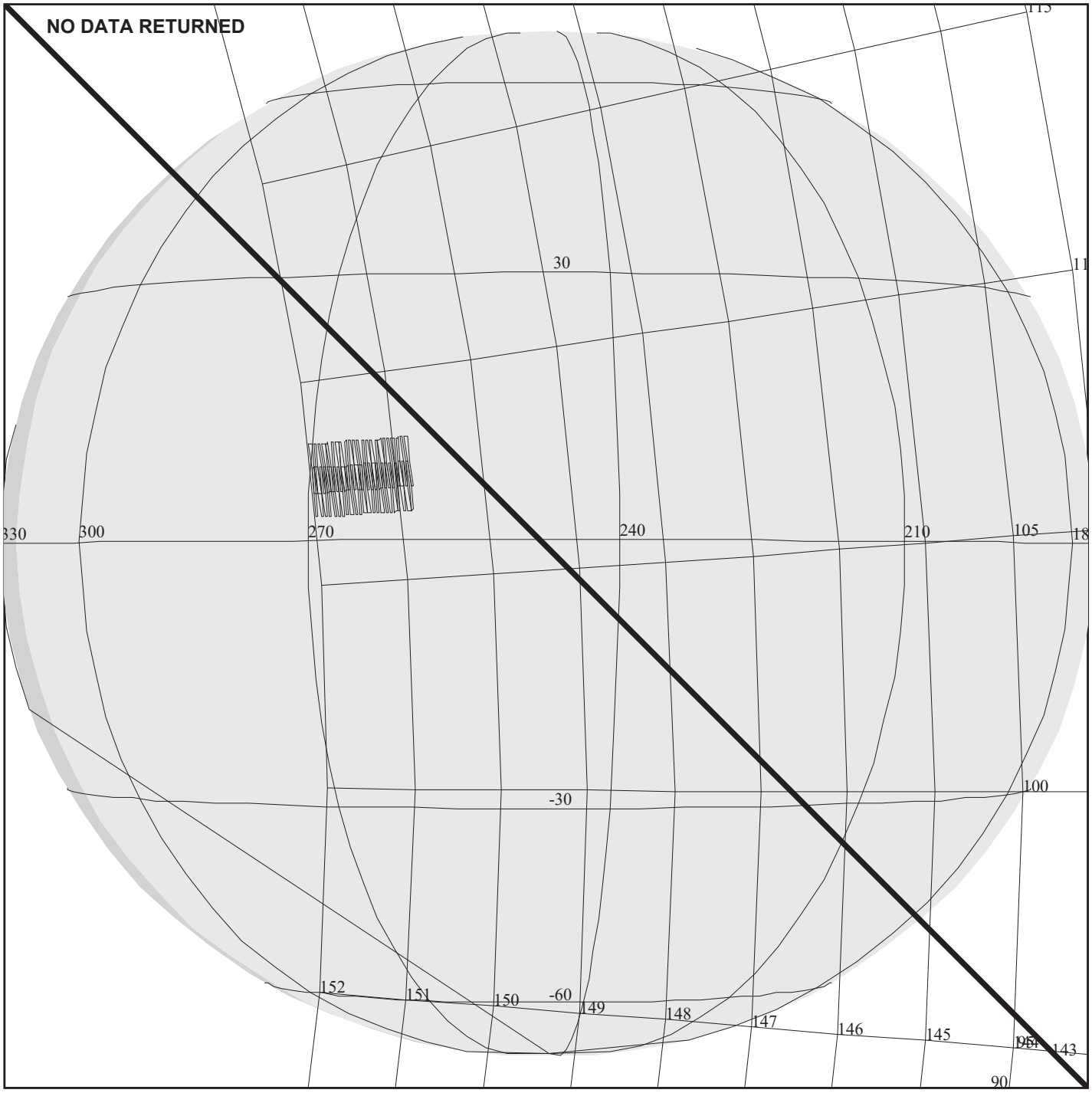
Format = LPU, Tics = 355, MBTG = 5.440

Processor Halted, No Data Returned

Design Detail

Long Map, Nyquist-sampled observation 5 X 1 (50 X 10 mrad) area centered
near 7 degrees North latitude, approximately 95 degrees West longitude,
covering about 26 degrees of longitude at about 325 km IFOV spatial resolution
Science scan lasts 200 * 8.666 = 1732 secs = 28:52 = 28:50 CDS
accumulating 5.44 MBTG in 170 colors (assuming 1.30 compression)
and using 405 tics. Four RIMS availble for targetting.
NIMS wavelength table used is GEM170.

Galileo Activity Plan Form 07/23/98 08:42:12 rev 6/95



165DD:TT= 0 TMC= 1 C= 9.00 XC= 2.50 BS= 0/0746 TC= 1(7 265)
A= 728 pD= 2356 SR=17.450 RA50=331.28 DEC50=-10.82 cone=151.99 clock=107.90
117DD:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0746
1:#s= 2 Cs= -11.60 XCs= 0.00 Cr= 20.00 XCr= -4.00 sD= 1168 rD= 20

16JNHOTMAP02

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16JNHOTMAP02

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:JEE 98-202/00:18:08.066 -CDS 183:00:0

BODY PLOT TIME:TARGET-TIME D= 2356 S= 1.000

OBSERVATION:16JNHOTMAP02

DESCRIP:NIMS+Jupiter_HotMap

NIMS Jupiter HotMap

ACTIVITY ID: 16JNHOTMAP02-
START TIME: 98-201/21:02:59.400

Activity ID: Orbit 16 Target J Inst N OAPEL HOTMAP SeqNo 02 -

Title	NIMS Jupiter HotMap			Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID	Calendar Date 07/20/98 Week 29
Start	JEE-CDS 00000193:00:0	98-201/21:02:59.400	JEE-000/03:15:08.666
End	JEE-CDS 00000167:00:0	98-201/21:29:16.733	JEE-000/02:48:51.333
Duration	00000026:00:0	000/00:26:17.333	000/00:26:17.333

Top Label 16JNHOTMAP02-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

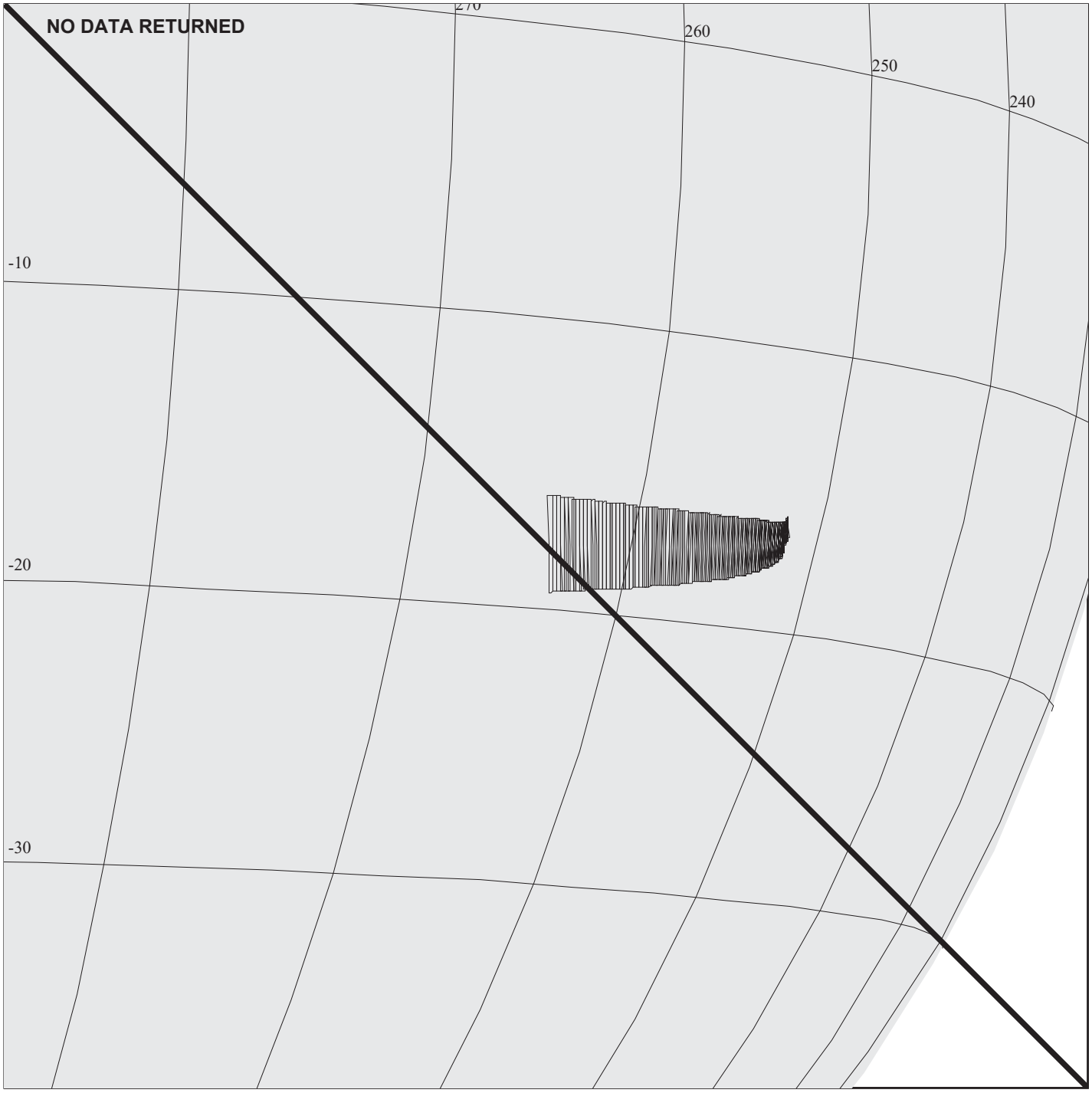
Long mapping of hotspot region at high spatial resolution.
Observation uses special wavelength table JHT204A
(i.e., 80 wavelengths of thermal from 4.2 to 5.2 um
plus 124 wavelengths sampling reflected sunlight).

TICS= 355, FMT= LPU MBTG= 5.440

S/C SAFED, No Data Returned

Design Detail

Long Map, Nyquist-sampled observation 5 X 1 (50 mrad X 10 mrad) area
centered near 7 degrees North latitude, approximately 220 degrees
West longitude, covering about 23 degrees of longitude at about 294 km
IFOV spatial resolution.
Science scan lasts 200 * 8.666 = 1732 secs = 28:52 = 28:50 CDS
accumulating 5.44 Mbits in 170 colors
(assuming 1.30 compression) and using 406 tics.
Four RIMS available for targetting.
NIMS wavelength table used is GEM170.



165DE:TT= 0 TMC= 1 C= 19.00 XC= 0.00 BS= 0/0826 TC= 1(-17 255)
A= 728 pD= 3994 SR=17.450 RA50=250.81 DEC50=-18.07 cone= 74.28 clock=107.53
117DE:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0826
1:#s= 1 Cs= -39.82 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 3994 rD= 2

16ENSUCOMP01

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16ENSUCOMP01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS:

THINNING:NIM 1

START:EEE 98-202/05:04:16.733 -CDS 26:00:0

BODY PLOT TIME:TARGET-TIME D= 3994 S= 2.700

OBSERVATION:16ENSUCOMP01

DESCRIP:Europa_Surface_Composition

Europa Surface Composition

ACTIVITY ID: 16ENSUCOMP01-
START TIME: 98-202/04:32:56.067

Activity ID: Orbit 16 Target E Inst N OAPEL SUCOMP SeqNo 01 -

Title	Europa Surface Composition			Instrument	NIMS
Requestor	NIMS-SWG/A. OCAMPO	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date 07/21/98 Week 29
Start	EEE-CDS 00000031:00:0	98-202/04:32:56.067	EEE-000/00:31:20.666
End	EEE-CDS 00000004:00:0	98-202/05:00:14.067	EEE-000/00:04:02.666
Duration	00000027:00:0	000/00:27:18.000	000/00:27:18.000

Top Label 16ENSUCOMP01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

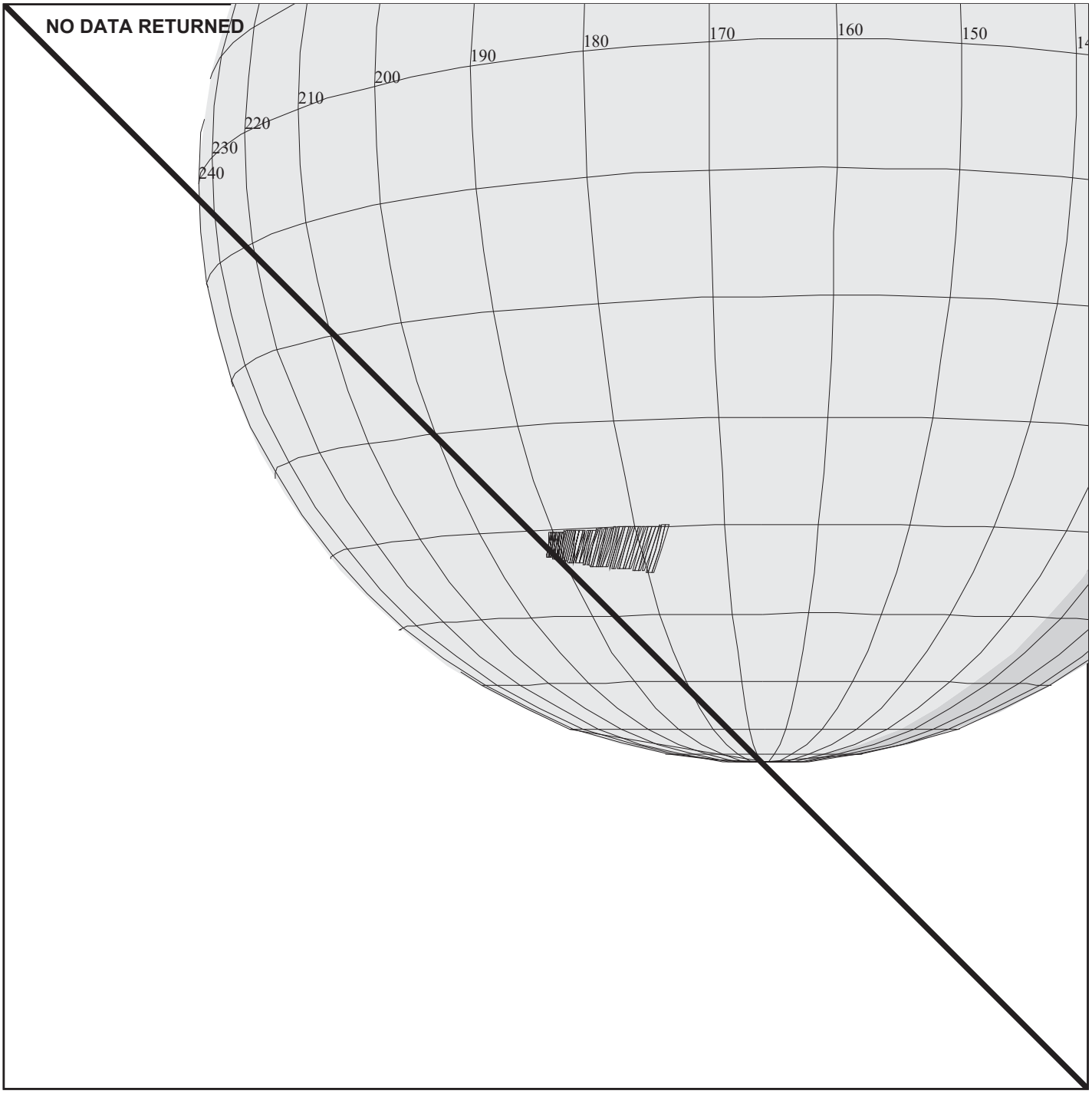
Europa surface composition observation covering latitude at -41 degrees and West longitude at 188 degrees on Aegnor linea terrain.

TICS= 1004, FMT=MPW MBTG= 6.566, PPR_RA=0.189

S/C SAFED, No Data Returned

Design Detail

NIMS mode = LM Record mode = MPW Gain state = 2 Grating position = 0



165DF:TT= 0 TMC= 1 C= -12.00 XC= 0.00 BS= 0/8106 TC= 1(-42 188)
A= 182 pD= 2720 SR=17.450 RA50= 32.66 DEC50= 19.67 cone=139.66 clock=272.54
117DF:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/8106
1:#s= 1 Cs= 27.10 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 2720 rD= 2

16ENSUCOMP02

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16ENSUCOMP02

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:EEE 98-202/05:04:16.733 +CDS 14:00:0

BODY PLOT TIME:TARGET-TIME D= 2720 S= 1.000

OBSERVATION:16ENSUCOMP02

DESCRIP:Europa_Surface_Composition

Europa Surface Composition

ACTIVITY ID: 16ENSUCOMP02-
START TIME: 98-202/05:14:23.399

Activity ID: Orbit 16 Target E Inst N OAPEL SUCOMP SeqNo 02 -

Title	Europa Surface Composition			Instrument	NIMS
Requestor	NIMS-SWG/A. OCAMPO	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	07/21/98 Week 29
Start	EEE+CDS 00000010:00:0	98-202/05:14:23.399		EEE+000/00:10:06.666	
End	EEE+CDS 00000029:00:0	98-202/05:33:36.066		EEE+000/00:29:19.333	
Duration	00000019:00:0	000/00:19:12.667		000/00:19:12.667	

Top Label	16ENSUCOMP02-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

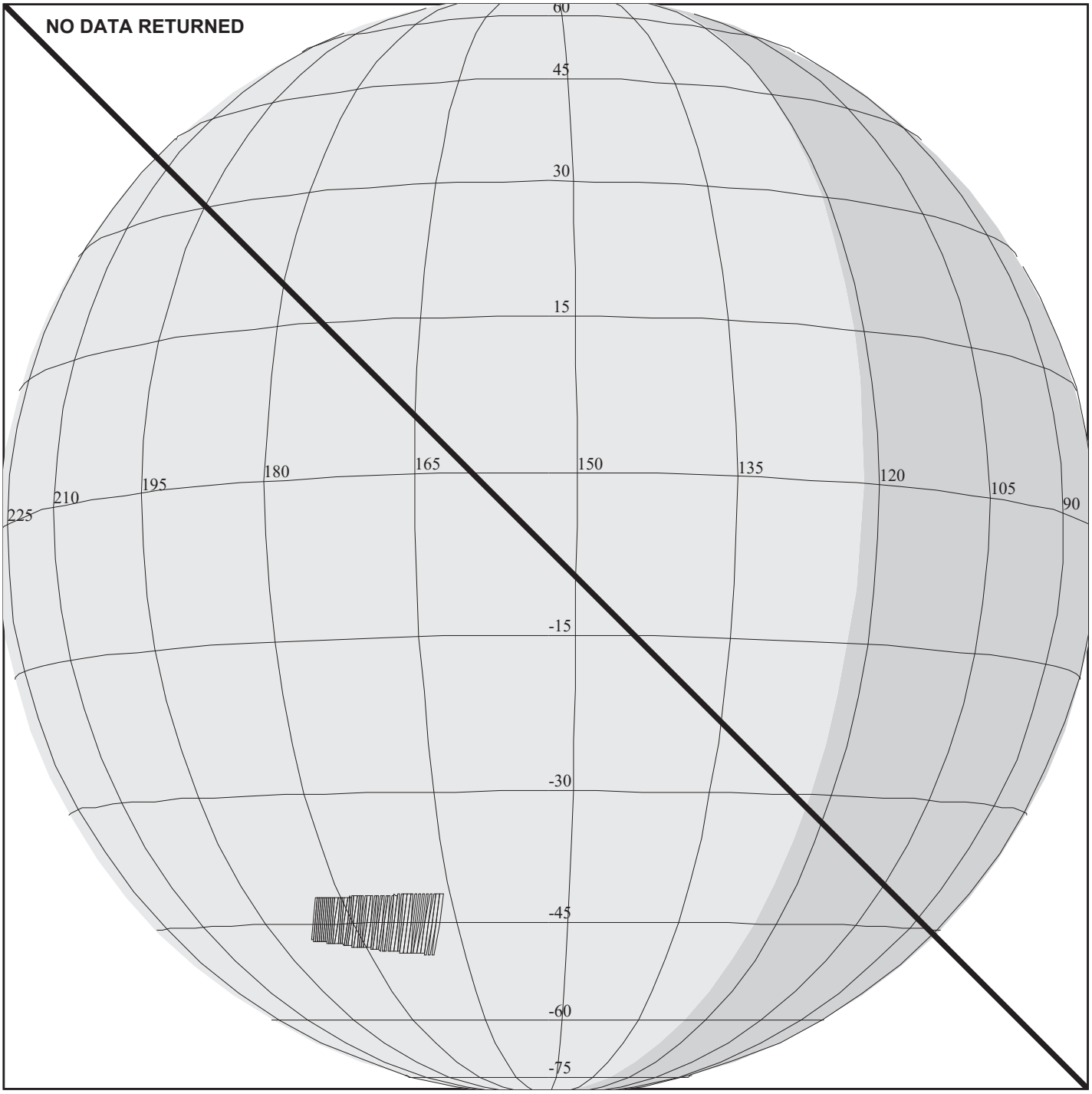
Europa surface composition observation covering latitude at -21 degrees and West longitude at 141 degrees on the Taliesin crater region.

S/C SAFED, No Data Returned

Design Detail

NIMS mode = LM Record mode FMT = MPW
Gain state = 2 Grating position = 0 Tics =794
MBTG = 5.554, PPR_RA=0.150

Galileo Activity Plan Form 07/23/98 08:42:12 rev 6/95



165DG:TT= 0 TMC= 1 C= -14.00 XC= 0.00 BS= 0/1018 TC= 1(-45 177)
A= 182 pD= 2356 SR=17.450 RA50= 46.07 DEC50= 20.78 cone=127.75 clock=278.39
117DG:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/1018
1:#s= 1 Cs= 23.50 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 2356 rD= 2

16ENSUCOMP03

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16ENSUCOMP03

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:EEE 98-202/05:04:16.733 +CDS 30:00:0 **BODY PLOT TIME:TARGET-TIME D= 2356 S= 1.000**

OBSERVATION:16ENSUCOMP03 **DESCRIP:Europa_Surface_Composition_03**

Europa Surface Composition

ACTIVITY ID: 16ENSUCOMP03-
START TIME: 98-202/05:33:36.066

Activity ID: Orbit 16 Target E Inst N OAPEL SUCOMP SeqNo 03 -

Title	Europa Surface Composition			Instrument	NIMS
Requestor	NIMS-SWG/A. OCAMPO	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	07/21/98 Week 29
Start	EEE+CDS 00000029:00:0	98-202/05:33:36.066		EEE+000/00:29:19.333	
End	EEE+CDS 00000045:00:0	98-202/05:49:46.733		EEE+000/00:45:30.000	
Duration	00000016:00:0	000/00:16:10.667		000/00:16:10.667	

Top Label	16ENSUCOMP03-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

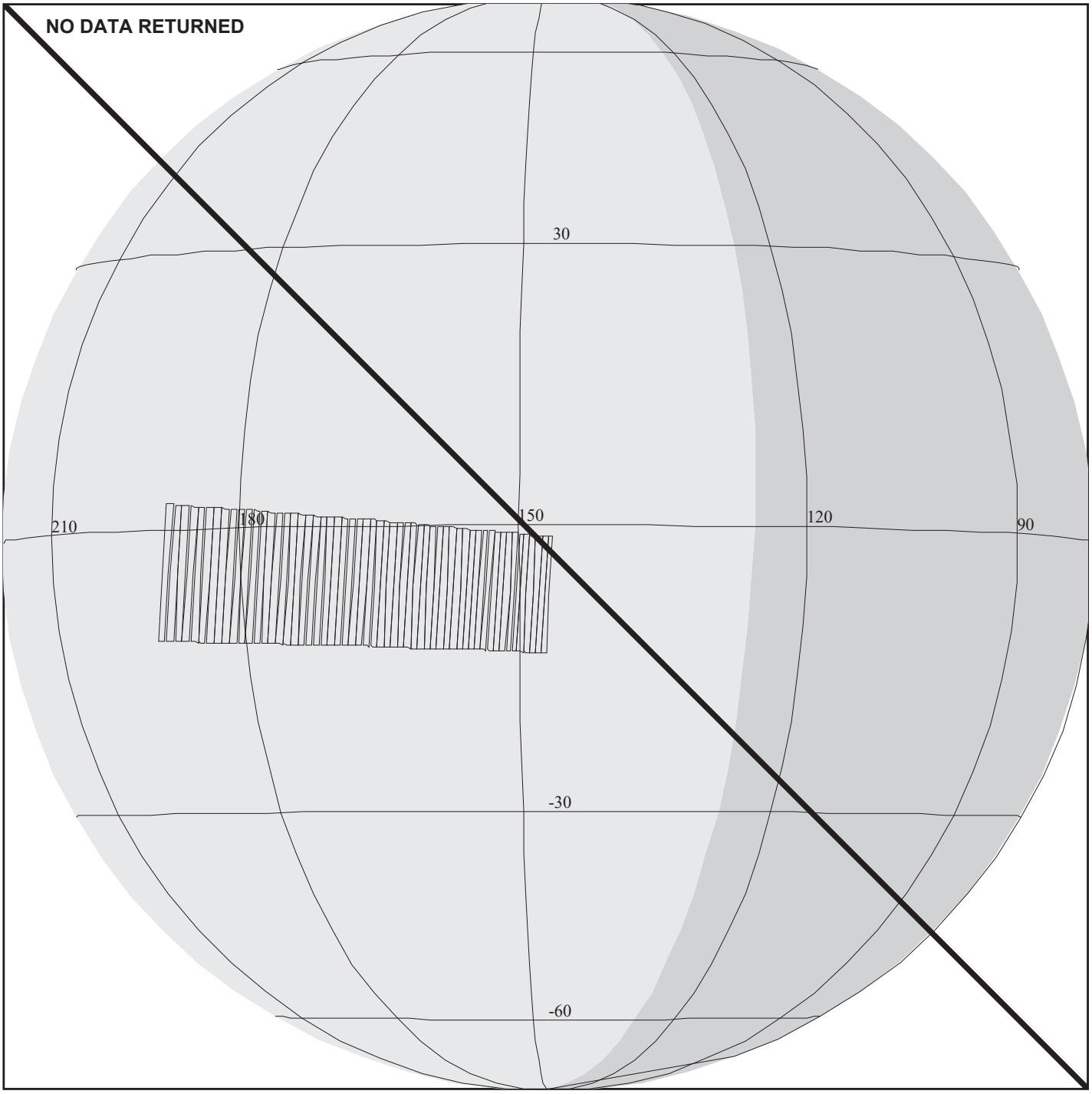
Europa surface composition observation covering latitude at -43 degrees and West longitude at 175 degrees on the northern portion of the Thrace Macula region.

S/C SAFED, No Data Returned

Design Detail

NIMS mode = LM Record mode FMT = MPW
Gain state = 2 Grating position = 0 Tics = 899
MBTG = 6.295, PPR_RA=0.169

Galileo Activity Plan Form 07/23/98 08:42:12 rev 6/95



165DH:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/1392 TC= 1(-7 147)
A= 728 pD= 2902 SR=17.450 RA50= 52.72 DEC50= 22.71 cone=121.28 clock=278.60
117DH:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/1392
1:#s= 1 Cs= -28.90 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 2902 rD= 2

16ENSUCOMP04

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16ENSUCOMP04

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:EEE 98-202/05:04:16.733 +CDS 87:00:0

BODY PLOT TIME:TARGET-TIME D= 2902 S= 1.000

OBSERVATION:16ENSUCOMP04

DESCRIP:Europa_Surface_Composition_04

Europa Surface Composition

ACTIVITY ID: 16ENSUCOMP04-
START TIME: 98-202/06:26:10.733

Activity ID: Orbit 16 Target E Inst N OAPEL SUCOMP SeqNo 04 -

Title	Europa Surface Composition			Instrument	NIMS
Requestor	NIMS-SWG/A. OCAMPO	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	07/21/98 Week 29
Start	EEE+CDS 00000081:00:0	98-202/06:26:10.733		EEE+000/01:21:54.000	
End	EEE+CDS 00000104:00:0	98-202/06:49:26.066		EEE+000/01:45:09.333	
Duration	00000023:00:0	000/00:23:15.333		000/00:23:15.333	

Top Label 16ENSUCOMP04-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

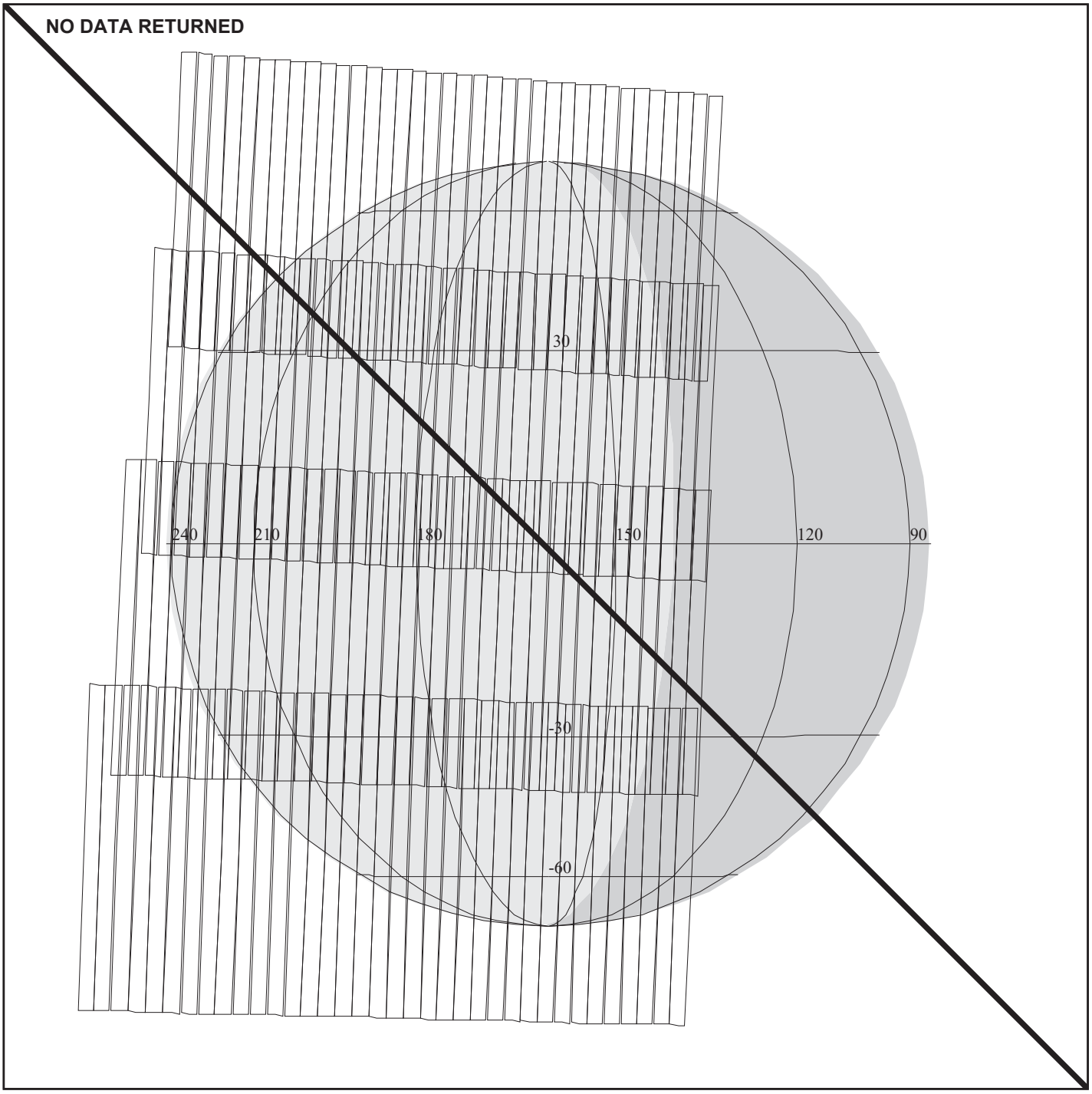
Observation Objective

Europa surface composition observation covering latitude at -7 degrees West longitude at 196 degrees on the Wedge terrain.

S/C SAFED, No Data Returned

Design Detail

NIMS mode = LM Record mode FMT = LPU
Gain state = 2 Grating position = 0 Tics = 269
MBTG = 4.159, PPR_RA=0.189



165DI:TT= 0 TMC= 1 C= 5.20 XC= -11.00 BS= 0/0886 TC= 3
A= 728 pD= 7452 SR=17.450 RA50= 55.13 DEC50= 22.21 cone=119.30 clock=279.91
117DI:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0886
1:#s= 4 Cs= -18.40 XCs= 0.00 Cr= 18.30 XCr= 7.00 sD= 1848 rD= 20

16ENGLOBAL01

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16ENGLOBAL01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:EEE 98-202/05:04:16.733 +CDS 304:00:0 **BODY PLOT TIME:TARGET-TIME D= 7452 S= 0.700**

OBSERVATION:16ENGLOBAL01 **DESCRIP:Europa_Global_Observation**

Europa Global Observation

ACTIVITY ID: 16ENGLOBAL01-
START TIME: 98-202/10:07:36.733

Activity ID: Orbit 16 Target E Inst N OAPEL GLOBAL SeqNo 01 -

Title	Europa Global Observation			Instrument	NIMS
Requestor	NIMS-SWG/A. OCAMPO	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	07/21/98 Week 29
Start	EEE+CDS 00000300:00:0	98-202/10:07:36.733		EEE+000/05:03:20.000	
End	EEE+CDS 00000356:00:0	98-202/11:04:14.066		EEE+000/05:59:57.333	
Duration	00000056:00:0	000/00:56:37.333		000/00:56:37.333	

Top Label 16ENGLOBAL01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

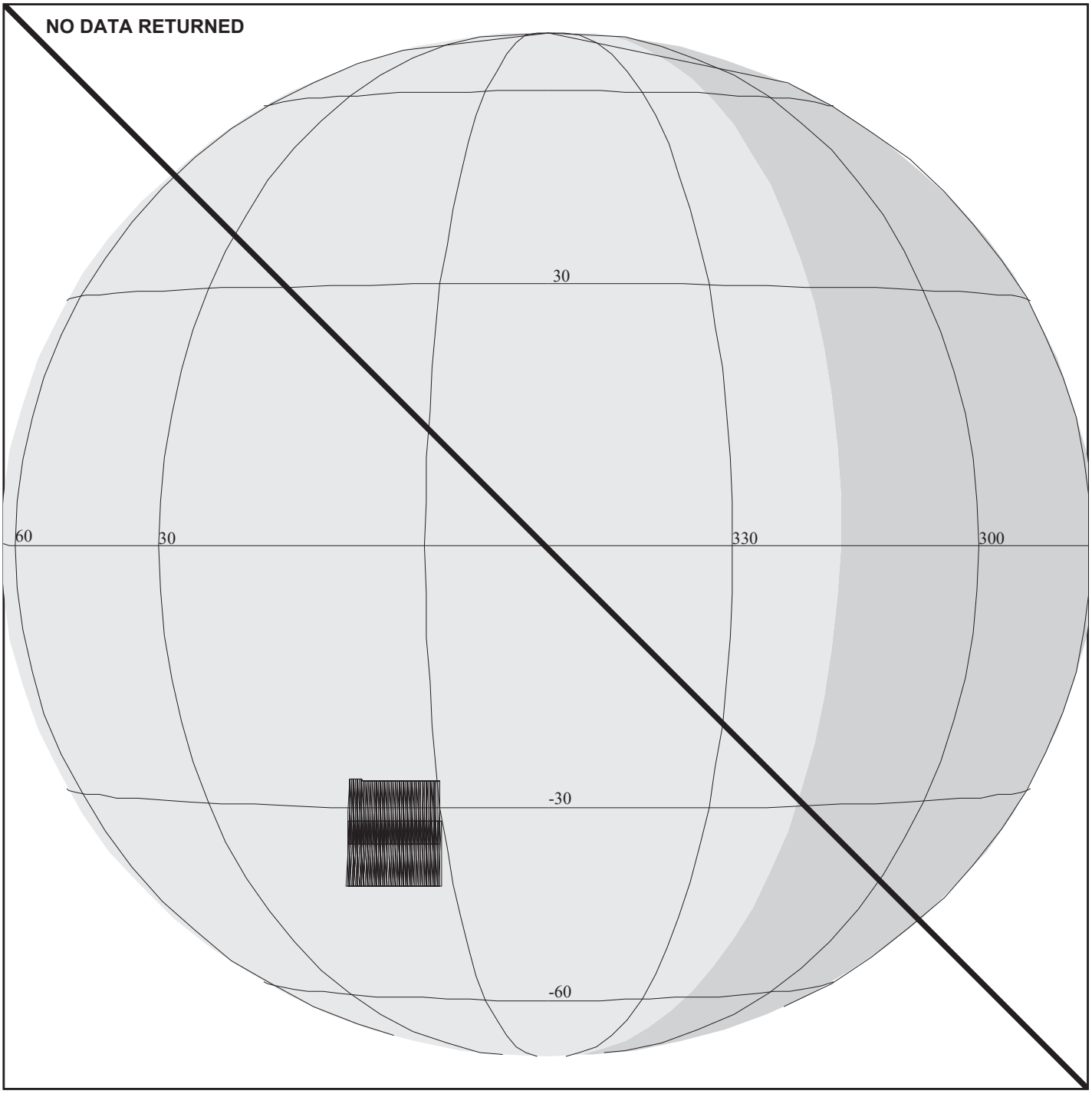
Europa Global mosaic covering West longitude 236-128 degrees.
Resolution = 71 km/pixel.
This observation is one in a set, designed to provide 360 degrees
of longitudinal coverage.

TICS=494 , FMT=LPU, MBTG=8.974, PPR_RA=0.409

S/C SAFED, No Data Returned

Design Detail

NIMS mode = LM.
Record mode = LPU.
Number of swaths = 4.
Polar swath is at Gain state 3.
Equatorial swath is at Gain state 2.
Grating position = 0.



165EA:TT= 0 TMC= 1 C= 7.00 XC= -3.00 BS= 0/2180 TC= 1(-33 6)
A= 728 pD= 5086 SR=17.450 RA50= 46.23 DEC50= 16.76 cone=128.90 clock=283.30
117EA:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/2180
1:#s= 2 Cs= -25.20 XCs= 0.00 Cr= 14.00 XCr= 6.50 sD= 2530 rD= 24

16JNWHTOVL01

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16JNWHTOVL01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:JEE 98-202/00:18:08.066 +CDS 704:00:0

BODY PLOT TIME:TARGET-TIME D= 5086 S= 1.000

OBSERVATION:16JNWHTOVL01

DESCRIP:NIMS_MERGING_WHITE_OVAL

Jupiter White Oval Observation

ACTIVITY ID: 16JNWHTOVL01-
START TIME: 98-202/11:57:49.399

Activity ID: Orbit 16 Target J Inst N OAPEL WHTOVL SeqNo 01 -

Title	Jupiter White Oval Observation	Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team NIMS	Working Group SWG

Time System	CDS	Load ID	Calendar Date 07/21/98 Week 29
Start	JEE+CDS 00000692:00:0	98-202/11:57:49.399	JEE+000/11:39:41.333
End	JEE+CDS 00000732:00:0	98-202/12:38:16.066	JEE+000/12:20:08.000
Duration	00000040:00:0	000/00:40:26.667	000/00:40:26.667

Top Label 16JNWHTOVL01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

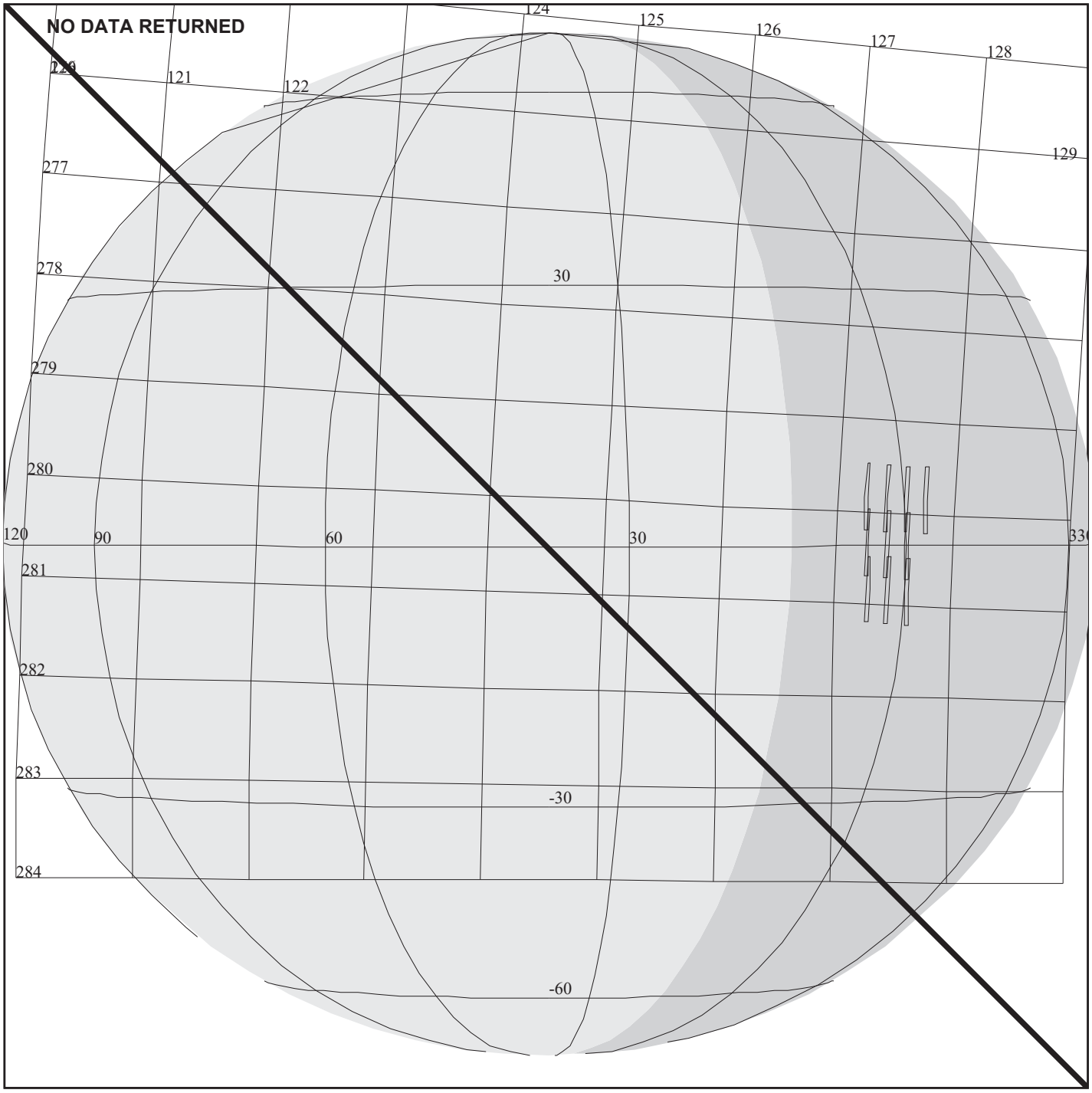
Observation Objective

To observe the newly created white oval, which was formed in the Spring of 1998, from the merging of two white ovals previously named BC and DE.

S/C SAFED, No Data Returned

Design Detail

LM mode, gain state 2, Recformat LPU



165DJ:TT= 0 TMC= 1 C= 3.00 XC= -7.00 BS= 0/8560 TC= 1(0 0)
A= 728 pD= 1810 SR=17.450 RA50= 46.48 DEC50= 19.69 cone=127.76 clock=279.85
117DJ:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/8560
1:#s= 3 Cs= -11.50 XCs= 0.00 Cr= 8.50 XCr= 7.00 sD= 580 rD= 34

16JNJUPRTS02

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16JNJUPRTS02

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS: **THINNING:NIM 7**

START:JEE 98-202/00:18:08.066 +CDS 794:00:0 **BODY PLOT TIME:TARGET-TIME D= 1810 S= 1.000**

OBSERVATION:16JNJUPRTS02 **DESCRIP:Jupiter_Realtime_Observation_02**

Jupiter Realtime Observation

ACTIVITY ID: 16JNJUPRTS02*
START TIME: 98-202/13:28:49.399

Activity ID: Orbit 16 Target J Inst N OAPEL JUPRTS SeqNo 02 *

Title	Jupiter Realtime Observation	Instrument	NIMS
Requestor	NIMS-AWG/A. OCAMPO	Team NIMS	Working Group AWG

Time System	CDS	Load ID	Calendar Date 07/21/98 Week 29
Start	JEE+CDS 00000782:00:0	98-202/13:28:49.399	JEE+000/13:10:41.333
End	JEE+CDS 00000804:00:0	98-202/13:51:04.066	JEE+000/13:32:56.000
Duration	00000022:00:0	000/00:22:14.667	000/00:22:14.667

Top Label	16JNJUPRTS02*				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Search for Jupiter atmospheric composition and thermal variations over time.

FREE_RTS=0.16 mbits

S/C SAFED, No Data Returned

Design Detail

Long map. Three scans, each three RIMS long.
Target to 35 degrees North latitude for first scan.
No scan overlap; Nyquist sampling not necessary - lit surface only.
Not longitudinal dependent. No overlap in FOV.
NIMS R/T only returns every seventh FOV.

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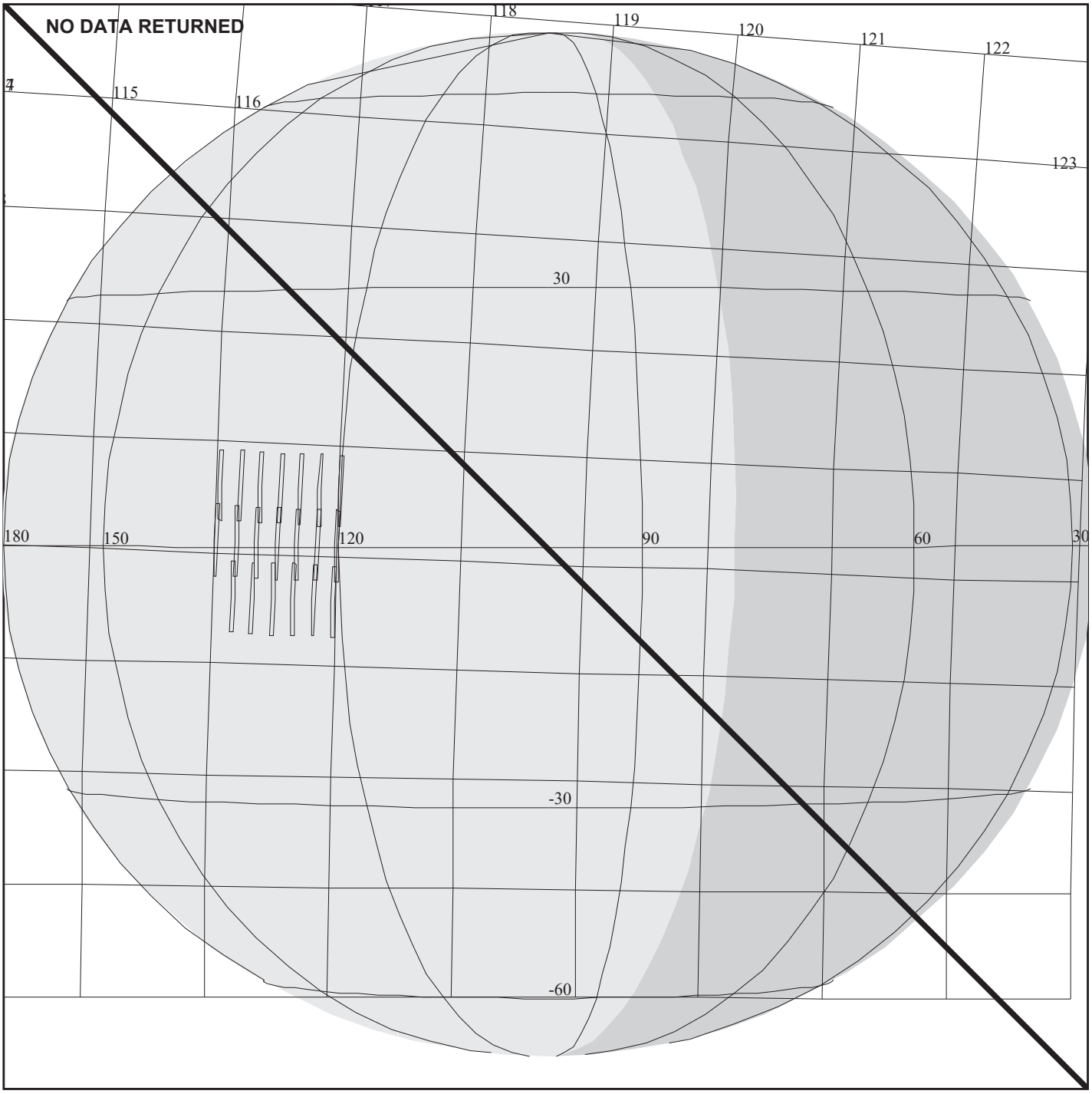

165DK:TT= 0 TMC= 1 C= 0.00 XC= -8.00 BS= 0/8580 TC= 1(0 120)
A= 728 pD= 3630 SR=17.450 RA50= 57.63 DEC50= 22.40 cone=117.02 clock=280.41
117DK:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/8580
1:#s= 3 Cs= -23.80 XCs= 0.00 Cr= 19.00 XCr= 8.00 sD= 1194 rD= 20

16JNJUPRTS03

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16JNJUPRTS03

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS: **THINNING:NIM 7**

START:JEE 98-202/00:18:08.066 +CDS 904:00:0 **BODY PLOT TIME:TARGET-TIME D= 3630 S= 1.000**

OBSERVATION:16JNJUPRTS03 **DESCRIP:Jupiter_Realtime_Observation_03**

Jupiter Realtime Observation — ACTIVITY ID: 16JNJUPRTS03* — START TIME: 98-202/15:24:05.399

Activity ID: Orbit 16 Target J Inst N OAPEL JUPRTS SeqNo 03 *

Title	Jupiter Realtime Observation			Instrument	NIMS
Requestor	NIMS-AWG/A. OCAMPO	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID		Calendar Date	07/21/98 Week 29
Start	JEE+CDS 00000896:00:0	98-202/15:24:05.399		JEE+000/15:05:57.333	
End	JEE+CDS 00000924:00:0	98-202/15:52:24.066		JEE+000/15:34:16.000	
Duration	00000028:00:0	000/00:28:18.667		000/00:28:18.667	

Top Label	16JNJUPRTS03*				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Search for Jupiter atmospheric composition and thermal variations over time.

FREE_RTS=0.16 mbits

S/C SAFED, No Data Returned

Design Detail

Long map. One scan ten RIMS long.
Equator - Nyquist sampling not necessary.
Longiutde - not dependent. No overlap in FOV.

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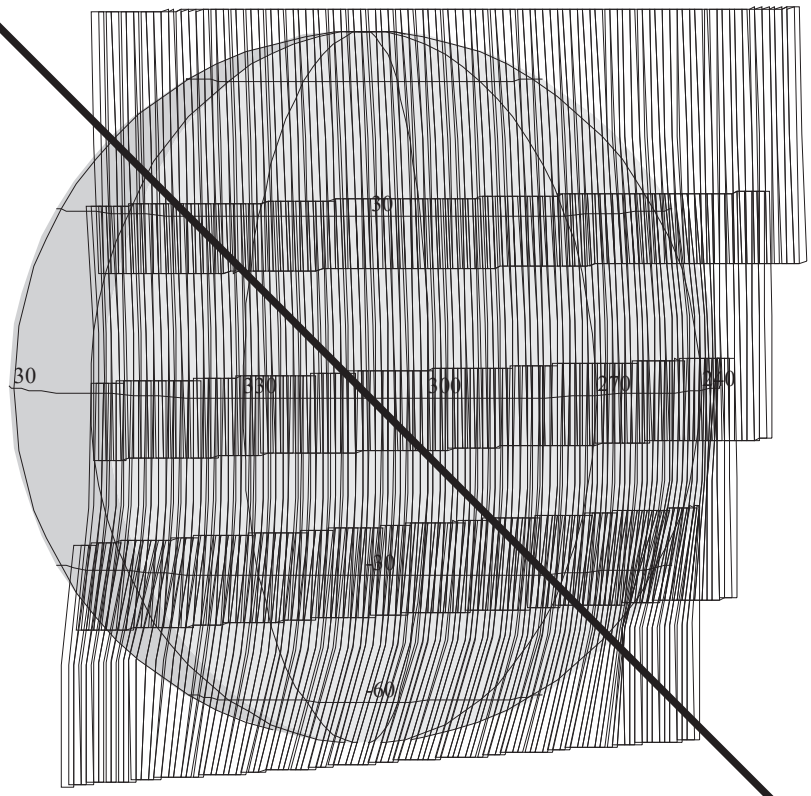
NO DATA RETURNED



165DL:TT= 0 TMC= 1 C= 10.00 XC= 9.50 BS= 0/1502 TC= 3
A= 728 pD= 10910 SR=17.450 RA50=307.20 DEC50=-21.89 cone=126.78 clock=101.10
117DL:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/1502
1:#s= 4 Cs= -27.00 XCs= 0.00 Cr= 28.00 XCr= -7.20 sD= 2706 rD= 20

16GNGLOBAL01

TARGET G3.1 lisac: 7/ 2/1998 10:34:52

FILE:P.16GNGLOBAL01

TARGET BODY : GANYMEDE

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS:

THINNING:NIM 1

START:GEE 98-202/20:06:11.400 -CDS 200:00:0

BODY PLOT TIME:TARGET-TIME D=10910 S= 0.500

OBSERVATION:16GNGLOBAL01

DESCRIP:GANYMEDE_GLOBAL_MAP

Ganymede Global Map

ACTIVITY ID: 16GNGLOBAL01*
START TIME: 98-202/16:35:52.734

Activity ID: Orbit 16 Target G Inst N OAPEL GLOBAL SeqNo 01 *

Title	Ganymede Global Map			Instrument	NIMS
Requestor	NIMS-SWG/J. HUI	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date 07/21/98 Week 29
Start	GEE-CDS 00000208:00:0	98-202/16:35:52.734	GEE-000/03:30:18.666
End	GEE-CDS 00000140:00:0	98-202/17:44:38.067	GEE-000/02:21:33.333
Duration	00000068:00:0	000/01:08:45.333	000/01:08:45.333

Top Label 16GNGLOBAL01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

Format = LPU, Tics = 228, MBTG = 5.107
To study composition of Ganymede's surface in a global context.
Recover missing longitude coverage from the pime mission.

S/C SAFED, No Data Returned

Design Detail

Allow 4 RIMS for target Use CSMOS to cover the entire lit disk
at 0.03 mrad/sec (4 strips).
NIMS in LM mode. Gain State = 3. Chopper = Reference.
Record Mode = LPU.
Playback all recorded wavelengths

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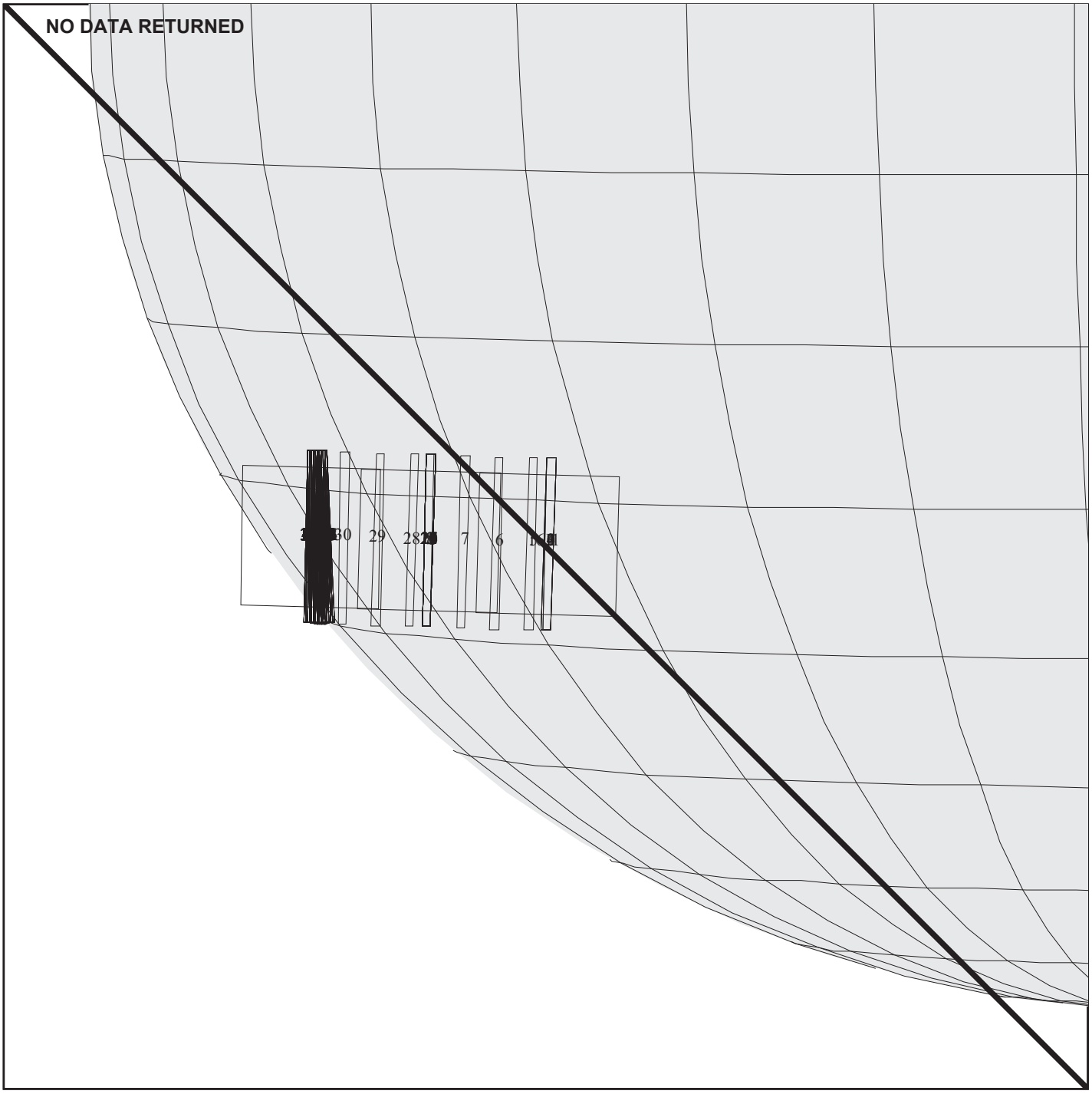

165IL:TT= 0 TMC= 1 C= 7.00 XC= 0.00 BS= 0/7376 TC= 1(-33 6)
A= 728 pD= 138 SR=17.450 RA50= 75.04 DEC50= 22.52 cone=101.21 clock=283.53
118IL:#SB= 1 Cs= -7.00 XCs= 0.00 TPP= 46 SR= 3.000 RR= 3.000 BM=T RC= 1 BS= 3/7376
1:#s= 3 #p= 1 Cr= 0.00 XCr= 0.00

16JNJUPWHT01

DESIGN G3.2 lisac: 7/ 8/1998 11: 3:10

FILE:P.16JSWTOVAL01

CENTRAL BODY:JUPITER III

MINI:m.16JSWTOVAL01

S/C EPH:/DATA/NAVIO/T-980518-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:JEE 98-202/00:18:08.066 +CDS 1282:00:0 **BODY PLOT TIME:TARGET-TIME D= 138 S= 2.000**

OBSERVATION:16JSWTOVAL01 **DESCRIP:1x3_Jupiter_White_Oval_part_1**

Jupiter White Oval Window

ACTIVITY ID: 16JNJUPWHT01-
START TIME: 98-202/20:27:25.399

Activity ID: Orbit 16 Target J Inst N OAPEL JUPWHT SeqNo 01 -

Title	Jupiter White Oval Window			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	07/21/98 Week 29
Start	JEE+CDS 00001196:00:0	98-202/20:27:25.399		JEE+000/20:09:17.333	
End	JEE+CDS 00001697:00:0	98-203/04:53:59.399		JEE+001/04:35:51.333	
Duration	00000501:00:0	000/08:26:34.000		000/08:26:34.000	

Top Label	16JNJUPWHT01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	ALL	DMS	No

Observation Objective

To observe the newly created white oval, which was formed in the Spring of 1998, from the merging of two white ovals previously named BC and DE. Ride-along observation with SSI. Full NIMS spectra collected at center of each SSI frame over a 2 hour period.

S/C SAFED, No Data Returned

Design Detail

LM, REC = MPW (SSI ride-along format)
Gain state = 2

NIMS Chopper off

ACTIVITY ID: 16NNCHOPOF01-
START TIME: 98-203/08:21:16.066

Activity ID: Orbit 16 Target N Inst N OAPEL CHOPOF SeqNo 01 -

Title	NIMS Chopper off			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	07/22/98 Week 29
Start	JEE+CDS 00001902:00:0	98-203/08:21:16.066		JEE+001/08:03:08.000	
End	JEE+CDS 00001912:00:0	98-203/08:31:22.732		JEE+001/08:13:14.666	
Duration	00000010:00:0	000/00:10:06.666		000/00:10:06.666	

Top Label	16NNCHOPOF01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

NIMS Chopper off

S/C SAFED, Not executed.

Design Detail

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NIMS Dark Calibration

ACTIVITY ID: 16HNDARKCL01-
START TIME: 98-211/13:39:50.000

Activity ID: Orbit 16 Target H Inst N OAPEL DARKCL SeqNo 01 -

Title	NIMS Dark Calibration			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	07/30/98 Week 30

Start	98-211/13:39:50.000
End	98-211/14:00:00.000
Duration	000/00:20:10.000

Top Label	16HNDARKCL01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

NIMS Dark Calibration

Take 2 Rims of Dark data for each of the 4 gain states.
Dark data taken in a low noise environment.

Data Returned

Design Detail

2 Rims Gain State 2 : 16HNDARKCL02
2 Rims Gain State 4 : 16HNDARKCL04
2 Rims Gain State 3 : 16HNDARKCL03
2 Rims Gain State 1 : 16HNDARKCL01

Long Map (LM), Gain 1,2,3,4 Grating Start 0, MPW, E14HN442, E16HN408

NIMS Chopper off

ACTIVITY ID: 16NNCHOPOF02-
START TIME: 98-211/14:01:26.066

Activity ID: Orbit 16 Target N Inst N OAPEL CHOPOF SeqNo 02 -

Title	NIMS Chopper off			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	07/30/98	Week	30

Start	98-211/14:01:26.066
End	98-203/14:11:32.732
Duration	000/00:10:06.666

Top Label	16NNCHOPOF02-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

NIMS Chopper off

Design Detail

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NIMS RCT Real Time Calibration

ACTIVITY ID: 16NNRCTRLT01-
START TIME: 98-243/21:00:32.666

Activity ID: Orbit 16 Target N Inst N OAPEL RCTRLT SeqNo 01 -

Title	NIMS RCT Real Time Calibration		Instrument		NIMS
Requestor	NIMS-AWG/K. BAINES	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID		Calendar Date	08/31/98 Week 35
Start	RTA+CDS 0:00:0	98-243/21:00:32.666		RTA+000/00:00:00.000	
End	RTA+CDS 00000787:00:0	98-244/10:16:17.332		RTA+000/13:15:44.666	
Duration	00000787:00:0	000/13:15:44.666		000/13:15:44.666	

Top Label	16NNRCTRLT01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	450	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

This observation is a NIMS radiometric calibration using the RCT target.
The data will be used to calibrate the NIMS thermal detectors.
The calibration data will be returned using Real-Time Telemetry.
An OPCAL is also performed.

Design Detail

1) Turn on RCT Heaters for 12 hours.
2) Set Engineering Variable Map to return NIMS Temps more frequently.
3) Set NIMS to Long Map Mode, Gain state 1, Chopper Reference, Mirror Blocking (11011,11011), ETB=RCT252.
4) Pause playback before using scan platform.
5) Slew to Dark (cone = 119.7), return 1 grating cycle (12 mf) in R/T
6) Slew to RCT (cone = 0.0), return 2 grating cycles (12 mf) in R/T
7) Slew to Dark (cone = 119.7), return 1 grating cycle (12 mf) in R/T
8) Slew to Safe (cone = 153.0)
9) Long Map, gain state 4, ETB=OPCAL48.
10) Use 37IST to turn on OPCAL Lamp (two times).
11) Select NIMS Real Time 1 Rim OPCAL, 1 Rim Dark, 1 Rim OPCAL
12) Set NIMS to Safe Mode and turn off Chopper.
13) Resume Playback after using scan platform.

Long Map (LM), Gain 1, Grating Start 0, R/T, RCT252
Long Map (LM), Gain 4, Grating Start 0, R/T, OPCAL48

NIMS Real-Time PCT Calibration — ACTIVITY ID: 16NNPCTRLT01-
START TIME: 98-255/00:00:34.733

Activity ID: Orbit 16 Target N Inst N OAPEL PCTRLT SeqNo 01 -

Title	NIMS Real-Time PCT Calibration			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA		Team NIMS	Working Group	SWG

Time System CDS Load ID Calendar Date 09/12/98 Week 37

Start	PCT+CDS 0:00:0	98-255/00:00:34.733	PCT+000/00:00:00.000
End	PCT+CDS 00000465:00:0	98-255/07:50:44.733	PCT+000/07:50:10.000
Duration	00000465:00:0	000/07:50:10.000	000/07:50:10.000

Top Label 16NNPCTRLT01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	275	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

This observation is a NIMS photometric calibration usint the PCT target.
The data will be used to calibrate the NIMS visible detectors.
The calibration data will be returned using Real-Time Telemetry.
At this time the off sun angle is about 1.5 degrees.

Design Detail

1) Turn off PCT heaters 6 hours before calibration.
2) Scan Platform is at Safe/Unstow (cone = 153.00, clock = 0.00)
3) Chopper on, Gain State 4,
4) Set NIMS to Long Map Mode, ETB = PCT252,
   Mirror Blocking (1B, 1B) (11011, 11011)
5) Select 2 RIMs of Dark in Real-Time (Return 2 LM grating cycle)
6) Slew to PCT (cone 54.88, clock = 244.07)
7) Select 10 RIMS of PCT in Real-Time (Return 10 LM grating cycles)
8) Slew to Safe (cone = 153.00, clock = 0.00)
9) NIMS to Safe Mode, Reset Mirror Blocking (00,00) (00000, 00000)
10) Chopper Off.

Long Map (LM), Gain 4, Grating Start 0, RT, PCT252

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Chapter 6 - Edit Tables

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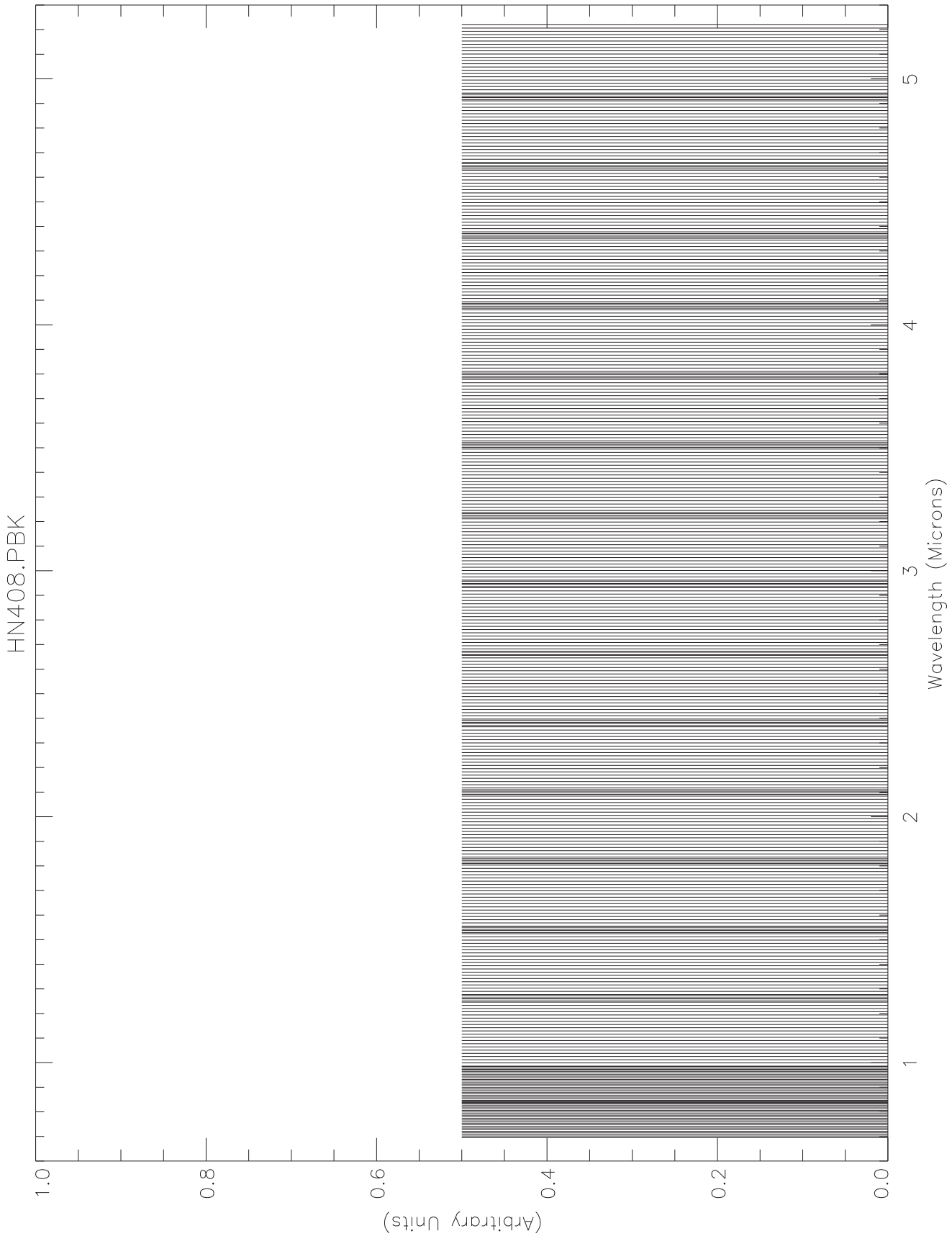
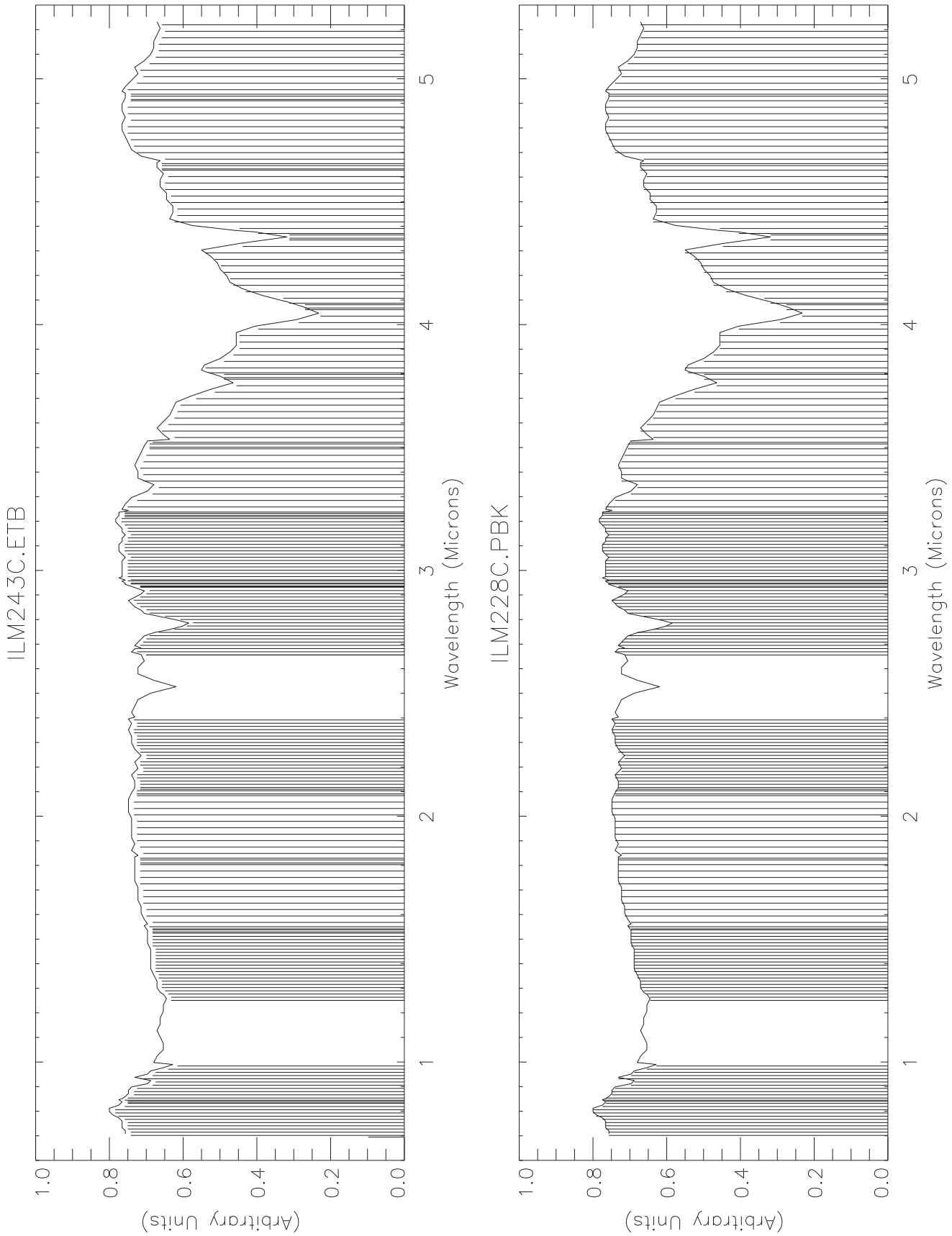
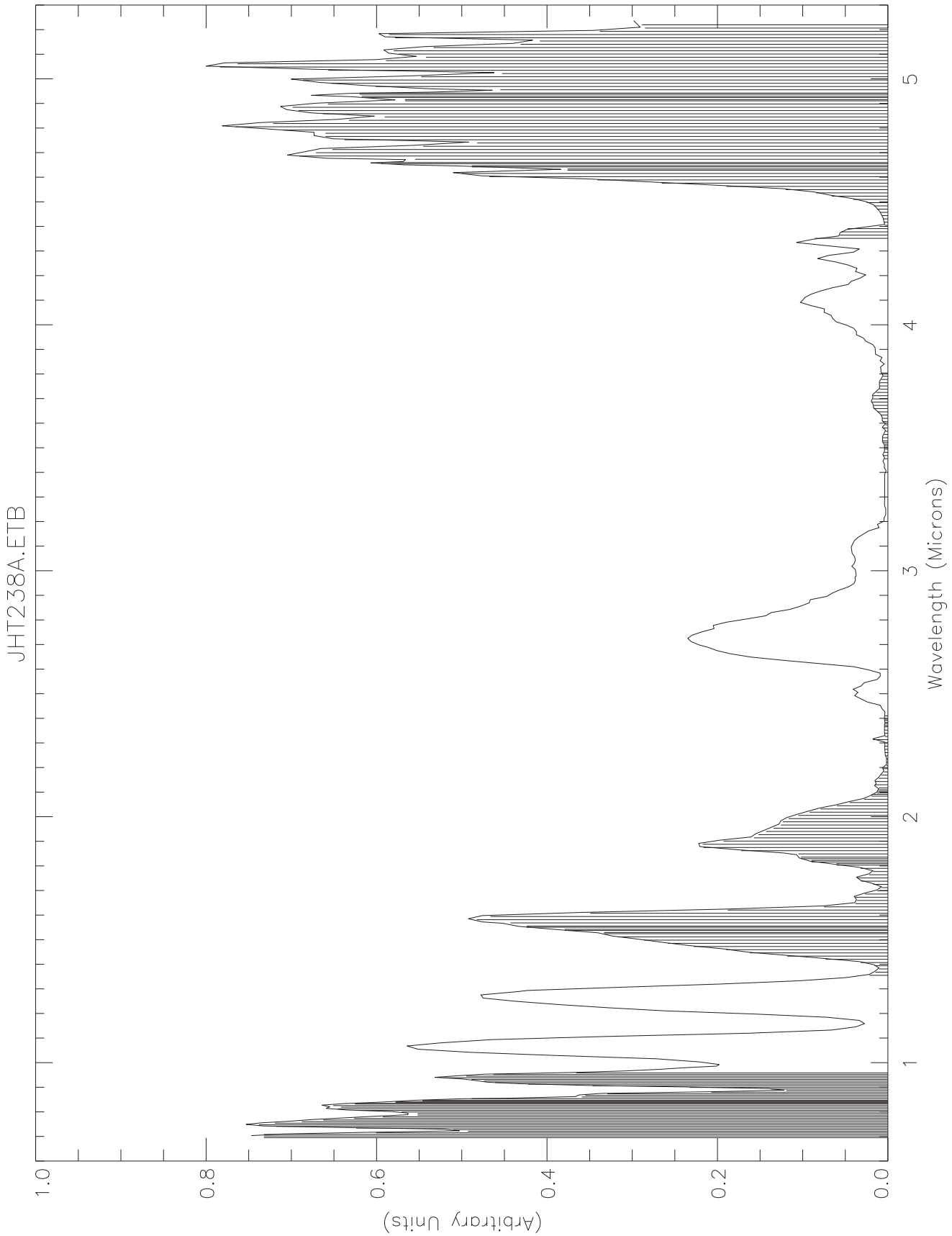
Introduction to Chapter 6

NIMS Edit Table Plots

This chapter contains plots of the NIMS Edit Tables used in E16. The representative spectra used in these plots are observational reference spectra for the target body as obtained from telescopic observations from the Earth. Each reference spectrum is a composite of multiple published sources. Vertical lines below the reference curves mark the wavelengths selected for return. Where no spectral information is available, the selected wavelengths are shown as lines with amplitude equal to .05 on the vertical axis.


HN408.PBK
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


ILM243C.ETB
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)
ILM228C.PBK
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)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(Arbitrary Units)
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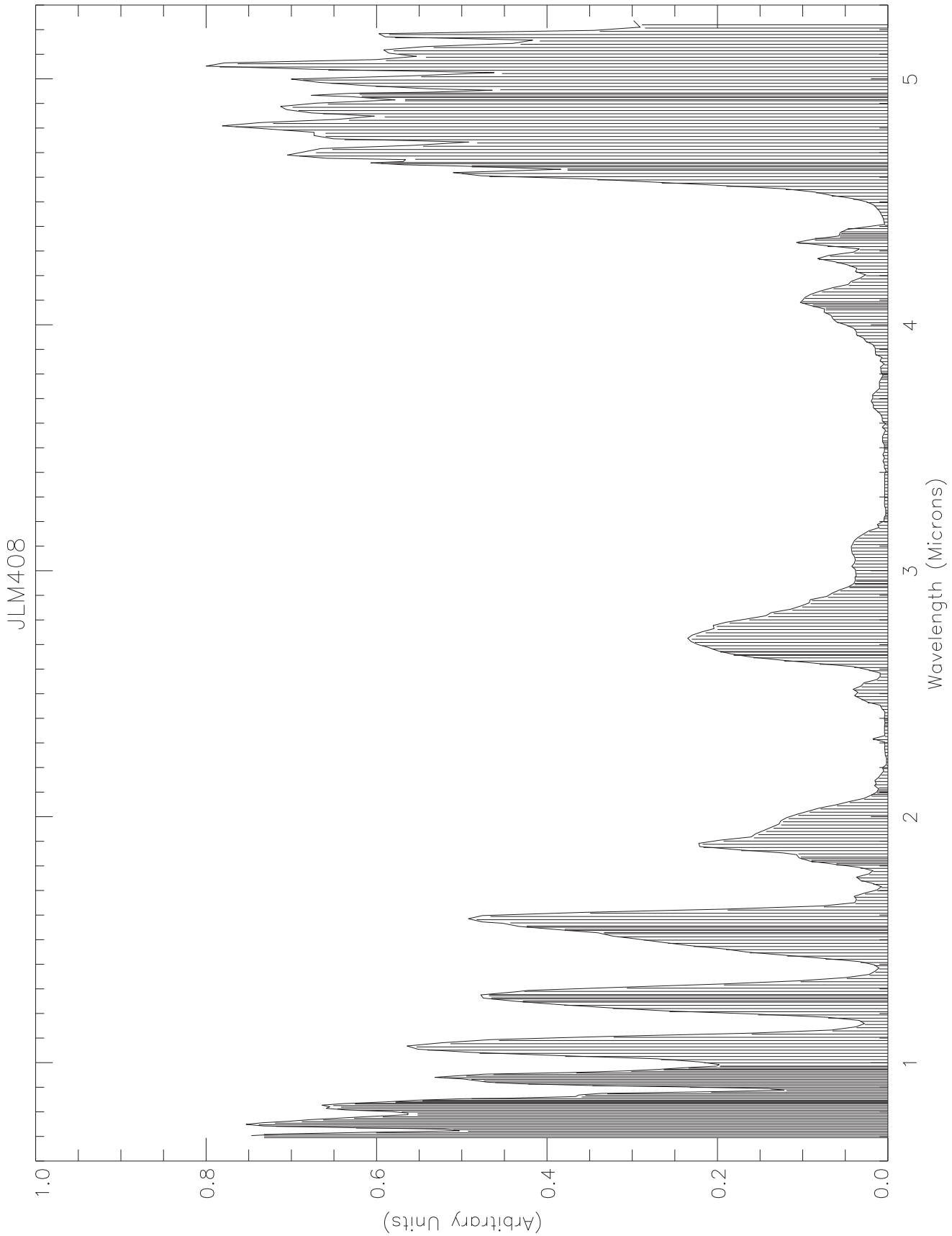
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)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1
2
3
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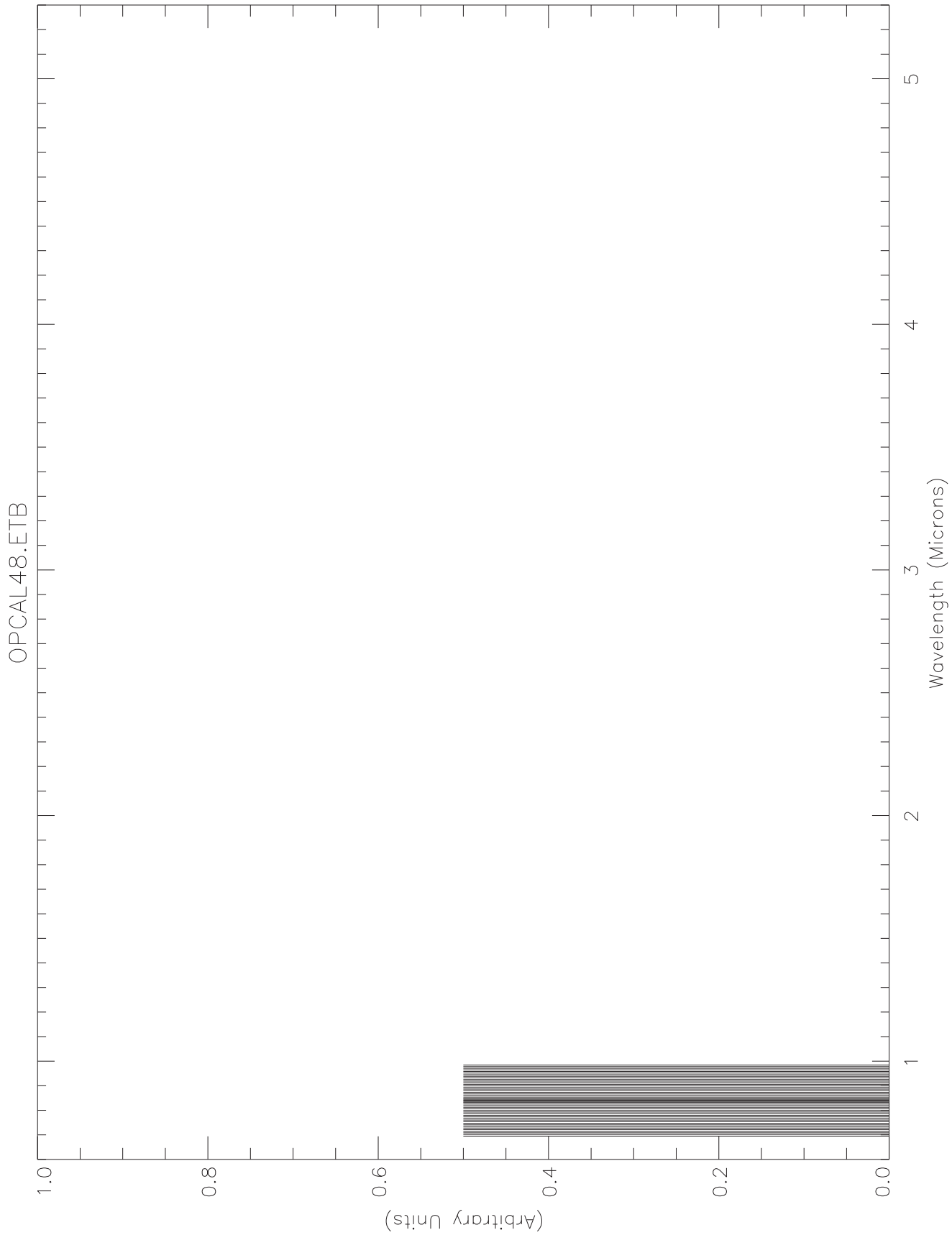
Wavelength (Microns)


OPCAL48.ETB
(Arbitrary Units)
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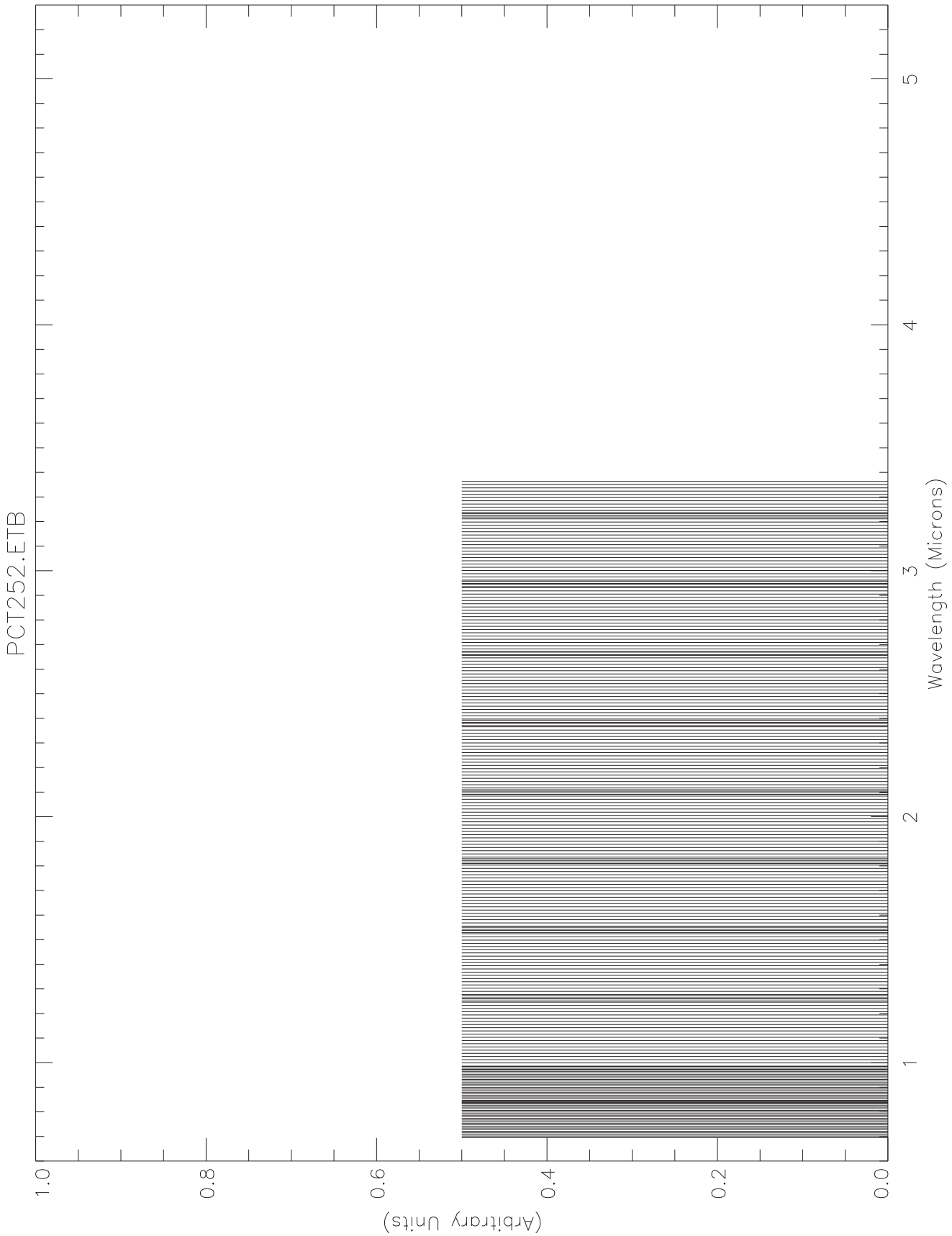
1
2
3
4
5
Wavelength (Microns)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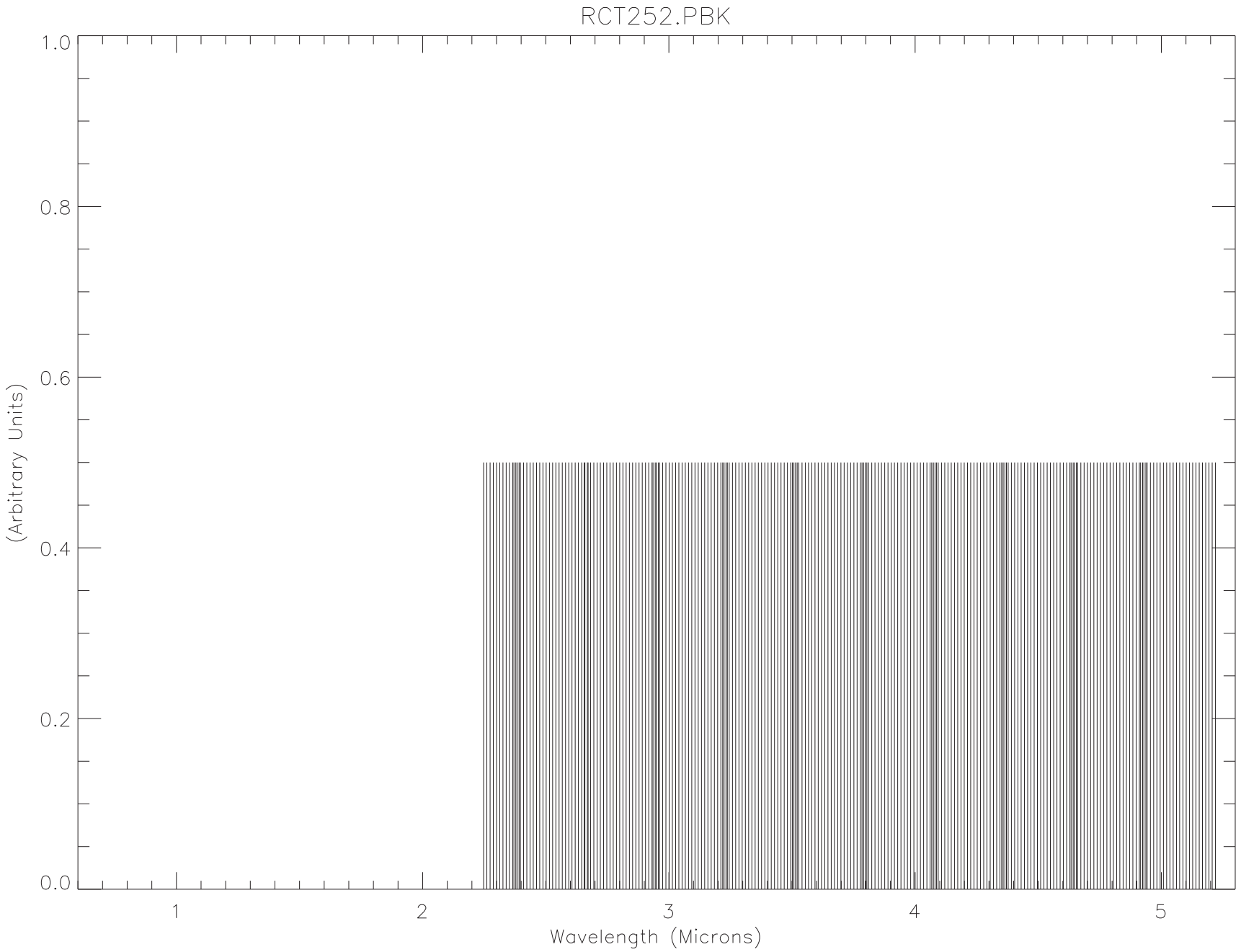
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


RCT252.PBK
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0.8
0.6
0.4
0.2
0.0
(Arbitrary Units)
1
2
3
4
5
Wavelength (Microns)

Chapter 7 - Data Return

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Introduction to Chapter 7

This chapter is a report on the NIMS data return for the E16 orbit. Due to the low downlink data rates available for Galileo Jupiter Operations and other unforeseen and unpredictable events during the E16 Encounter and Cruise, not all NIMS data recorded on the tape recorder or selected in real-time were returned. The previous 6 chapters nominally describe the planning and intention of the NIMS observations for this orbit, except the obstab section in chapter 4 which was updated to give the latest parameters for the data that were actually returned.

There were thirteen autonomous reloads of the NIMS RAM code from CDS during the E16 encounter, one just before each science observation. One observation, 16JNHOTMAP01, was lost due to a NIMS processor halt, but that was due to an error in the planned reload sequence. The approach that we are taking to avoid data loss due to processor halts has proven to be very successful.

Detectors 3 and 8 are still not functioning and are expected to be lost for the rest of the mission.

The spacecraft suffered a Despun Bus Reset Error that safed the spacecraft about 6 hours before E16 perijove. The perijove and outbound portions of the E16 encounter were lost.

Spacecraft safing during the E16 encounter caused a good portion of E15 data not to be recorded over in E16. Thus, additional E15 data were returned during E16 playback.

The plots on the pages 3 and 4 show the geometry of the NIMS E16 observations using a north trajectory pole projection. The 'returned' observations are in Bold characters and the 'non-returned' in gray. The observations with an asterix were taken with the NIMS software halted.

The spreadsheets on pages 5 through 8 summarize the 'final' playback model for the 'returned' E16 and E15 data returned during E16 cruise.

The text on page 9 gives a 'recap' of the E16 playback events which affected which observations were returned.

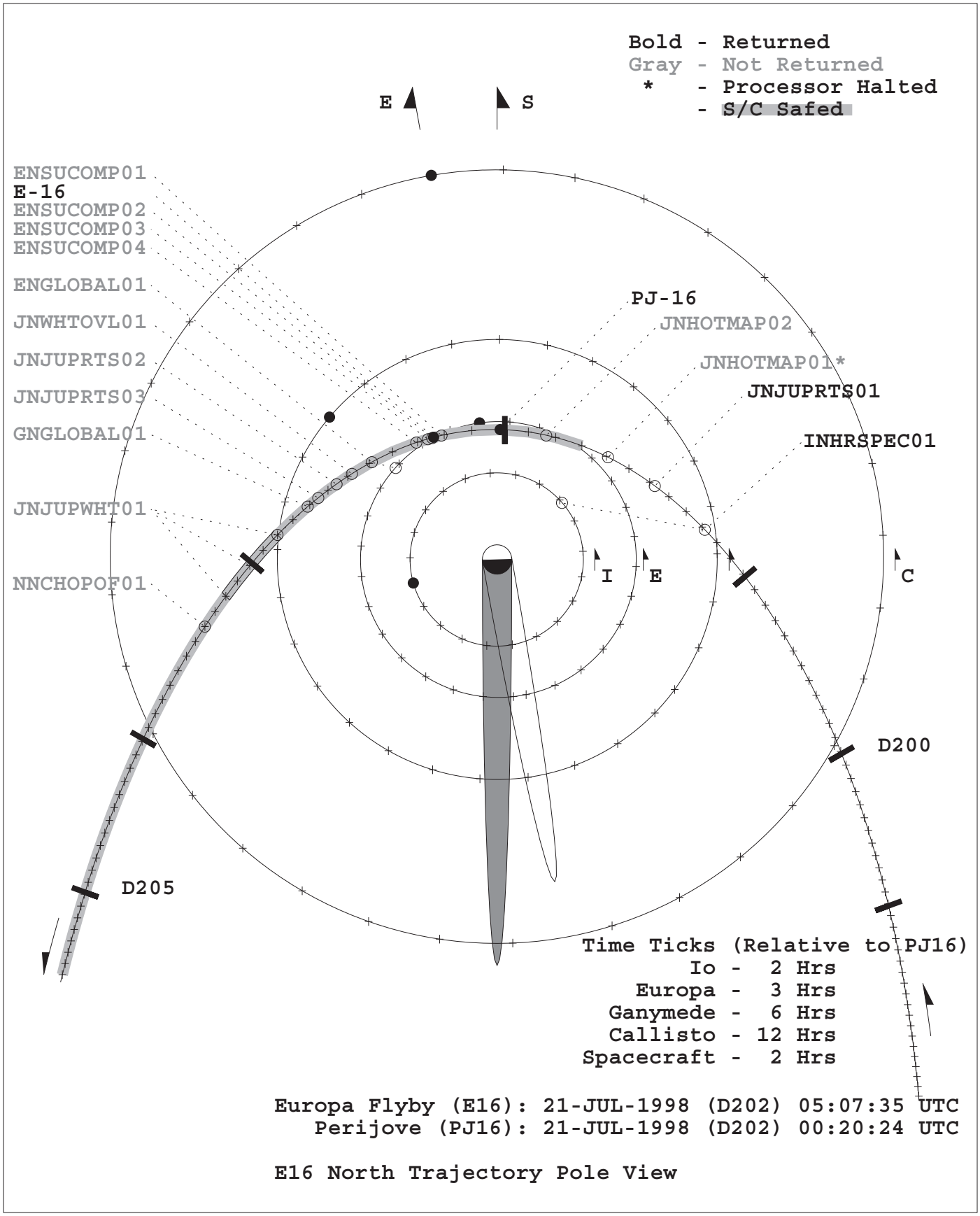
A Timeline of E16 playback events is on pages 10 through 15.

The text on page 16 describes the E16 NIMS and Spacecraft Anomalies.

The text on page 17 gives a brief discussion of the NIMS data files. Additional information about NIMS data formats, data types, data labels and data access is given on pages 18 and 19.

The text on page 20 is a guide to understanding the NIMS MASK.

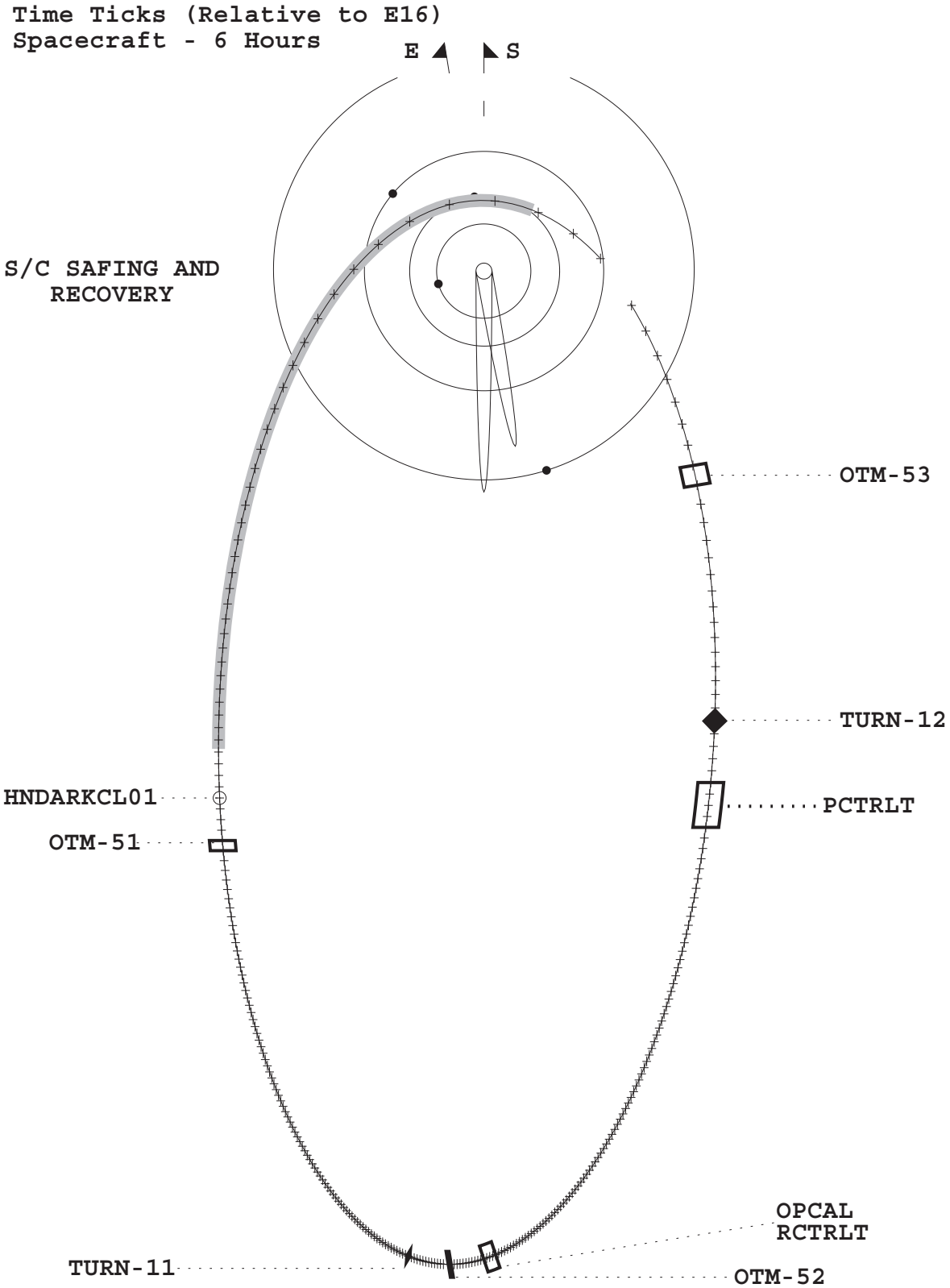
NIMS E16 OBSERVATIONS



NIMS - FEL - 12/06/99

NIMS E16 CRUISE CALIBRATIONS

Europa Flyby (E16): 21-JUL-1998 (D202) 05:07:35 UTC
Perijove (PJ16): 21-JUL-1998 (D202) 00:20:24 UTC
Apojove (AJ16): 23-Aug-1998 (D235) 16:00:00 UTC



E16 North Trajectory Pole View, Perijove to Perijove

NIMS E16 DATA RETURN

Activity ID	Observation Title	NIMS EDIT Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
16INHRSPEC01	Io Monitoring at High Spectral Resolution	E16ILM243C	E16ILM228C	LM	2	0	4	LPU	
16JNJUPRTS01	Jupiter Realtime Observation	E16JLM442		LM	2	0	4	R/T	
16JNHOTMAP01	NIMS Jupiter Hotmap	E16JHT238A	E16JHT238A	LM	2	0	4	LPU	
16HNDARKCL01		E16HN442	E16HN408	LM	1,2,3,4			MPW	
	NIMS Software Reload								
15ENSUCOMP02-gf	Europa Surface Composition	E15ELM442	E15ELM360	LM	3	0	4	MPW	DG
15ENSUCOMP02-	Europa Surface Composition	E15ELM442	E15ELM360	LM	3	0	4	MPW	DG
15ENGLOBAL01-gf	Europa Global	E15ELM442	E15B_ELM228C	LM	4,3	0	4	MPW	DI
15ENGLOBAL01-	Europa Global	E15ELM442	E15B_ELM228C	LM	4,3	0	4	MPW	DI
15ENEUR16H01C-	Europa 16 Hour Map	E15ELM442	E15ELM120T	LM	4	0	4	MPW	DK
15ENEUR16H01D-	Europa 16 Hour Map	E15ELM240V	E15ELM72V	LM	3	0	4	LPU	EK
15JNJPDARK01A-	Jupiter Dark Observation	E15J5M253B	E15J5M80B	LM	4	0	4	LPU	DN
15JNJPDARK02A-gf	Jupiter Dark Observation	E15J5M253B	E15J5M80B	LM	4	0	4	LPU	DO
15JNJPDARK02A-	Jupiter Dark Observation	E15J5M253B	E15J5M80B	LM	4	0	4	LPU	DO
15ENEUR20H01B-gf	Europa 20 Hour Map	E15ELM240V	E15ELM168V	LM	3	0	4	LPU	EL
15JNJPDARK03A-	Jupiter Dark Observation	E15J5M253B	E15J5M80B	LM	4	0	4	LPU	DP
15JNJPDARK03A-gf	Jupiter Dark Observation	E15J5M253B	E15J5M80B	LM	4	0	4	LPU	DP
15ENEUR22H01C-	Europa 22 Hour Map	E15ELM442	E15ELM120T	LM	4	0	4	MPW	DM
15ENEUR22H01D-	Europa 22 Hour Map	E15ELM240V	E15ELM72V	LM	3	0	4	LPU	EM
15INHRSPEC01-	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LM	2	0	4	MPW	DB
15INHRSPEC01-	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LS	2	0	4	MPW	DB
15INHRSPEC02-gf	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LM	2	0	4	MPW	DD
15INHRSPEC02-	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LM	2	0	4	MPW	DD
16INHRSPEC01	Io Monitoring at High Spectral Resolution	E16ILM243C	E16ILM228C	LM	2	0	4	LPU	
16HNDARKCL01		E15HN442	E15HN408	LM	1,2,3,4			MPW	
15ENREGION01-gf	Europa Regional Observation	E15ELM442	E15ELM360	LM	3	0	4	MPW	DE
15ENSUCOMP02-gf	Europa Surface Composition	E15ELM442	E15ELM360	LM	3	0	4	MPW	DG
15ENSUCOMP02-gf	Europa Surface Composition	E15ELM442	E15ELM360	LM	3	0	4	MPW	DG
15ENSUCOMP03CD-	Europa Surface Composition	E15ELM442	E15ELM132C	LM	4,3	0	4	MPW	DH
15ENGLOBAL01J-Q-	Europa Global	E15ELM442	E15ELM132C	LM	4,3	0	4	MPW	DI

NIMS E16 DATA RETURN

15ENEUR16H01A-gf	Europa 16 Hour Map	E15ELM442	E15ELM360	LM	4	0	4	LPU	EK
15JNJPDARK01B-	Jupiter Dark Observation	E15J5M253B	E15J5M149B	LM	4	0	4	LPU	DN
15JNJPDARK02B-	Jupiter Dark Observation	E15J5M253B	E15J5M149B	LM	4	0	4	LPU	DO
15ENEUR20H01C-	Europa 20 Hour Map	E15ELM442	E15ELM120T	LM	4	0	4	MPW	DL
15ENEUR20H01D-	Europa 20 Hour Map	E15ELM240V	E15ELM72V	LM	3	0	4	LPU	EL
15JNJPDARK03B-	Jupiter Dark Observation	E15J5M253B	E15J5M149B	LM	4	0	4	LPU	DP
Extended Playback Required Pass Number Reset to 1									
15INHRSPEC01-gf	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LM	2	0	4	MPW	DB
15INHRSPEC01-gf	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LM	2	0	4	MPW	DB
15INHRSPEC01-gf	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LM	2	0	4	MPW	DB
15INHRSPEC02-gf	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LM	2	0	4	MPW	DD
15INHRSPEC02-gf	Io Monitoring at High Spectral Resolutio	E15ILM442	E15ILM360	LM	2	0	4	MPW	DD
NOTES: The complexity of E16 playback resulted in the use of several schemes for numbering the separate portions of the observations. Final data product nomenclature will differ from that employed here. This spreadsheet is a record of the separate parts commanded to be played back, in time order of playback.									
gf= Gap fill									

NIMS E16 DATA RETURN

Activity ID	Mode	Record Format	Wave-lengths Returned	Record Time (sec.)	PB Time (sec.)	Selected Bits of Tape sBOT (Mbits)	Total Bits of Tape BOT (Mbits)	Mode Cycle (sec)	Thold	Comp	Total BTG Mbits (4% OHEAD)	Data Reduct Factor (sBOT/BTG)	Pass
16INHRSPEC01	LM	LPU	228	184.00	181.00	1.110	1.13	8.667	0	2.32	0.43	2.60	1
16JNJUPRTS01	LM		360										
16JNHOTMAP01	LM	LPU	238	1468.0	70.00	5.180	9.06	8.667	0	99.00	0.00	1.35	1
16HNDARKCL01	LM	MPW	408	667	485	5.59		8.667	0	2.71	1.75	3.19	1
15ENSUCOMP02-gf	LM	MPW	360	1200	212.2	2.44	13.82	8.667	0	1.33	1.38	1.77	2
15ENSUCOMP02-	LM	MPW	360	1200	88	1.01	13.82	8.667	0	1.33	0.57	1.77	2
15ENGLOBAL01-gf	LM	MPW	228	1800	195	2.25	20.74	8.667	0	1.20	0.89	2.53	2
15ENGLOBAL01-	LM	MPW	228	1800	204.6	2.36	20.74	8.667	0	1.26	0.89	2.65	2
15ENEUR16H01C-	LM	MPW	120	290	286	3.29	3.34	8.667	0	1.40	0.59	5.60	2
15ENEUR16H01D-	LM	LPU	72	290	282	1.74	1.79	8.667	0	1.25	0.39	4.46	2
15JNJPDARK01A-	LM	LPU	80	600	306	1.89	3.70	8.667	0	1.30	0.45	4.18	2
15JNJPDARK02A-gf	LM	LPU	80	600	20	0.12	3.70	8.667	0	1.26	0.03	4.05	2
15JNJPDARK02A-	LM	LPU	80	600	316	1.95	3.70	8.667	0	1.26	0.48	4.05	2
15ENEUR20H01B-gf	LM	LPU	168	266	20	0.12	1.64	8.667	0	1.50	0.05	2.29	2
15JNJPDARK03A-	LM	LPU	80	600	86	0.53	3.70	8.667	0	1.27	0.13	4.08	2
15JNJPDARK03A-gf	LM	LPU	80	600	30	0.19	3.70	8.667	0	1.27	0.05	4.08	2
15ENEUR22H01C-	LM	MPW	120	245	234	2.70	2.82	8.667	0	1.50	0.45	6.00	2
15ENEUR22H01D-	LM	LPU	72	245	234	1.44	1.51	8.667	0	1.53	0.26	5.46	2
15INHRSPEC01-	LM	MPW	360	1260	636	7.33	14.52	8.667	0	1.30	4.23	1.73	3
15INHRSPEC01-	LM	MPW	360	1260	146	1.68	14.52	8.667	0	1.40	0.90	1.87	3
15INHRSPEC02-gf	LM	MPW	360	1260	40	0.46	14.52	8.667	2	1.30	0.27	1.73	3
15INHRSPEC02-	LM	MPW	360	1260	303.3	3.49	14.52	8.667	0	1.30	2.02	1.73	3
16INHRSPEC01	LPU	MPW	228	184.00	180.00	1.110	1.13	8.667	0	1.60	0.62	1.80	3
16HNDARKCL01	LM	MPW	408	667	242	2.79		8.667	0	2.70	0.88	2.35	3
15ENREGION01-gf	LM	MPW	360	1140	20	0.23	13.13	8.667	0	1.25	0.14	1.67	4
15ENSUCOMP02-gf	LM	MPW	360	1200	30	0.35	13.82	8.667	0	1.33	0.19	1.77	4
15ENSUCOMP02-gf	LM	MPW	360	1200	30	0.35	13.82	8.667	0	1.33	0.19	1.77	4
15ENSUCOMP03CD-	LM	MPW	132	600	598	6.89	6.91	8.667	0	1.25	1.52	4.55	4
15ENGLOBAL01J-Q-	LM	MPW	132	1800	1092	12.58	20.74	8.667	0	1.25	2.77	4.55	4

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15ENEUR16H01A-gf	LM	MPW	360	290	50	0.58	3.34	8.667	0	1.25	0.35	1.67	4
15JNJPDARK01B-	LM	LPU	149	600	595	3.67	3.70	8.667	0	1.37	1.55	2.36	4
15JNJPDARK02B-	LM	LPU	149	600	605	3.73	3.70	8.667	0	1.43	1.51	2.47	4
15ENEUR20H01C-	LM	MPW	120	266	262	3.02	3.06	8.667	0	1.45	0.52	5.80	4
15ENEUR20H01D-	LM	LPU	72	266	263	1.62	1.64	8.667	0	1.53	0.30	5.46	4
15JNJPDARK03B-	LM	LPU	149	600	595	3.67	3.70	8.667	0	1.49	1.43	2.57	4
										Total	28.17	(MBTG)	
15INHRSPEC01-gf	LM	MPW	360	1260	50	0.58	14.52	8.667	0	1.30	0.33	1.73	1
15INHRSPEC01-gf	LM	MPW	360	1260	18	0.21	14.52	8.667	0	1.30	0.12	1.73	1
15INHRSPEC01-gf	LM	MPW	360	1260	52	0.60	14.52	8.667	0	1.30	0.35	1.73	1
15INHRSPEC02-gf	LM	MPW	360	1260	73	0.84	14.52	8.667	0	1.30	0.49	1.73	1
15INHRSPEC02-gf	LM	MPW	360	1260	44	0.51	14.52	8.667	0	1.30	0.29	1.73	1
										Total	1.58	(MBTG)	
gf= Gap fill													

RECAP OF E16 PLAYBACK EVENTS

E16 in its original form was the most downlink-bit-rich orbit of the Galileo Europa Mission (GEM), with total capability of greater than 290 Megabits. Early in the E16 encounter, a spacecraft fault occurred, placing the spacecraft in safe mode. It was not possible to diagnose and respond to the condition in time to record any of the scheduled observations later in the sequence. Thus, the E16 encounter was nearly a total loss.

The E16 cruise period was occupied with the recording and playback of calibrations, and the playback of a considerable quantity of E15 data that remained on the tape from the prior encounter. The successfully recorded 16INHRSPEC01 was also retrieved. All in all NIMS received well over 90% of the NIMS data recorded to tape for E15, producing one of the finest data sets of the entire mission. In many cases, where only a portion of the recorded wavelengths had been returned earlier, it was necessary to generate new wavelength tables to "fill in" the missing wavelenghts. As a result, there were multiple data files for many observations, which had to be merged together to produce the final products. This involved significant extra work in processing by NIMS team members and at MIPS.

In addition to the spacecraft safing, one halt of the NIMS software occurred, at the start of 16JNHOTMAP01, which was to have been recorded prior to the time of the safing. It was later determined that this was the result of an error in commanding the instrument.

The following timeline covers two quite different intervals of time, that prior to the spacecraft safing, which occurred on 20 July, and that which followed. Only minimal information is provided here for the pre-safing period, since only one of the planned observations was successfully recorded. Most of the text below is excerpted from messages issued at the time.

E16 Playback Events Timeline (06-30-98: to 09-24-98:)

06-30-98: The E16 encounter begins on 20 July. Following today's update there is one more opportunity to modify the table before uplink.
This orbit includes 4 Europa surface composition observations and one Europa global. There is a very large Ganymede global observation that will fill in a significant gap in our longitudinal coverage. Io is de-emphasized this time with only a single low resolution HRSPEC.
The original Jupiter plan called for two HOTMAPs and 3 realtime spectra. Observation of the merging of two white ovals observed previously prompted requests for new observations of the merged feature. In this update we added 16JNWHTOVL01, which is 11.5 Rims in length and which will return 253 wavelengths using table JSB253B.
In addition we will obtain spectra from some of SSI's observations of the white oval taken late in the encounter. At this point commands to cover one of the SSI mosaics that extends for about 5 minutes of time has been included

07-02-98: (J. Gross) NIMS playback allocation is 49.598 Mbits.

07-20-98: E16 encounter begins at 05:00 UTC.
16INHRSPEC01 occurs at 06:06, followed by 16JNJUPRTS01 at 11:53.

07-20-98: (M. Segura) At rim 4570588 roughly 201/16:58 scet, NIMS software halted. It appears that we have lost 16JNHOTMAP01. The next observation is ~ 30 minutes away with the usual reload just before so we should recover nicely for HOTMAP02.

07-21-98: (Report to Team) The spacecraft went into safe mode very early in the record sequence, approximately between our two JNHOTMAP observations. The balance of the sequence did not execute as planned, and therefore we have lost nearly all of E16. The apparent cause is a hardware bus parity error. Long term consequences for the spacecraft and the NIMS instrument are not known but we are receiving telemetry, and there are some similarities to events that have occurred previously. The next three weeks will be devoted to diagnosing the problem. If the problem is understood, it is likely that we will be able to make use of our E16 downlink capability for 1) returning data that was recorded but not played back in E15, 2) playing back the E16 data that was recorded, and 3) obtaining realtime data, mainly for MWG but also hopefully including NIMS dark calibrations.

07-21-98: (Report to Galileo Project) NIMS has several candidate observations that will make good use of E16 downlink. There are 3 categories of data: Data recorded successfully during E16, data recorded but not played back in E15, and realtime calibrations.

E16 Playback Events Timeline (06-30-98: to 09-24-98:)

During E16 we recorded 16INHRSPEC01, and may have completed recording of 16JNHOTMAP01. Complete playback of the former will require about 0.9 Mb, and complete playback of the latter, assuming it recorded successfully, would require approximately 6.7 Mb.
Due to insufficient downlink allocation in E15, the following observations were returned with partial spatial coverage, partial wavelength coverage, or both:

15INHRSPEC01
15ENSUCOMP02
15ENSUCOMP03
15ENGLOBAL01
15JNJPDARK01
15JNJPDARK02
15JNJPDARK03
15ENEUR16H01 (MPW and LPU)
15ENEUR20H01 (MPW and LPU)
15ENEUR22H01 (MPW and LPU)

To bring down the spatial areas and wavelengths not returned in E15 will require approximately 21.5 Mb.
No allowance for gap fills has been made here, because of insufficient time to identify them and estimate downlink requirements. Therefore it is likely that if we are able to replay E15 data, we will request additional bits for gap filling.
Realtime calibration data: Marcia Segura estimates that we can obtain excellent dark values at a cost of 5.0 Mb or possibly less. These will be representative of all 4 NIMS gain states. These data are needed for optimal processing of all other NIMS data obtained.
Total:

E16	7.6 Mb
E15	21.5 Mb
RTS	5.0 Mb
	34.1 Mb

07-21-98: (R. Mehlman) 16JNHOTMAP01 is almost certainly lost, due to a sequencing error in the NIMS software reload, which caused it to halt. I believe we want to return a RIM or so just to make sure, but probably no more.

07-21-98: (M. Segura) It has been confirmed that the spacecraft anomaly was caused by DESPUN bus resets on the A string which the B string saw and reacted to. There have been 3 resets in the last 24 hours.
Now that the problem is understood, recovery will begin. The first package will be uplinked tonight, followed by 4 others over the next few days. The science virtual machine will be commanded back on line early in the day on Thursday with state matching (instrument configurations and other stuff) occurring on Friday and beyond.
Based on this schedule and no further resets, we should be back on track by next week.

07-23-99 (K. Schimmels, Playback Strategy) It has been decided it would be better to pick up the E16 higher priority data prior to playing back more E15 data, so the playback strategy has changed slightly.

1) Pass 1: first time through E16 data, from tic 835, track 2, to tic 900, track 3.
   (includes NIMS Dark Calibration, which overwrites most of 15ESCILIXS01).
2) Pass 2: E15 data on tracks 3, 4, and 1, from tic 1011 on track 3, to end of track 1.
   (15ENREGION01 - 15ISKANEHI01)
3) Pass 3: E15 data on track 2, from tic 5946 to tic 984.
   (ISHIPHASE01 - ESREGMAP01) AND second time through all E16 data (tic 835, track 2 - tic 900, track 3)
4) Second time through E15 data on tracks 3, 4, and 1.
   Same locations as Pass 2.

7-23-98: The playback table delivered today will be sent up next week. It is largely devoted to recovering the rest of the NIMS E15 data that remains on the tape following the safing of the spacecraft early in the E16 encounter.
The loss of E16, GEM's most bit-rich orbit, was a blow, but there is a considerable silver lining developing. NIMS will bring down more than 25 Mb of NIMS data during the E16 playback period. This includes about 4 Mb for a new dark observation for calibration purposes. The 25 Mb total is larger than our total bits-to-ground for E14, and is twice as large as that for E12. Io is coming out ahead. With two chances to fill data gaps, the high-resolution 15INHRSPEC02 should be a complete observation. The additional equatorial scan recorded but not played back previously will be returned as well. Multiple looks at the same location will be extremely valuable for confirming the presence of particular spectral features. We will also bring down the first two scans of 15INHRSPEC01, which will be useful for the same reason. Lastly, 16INHRSPEC01 was successfully recorded before spacecraft safing.
Portions of the southern 2 scans of 15ENGLOBAL01 were written over. However, when all is said and done, we will have all recorded wavelengths and full spatial coverage for the remaining portion. All other Europa and Jupiter observations will likewise be available with full spectral and full spatial coverage, barring future problems in playback.
Generation of the new PBT on relatively short notice required substantial efforts. Thanks to Frank and Bob for gaps timing and to Elias for proofreading and generation of new wavelength edit tables.

07-24-98: (F. Leader) E16 and E15 playback hassles.
Well, the real fun is about to begin. We are playing back a lot of NIMS E15 data during E16 Cruise. Some of the observations will have the wavelength coverage expanded. This might give us some headaches if we do not procede carefully. The following table lists the observations with expanded wavelength coverage:

E16 Playback Events Timeline (06-30-98: to 09-24-98:)

OBS ID	EXT	WAVES	EXT	WAVES	TOTAL WAVES	NOTES
15ENSUCOMP03	A	228	C	132	360	MPW-NIMS5, GS 4
15ENSUCOMP03	B	228	D	132	360	MPW-NIMS5, GS 3
15ENGLOBAL01	A	228	B	132	360	MPW-NIMS5, GS 4
15ENGLOBAL03	A	228	B	132	360	MPW-NIMS5, GS 4
15ENGLOBAL04	A	228	B	132	360	MPW-NIMS5, GS 3
15ENGLOBAL05	A	228	B	132	360	MPW-NIMS5, GS 4
15ENGLOBAL06	A	228	B	132	360	MPW-NIMS5, GS 3
15ENGLOBAL07	A	228	B	132	360	MPW-NIMS5, GS 4
15ENGLOBAL08	A	228	B	132	360	MPW-NIMS5, GS 3
15ENEUR16H01	A	240	C	120	360	MPW-NIMS5
15ENEUR16H01	B	168	D	72	240	LPU-NIMS6
15ENEUR20H01	A	240	C	120	360	MPW-NIMS5
15ENEUR20H01	B	168	D	72	240	LPU-NIMS6
15ENEUR22H01	A	240	C	120	360	MPW-NIMS5
15ENEUR22H01	B	168	D	72	240	LPU-NIMS6
15JNJPDARK01	A	80	B	173	253	LPU-NIMS6
15JNJPDARK02	A	80	B	173	253	LPU-NIMS6
15JNJPDARK03	A	80	B	173	253	LPU-NIMS6

07-28-98: (K. Schimmels) Playback of E15/E16 data will start Thursday morning ~7:13 AM, with E16 data the first out the gate. We should be done with the E16 playback by Saturday AM, and on into E15 data we go.

07-30-98: A rare record-during-cruise begins at 13:39:50 UTC to obtain NIMS dark calibration data (16HNDARKCL01) in all four gain states. Playback initiates at 14:13.

08-12-98: The first pass over the E16 and E15 data is nearly complete. Today's update was scheduled to enable us to make changes to our plan based on the first pass performance. Four changes to the table were implemented.
16INHRSPEC01 came down in pass 1 with thresholding enabled (as usual for Io observations). However in this case some data drop-outs on the target resulted due to the thresholding. In the next pass the entire observation will be replayed without thresholding.
Two data gaps in 15ENSUCOMP02 will be filled by new playback commands (PSIDs FB, FC).

E16 Playback Events Timeline (06-30-98: to 09-24-98:)

A small gap in pass 1 playback of 15ENEUR16HR01 falls on top of a similar gap in E15 playback of this data. For our last shot, we are commanding playback of all 360 recorded wavelengths for this portion of the observation. Our additions to the playback plan amount to less than 1 Mb of downlink. SSI is adding about 17 Mb, to retrieve some images at lower compression ratios. Still a considerable amount of unused downlink capability remains. Some provisional trades of our present unused capability with other DSN users have been made; these may increase our downlink allocation in later orbits by a small amount.

09-03-98: (K. Schimmels) There is some discussion about doing another pass through some of the E15/E16 data before the end of the orbit. The idea would be to fill any gaps in E16 data (there is only one gap - in NIMS Dark Cal - that I know of) or possibly in E15 data, since track 2 got hit pretty hard by station problems and rain gaps in the first pass through. SSI and NIMS have the majority of the gaps, and UVS seems to have one as well. It would be a good idea if these three teams began to look at what they would like to do, given the opportunity to playback more data on track 2 or 3. We currently expect to have ~18 - 20 MB unused, and finish playback 5 days prior to the background sequence terminate playback command.

09-11-98: The current E16 playback plan will terminate a little over a week from now. There will be about 18 Mb of downlink capability remaining. In order to make use of this resource, the project has approved creation of a new table (not an extension of the current one, which has expended all possible pass numbers).
There are 5 gaps in 15INHRSPEC01 and 15INHRSPEC02 that we can fill using this opportunity. In addition, we will get the rest of the 16HNDARKCL01 (which will be the last thing played back). This is considerably padded to act as margin to ensure the return of the Io data. SSI has plans to use most of the available downlink. Our requests total just under 2.0 Mb.

09-11-98: (K. Schimmels) Playback is scheduled to be finished (run out of SINGLEs in the final Segment) on Friday, 9/18. Sunday's 63-pass is the first uplink pass available after this, over which we plan to send a realtime TPB, IPB, and uplink a new, separate playback table Segment 1.

09-15-98: The current and final E16 pbt is to be found in LIVELY::[JSHIRLEY]E16ALL_980915.PBT. NIMPBK start times for two gap fills were moved earlier, and the threshold parameter for one of the two 15INHRSPEC02 gap fills was reset to zero. Thanks to F. Leader for catching the errors, and thanks to Kathy Schimmels for permitting us to make the changes after the delivery deadline.

09-24-98: Playback terminates at 08:26:57 UTC. 29.75 Mbits of NIMS data were received during the E16 playback period.

NIMS Anomaly Report - E16 Sequence

There was one NIMS processor halts detected during the E16 Encounter. Detectors 3 and 8 are still not functioning and are expected to be lost for the rest of the mission.

Also, the spacecraft suffered a despun bus reset about 6 hours before E16 perijove. The perijove and outbound portion of the E16 encounter were lost.

Processor Halts

The NIMS processor halted to the NIMS observation 16JNHOTMAP01. This halt was due to an error in the order of the command sequence to reload the NIMS software prior to the observation.

Spacecraft Anomaly

The spacecraft suffered a despun bus reset and safed about 6 hours before E16 perijove. The spacecraft did not recover autonomously due to multiple despun bus resets to both CDS strings A and B. The anomaly was not resolved in time to recover any of the E16 encounter.

NIMS Archived EDRs and CUBEs

The NIMS data are stored in EDRs (Experimental Data Records) produced by JPL-MIPS (Multi-mission Image Processing System). The NIMS Phase2 EDR is described in the NIMS EDR SIS (Software Interface Specification) Number 232-08. The same information is available in both human and machine-readable form in the PDS (Planetary Data System) structure files EDRHDR.FMT and EDRDATA.FMT in the LABEL directory of the NIMS EDR CD-ROM. Each observation has at least one EDR. The EDR file name is derived from the 12 character observation name plus a single character which allows an observation to be broken up into multiple EDRs. The EDRs have a Vicar label, followed by a PDS/ISIS label, binary header records and the data records. For archiving on CD-ROM, the Vicar labels are detached from the EDR (but kept separately on CD) and the file is renamed so as to conform to the 8.3 DOS file-naming convention. The 8.3 EDR name consists of a 2 character orbit identifier, a single character target identifier, a 3 digit counter and the suffix EDR. For example, the MIPS EDR G1GNGLOBAL01A.1 becomes G1G001.EDR. More information about NIMS EDRs can be found in the VOLINFO.TXT file on the EDR CD-ROM.

NIMS EDR data typically require considerable processing before they are readily amenable to science analysis. Normally, the EDRs are processed into spectral image cubes by one of several sets of software. MIPS systematically processes the EDRs into CUBEs (band sequential image files) and MASKs (spatial/spectral summary images) which are distributed on the NIMS CUBE CD-ROMs. Information about the structure of the NIMS CUBEs can be found in the VOLINFO.TXT file on the CUBE CD-ROM. The name of the CUBE file is derived from the input EDR filename. For archiving on CD-ROM, the CUBE files are renamed so as to conform to the 8.3 DOS file-naming convention. The 8.3 CUBE name consists of a 2 character orbit identifier, a single character target identifier, a 3 digit counter, a single character cube-type identifier, a single character data unit-type (DN, radiance or IOF) and the suffix QUB. For example, the MIPS IOF radiance cube for the observation G1GNGLOBAL01A.1 (G1G001) becomes G1G001CR.EDR. The summary MASKs on the CD-ROM have the same 6 character name as the EDR name with the suffix JPG or GIF to denote its graphics format.

NIMS Data Format - Data types - Data Labels - Data Access

Data Format

All data files have PDS labels. The raw data (EDR) file contains time-sequential, 16 bit integers. Reduced data files (TUBES and CUBES) may be viewed as images or spectra. They contain VAX real numbers, are band sequential (BSQ - the images are stacked in band order) and have geometry information appended as backplanes after the last NIMS band.

Data Types

Mask files contain summary images (3 band BSQ) and spectra of up to six selected regions that provide a quick indication of data location, data quality and spectral content. A Guide to understanding the NIMS mask is available.

Cube files contain data that have been projected and resampled. The core data are BSQ - spatial in the first two dimensions, and spectral in the third. Cubes of the satellites are projected in point-of-view, and, with few exceptions have no photometric correction applied. Cubes of Jupiter are (generally) projected as simple cylindrical. Cubes of Europa, Ganymede, and Callisto have been despiked. The cubes are available both in radiance and I/F (intensity divided by flux) form.

Tube files contain data in (almost) time order and normally have a NIMS-related 20 pixel spatial dimension (20 x n or n x 20). Projection coordinates are contained in backplanes, but the data have not been resampled. The data are in units of radiance and no despiking has been applied. All data in cubes are also available in tube form. Some data (such as spatially undersampled data) appear in tube form only.

A spike file contains a list of pixels that have been identified as spikes, but not replaced, in the tube. Spike files can be used to remove spikes from both tube and EDR files.

EDR files contain the most primitive form of the data available. They should be used only for advanced data analysis. The format is complex and the files do not form images or spectra without prior processing.

Data Labels

A data label (PDS form) is attached to the front of each file (except masks, which have an attached VICAR label and a detached PDS label). The labels are in ASCII keyword=value format and contain pointers to various data objects in the file, descriptions of the data objects and descriptions of the observation associated with the file. A history object in similar format follows and describes the processing steps that produced the file. Much of this information is necessary for understanding and viewing the cube. In particular, the label contains the offset to the cube, the dimensions of the cube, axes labels, and explicit wavelength information.

Data Access

Software for processing this data is called ISIS and is available for DEC VAX VMS, SUN Solaris, DEC Alpha Digital Unix, Silicon Graphics Unix and PC LINUX systems. The Unix versions are available from the USGS Astrogeology team. Images from NIMS cubes and tubes can be viewed with any image display program which allows an offset from the beginning of the file to the selected image. Packages tested include ISIS, VICAR, ENVI, SAO IMAGE, and NASAVIEW. ISIS and ENVI (and soon NASAVIEW) additionally display spectra. The ISIS viewer is named CV (UNIX) or QL3 (VMS).

Labels may be displayed with some editors (eg DOS edit), and with most "type" and "search" functions. Some editors do not recognize the PDS line termination conventions. The label may be listed by the ISIS function LHLIST (VMS) or LABEL (UNIX).

Software for converting EDRs to cubes exist in both ISIS (DEC VAX VMS) and VICAR (DEC Alpha VMS) versions only. A primitive list of values in an EDR may be obtained with the program EDRDMP2.

Understanding the NIMS Mask

The NIMS mask is designed to provide a quick summary of the contents of a NIMS data cube (or tube). It displays a view of both the spatial and spectral content of the data.

The mask has four regions. Starting from the upper left and proceeding clockwise: a spatial display; six or fewer representative spectra; annotation; and a spectral histogram.

The spatial display of an observation which has been projected and resampled (a cube) has a maximum size of 600x600 pixels. This is overlaid with surface coordinates and is embedded in a 700x700 grid of pixel coordinates. It is accompanied by two 1-dimensional histograms describing the raw image and the image stretched for display. The data image can range from a simple combination of up to 3 NIMS bands displayed in the RGB planes, to complicated arithmetic functions of NIMS bands displayed in the RGB planes. (The formulas appear as annotation below the histograms.) The graphics directly below the image show the input and output data histograms for the three color planes. The "shortest" color for each bin displays in front. The image also contains from one to six numbered rectangles, which show the from which averaged spectra (displayed on the right) were taken.

The spatial display of an observation in time sequence (a tube) is a graphic showing a footprint of the observation over a grid of surface coordinates on the target body. Numerals 1-6 on the graphic mark the locations of the average spectra displayed on the right.

The spectra to the right of the image may display either BDRF or radiance (or both). If both are displayed, then a vertical "radiance fence" line will appear where the breakpoint occurs. This permits display of both atmospheric data, which have significant reflectance and thermal components, and I/F satellite surface data which have strong absorptions at longer wavelengths (such as water spectra.) The spectra are labelled with wavelength in microns and location in both pixel and latitude-longitude space.

The annotation provides information about the observation, including its name, a brief description, its geometry, instrument and projection parameters. TCA is the time from Galileo’s closest approach to the target body.

The 2-dimensional spectral histogram in the lower left corner shows the number of pixels at a given radiance for each wavelength. If a surface contains spatial mixtures with significantly different spatial fractions for several components, the spectra of the components will be evident in this display.