

NIMS GUIDE TO THE E18 ORBIT

Original: November 1998

Revised: May 2000

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 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 E18 Orbit for the NIMS Team. The aim of this guide is to provide detailed information on the various NIMS E18 observations and calibrations. Also included in this document is background information on the E18 orbit. This guide was produced before the start of the E18 orbit. After analysis of the NIMS E18 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 E18 orbit. Chapter 2 gives an overview of the E18 orbit and summarizes the NIMS science objectives for the E18 orbit using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry for the E18 orbit. Chapter 4 summarizes the NIMS E18 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 E18 orbit.

For more information on the E18 orbit, please refer to the Galileo Orbit Planning guide and the Galileo Orbit Activity Plan for the E18 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

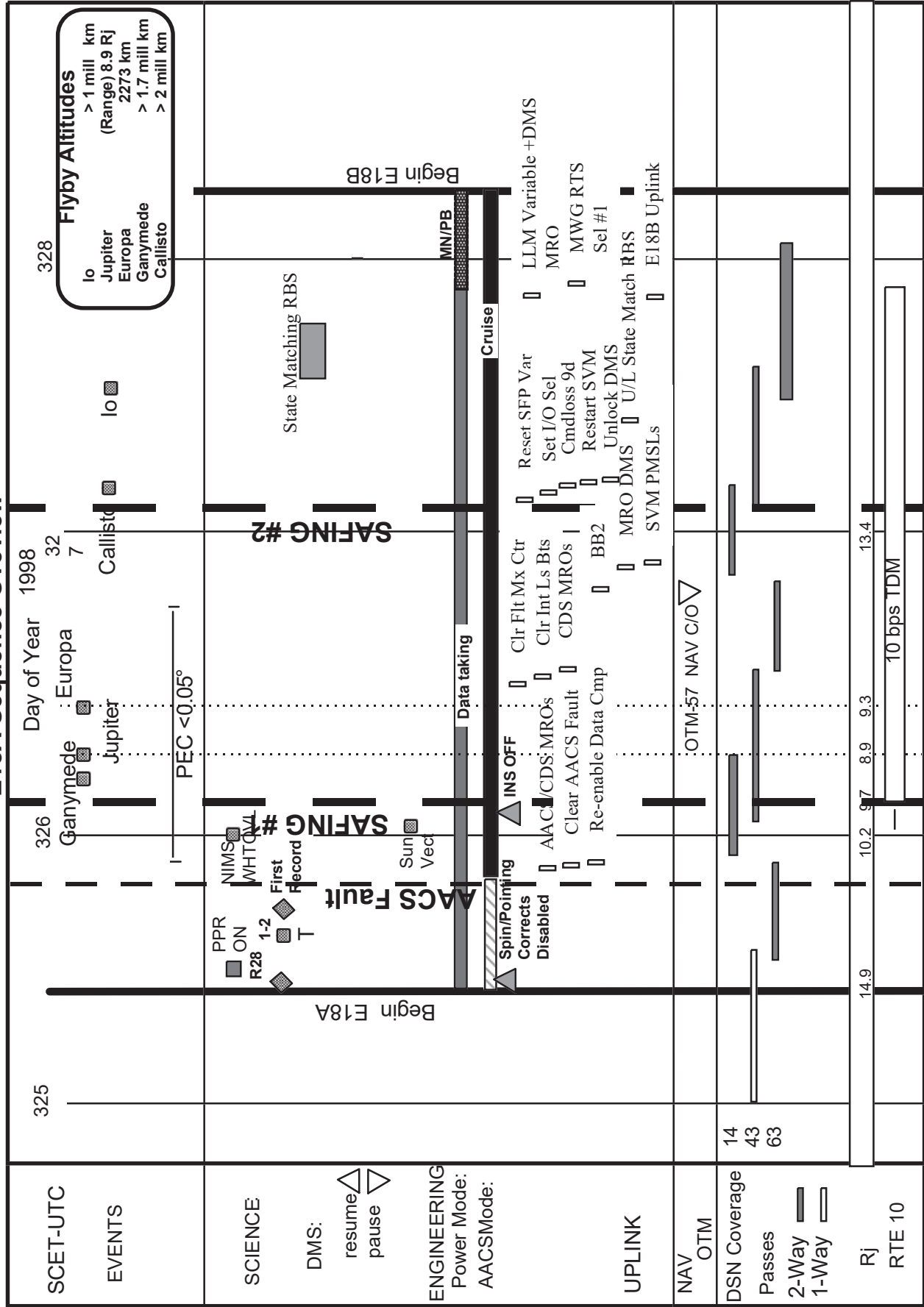
This E18 orbit is the eighteenth of twenty-five orbits in Galileo's Tour of the Jovian system and the seventh orbit in the Galileo Europa Mission (GEM). This orbit has a targetted satellite flyby of Europa. NIMS will make observations of Jupiter and Io in this orbit.

There are 9 autonomous reloads of the NIMS RAM code from CDS planned during the E18A 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 monitor the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

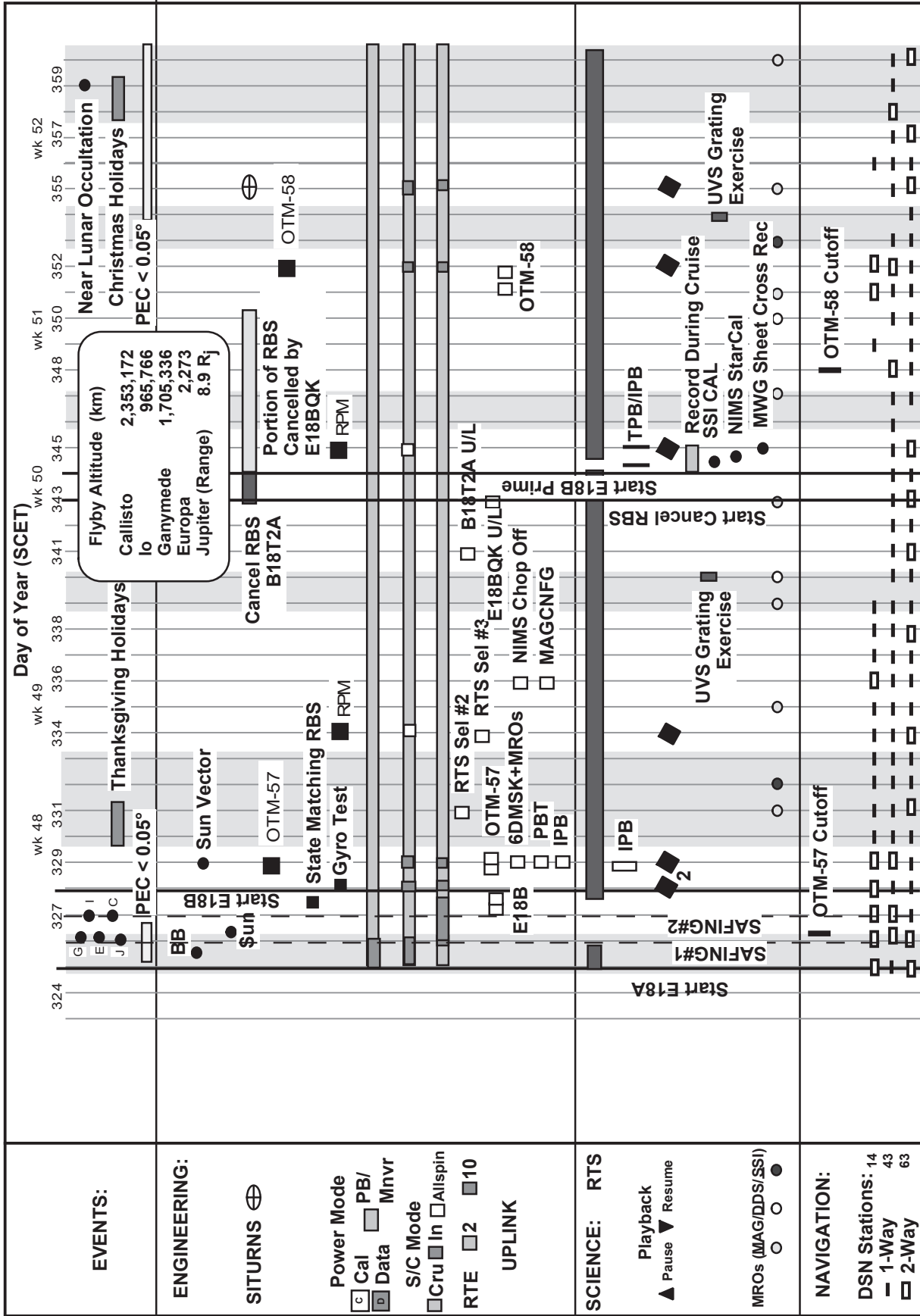
The E18 orbit is divided into 2 sequence loads: one Encounter Load (E18A) and one Orbital Cruise Load (E18B). The E18A load begins on D325 (11/21/98) and ends on D328 (11/24/98). This load contains the flybys of Jupiter, Europa and Io. The Cruise Load E18B runs from D328 to D031. Playback of the recorded data takes place during the Cruise phase, E18B. A high-level overview timeline of the E18 orbit can be found on the following three pages.

Due to spacecraft safing just before perijove in the E18 encounter, a large portion of the E18 encounter sequence was lost. Additional NIMS calibration observations were added after the fact to take advantage of the extra tape and bits to ground. Some E17 observations were not recorded over in E18 as planned. Therefore, these E17 observations were available for playback during E18 cruise.

E18A Sequence Overview



E18 Overview (Part 1)



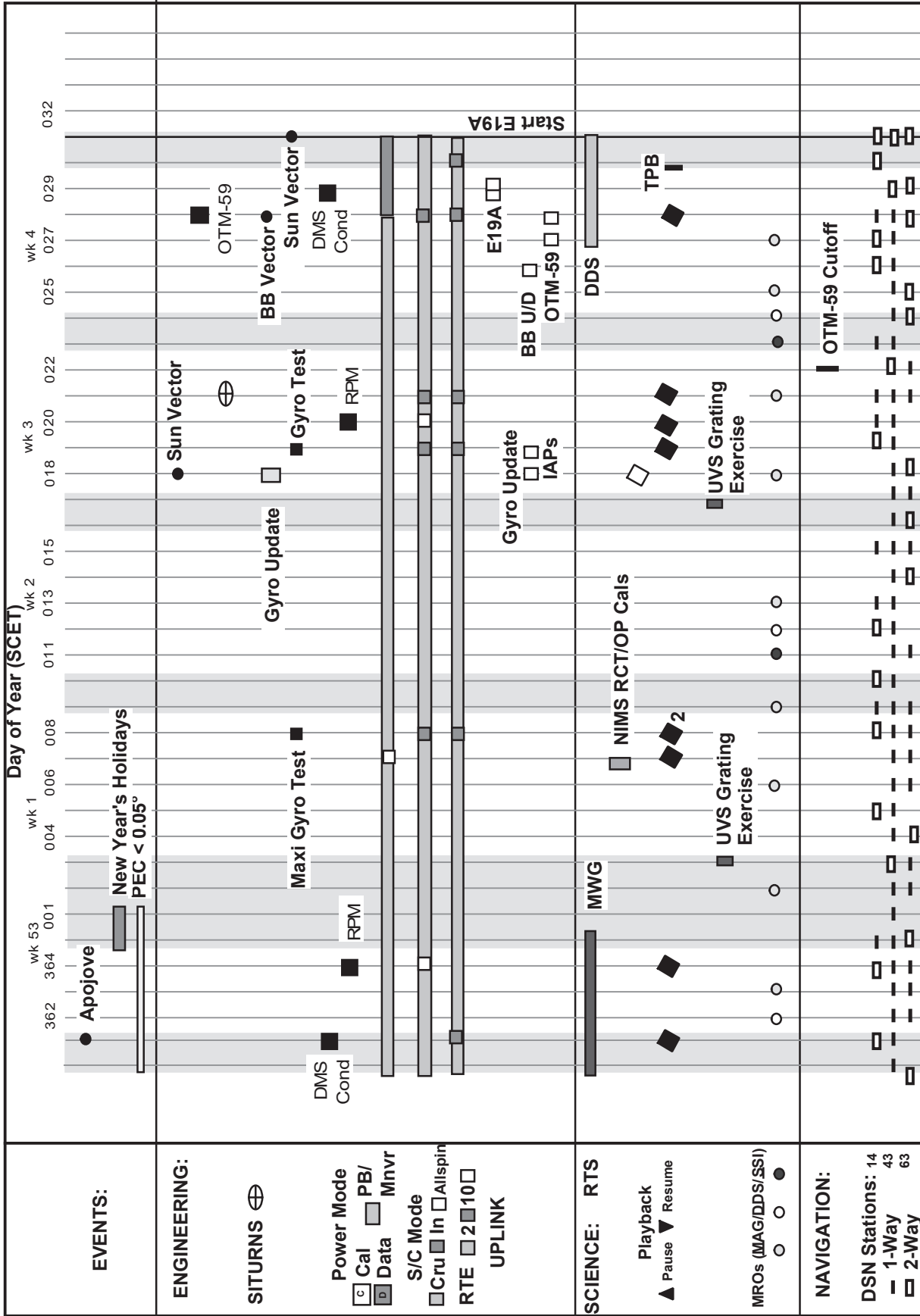
November 1998
December 1998

Th F Sa Su M Tu W Th F Sa Su M Tu W Th F Sa Su M Tu W Th F Sa Su M Tu W Th F Sa

20 23 25 27 30 32 34 36 38 40 42 44 46 48 50 52

A. Allbaugh
12/4/98

E18 Overview (Part 2)



December 1998 January 1999 February 1999

Sa Su M Tu W Th F Sa Su M Tu W Th F Sa Su M Tu W Th F Sa Su M

A. Allbaugh
12/4/98

Introduction

The following table lists the major events during E18, including NIMS Real Time observations, in UTC.

11/21/98	98-325/12:00:00	E18 Encounter Start
11/21/98	98-325/17:59:17	NIMS RAM Reload 01
11/21/98	98-325/18:05:07	NIMS R/T Jupiter 01
11/22/98	98-326/00:24:31	NIMS RAM Reload 02
11/22/98	98-326/01:54:31	NIMS RAM Reload 03
11/22/98	98-326/02:01:21	NIMS R/T Jupiter 02
11/22/98	98-326/05:34:00	SPACECRAFT SAFED
11/23/98	98-327/18:20:00	NIMS Power ON
11/24/98	98-328/01:07:00	Start E18 Playback
12/10/98	98-344/17:39:04	NIMS RAM Reload
12/10/98	98-344/17:41:00	NIMS Star Cal
01/07/99	99-007/14:00:00	NIMS R/T RCT CAL
01/29/99	99-029/07:26:50	End E18 Playback

Chapter 2 - Orbit Overview

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Introduction to Chapter 2

This chapter gives an overview of the NIMS observations in the E18 Orbit.

The text on page 3 summarizes the NIMS science objectives for E18. The NIMS calibrations are discussed on page 3. Early data return and E18 playback are also discussed on page 3.

The table on page 4 is a time-ordered listing of the NIMS Oapels for E18.

The plot on page 5 shows the geometry of the NIMS E18 observations using a north trajectory pole view projection. The plot on page 6 shows the geometry of the NIMS E18 calibrations.

The spreadsheet on page 7 summarizes the various inputs for the NIMS E18 Observations. The spreadsheet on pages 8 and 9 summarizes the resource usage for the NIMS E18 observations.

The table on page 10 lists various NIMS E18 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 E18 observations for all instruments during the E18 Encounter Period.

The tapemap on page 12 shows the placement of the E18 observations on the spacecraft's tape recorder.

The timeline on pages 13 through 23 shows the preliminary E18 playback schedule.

The NIMS E18 mosaic designs are summarized on page 24 and 25 in time-order.

NIMS E18 SCIENCE OVERVIEW

Jupiter Science

There are four Jupiter observations in E18. Three are realtime and one is recorded. One of the realtime observations looks along the equator and the other two look at the daylit middle north latitude region. The one recorded observations looks at the white oval region in the southern hemisphere near -30 latitude to investigate the newly created merged white ovals.

Io Science

There is one INHRSPEC high spatial and spectral resolution Io observation in E18. INHRSPEC01, centered at 90 W. longitude, consists of a single scan across the half-lit disk.

Europa Science

There are five Europa observations planned for E18: Three regional observations and two half-disk global observations. ENSUCOMP01 looks at 27N 200W covering complex intersecting dark linea. ENSUCOMP02 looks at 25N 155W covering sharply defined dark linea. ENSUCOMP03 looks at 70N 150W in Europa's north polar region. ENGLOBAL01 covers pole to pole 210 to 290 degrees West longitude. ENGLOBAL02 covers pole to pole 120 to 210 degrees West longitude.

Ganymede Science

Ganymede was not observed in E18.

Callisto Science

Callisto was not observed in E18.

Calibration

There are two NIMS calibration observations planned for E18: one RCT cal, one OPCAL. A starcal was added later.

Early Data Return

There are five realtime observations in E18: Three 408 wavelength Jupiter observations (JUPRTS), one RCT calibration and one OPCAL.

E18 Playback

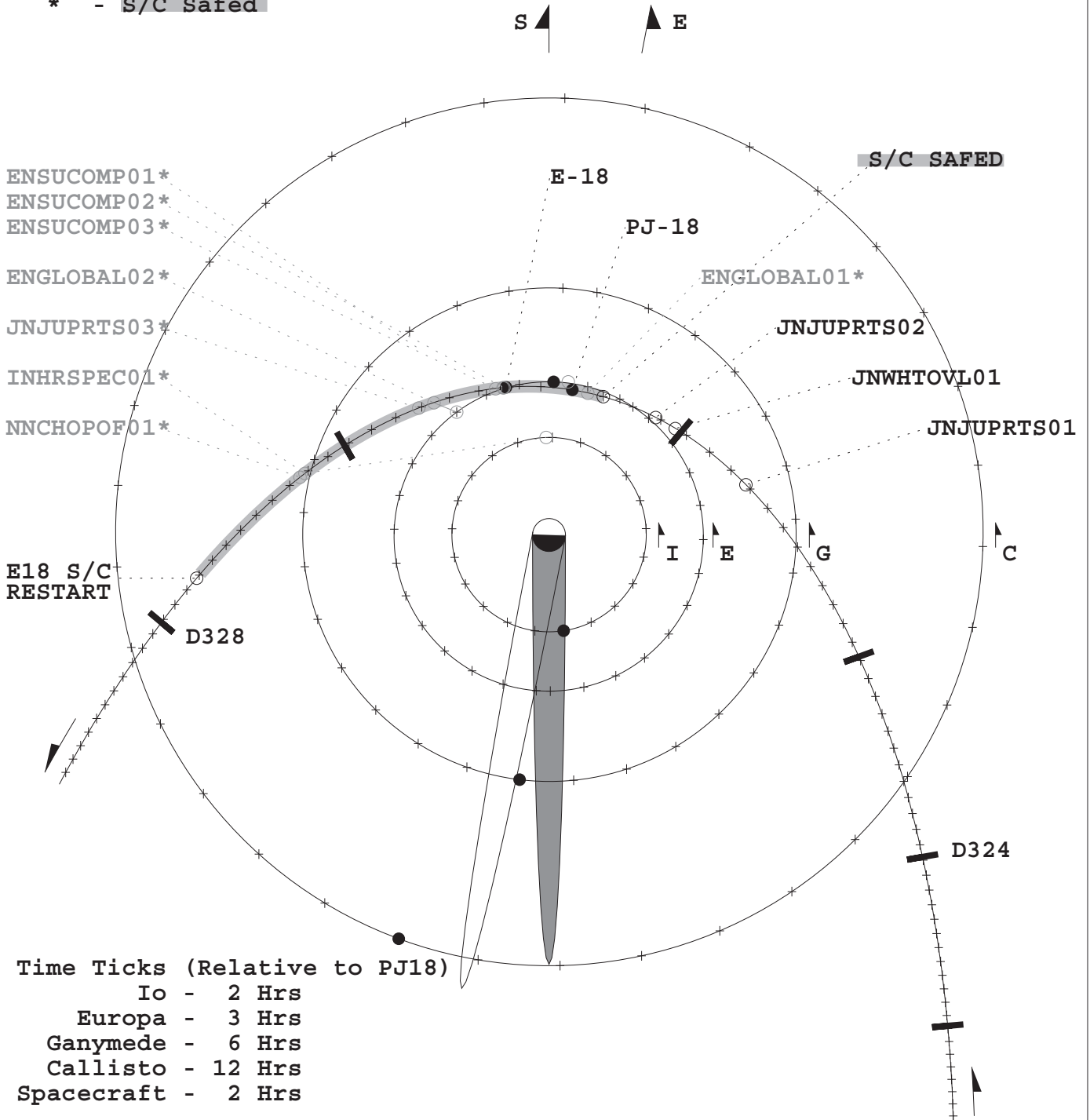
E18 playback is split into two passes through the tape.

E18 Time-Ordered Listing

OAPEL	Start (UTC)	End (UTC)	Duration
18NNJUPRTS01-	98-325/17:50:58	98-325/18:01:05	000/00:10:06
18JNJUPRTS01*	98-325/18:02:05	98-325/18:26:21	000/00:24:16
18NNWHTOVL01-	98-326/00:16:12	98-326/00:26:19	000/00:10:06
18JNWHTOVL01-	98-326/00:27:19	98-326/00:48:33	000/00:21:14
18NNJUPRTS02-	98-326/01:46:11	98-326/01:56:18	000/00:10:06
18JNJUPRTS02*	98-326/01:57:19	98-326/02:11:28	000/00:14:09
18NNGLOBAL01-	98-326/06:25:15	98-326/06:35:22	000/00:10:06
18ENGLOBAL01-	98-326/06:35:22	98-326/07:11:46	000/00:36:24
18NNSUCOMP01-	98-326/11:40:43	98-326/11:50:50	000/00:10:06
18ENSUCOMP01-	98-326/11:51:51	98-326/11:56:54	000/00:05:03
18ENSUCOMP02-	98-326/11:56:54	98-326/12:29:15	000/00:32:21
18NNSUCOMP03-	98-326/12:18:08	98-326/12:28:15	000/00:10:06
18ENSUCOMP03-	98-326/12:29:15	98-326/12:37:21	000/00:08:05
18NNGLOBAL02-	98-326/15:42:23	98-326/15:52:29	000/00:10:06
18ENGLOBAL02-	98-326/16:42:02	98-326/17:27:32	000/00:45:30
18NNJUPRTS03-	98-326/17:38:39	98-326/17:48:46	000/00:10:06
18JNJUPRTS03*	98-326/17:49:47	98-326/18:03:56	000/00:14:09
18NNHRSPEC01-	98-327/03:46:20	98-327/03:56:27	000/00:10:06
18INHRSPEC01-	98-327/03:56:27	98-327/04:05:22	000/00:08:55
18NNCHOPOF01-	98-327/04:28:48	98-327/04:38:55	000/00:10:06
18NNRCTRLT01-	99-007/14:00:05	99-008/03:15:50	000/13:15:44

NIMS E18 OBSERVATIONS

Bold - Returned
 Gray - Not Returned
 * - S/C Safed



Europa Flyby (E18): 22-NOV-1998 (D326) 11:48:06 UTC
 Perijove (PJ18): 22-NOV-1998 (D326) 07:35:04 UTC

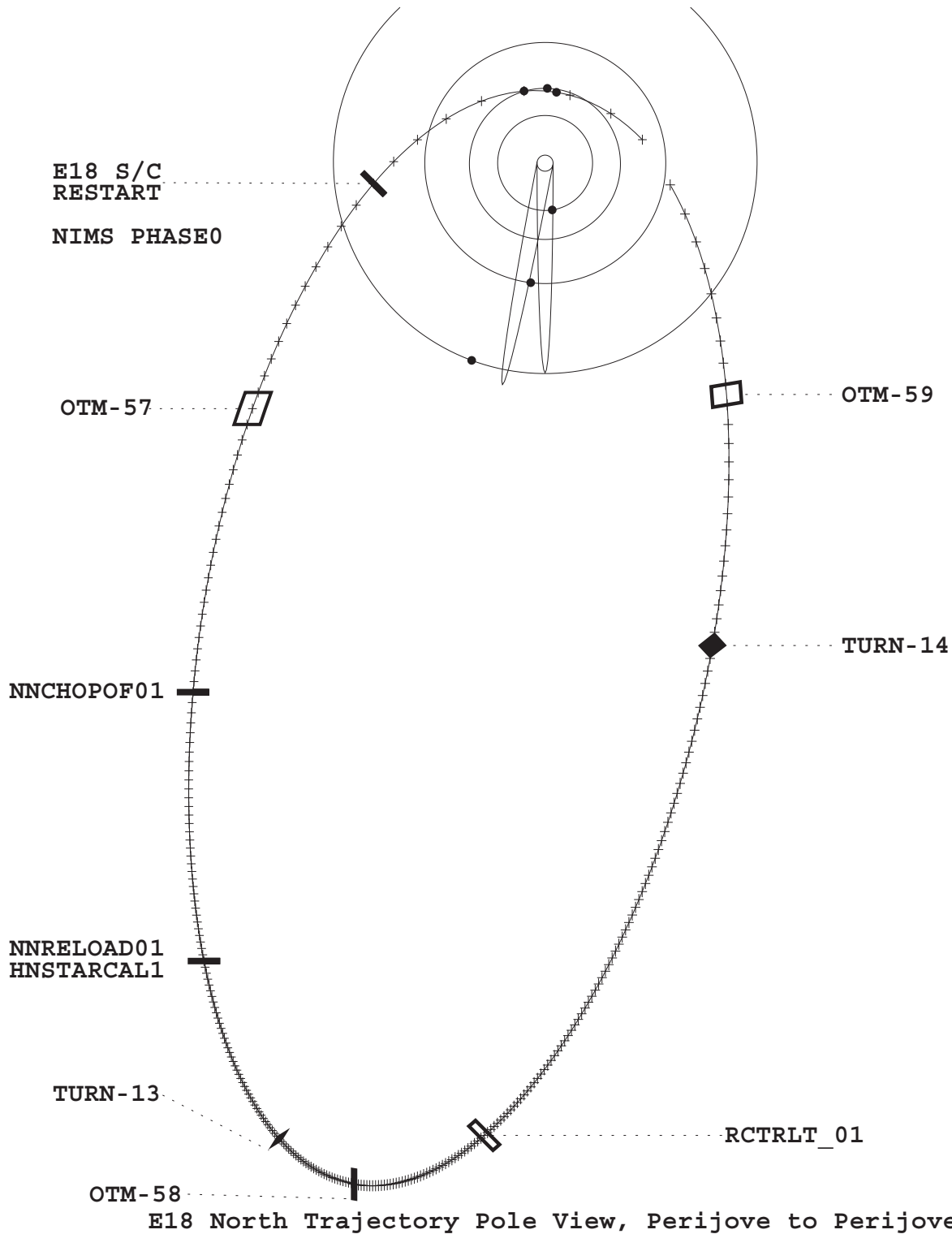
E18 North Trajectory Pole View

NIMS E18 CRUISE CALIBRATIONS

Europa Flyby (E18): 22-NOV-1998 (D326) 11:48:06 UTC
Perijove (PJ18): 22-NOV-1998 (D326) 07:35:04 UTC
Apojove (AJ18): 27-DEC-1998 (D361) 17:00:00 UTC

Time Ticks (Relative to E18)
Spacecraft - 6 Hours

S ▲ ▲ E



E18 NIMS INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
18NNJUPRTS01-	NIMS Software Reload								
18JNJUPRTS01*	Jupiter Realtime Observation	E18JLM408/MB	R/T	LM	2	0	4	R/T	DA
18NNWHTOVL01-	NIMS Software Reload								
18JNWHTOVL01-	Jupiter White Oval	E18JSB253B	E18JSB253B	LM	2	0	4	LPU	DJ
18NNJUPRTS02-	NIMS Software Reload								
18JNJUPRTS02*	Jupiter Realtime Observation	E18JLM408/MB	R/T	LM	2	0	4	R/T	DB
18NNGLOBAL01-	NIMS Software Reload								
18ENGLOBAL01-	Europa Global Observation	E18ELM442	E18ELM360	LM	3,4	0	4	MPW	DC
18NNSUCOMP01-	NIMS Software Reload								
18ENSUCOMP01-	Europa Surface Composition	E18ELM442	E18ELM360	LM	3	0	4	MPW	DD
18ENSUCOMP02-	Europa Surface Composition	E18ELM442	E18ELM360	LM	3	0	4	MPW	DE
18NNSUCOMP03-	NIMS Software Reload								
18ENSUCOMP03-	Europa Surface Composition	E18ELM442	E18ELM360	LM	4	0	4	MPW	DF
18NNGLOBAL02-	NIMS Software Reload								
18ENGLOBAL02-	Europa Global Observation	E18ELM442	B E18ELM228C_1	LM	3,4	0	4	MPW	DG
18NNJUPRTS03-	NIMS Software Reload								
18JNJUPRTS03*	Jupiter Realtime Observation	E18JLM408/MB	R/T	LM	2	0	4	R/T	DH
18NNHRSEC01-	NIMS Software Reload								
18INHRSPEC01-	Io Monitoring at High Spectral Resolutio	E18ILM442	E18ILM360	LM	2	0	4	MPW	DI
18NNCHOPF01-	NIMS Chopper Off								
18HNSTRCAL01-	NIMS Star Calibration	STRCAL17	STRCAL15	XM	4	0	4	MPW	FA
18NNRCTRLT01-	NIMS RCT Real Time Calibration	E18RCT252	R/T	LM	1	0	4	R/T	XE
18NNROPAL01-	NIMS OPCAL	E18OPCAL48	R/T	LM	4	0	4	R/T	DC

3/28/00

E. Barbinis

E18 RESOURCES

Activity ID	Mode	Record	Obs. Cost (tracks)	Obs. Cost (ticks)	Number Wavelengths Returned	Obs Record (sec.)	Obs PB (sec.)	Selected		Mode
								Bits to Tape sBOT (MBITS)	Bits to Tape MBOT (Mbit)	
18JNJUPRTS01	LM				360					
18JNWHTOVL01	LM	LPU	0.0393	229	253	969	967.33	5.97	5.98	8.667
18JNJUPRTS02	LM				360					
18ENGLOBAL01	LM	MPW	0.3172	1848	360	2100	1057.33	12.18	24.19	8.667
18ENSUCOMP01	LM	MPW	0.0366	213	360	240	219.33	2.53	2.76	8.667
18ENSUCOMP02	LM	MPW	0.2810	1637	360	1860	832	9.58	21.43	8.667
18ENSUCOMP03	LM	MPW	0.0638	372	360	420	416.67	4.80	4.84	8.667
18ENGLOBAL02	LM	MPW	0.4016	2340	228	2660	1386.67	15.97	30.64	8.667
18JNJUPRTS03	LM				360					
18INHRSPEC01	LM	MPW	0.0436	254	360	286	126.67	1.46	3.29	8.667
18ENGLOBAL01	LM	MPW	0.3172	1848	360	2100	1031.33	11.88	24.19	8.667
18ENSUCOMP02	LM	MPW	0.2810	1637	360	1860	934	10.76	21.43	8.667
18ENGLOBAL02	LM	MPW	0.4016	2340	228	2660	1270	14.63	30.64	8.667
18INHRSPEC01	LM	MPW	0.0436	254	360	286	156	1.80	3.29	8.667
18NNRCTRLT01	LM	R/T								
18NNROPCAL01	LM	R/T								
Resource Totals			1.1002	6411				52.49	93.14	

E18 RESOURCES

Activity ID	AACS Mbits	Comp	Thold	RT Mbits	Total BTG (4% ahead)	Mbits (SBOT/BTG)	Data Reduction Factor	Pass
	c 2.5							
18JNJUPRTS01				0.16				
18JNWHTOVL01	0.06	1.9	0		3.0913		1.9	1
18JNJUPRTS02				0.16				
18ENGLOBAL01	0.06	1.4	0		6.5250		1.9	1
18ENSUCOMP01	0.01	1.3	0		1.4576		1.7	1
18ENSUCOMP02	0.05	1.3	0		5.5294		1.7	1
18ENSUCOMP03	0.02	1.3	0		2.7691		1.7	1
18ENGLOBAL02	0.08	1.4	0		5.4197		2.9	1
18JNJUPRTS03				0.16				
18INHRSPEC01	0.01	1.6	2		0.6840		2.1	1
18ENGLOBAL01	0.06	1.4	0		6.3645		1.9	2
18ENSUCOMP02	0.05	1.3	0		6.2073		1.7	2
18ENGLOBAL02	0.07	1.4	0		4.9637		2.9	2
18INHRSPEC01	0.01	1.6	2		0.8424		2.1	2
18NNRCTRLT01				0.13				
18NNROPAL01								
Resource Totals								
							43.8540	
							44.2440	
							-0.3900	

NIMS E18 OBSERVING GEOMETRY

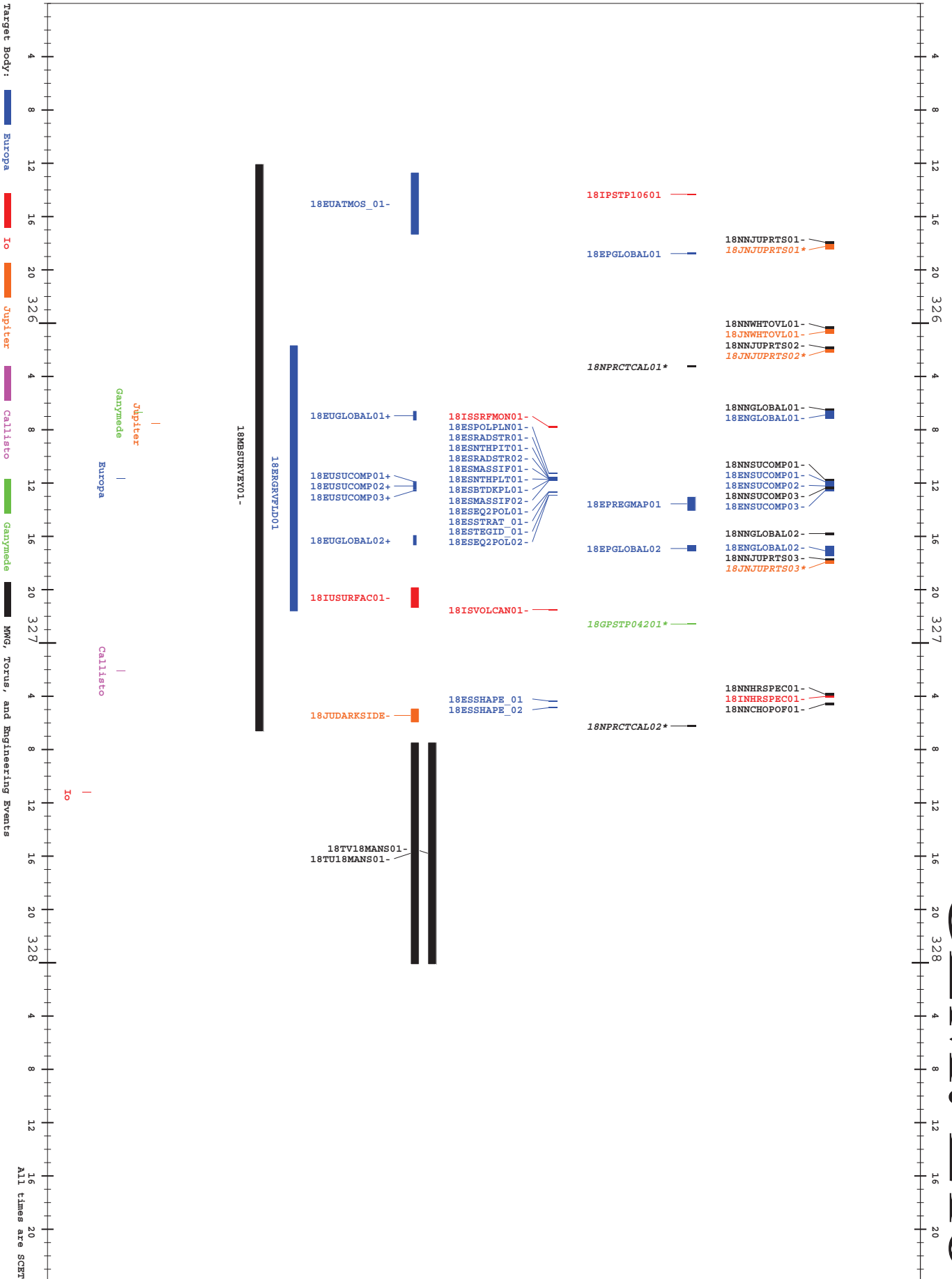
OAPEL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
18JNJUPRTS01	+10 to +25	113 to 133	808K	114	2 to 79	14 to 32	75
18JNWHTOVL01	-33 to -27	344 to 6	657K	143	59 to 86	32 to 49	46
18JNJUPRTS02	+5 to +15	14 to 21	617K	148	37 to 44	6 to 18	41
18ENGLOBAL01	-90 to +90	201 to 290	100K	76	25 to 112	9 to 90	113
18ENSUCOMP01	+25 to +28	198 to 201	6K	118	24 to 25	27 to 50	53
18ENSUCOMP02	+20 to +30	147 to 163	10K	116	40 to 55	10 to 24	48 to 59
18ENSUCOMP03	+60 to +70	139 to 159	19K	110	69 to 76	62	60
18ENGLOBAL02	-90 to +90	120 to 241	100K	105	13 to 103	10 to 90	65
18JNJUPRTS03	+6 to +8	130 to 156	726K	124	40 to 61	1 to 16	46
18INHRSPEC01	-90 to +90	0 to 180	1062K	72	8 to 171	0 to 90	98

11-2

E18 ENCOUNTER
 Plot Time: 98-325/00:00:00.000 to 98-329/00:00:00.000
 Date of Plot: 17-Nov-98 15:12:36

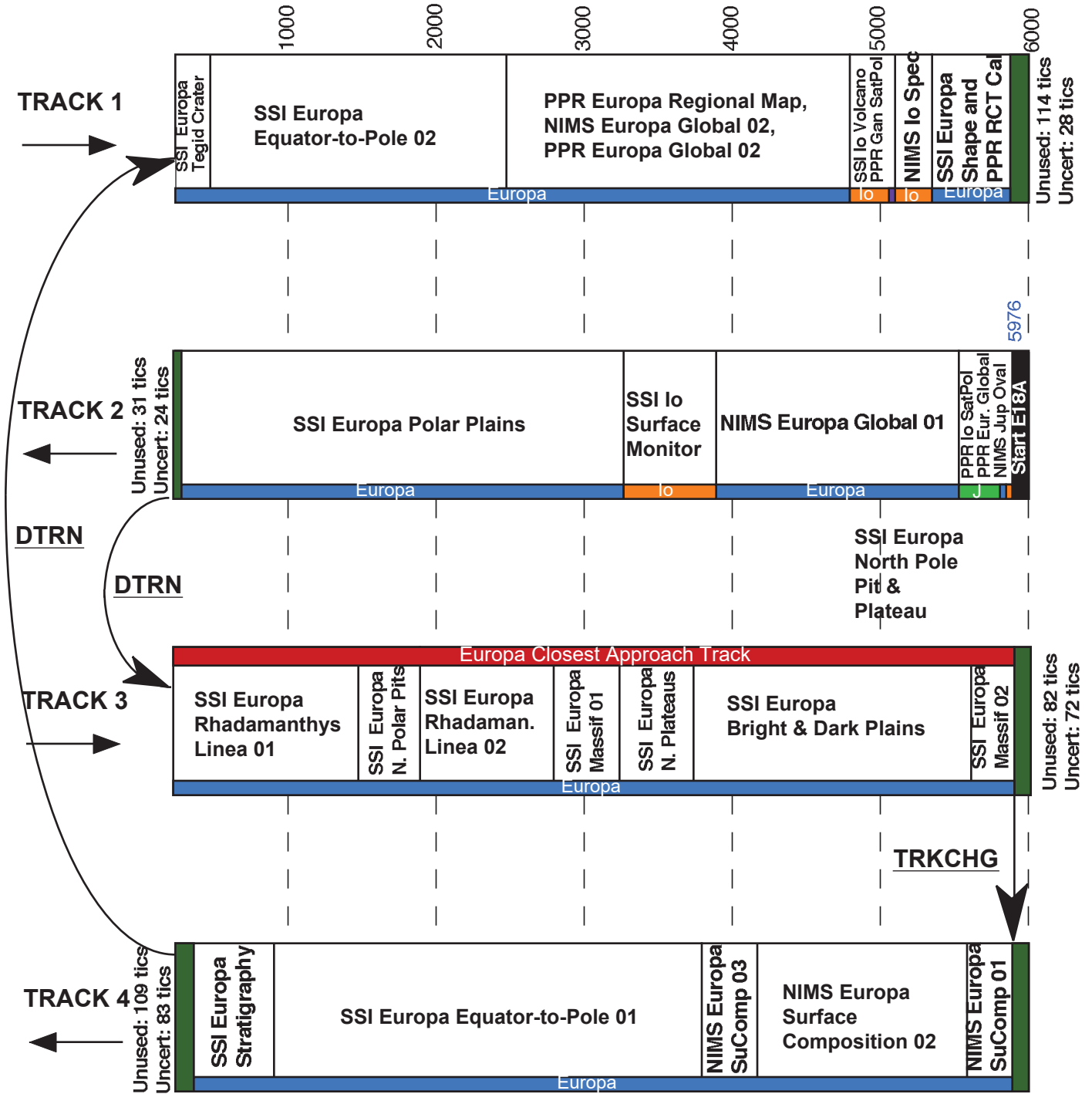
GEM: E18

Geometric Events MWG Observations RS UVS/EUV Observations SSI Observations PPR Observations NIMS Observations



All times are SCET

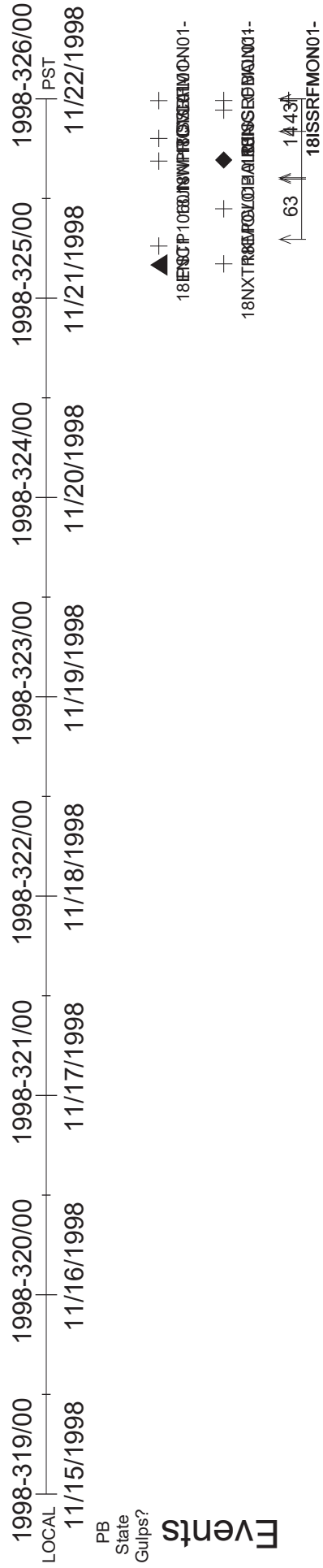
E18 HIGH-LEVEL TAPEMAP



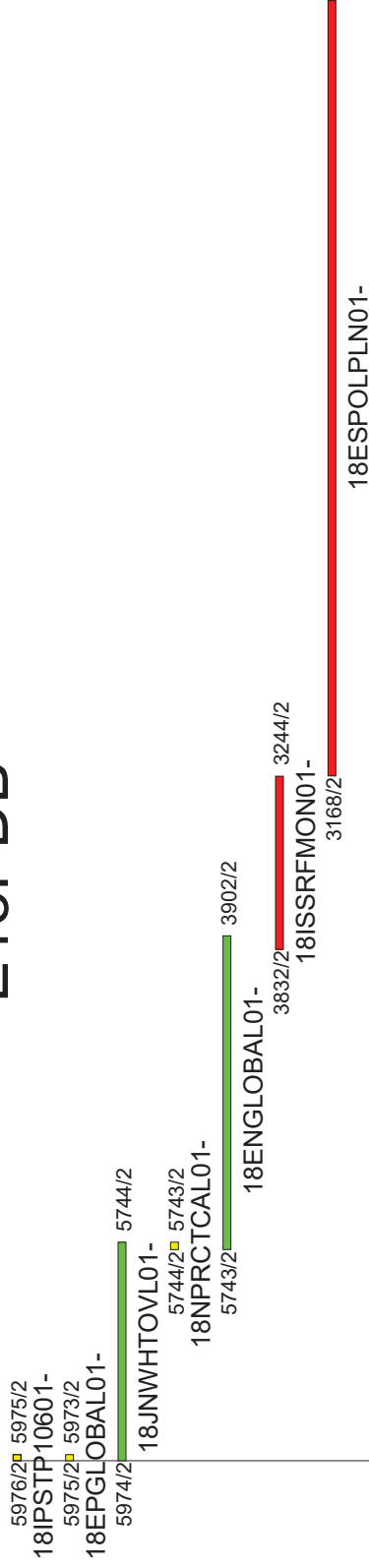
J. Gross, 11/03/98

E18PDB

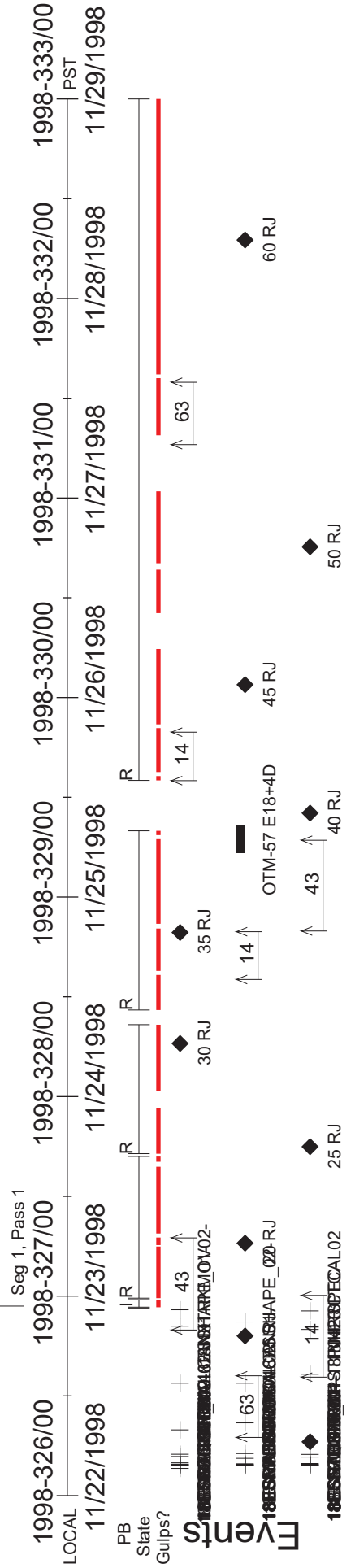
Playback / Date Returned



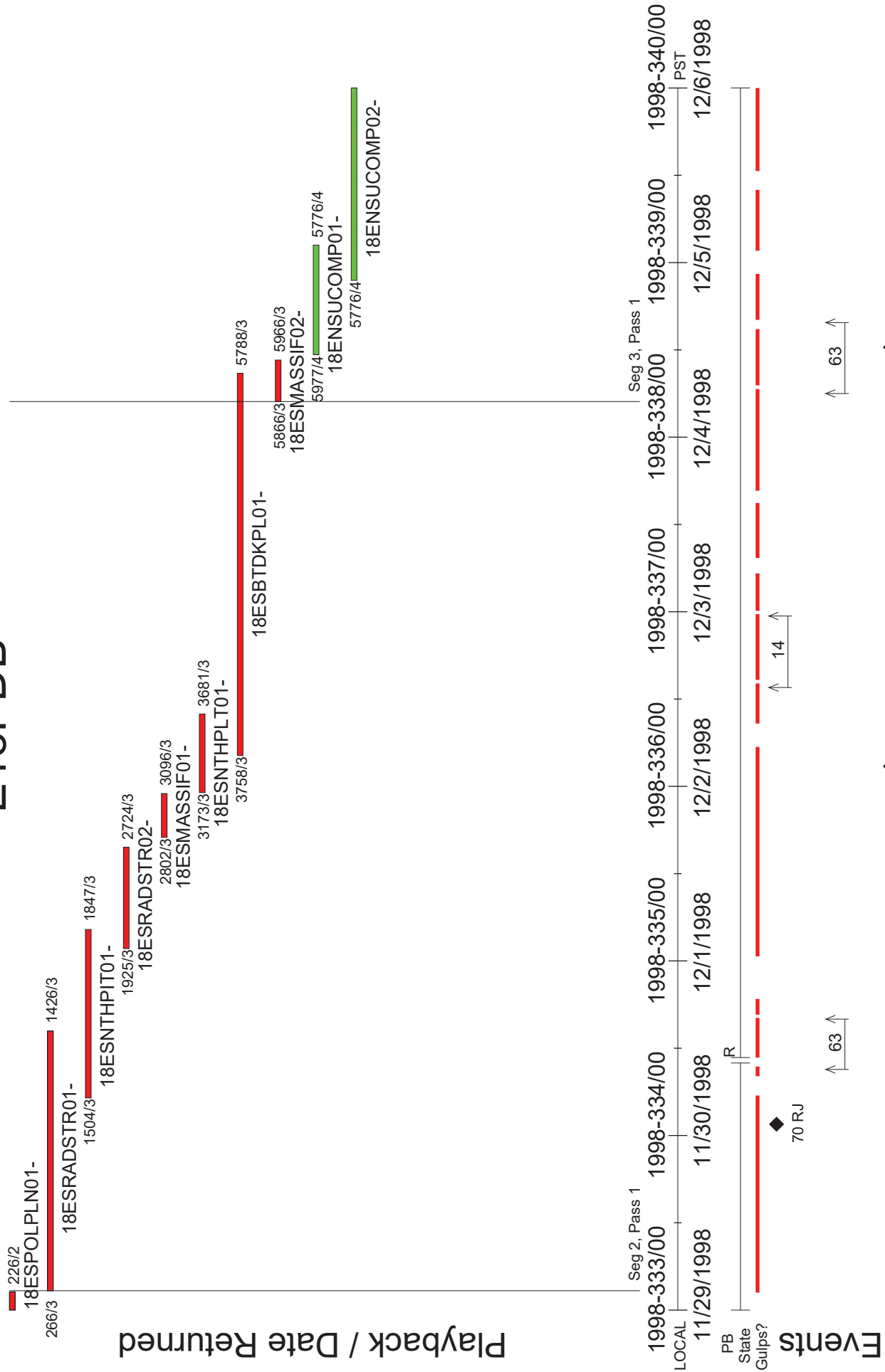
E18PDB



Playback / Date Returned



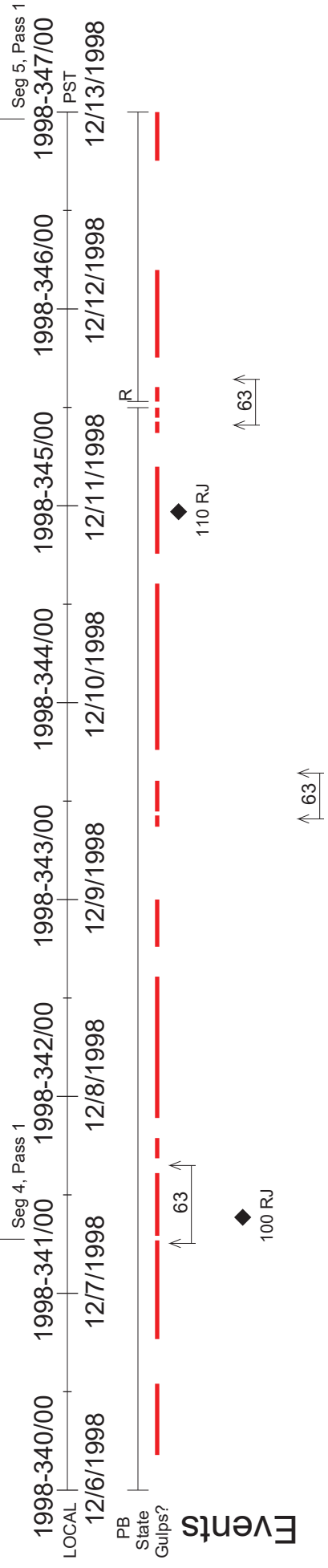
E18PDB



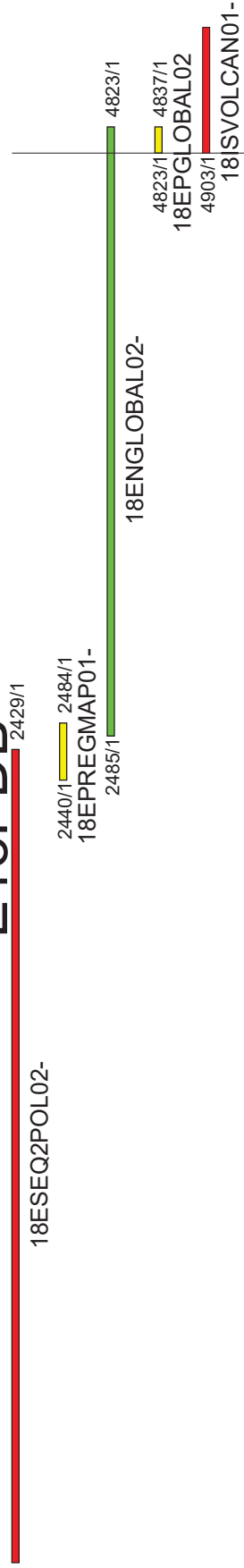
E18PDB



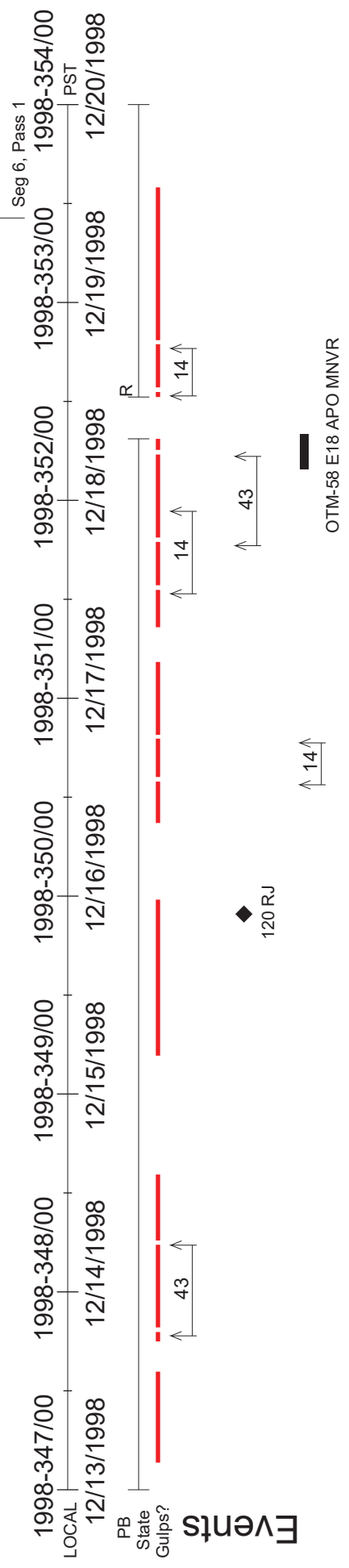
Playback / Date Returned



E18PDB



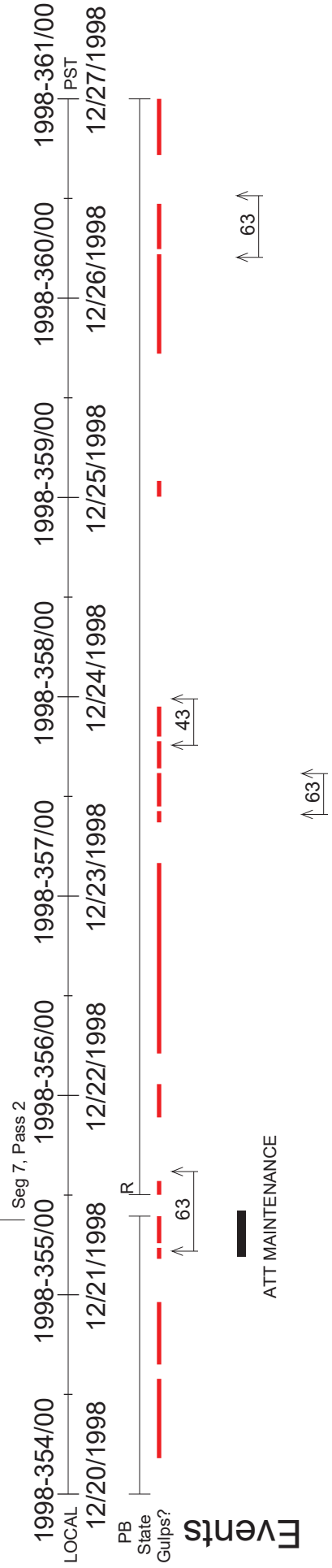
Playback / Date Returned



E18PDB

- 5148/1 18ISVOLCAN01-
- 5160/1 18GPSTP04201
- 5164/1 18INHRSPEC-
- 5482/1 18ESSHAPE_01-
- 5725/1 18ESSHAPE_02-
- 5891/1 18NPRCTCAL02
- 5902/1 18ENGLOBAL01-
- 5905/1 3168/2 18ESPOLPLN01-

Playback / Date Returned



E18PDB

18ESPOLPLN01-
226/2

266/3

18ESRADSTR01-

1426/3

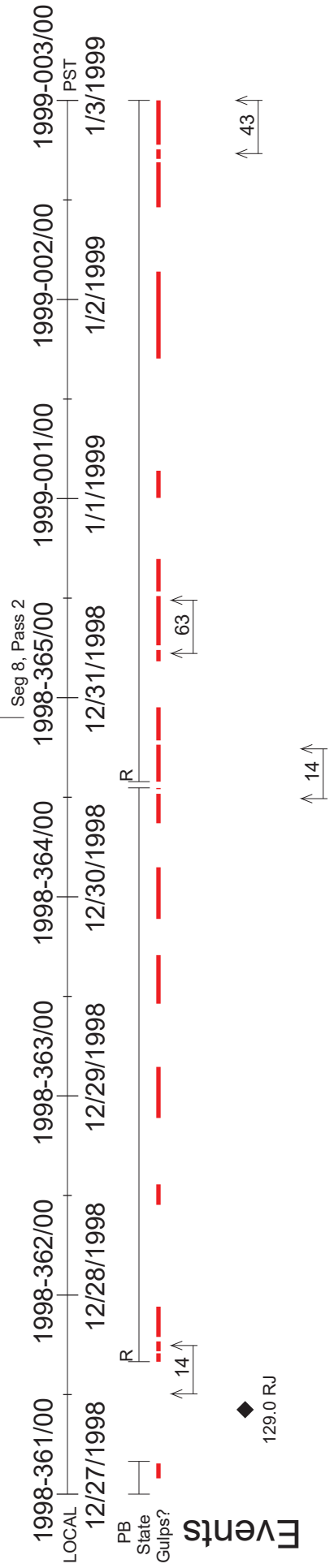
1504/3-1847/3

18ESNTHPIT01-

1925/3

18ESRADSTR02-

Playback / Date Returned



E18PDB

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 3758/3

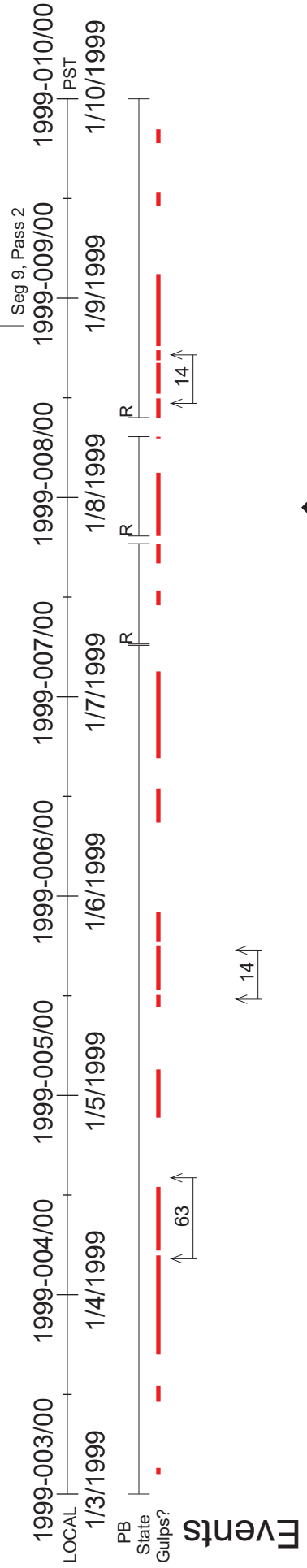
18ESBTDKPL01-

5788/3

5866/3 5966/3
 18ESMASSIF02-
 5776/4

18ENSUCOMP02-

Playback / Date Returned



E18PDB

4138/4

18ENSUCOMP02-

3704/4

18ESEQ2POL01-

735/4

18ESSTRAT_01-

Playback / Date Returned

2-21

Seg 10, Pass 2

1999-010/00 1999-011/00 1999-012/00 1999-013/00 1999-014/00 1999-015/00 1999-016/00 1999-017/00
LOCAL 1/10/1999 1/11/1999 1/12/1999 1/13/1999 1/14/1999 1/15/1999 1/16/1999 1/17/1999
PST

PB
State
Gulps?

↑ 14 ↑

↑ 63 ↑

↑ 14 ↑

↑ 63 ↑

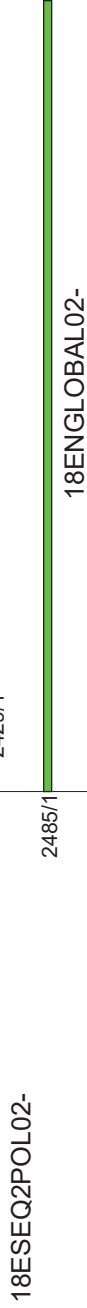
◆
110 RJ

◆
100 RJ

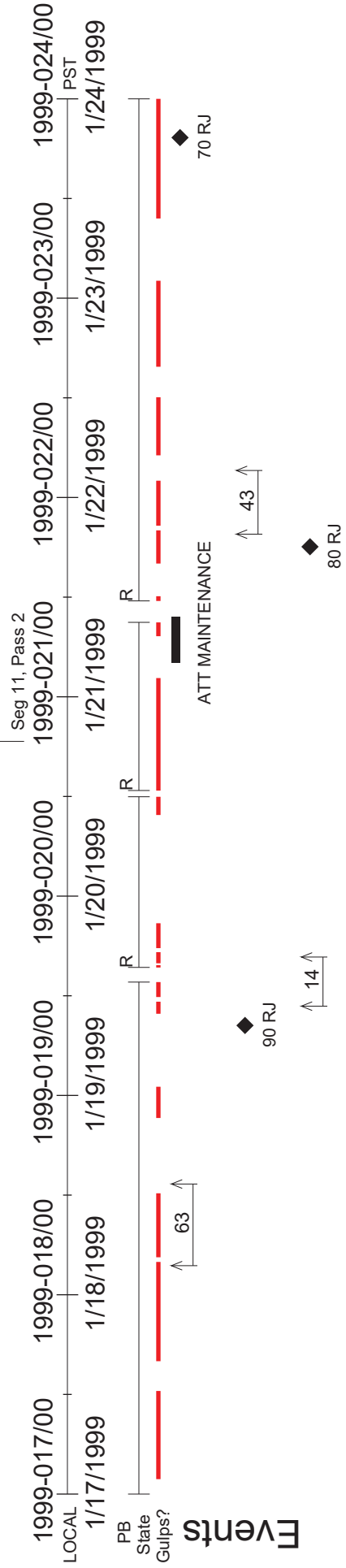
E18PDB

- 812/4
- 18ESEQ2POL01-
- 337/4
- 18ESSTRAT_01-
- 223/1
- 306/1
- 18ESTEGID_01-
- 376/1

Playback / Date Returned



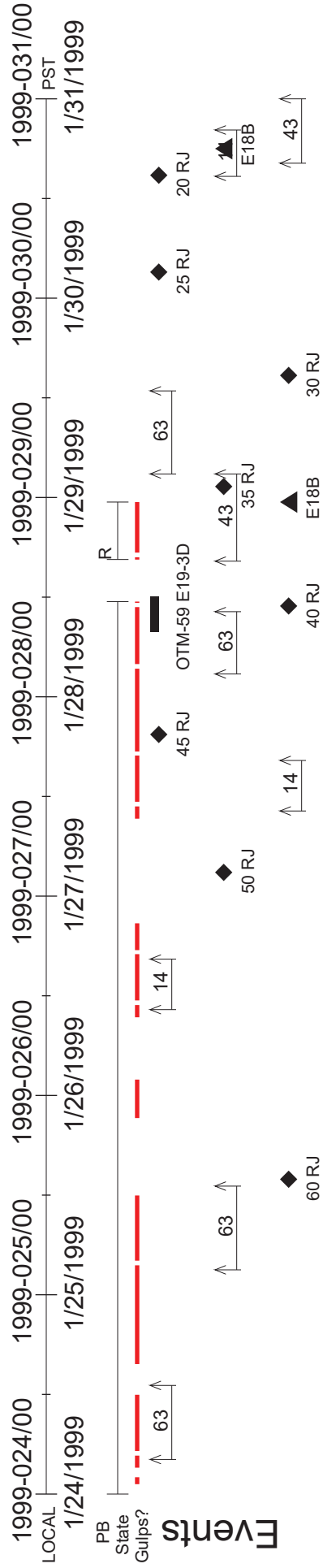
2-22



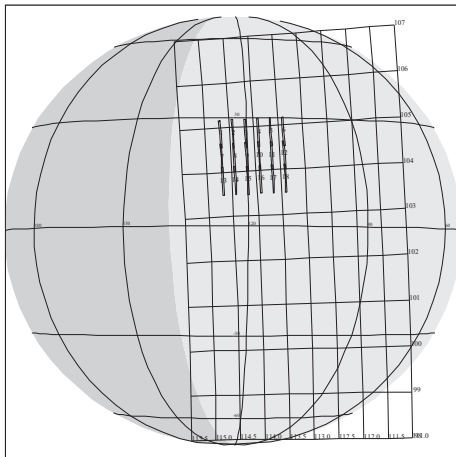
E18PDB

- 4823/1
- 18ENGLOBAL02-
- 5164/1
- 5415/1
- 18INHRSPEC-
- 5482/1
- 5647/1
- 18ESSHAPE_01-
- 5725/1
- 5891/1
- 18ESSHAPE_02-

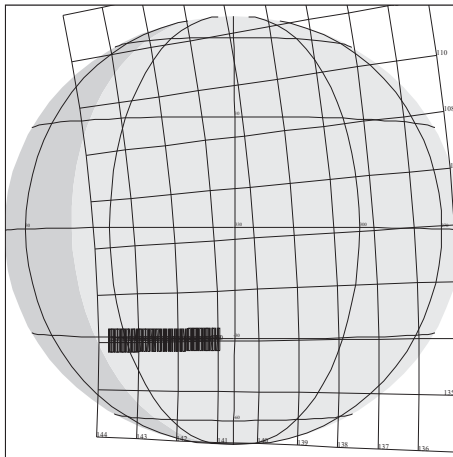
Playback / Date Returned



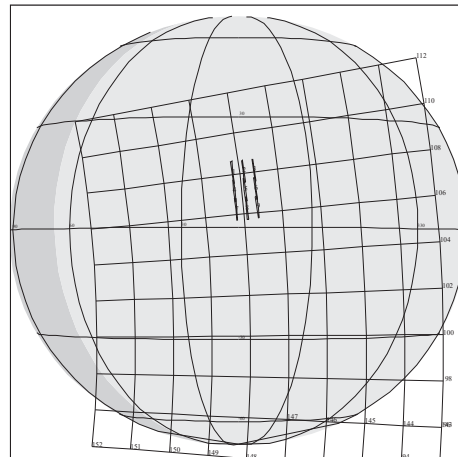
E18 NIMS A



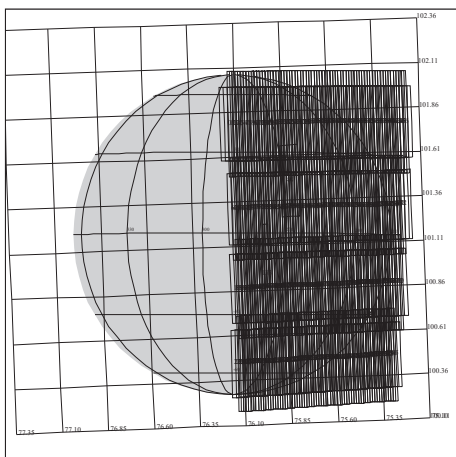
18JNJUPRTS01
98-325/18:02:05



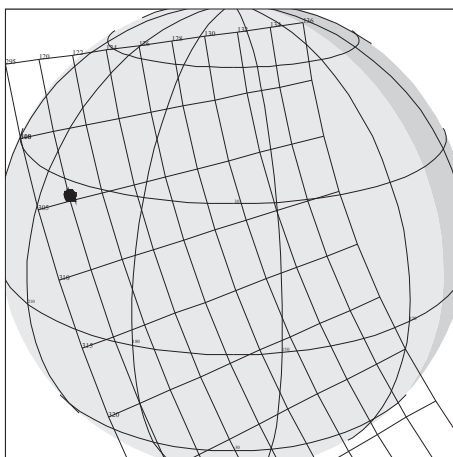
18JNWHTOVL01
98-326/00:27:19



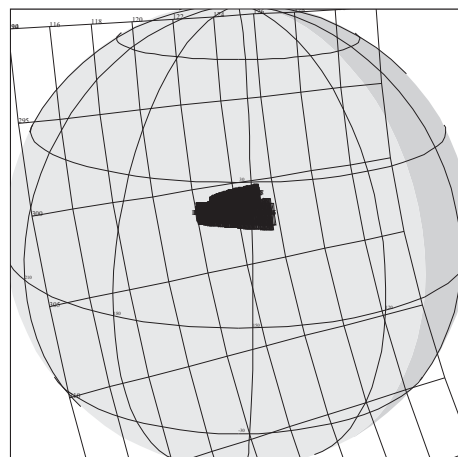
18JNJUPRTS02
98-326/01:57:19



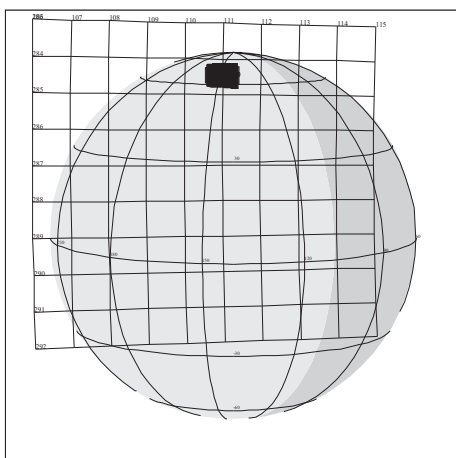
18ENGLOBAL01
98-326/06:35:22



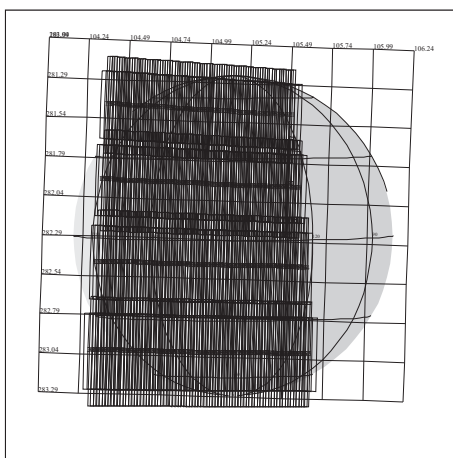
18ENSUCOMP01
98-326/11:51:51



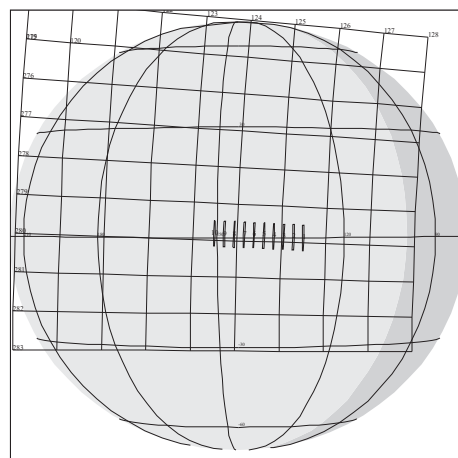
18ENSUCOMP02
98-326/11:56:54



18ENSUCOMP03
98-326/12:29:15

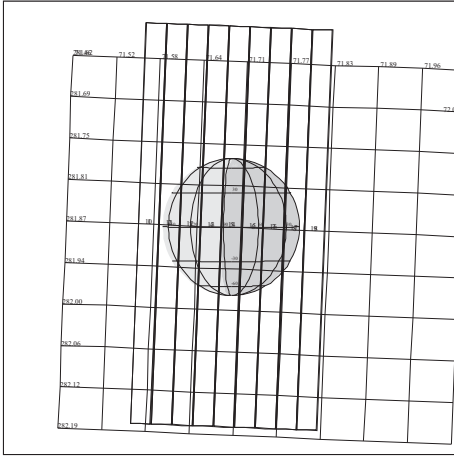


18ENGLOBAL02
98-326/16:42:02



18JNJUPRTS03
98-326/17:49:47

E18 NIMS B



18INHRSPEC01

98-327/03:56:27

Chapter 3 - Orbit Geometries

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Introduction to Chapter 3

This chapter contains diagrams of various aspects of geometry for the E18 Orbit.

The figure on page 3 is a North Trajectory Pole View of the E18 Orbit from apoapsis to apoapsis.

The figure on page 4 is a North Trajectory Pole View of the E18 Orbit from +/- 5 days of Europa closest approach.

The figure on page 5 is a North Trajectory Pole View of the E18 Orbit from +/- 2 days of Europa closest approach.

The figure on page 6 is a North Trajectory Pole View of the E18 Orbit from +/- 1 day of Europa closest approach.

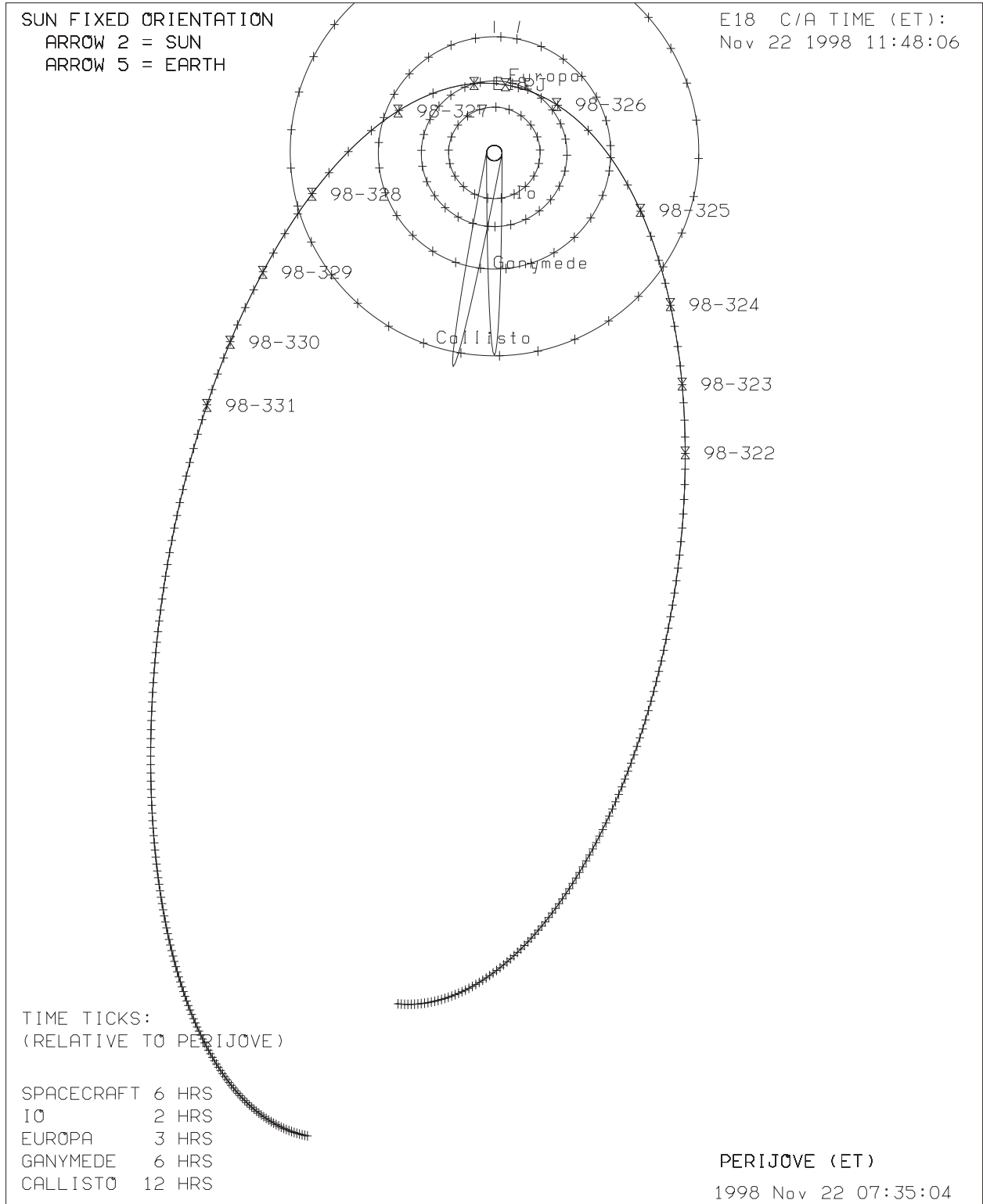
The figure on page 7 is a North Trajectory Pole View of the E18 Orbit from +/- 6 hours of Europa closest approach.

The figure on page 8 is a North Trajectory Pole View of the E18 Orbit from +/- 1 hour of Europa closest approach.

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

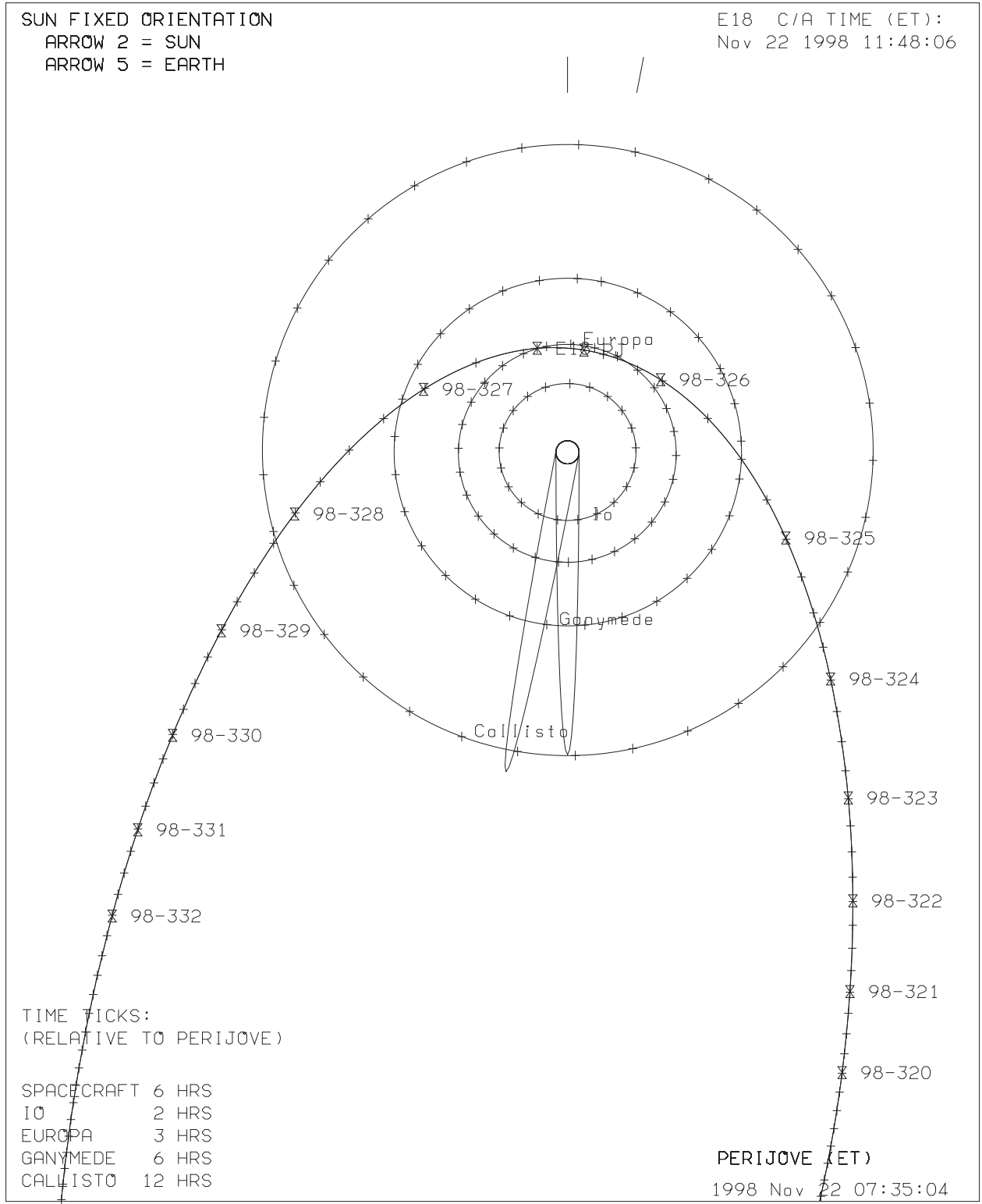
The figure on page 10 shows the spacecraft's groundtrack on Jupiter at Jupiter closest approach.

JUPITER 18: N. TRAJ. POLE VIEW (APO TO APO)



GEM-970401

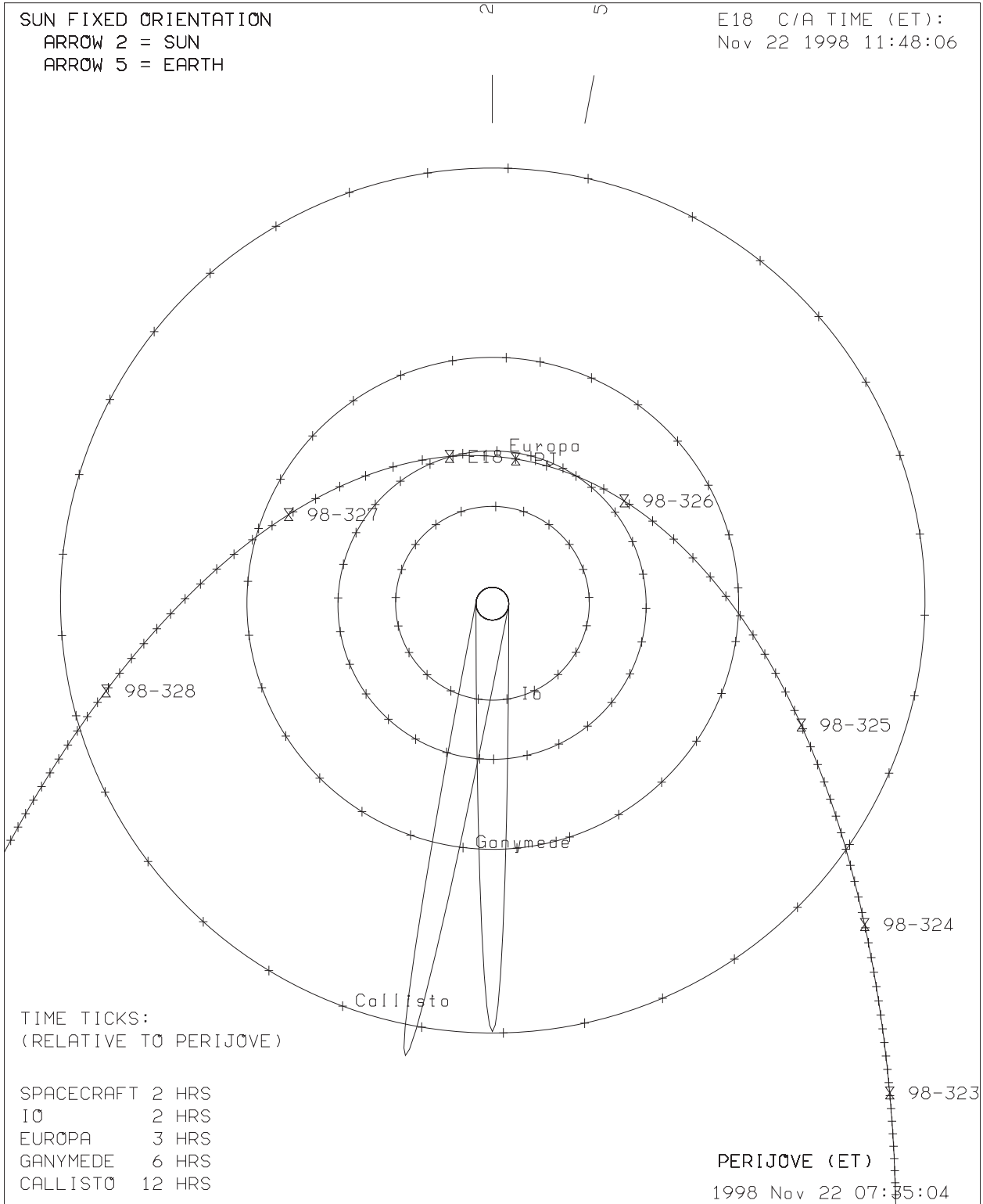
JUPITER 18: N. TRAJ. POLE VIEW (+/- 5 DAYS)



GEM-970401

NAV Apr 24, 1997

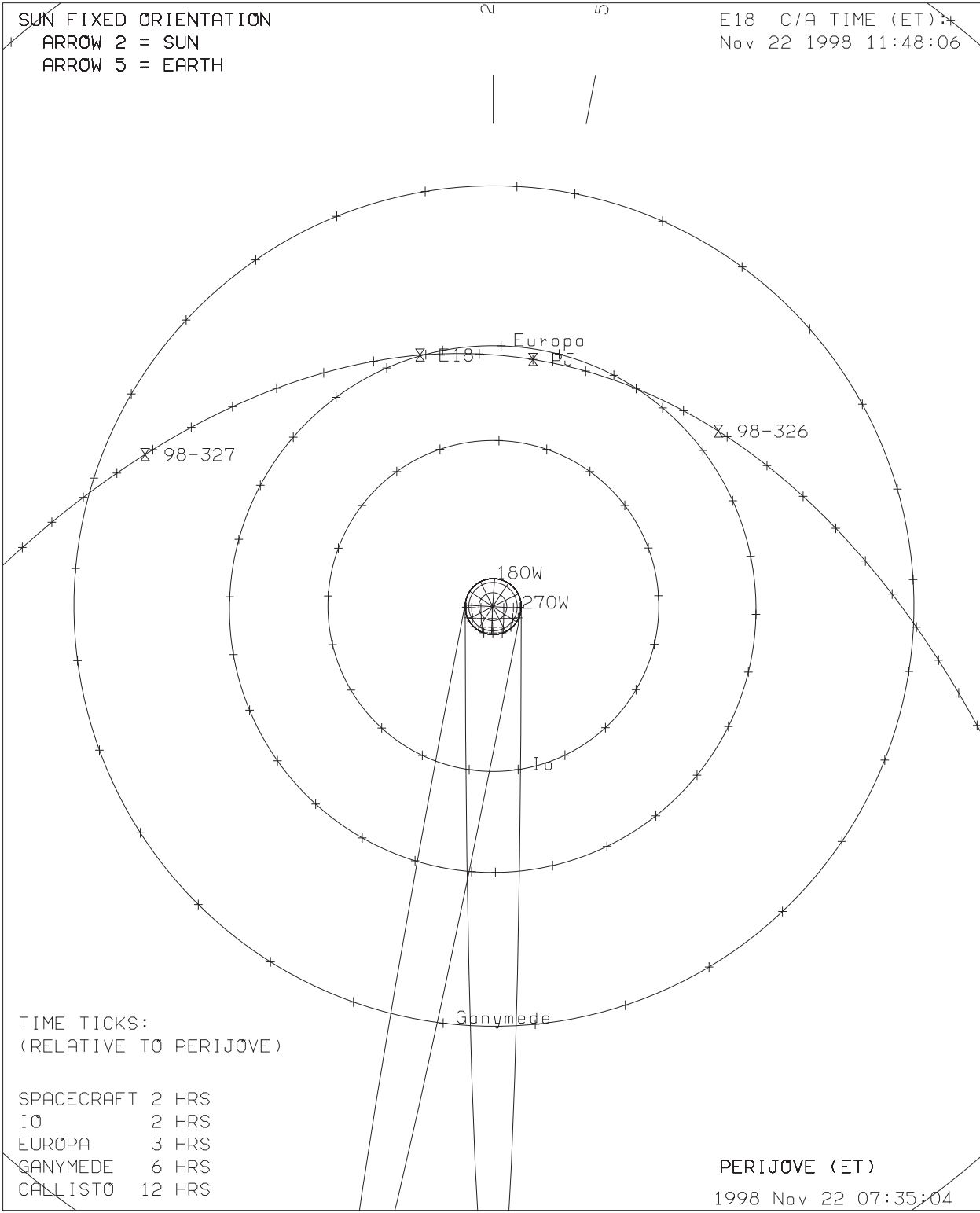
JUPITER 18: N. TRAJ. POLE VIEW (+/- 2 DAYS)



GEM-970401

NAV Apr 24, 1997

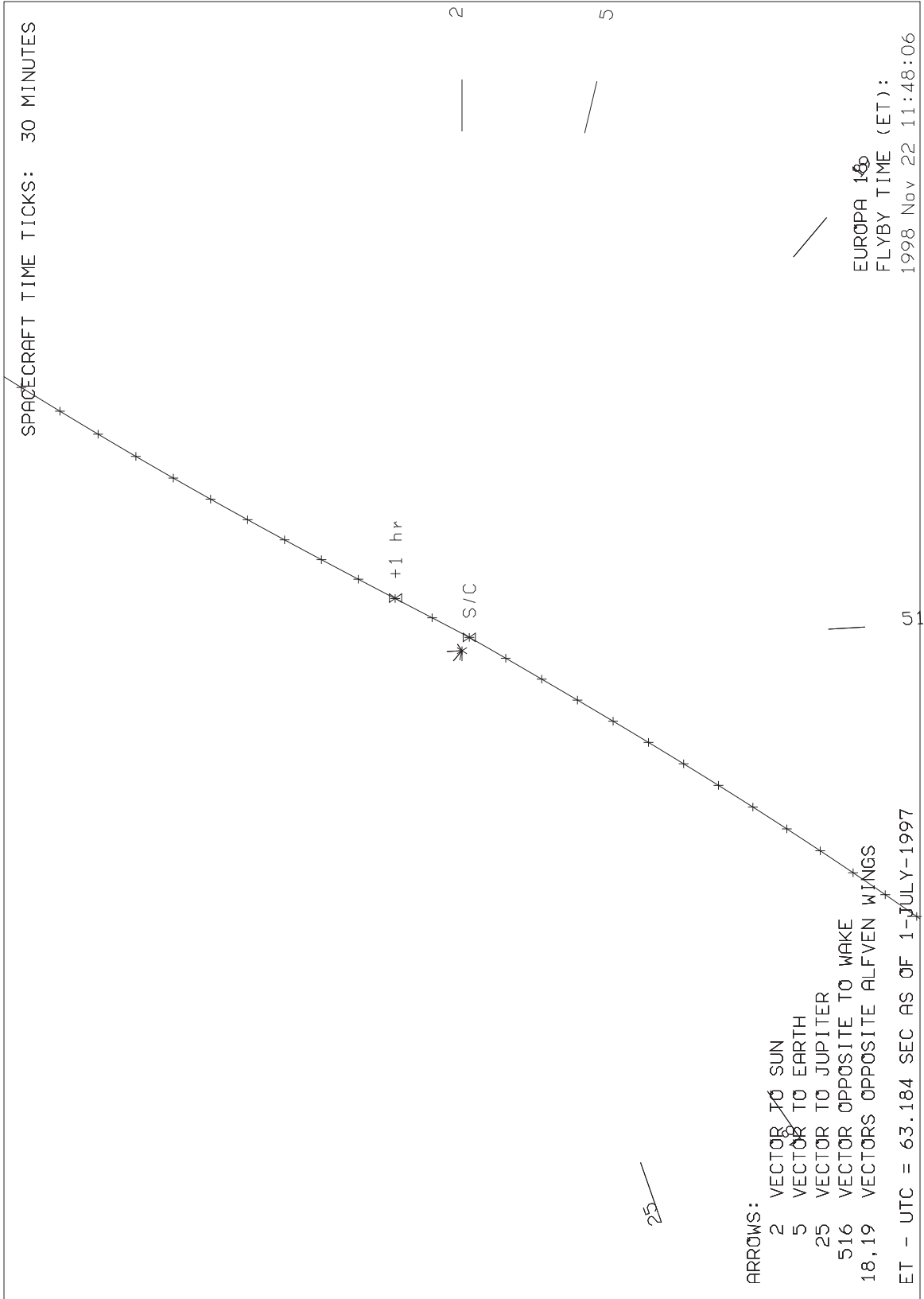
JUPITER 18: N. TRAJ. POLE VIEW (+/- 1 DAY)



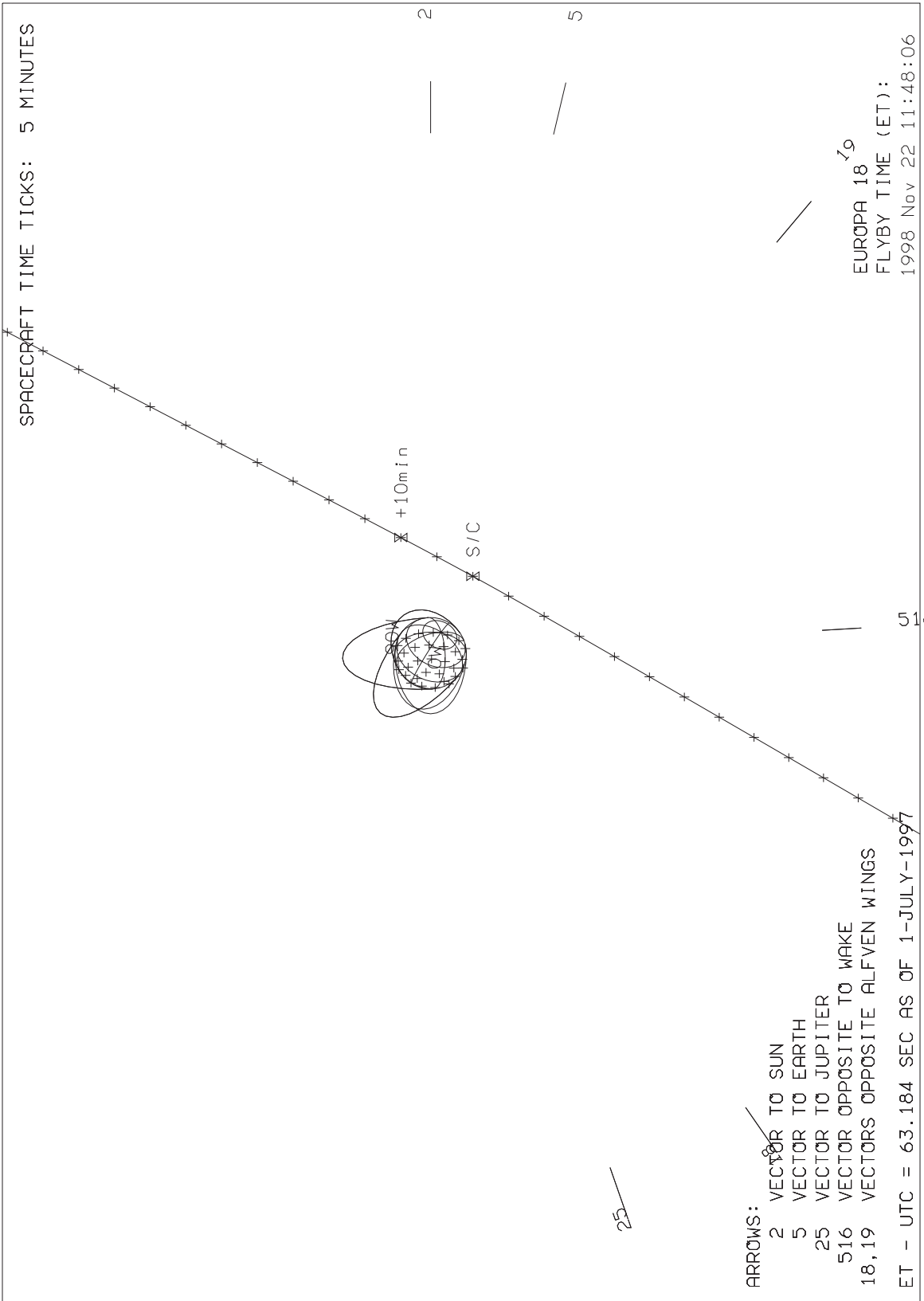
GEM-970401

NAV Apr 24, 1997

EUROPA 18: N. TRAJ POLE VIEW (+/- 6 HRS)

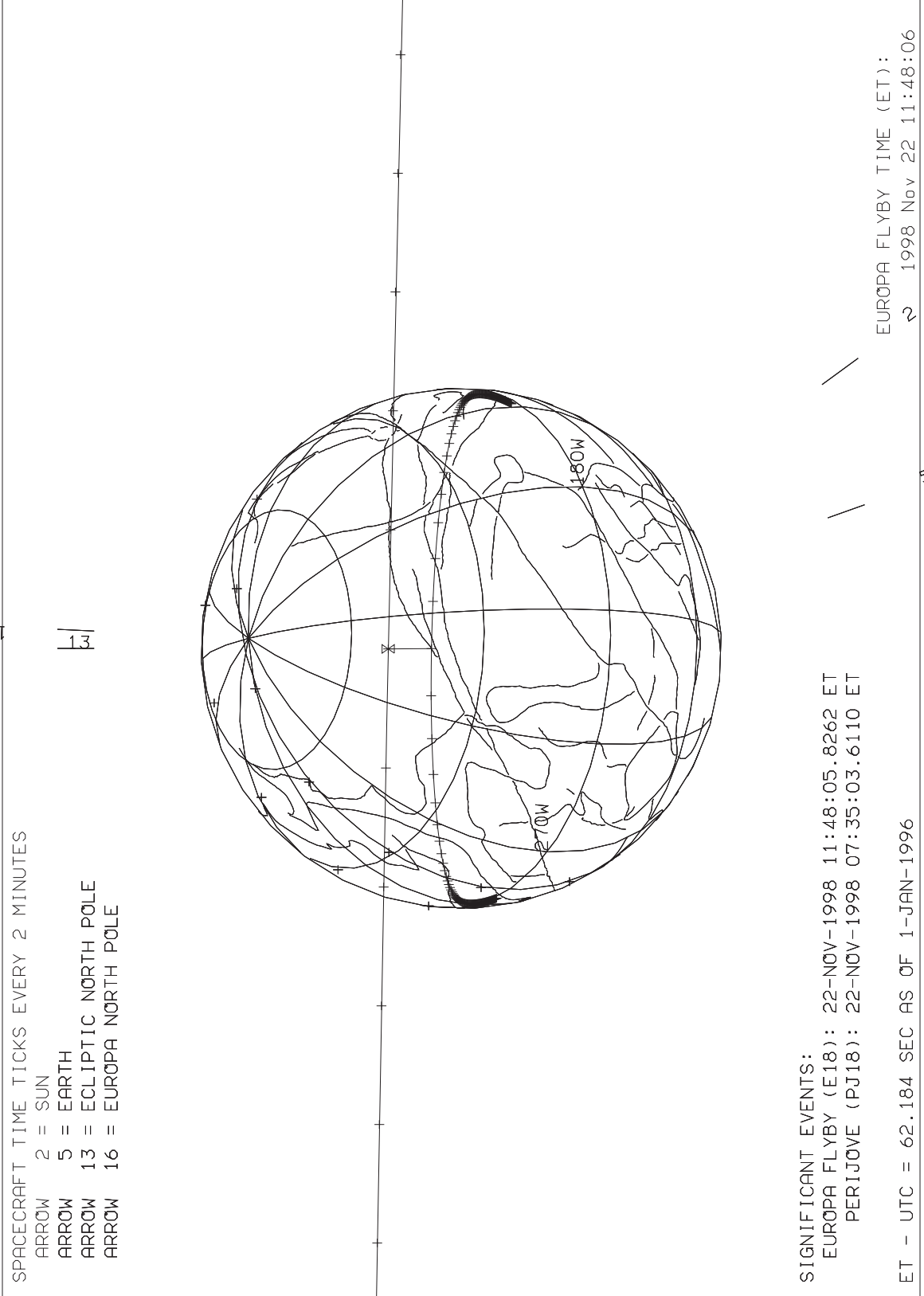


EUROPA 18: N. TRAJ POLE VIEW (+/- 1 HR)

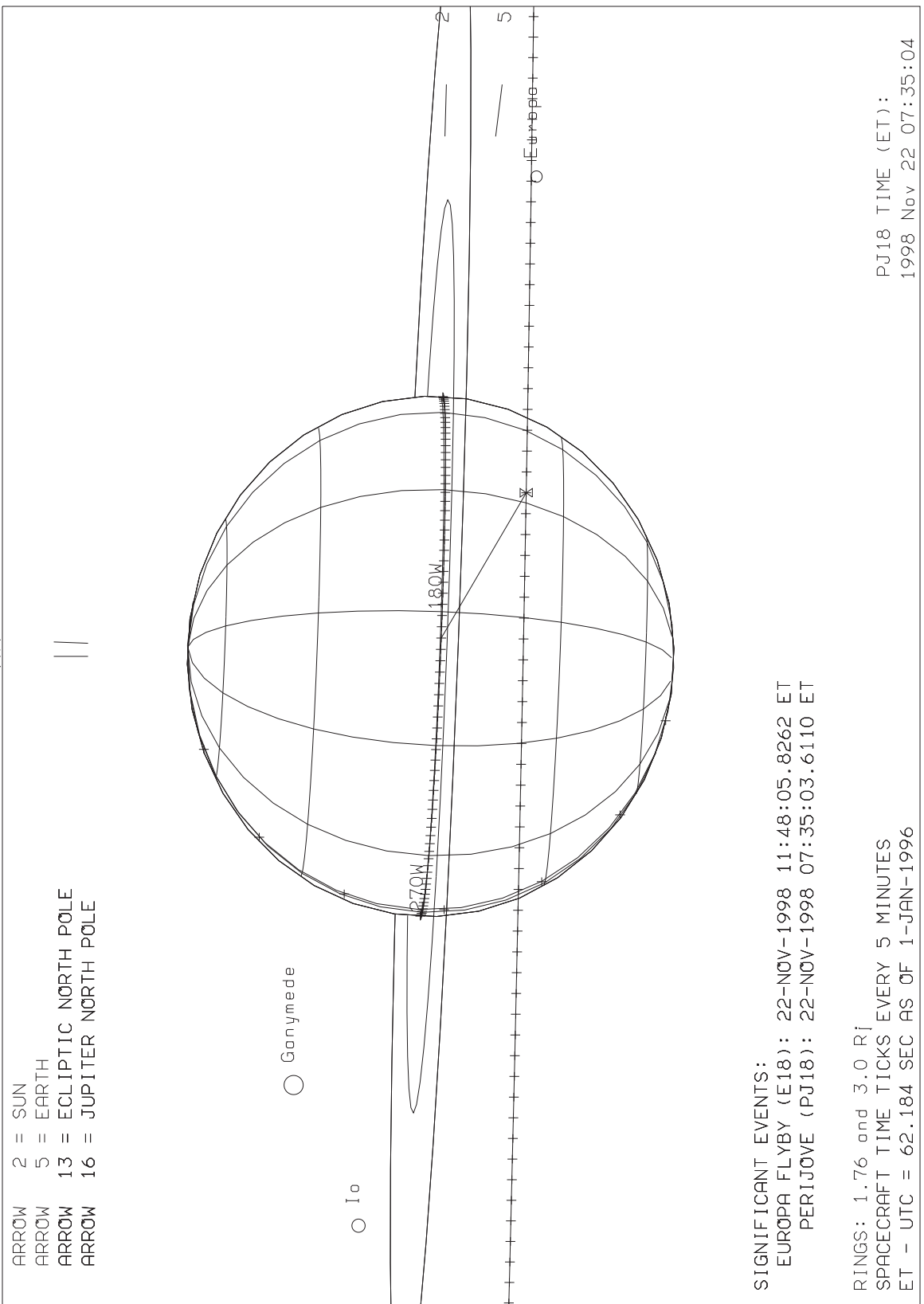


NAV 4/30/97

EUROPA 18: GROUNDTRACK AT CLOSEST APPROACH



JUPITER 18: GROUNDTRACK AT CLOSEST APPROACH



ARROW 2 = SUN
 ARROW 5 = EARTH
 ARROW 13 = ECLIPTIC NORTH POLE
 ARROW 16 = JUPITER NORTH POLE

○ Ganymede

○ Io

SIGNIFICANT EVENTS:
 EUROPA FLYBY (E18): 22-NOV-1998 11:48:05.8262 ET
 PERIJOVE (PJ18): 22-NOV-1998 07:35:03.6110 ET

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

PJ18 TIME (ET):
 1998 Nov 22 07:35:04
 NAV Apr 6, 1997

Chapter 4 - NIMS Observation Summaries

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4.3	NIMS Individual Obstab Summaries	44-74
4.4	NIMS OBSTAB (Returned)	75-81

Introduction to Chapter 4

This chapter summarizes the NIMS E18 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 E18 Sequence. The information in this summary is derived from the E18 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 (Opel) 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 E18 data. It is also derived from the E18 SEFs and PBTs. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry.

Sequence:		E18A-AR		Created: 2/26/99		Begin: 98-325/12:00:00		Finish: 98-328/01:00:00			
Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MFI
1	98	325	11:59:59.866		DMS: : READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,746,939:86:0	
2	98	325	12:00:00.000	20A3EW	37A Initial Condition	NIMS Power ON	400	4	0	4,746,939:86:2	
3	98	325	12:00:00.000	20A3EX	37HR Initial Condition	Replacement Heaters OFF	400	4	0	4,746,939:86:2	
4	98	325	12:00:00.000	20A3EY	37C1PR Initial Condition	Optics Heater 1 OFF (primary relay)	400	4	0	4,746,939:86:2	
5	98	325	12:00:00.000	20A3FA	37F1PR Initial Condition	Radiator Flash Heater OFF (primary relay)	400	4	0	4,746,939:86:2	
6	98	325	12:00:00.000	20A3EZ	37C2PR Initial Condition	Optics Heater 2 OFF (primary relay)	400	4	0	4,746,939:86:2	
7	98	325	12:00:00.000	20A3FF	40T2R Initial Condition	PCT Heater 2 OFF	400	4	0	4,746,939:86:2	
8	98	325	12:00:00.000	20A3FE	40T1PR Initial Condition	PCT Heater 1 OFF (primary relay)	400	4	0	4,746,939:86:2	
9	98	325	12:00:00.000	20A3FD	40HRPR Initial Condition	RCT Heater OFF (primary relay)	400	4	0	4,746,939:86:2	
10	98	325	12:00:00.000	20A3FB	37F2PR Initial Condition	Shield Flash Heater OFF (primary relay)	400	4	0	4,746,939:86:2	
11	98	325	12:00:12.533	488AA6A	6TMSED NORM,DL5	Sci, Eng, and D/L Chan	400	4	0	4,746,940:14:0	
12	98	325	12:00:59.866	200A6A	6HICON		400	4	0	4,746,940:85:0	
13	98	325	12:02:03.200	432JA6B	6RTDS2 NIMDSL,AACNCG,RT	NIMS R/T DESELECT	400	4	0	4,746,941:89:0	
14	98	325	12:02:03.866	432JA431A6A	6RCDLSD DSDSNG,PLSDSL,EP	Record Deselect (DDS o	400	4	0	4,746,941:90:0	
15	98	325	12:02:03.866	165SA4A	7SCAN NORM,254.24,-22.	Check S/P Position	400	4	0	4,746,941:90:0	
16	98	325	12:02:04.533	432JA6C	6RTSL1	R/T Select of DDS and	400	4	0	4,746,942:00:0	
17	98	325	12:02:04.533	432JA6D	6RTSL2 NIMNCG,AACSEL,RT	AACS SELECT	400	4	0	4,746,942:00:0	
18	98	325	12:06:57.200	175TZ422A6A	DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,746,946:75:0	
19	98	325	12:06:57.200	6DMSC R28,1		DMS Control	400	4	0	4,746,946:75:0	
20	98	325	12:07:03.866	6DMSC R28,1	DMS: : *RUNUP	R28, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,746,946:85:0	
21	98	325	12:07:07.200	175TZ176A6A	6TMREC MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	400	4	0	4,746,946:90:0	
22	98	325	12:07:07.866		DMS: : *AT SPD	R28, TRACK 1, FWD, TIC 203.62 +/-	400	4	0	4,746,947:00:0	
23	98	325	12:07:07.866		DMS: : *RECORD	R28, TRACK 1, FWD, TIC *203.62 +/-	400	4	0	4,746,947:00:0	
24	98	325	12:28:18.533	444UA443A4B	7MODE INT	AACS INERTIAL MODE	400	4	0	4,746,967:86:0	
25	98	325	12:40:29.200	165CA4A	7SCAN NORM,254.24,-22.	Check S/P Position	400	4	0	4,746,979:90:0	
26	98	325	12:44:31.200	165CA4B	7VECT	Inert vect update UTC	400	4	0	4,746,983:89:0	
27	98	325	13:10:36.533	488AA6B	6TMSED NORM,DL4	Sci, Eng, and D/L Chan	400	4	0	4,747,009:71:0	
28	98	325	13:28:58.533	165CA4C	7VECT	Inert vect update UTC	400	4	0	4,747,027:86:0	
29	98	325	13:56:37.866	175TZ422A6B	DMS: : *RUNDOWN	R28, TRACK 1, FWD, TIC *5978.04 +/-	400	4	0	4,747,055:27:0	
30	98	325	13:56:37.866	6DMSC RDY,0		DMS Control Tape stop	400	4	0	4,747,055:27:0	
31	98	325	13:56:39.066		DMS: : *READY	RDY, TRACK 1, FWD, TIC *5978.34 +/-	400	4	0	4,747,055:28:8	
32	98	325	13:59:21.866		DMS: : *READY	RDY, TRACK *2, *REV, TIC 5978.34 +/-	400	4	0	4,747,058:00:0	
33	98	325	13:59:21.866	465KA6A	6DMSC RDY,2	DMS Control Tape stop	400	4	0	4,747,058:00:0	
34	98	325	14:13:30.533	165GA4A	7SCAN NORM,256.080997,	Check S/P Position	400	4	0	4,747,071:90:0	
35	98	325	14:16:33.200	176GA6A	6TMREC BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	400	4	0	4,747,075:00:0	
36	98	325	14:17:24.533	117GA	CSMOS GS	**** GROUP START CSMOS	400	4	0	4,747,075:77:0	
37	98	325	14:17:33.866	117GA105A106A4A	7STRP 0.001,0.0035,0.0	Slew = 0.06	400	4	0	4,747,076:00:0	
38	98	325	14:18:33.200	117GA11A	CSMOS GE	**** GROUP END CSMOS	400	4	0	4,747,076:89:0	
39	98	325	14:18:33.866	165CE4A	7SCAN NORM,250.813,-22	Check S/P Position	400	4	0	4,747,076:90:0	
40	98	325	14:18:42.533	176GA6B	6TMREC NRC	NO RECORD Record Mode Change	400	4	0	4,747,077:12:0	
41	98	325	14:18:44.533	50ZZ6XX	6DMSC R7,0	DMS Control Tape runup 7.68kps	400	4	0	4,747,077:15:0	
42	98	325	14:18:44.533		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5978.34 +/-	400	4	0	4,747,077:15:0	
43	98	325	14:18:45.933		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *5978.46 +/-	400	4	0	4,747,077:17:1	
44	98	325	14:18:51.200		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5979.69 +/-	400	4	0	4,747,077:25:0	
45	98	325	14:18:52.400		DMS: : *RUNUP	R7, TRACK *2, *REV, TIC *5979.75 +/-	400	4	0	4,747,077:26:8	
46	98	325	14:18:53.800		DMS: : *AT SPD	R7, TRACK 2, REV, TIC *5979.63 +/-	400	4	0	4,747,077:28:9	
47	98	325	14:18:54.533		DMS: : *RECORD	R7, TRACK 2, REV, TIC *5979.46 +/-	400	4	0	4,747,077:30:0	
48	98	325	14:19:05.866		DMS: : *RUNDOWN	R7, TRACK 2, REV, TIC *5976.80 +/-	400	4	0	4,747,077:47:0	
49	98	325	14:19:05.866	50ZZ6RD	6DMSC RDY,0	DMS Control Tape stop	400	4	0	4,747,077:47:0	
50	98	325	14:19:07.066		DMS: : *READY	RDY, TRACK 2, REV, TIC *5976.74 +/-	400	4	0	4,747,077:48:8	
51	98	325	14:22:35.866	165CE4B	7VECT	Inert vect update UTC	400	4	0	4,747,080:89:0	
52	98	325	15:06:02.533	165CE4C	7VECT	Inert vect update UTC	400	4	0	4,747,123:86:0	
53	98	325	15:09:28.533	488AA6C	6TMSED FILL,DL4	Sci, Eng, and D/L Chan	400	4	0	4,747,127:31:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
54	98	325	15:48:28.533	488AA6D	6TMSED	FILL,DL5	Sci, Eng, and D/L Chan	400	4	0	4,747,165:83:0	
55	98	325	15:49:33.866	165CB4A	7SCAN	NORM,248.637999,	Check S/P Position	400	4	0	4,747,166:90:0	
56	98	325	15:50:33.866	165CB4B	7VECT		Inert vect update UTC	400	4	0	4,747,167:89:0	
57	98	325	15:55:01.200	488AA6E	6TMSED	NORM,DL5	Sci, Eng, and D/L Chan	400	4	0	4,747,172:35:0	
58	98	325	16:05:11.866	165CB4C	7VECT		Inert vect update UTC	400	4	0	4,747,182:41:0	
59	98	325	16:19:53.866	165CC4A	7SCAN	NORM,246.705999,	Check S/P Position	400	4	0	4,747,196:90:0	
60	98	325	16:20:53.866	165CC4B	7VECT		Inert vect update UTC	400	4	0	4,747,197:89:0	
61	98	325	16:35:31.866	165CC4C	7VECT		Inert vect update UTC	400	4	0	4,747,212:41:0	
62	98	325	16:50:13.866	165CD4A	7SCAN	NORM,245.539,-21	Check S/P Position	400	4	0	4,747,226:90:0	
63	98	325	16:51:13.866	165CD4B	7VECT		Inert vect update UTC	400	4	0	4,747,227:89:0	
64	98	325	17:05:51.866	165CD4C	7VECT		Inert vect update UTC	400	4	0	4,747,242:41:0	
65	98	325	17:50:58.534	18NNJUPRTS01-		-----START-----		400	4	0	:	:
66	98	325	17:57:56.533	176DA6A	6TMREC	NRC	NO RECORD Record Mode Change	400	4	0	4,747,293:87:0	
67	98	325	17:59:17.866	20DA5A	37PL		Program Load (halts microprocessor & unwri	260	4	0	4,747,295:27:0	
68	98	325	17:59:19.200	20DA5B	37MRL		Memory Relocate (software operates from R	260	4	0	4,747,295:29:0	
69	98	325	17:59:20.533	20DA6A	6MCOPI	NIMS	NIMS,1000,LLM1A,7300,77F7	260	4	0	4,747,295:31:0	
70	98	325	17:59:30.533	20DA6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	260	4	0	4,747,295:46:0	
71	98	325	17:59:40.533	20DA5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,747,295:61:0	
72	98	325	18:00:00.533	20DA5D	37MNI		Memory Normal (software operates from ROM)	260	4	0	4,747,296:00:0	
73	98	325	18:00:15.866	20DA4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,747,296:23:0	
74	98	325	18:01:05.200	18NNJUPRTS01-		-----STOP-----		2R0	4	0	:	:
75	98	325	18:01:57.200	125DA4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R0	4	0	4,747,297:84:0	
76	98	325	18:01:57.200	125DA	NIMSNIT	GS	##### GROUP START INIT	2R0	4	0	4,747,297:84:0	
77	98	325	18:02:01.200	165DA4A	7SCAN	NORM,284.577999,	Check S/P Position	2R0	4	0	4,747,297:90:0	
78	98	325	18:02:05.867	18JNJUPRTS01*		-----START-----		2R0	4	0	:	:
79	98	325	18:02:57.866	125DA11A	NIMSNIT	GE	##### GROUP END INIT	2R0	4	0	4,747,298:84:0	
80	98	325	18:02:57.866	125DA4B	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	2R0	4	0	4,747,298:84:0	
81	98	325	18:04:59.200	127DA4A	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,747,300:84:0	
82	98	325	18:04:59.200	127DA	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,747,300:84:0	
83	98	325	18:04:59.866	127DA4B	37ETB	04,C,4,35,FF,FF	Loads wavelength edit table	2R3	4	0	4,747,300:85:0	
84	98	325	18:05:07.866	127DA11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,747,301:06:0	
85	98	325	18:05:07.866	432DA6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	2R3	4	0	4,747,301:06:0	
86	98	325	18:05:55.200	117DA	CSMOS	GS	**** GROUP START CSMOS	2R3	4	0	4,747,301:77:0	
87	98	325	18:06:03.200	165DA4B	7VECT		Inert vect update UTC	2R3	4	0	4,747,301:89:0	
88	98	325	18:06:04.533	117DA105A106A4A	7STRP	-0.020903,0,0,0,	Slew =0.06	2R3	4	0	4,747,302:00:0	
89	98	325	18:11:55.200	117DA105A106A4B	7STRP	0.026606,-0.0081	Slew =12.01	2R3	4	0	4,747,307:71:0	
90	98	325	18:12:01.200	117DA105A106A4C	7STRP	-0.020903,0,0,0,	Slew =0.06	2R3	4	0	4,747,307:80:0	
91	98	325	18:17:51.866	117DA105A106A4D	7STRP	0.026606,-0.0081	Slew =12.01	2R3	4	0	4,747,313:60:0	
92	98	325	18:17:57.866	117DA105A106A4E	7STRP	-0.020903,0,0,0,	Slew =0.06	2R3	4	0	4,747,313:69:0	
93	98	325	18:23:48.533	117DA11A	CSMOS	GE	**** GROUP END CSMOS	2R3	4	0	4,747,319:49:0	
94	98	325	18:25:19.866	432DZ6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	2R3	4	0	4,747,321:04:0	
95	98	325	18:26:21.867	18JNJUPRTS01*		-----STOP-----		2R3	4	0	:	:
96	98	325	18:42:27.866	165GC4A	7SCAN	NORM,243.309999,	Check S/P Position	2R3	4	0	4,747,337:90:0	
97	98	325	18:45:30.533	176GC6A	6TMREC	BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,747,341:00:0	
98	98	325	18:46:21.866	117GC	CSMOS	GS	**** GROUP START CSMOS	2R3	4	0	4,747,341:77:0	
99	98	325	18:46:31.200	117GC105A106A4A	7STRP	-0.0046,0,0,0,0,	Slew =0.29	2R3	4	0	4,747,342:00:0	
100	98	325	18:46:49.866	117GC105A106A4B	7STRP	0.00447,-0.0012,	Slew =12.01	2R3	4	0	4,747,342:28:0	
101	98	325	18:46:55.200	117GC105A106A4C	7STRP	-0.0046,0,0,0,0,	Slew =0.29	2R3	4	0	4,747,342:36:0	
102	98	325	18:47:13.866	117GC105A106A4D	7STRP	0.00447,-0.0012,	Slew =12.01	2R3	4	0	4,747,342:64:0	
103	98	325	18:47:19.200	117GC105A106A4E	7STRP	-0.0046,0,0,0,0,	Slew =0.29	2R3	4	0	4,747,342:72:0	
104	98	325	18:47:37.866	117GC105A106A4F	7STRP	0.00447,-0.0012,	Slew =12.01	2R3	4	0	4,747,343:09:0	
105	98	325	18:47:43.200	117GC105A106A4G	7STRP	-0.0046,0,0,0,0,	Slew =0.29	2R3	4	0	4,747,343:17:0	
106	98	325	18:48:01.866	117GC105A106A4H	7STRP	0.00447,-0.0012,	Slew =12.01	2R3	4	0	4,747,343:45:0	
107	98	325	18:48:07.200	117GC105A106A4I	7STRP	-0.0046,0,0,0,0,	Slew =0.29	2R3	4	0	4,747,343:53:0	
108	98	325	18:48:25.866	117GC105A106A4J	7STRP	0.00447,-0.0012,	Slew =12.01	2R3	4	0	4,747,343:81:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
109	98	325	18:48:31.200	117GC105A106A4K	7STRP	-0.0046,0.0,0.0,	Slew =0.29	2R3	4	0	4,747,343:89:0	
110	98	325	18:48:49.866	117GC105A106A4L	7STRP	0.00447,-0.0012,	Slew =12.01	2R3	4	0	4,747,344:26:0	
111	98	325	18:48:55.200	117GC105A106A4M	7STRP	-0.0046,0.0,0.0,	Slew =0.29	2R3	4	0	4,747,344:34:0	
112	98	325	18:49:13.866	117GC11A	CSMOS	GE	**** GROUP END	2R3	4	0	4,747,344:62:0	
113	98	325	18:49:35.200	176GC6B	6TMREC	NRC	NO RECORD Record Mode Change	2R3	4	0	4,747,345:00:0	
114	98	325	18:49:35.200	DMS:	: *US-RUNUP		P7, TRACK *1, *FWD, TIC 5976.74 +/-	2R3	4	0	4,747,345:03:0	
115	98	325	18:49:35.200	50ZZ6XX	6DMSC	R7.0	DMS Control Tape runup 7.68kps	2R3	4	0	4,747,345:03:0	
116	98	325	18:49:36.600	DMS:	: *US AT_SP		P7, TRACK 1, FWD, TIC *5976.86 +/-	2R3	4	0	4,747,345:05:1	
117	98	325	18:49:41.866	DMS:	: *US RD		P7, TRACK 1, FWD, TIC *5978.10 +/-	2R3	4	0	4,747,345:13:0	
118	98	325	18:49:43.066	DMS:	: *RUNUP		R7, TRACK *2, *REV, TIC *5978.16 +/-	2R3	4	0	4,747,345:14:8	
119	98	325	18:49:44.466	DMS:	: *AT_SPD		R7, TRACK 2, REV, TIC *5978.04 +/-	2R3	4	0	4,747,345:16:9	
120	98	325	18:49:45.200	DMS:	: *RECORD		R7, TRACK 2, REV, TIC *5977.86 +/-	2R3	4	0	4,747,345:18:0	
121	98	325	18:49:57.866	DMS:	: *RUNDOWN		R7, TRACK 2, REV, TIC *5974.90 +/-	2R3	4	0	4,747,345:37:0	
122	98	325	18:49:57.866	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,747,345:37:0	
123	98	325	18:49:59.066	DMS:	: *READY		RDY, TRACK 2, REV, TIC *5974.84 +/-	2R3	4	0	4,747,345:38:8	
124	98	325	21:21:16.533	488AB6A	6TMSED	NORM,DL4	Sci. Eng. and D/L Chan	2R3	4	0	4,747,495:05:0	
125	98	325	22:42:04.533	488AB6B	6TMSED	FILL,DL4	Sci. Eng. and D/L Chan	2R3	4	0	4,747,574:88:0	
126	98	325	22:42:20.533	488AB6C	6TMSED	FILL,DL5	Sci. Eng. and D/L Chan	2R3	4	0	4,747,575:21:0	
127	98	325	22:59:59.866	444UE443A4A	7MODE	CRU	AACS CRUISE MODE	2R3	4	0	4,747,592:63:0	
128	98	325	23:12:59.866	20SD4A	7SCAN	NORM,315.872,-19	Check S/P Position	2R3	4	0	4,747,605:50:0	
129	98	325	23:16:22.533	488AB6D	6TMSED	NORM,DL5	Sci. Eng. and D/L Chan	2R3	4	0	4,747,608:81:0	
130	98	325	23:39:59.866	444UF443A4B	7MODE	INT	AACS INERTIAL MODE	2R3	4	0	4,747,632:23:0	
131	98	325	23:59:59.866	488AB6E	6TMSED	NORM,EH5	Sci. Eng. and D/L Chan	2R3	4	0	4,747,652:03:0	
132	98	326	00:09:59.866	481UA4A	7VECT		Inert vect update UTC	2R3	4	0	4,747,661:84:0	
133	98	326	00:16:12.534	18NNWHTOVL01-		-----START-----		2R3	4	0	:	:
134	98	326	00:24:31.866	20DJ5A	37PL		Program Load (halts microprocessor & unwri	2R3	4	0	4,747,676:27:0	
135	98	326	00:24:33.200	20DJ5B	37MRL		Memory Realocate (software operates from R	2R3	4	0	4,747,676:29:0	
136	98	326	00:24:34.533	20DJ6A	6MCOPY	NIMS	NIMS,1000,LLM1A,7300,77F7	2R3	4	0	4,747,676:31:0	
137	98	326	00:24:44.533	20DJ6B	6MCOPY	NIMS	NIMS,1598,LLM1A,77F8,781D	2R3	4	0	4,747,676:46:0	
138	98	326	00:24:54.533	20DJ5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,747,676:61:0	
139	98	326	00:25:14.533	20DJ5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,747,677:00:0	
140	98	326	00:25:29.866	20DJ4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,747,677:23:0	
141	98	326	00:26:19.200	18NNWHTOVL01-		-----STOP-----		2R0	4	0	:	:
142	98	326	00:27:15.200	165DJ4A	7SCAN	NORM,315.872997,	Check S/P Position	2R0	4	0	4,747,678:90:0	
143	98	326	00:27:19.867	18JNWHTOVL01-		-----START-----		2R0	4	0	:	:
144	98	326	00:28:11.866	125DJ	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	4,747,679:84:0	
145	98	326	00:28:11.866	125DJ11A	NIMSINIT	GE	##### GROUP END INIT	2R0	4	0	4,747,679:84:0	
146	98	326	00:28:11.866	125DJ4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R0	4	0	4,747,679:84:0	
147	98	326	00:30:13.200	127DJ	NIMSTAB	GS	%%%%% GROUP START TAB	2R0	4	0	4,747,681:84:0	
148	98	326	00:30:13.200	127DJ4A	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,747,681:84:0	
149	98	326	00:30:13.866	127DJ4B	37ETB		Loads wavelength edit table	2R3	4	0	4,747,681:85:0	
150	98	326	00:30:21.866	127DJ11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,747,682:06:0	
151	98	326	00:31:06.533	DMS:	: *US-RUNUP		P7, TRACK *1, *FWD, TIC 5974.84 +/-	2R3	4	0	4,747,682:73:0	
152	98	326	00:31:06.533	175DJ422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,747,682:73:0	
153	98	326	00:31:07.933	DMS:	: *US AT_SP		P7, TRACK 1, FWD, TIC *5974.96 +/-	2R3	4	0	4,747,682:75:1	
154	98	326	00:31:09.200	117DJ	CSMOS	GS	**** GROUP START CSMOS	2R3	4	0	4,747,682:77:0	
155	98	326	00:31:13.200	DMS:	: *US RD		P7, TRACK 1, FWD, TIC *5976.19 +/-	2R3	4	0	4,747,682:83:0	
156	98	326	00:31:14.400	DMS:	: *RUNUP		R7, TRACK *2, *REV, TIC *5976.25 +/-	2R3	4	0	4,747,682:84:8	
157	98	326	00:31:15.200	175DJ176A6A	6TMREC	LPU	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	2R3	4	0	4,747,682:86:0	
158	98	326	00:31:15.800	DMS:	: *RECORD		R7, TRACK 2, REV, TIC *5976.13 +/-	2R3	4	0	4,747,682:86:9	
159	98	326	00:31:15.800	DMS:	: *AT_SPD		R7, TRACK 2, REV, TIC *5976.13 +/-	2R3	4	0	4,747,682:86:9	
160	98	326	00:31:17.200	165DJ4B	7VECT		Inert vect update UTC	2R3	4	0	4,747,682:89:0	
161	98	326	00:31:18.533	18JNWHTOVL01-	NIMPBK	30IES	JUPIITER WHITE OVALOBS	2R3	4	0	:	:
162	98	326	00:31:18.533	18JNWHTOVL01-	NIMPBK	30IDF	JUPIITER WHITE OVALOBS	2R3	4	0	:	:
163	98	326	00:31:18.533	117DJ105A106A4A	7STRP	-0.03081,0,0,0,0	Slew =-0.03	2R3	4	0	4,747,683:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
164	98	326	00:47:25.866	18JNWHTOVL01-	DESEL	300DF	JUPITER WHITE OVAL OBS	2R3	4	0	:	:
165	98	326	00:47:25.866	18JNWHTOVL01-	DESEL	300ES	JUPITER WHITE OVAL OBS	2R3	4	0	:	:
166	98	326	00:47:35.866	175DJ6A	6TMREC	NRC	NO RECORD Record Mode Change	2R3	4	0	4,747,699:10:0	
167	98	326	00:47:35.866	175DJ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,747,699:10:0	
168	98	326	00:47:35.866		DMS:	: *RUNDOWN	R7, TRACK 2, REV, TIC *5746.43 +/-	2R3	4	0	4,747,699:10:0	
169	98	326	00:47:37.066		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5746.37 +/-	2R3	4	0	4,747,699:11:8	
170	98	326	00:48:26.533	117DJ11A	CSMOS	GE	**** GROUP END CSMOS	2R3	4	0	4,747,699:86:0	
171	98	326	00:48:33.867	18JNWHTOVL01-		-----STOP		2R3	4	0	:	:
172	98	326	01:30:59.200	444UB443A4A	7MODE	CRU	AACS CRUISE MODE	2R3	4	0	4,747,742:02:0	
173	98	326	01:46:11.867	18NNJUPRTS02-		-----START		2R3	4	0	:	:
174	98	326	01:54:31.200	20DB5A	37PL		Program Load (halts microprocessor & unwri	2R3	4	0	4,747,765:27:0	
175	98	326	01:54:32.533	20DB5B	37MRL		Memory Realocate (software operates from R	2R3	4	0	4,747,765:29:0	
176	98	326	01:54:33.866	20DB6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	2R3	4	0	4,747,765:31:0	
177	98	326	01:54:43.866	20DB6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	2R3	4	0	4,747,765:46:0	
178	98	326	01:54:53.866	20DB5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,747,765:61:0	
179	98	326	01:55:13.866	20DB5D	37MNI		Memory Normal (software operates from ROM)	260	4	0	4,747,766:00:0	
180	98	326	01:55:29.200	20DB4A	37IST	1,2,0,0,FF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,747,766:23:0	
181	98	326	01:56:18.534	18NNJUPRTS02-		-----STOP		2R0	4	0	:	:
182	98	326	01:57:10.533	125DB	NIMSNIT	GS	#### GROUP START INIT	2R0	4	0	4,747,767:84:0	
183	98	326	01:57:10.533	125DB4A	37IST	0,2,0,0,FF,0,1,0	Gain State 2	2R0	4	0	4,747,767:84:0	
184	98	326	01:57:14.533	165DB4A	7SCAN	NORM,319,125,-14	Check S/P Position	2R0	4	0	4,747,767:90:0	
185	98	326	01:57:19.200	18JNJUPRTS02*		-----START		2R0	4	0	:	:
186	98	326	01:58:11.200	125DB4B	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	2R0	4	0	4,747,768:84:0	
187	98	326	01:58:11.200	125DB11A	NIMSNIT	GE	#### GROUP END INIT	2R0	4	0	4,747,768:84:0	
188	98	326	02:00:12.533	127DB	NIMSTAB	GS	%% %% GROUP START TAB	2R0	4	0	4,747,770:84:0	
189	98	326	02:00:12.533	127DB4A	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,747,770:84:0	
190	98	326	02:00:13.200	127DB4B	37TEB	04,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	4,747,770:85:0	
191	98	326	02:00:21.200	127DB11A	NIMSTAB	GE	%% %% GROUP END TAB	2R3	4	0	4,747,771:06:0	
192	98	326	02:01:08.533	117DB	CSMOS	GS	**** GROUP START CSMOS	2R3	4	0	4,747,771:77:0	
193	98	326	02:01:16.533	165DB4B	7VECT		Inert vect update UTC	2R3	4	0	4,747,771:89:0	
194	98	326	02:01:17.866	117DB105A106A4A	7STRP	-0,01015,0,0,0,0	Slew =,0,06	2R3	4	0	4,747,772:00:0	
195	98	326	02:01:21.866	432DB6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	2R3	4	0	4,747,772:06:0	
196	98	326	02:04:09.200	117DB105A106A4B	7STRP	0,014001,-0,0080	Slew =12,01	2R3	4	0	4,747,774:75:0	
197	98	326	02:04:21.200	117DB105A106A4C	7STRP	-0,01015,0,0,0,0	Slew =,0,06	2R3	4	0	4,747,775:02:0	
198	98	326	02:07:12.533	117DB105A106A4D	7STRP	0,014001,-0,0080	Slew =12,01	2R3	4	0	4,747,777:77:0	
199	98	326	02:07:24.533	117DB105A106A4E	7STRP	-0,01015,0,0,0,0	Slew =,0,06	2R3	4	0	4,747,778:04:0	
200	98	326	02:07:59.866	488AC6A	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	2R3	4	0	4,747,778:57:0	
201	98	326	02:10:15.866	117DB11A	CSMOS	GE	**** GROUP END CSMOS	2R3	4	0	4,747,780:79:0	
202	98	326	02:11:27.200	432DY6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	2R3	4	0	4,747,782:04:0	
203	98	326	02:11:28.534	18JNJUPRTS02*		-----STOP		2R3	4	0	:	:
204	98	326	03:11:03.866	192GB4A	7CONE	17,4,0,0	Check S/P Position	2R3	4	0	4,747,841:00:0	
205	98	326	03:14:05.866	176GB6A	6TMREC	BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,747,844:00:0	
206	98	326	03:16:20.533	176GB6B	6TMREC	NRC	NO RECORD Record Mode Change	2R3	4	0	4,747,846:20:0	
207	98	326	03:16:22.533	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,747,846:23:0	
208	98	326	03:16:22.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC *5746.37 +/-	2R3	4	0	4,747,846:23:0	
209	98	326	03:16:23.933		DMS:	: *US AT_SP	P7, TRACK 1, FWD, TIC *5746.49 +/-	2R3	4	0	4,747,846:25:1	
210	98	326	03:16:29.200		DMS:	: *US RD	P7, TRACK 1, FWD, TIC *5747.72 +/-	2R3	4	0	4,747,846:33:0	
211	98	326	03:16:30.400		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC *5747.78 +/-	2R3	4	0	4,747,846:34:8	
212	98	326	03:16:31.800		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC *5747.66 +/-	2R3	4	0	4,747,846:36:9	
213	98	326	03:16:32.533		DMS:	: *RECORD	P7, TRACK 2, REV, TIC *5747.49 +/-	2R3	4	0	4,747,846:38:0	
214	98	326	03:16:43.866		DMS:	: *RUNDOWN	P7, TRACK 2, REV, TIC *5744.83 +/-	2R3	4	0	4,747,846:55:0	
215	98	326	03:16:43.866	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,747,846:55:0	
216	98	326	03:16:45.066		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5744.77 +/-	2R3	4	0	4,747,846:56:8	
217	98	326	04:22:17.200	488AC6B	6TMSED	FILL,EL5	Sci, Eng, and D/L Chan	2R3	4	0	4,747,911:40:0	
218	98	326	04:56:23.866	488AC6C	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	2R3	4	0	4,747,945:16:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MFI
219	98	326	06:25:15.867	18NNGLOBAL01-	-----START-----						
220	98	326	06:35:22.533	18ENGL0BAL01-	-----START-----						
221	98	326	06:35:22.533	18NNGLOBAL01-	-----STOP-----						
222	98	326	07:11:46.533	18ENGL0BAL01-	-----STOP-----						
223	98	326	11:40:43.866	18NNSUCOMP01-	-----START-----						
224	98	326	11:50:50.533	18NNSUCOMP01-	-----STOP-----						
225	98	326	11:51:51.199	18NNSUCOMP01-	-----START-----						
226	98	326	11:56:54.533	18NNSUCOMP01-	-----STOP-----						
227	98	326	11:56:54.533	18NNSUCOMP02-	-----START-----						
228	98	326	11:57:45.000	18NNDAC_01-	-----START-----						
229	98	326	11:57:46.000	18NNDAC_01-	-----STOP-----						
230	98	326	12:12:55.000	18NNDAC_02-	-----START-----						
231	98	326	12:12:56.000	18NNDAC_02-	-----STOP-----						
232	98	326	12:18:08.533	18NNSUCOMP03-	-----START-----						
233	98	326	12:28:15.199	18NNSUCOMP03-	-----STOP-----						
234	98	326	12:29:15.866	18NNSUCOMP02-	-----STOP-----						
235	98	326	12:29:15.866	18NNSUCOMP03-	-----START-----						
236	98	326	12:37:21.199	18NNSUCOMP03-	-----STOP-----						
237	98	326	15:42:23.199	18NNGLOBAL02-	-----START-----						
238	98	326	15:52:29.866	18NNGLOBAL02-	-----STOP-----						
239	98	326	16:42:02.533	18NNGLOBAL02-	-----START-----						
240	98	326	17:27:32.533	18ENGL0BAL02-	-----STOP-----						
241	98	326	17:38:39.866	18NNJUPRTS03-	-----START-----						
242	98	326	17:48:46.533	18NNJUPRTS03-	-----STOP-----						
243	98	326	17:49:47.200	18JNJUPRTS03*	-----START-----						
244	98	326	18:03:56.533	18JNJUPRTS03*	-----STOP-----						
245	98	327	03:46:20.533	18NNHRSPEC01-	-----START-----						
246	98	327	03:56:27.200	18NNHRSPEC01-	-----STOP-----						
247	98	327	03:56:27.200	18NNHRSPEC01-	-----STOP-----						
248	98	327	04:05:22.533	18NNHRSPEC01-	-----STOP-----						
249	98	327	04:28:48.533	18NNCHOP0F01-	-----START-----						
250	98	327	04:38:55.200	18NNCHOP0F01-	-----STOP-----						
251	98	327	18:12:01.133	20ZS6A	6CKSUM MAG.4040.46F0					4,750,156:21:0	
252	98	327	18:12:41.133	20ZS6B	6MROH 12,2282,0,A10	read from LLM1A12,2282,0,A1				4,750,156:81:0	
253	98	327	18:12:41.133	20ZS6B	6MROH	12 read from LLM1A12,2282,0,A1				4,750,156:81:0	
254	98	327	18:19:59.800	20ZU3Q	37HR	1 Replacement Heaters OFF				4,750,164:11:0	
255	98	327	18:20:01.800	20ZU3S	37HR	2 Replacement Heaters OFF				4,750,164:14:0	
256	98	327	18:20:27.800	20ZU3R	37A	1 NIMS Power ON	260	4	0	4,750,164:53:0	
257	98	327	18:20:29.800	20ZU3T	37A	2 NIMS Power ON Phase 0	260	4	0	4,750,164:56:0	
258	98	327	18:22:29.133	20ZU4A	37IST 1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,750,166:53:0	
259	98	327	18:52:59.800	41V99A	POWER PWR MODE change	Change to Maneuver/Playback Mode	2R0	4	0	4,750,196:69:0	
260	98	327	18:54:53.800	41V3G	40T1P	1 PCT Heater 1 ON (primary relay)	2R0	4	0	4,750,198:58:0	
261	98	327	18:55:03.800	41V3H	40T1P	2 PCT Heater 1 ON (primary relay)	2R0	4	0	4,750,198:73:0	
262	98	327	18:55:13.800	41V3I	40T2	1 PCT Heater 2 ON	2R0	4	0	4,750,198:88:0	
263	98	327	18:55:23.800	41V3J	40T2	2 PCT Heater 2 ON	2R0	4	0	4,750,199:12:0	
264	98	327	19:00:03.800	20RA6A	6MROH 44,2266,0,A10	read from LLM2A44,2266,0,A1	2R0	4	0	4,750,203:68:0	
265	98	327	19:02:03.800	20RA6B	6MROH 45,2255,0,B10	read from LLM2B45,2255,0,B1	2R0	4	0	4,750,205:66:0	
266	98	327	20:05:03.800	20UP4A	7SAFE STOP	SIP NO MOVEMENT	2R0	4	0	4,750,268:03:0	
267	98	327	20:05:53.800	20UP4B	7SLEW DIS POS,0,0	Stator movement	2R0	4	0	4,750,268:78:0	
268	98	328	00:59:59.800	DMS:	: READY	RDY, TRACK 2, REV, TIC 5744.77 +/-	2R0	4	0	4,750,559:66:0	
269	98	328	01:00:00.000	20A3EW	37A Final Condition	NIMS Power ON	2R0	4	0	4,750,559:66:3	
270	98	328	01:00:00.000	20A3EX	37HR Final Condition	Replacement Heaters OFF	2R0	4	0	4,750,559:66:3	
271	98	328	01:00:00.000	20A3EY	37C1PR Final Condition	Optics Heater 1 OFF (primary relay)	2R0	4	0	4,750,559:66:3	
272	98	328	01:00:00.000	20A3EZ	37C2PR Final Condition	Optics Heater 2 OFF (primary relay)	2R0	4	0	4,750,559:66:3	
273	98	328	01:00:00.000	20A3FA	37F1PR Final Condition	Radiator Flash Heater OFF (primary relay)	2R0	4	0	4,750,559:66:3	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
274	98	328	01:00:00.000	20A3FB	37F2PR	Final Condition	Shield Flash Heater OFF (primary relay)	2R0	4	0	4,750,559:66:3	
275	98	328	01:00:00.000	20A3FD	40HRPR	Final Condition	RCT Heater OFF (primary relay)	2R0	4	0	4,750,559:66:3	
276	98	328	01:00:00.000	20A3FE	40T1P	Final Condition	PCT Heater 1 ON (primary relay)	2R0	4	0	4,750,559:66:3	
277	98	328	01:00:00.000	20A3FF	40T2	Final Condition	PCT Heater 2 ON	2R0	4	0	4,750,559:66:3	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1	98	328	00:59:59.800		DMS: : READY	RDY, TRACK 2, REV, TIC, 5744.77 +/-	2R0	4	0	4,750,559:66:0	
2	98	328	01:00:00.000	20A3FF	40T2 Initial Condition	PCT Heater 2 ON	2R0	4	0	4,750,559:66:3	
3	98	328	01:00:00.000	20A3EW	37A Initial Condition	NIMS Power ON Phase 0	2R0	4	0	4,750,559:66:3	
4	98	328	01:00:00.000	20A3EX	37HR Initial Condition	Replacement Heaters OFF	2R0	4	0	4,750,559:66:3	
5	98	328	01:00:00.000	20A3EY	37C1PR Initial Condition	Optics Heater 1 OFF (primary relay)	2R0	4	0	4,750,559:66:3	
6	98	328	01:00:00.000	20A3EZ	37C2PR Initial Condition	Optics Heater 2 OFF (primary relay)	2R0	4	0	4,750,559:66:3	
7	98	328	01:00:00.000	20A3FA	37F1PR Initial Condition	Radiator Flash Heater OFF (primary relay)	2R0	4	0	4,750,559:66:3	
8	98	328	01:00:00.000	20A3FB	37F2PR Initial Condition	Shield Flash Heater OFF (primary relay)	2R0	4	0	4,750,559:66:3	
9	98	328	01:00:00.000	20A3FD	40HRPR Initial Condition	RCT Heater OFF (primary relay)	2R0	4	0	4,750,559:66:3	
10	98	328	01:00:00.000	20A3FE	40T1P Initial Condition	PCT Heater 1 ON (primary relay)	2R0	4	0	4,750,559:66:3	
11	98	328	01:01:00.466	488AA6A	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,750,560:66:0	
12	98	328	01:01:15.800	432NA6B	6RTDS2 NIMDSL, AACDSL, RT	NIMS RT DESELECTAACS DESELECT	2R0	4	0	4,750,560:89:0	
13	98	328	01:05:03.800	20WA4A	7SAFE STOP	S/P NO MOVEMENT	2R0	4	0	4,750,564:67:0	
14	98	328	01:05:53.800	20WA4B	7SLEW DIS, POS, 0.0	Stator movement	2R0	4	0	4,750,565:51:0	
15	98	328	01:07:21.133	176SA6A	6TMREG RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	2R0	4	0	4,750,567:00:0	
16	98	328	05:55:24.466	488AA6B	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,750,851:81:0	
17	98	328	06:36:15.800	488AA6C	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,750,892:27:0	
18	98	328	06:42:20.466	488AA6D	6TMSED FILL,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,750,898:28:0	
19	98	328	08:38:33.800	488AB6A	6TMSED NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,751,013:23:0	
20	98	328	10:00:44.466	488AB6B	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,751,094:48:0	
21	98	328	13:19:08.466	488AB6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,751,290:68:0	
22	98	328	13:55:24.466	488AB6D	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,751,326:56:0	
23	98	328	14:23:08.466	488AB6E	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,751,354:04:0	
24	98	328	16:07:40.466	488AC6A	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,751,457:39:0	
25	98	328	16:34:59.800	488AC6B	6TMSED NORM,AH6	Sci, Eng, and D/L Chan	2R0	4	0	4,751,484:41:0	
26	98	328	16:38:35.133	176SH6A	6TMREC PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2R0	4	0	4,751,488:00:0	
27	98	328	17:08:59.800	20SQ4I	7MODE INT	AACS INERTIAL MODE	2R0	4	0	4,751,518:07:0	
28	98	328	17:23:59.800	20SQ4K	7SLEW INIT, POS, 17.45	Stator movement	2R0	4	0	4,751,532:83:0	
29	98	328	17:35:59.800	20SQ4L	7SLEW DIS, POS, 0.0	Stator movement	2R0	4	0	4,751,544:71:0	
30	98	328	17:42:59.800	20SQ4M	7SLEW INIT, NEG, 17.45	Stator movement	2R0	4	0	4,751,551:64:0	
31	98	328	17:54:59.800	20SQ4N	7SLEW DIS, POS, 0.0	Stator movement	2R0	4	0	4,751,563:52:0	
32	98	328	18:06:59.800	20SQ4AH	7MODE CRU	AACS CRUISE MODE	2R0	4	0	4,751,575:40:0	
33	98	328	18:23:03.800	20ST4A	7SAFE STOP	S/P NO MOVEMENT	2R0	4	0	4,751,591:30:0	
34	98	328	18:23:53.800	20ST4B	7SLEW DIS, POS, 0.0	Stator movement	2R0	4	0	4,751,592:14:0	
35	98	328	18:24:45.133	176SJ6A	6TMREG RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	2R0	4	0	4,751,593:00:0	
36	98	328	18:42:59.800	488AC6C	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,751,611:04:0	
37	98	328	21:04:12.466	488AC6D	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,751,750:64:0	
38	98	328	21:57:32.466	488AC6E	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,751,803:41:0	
39	98	328	22:37:45.800	488AD6A	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,751,843:21:0	
40	98	328	23:06:51.800	488AD6B	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,751,872:01:0	
41	98	328	23:59:59.800	481UB4A	7VECT	Inert vect update UTC	2R0	4	0	4,751,924:51:0	
42	98	329	03:00:28.400	488AD6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,752,103:05:0	
43	98	329	03:43:08.400	488AD6D	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,752,145:23:0	
44	98	329	04:12:47.733	488AD6E	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,752,174:53:0	
45	98	329	04:46:53.733	488AE6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,752,208:28:0	
46	98	329	13:10:36.400	488AF6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,752,706:44:0	
47	98	329	14:16:44.400	488AF6B	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,752,771:81:0	
48	98	329	14:57:52.400	488AF6C	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,752,812:52:0	
49	98	329	15:26:58.400	488AF6D	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,752,841:32:0	
50	98	329	15:52:44.400	488AF6E	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,752,866:76:0	
51	98	329	15:52:59.733	488AG6A	6TMSED NORM,AH6	Sci, Eng, and D/L Chan	2R0	4	0	4,752,867:08:0	
52	98	329	15:57:57.733	176SB6A	6TMREC PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2R0	4	0	4,752,872:00:0	
53	98	329	16:08:59.733	20AA4C	7STAT 17.45, 260.8759.5	Stator inertial point	2R0	4	0	4,752,882:83:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	98	329	16:29:59.733	474AA416A4B	7MODE	INT	AACS INERTIAL MODE	2R0	4	0	4,752,903.62:0	
55	98	329	16:31:59.733	474AA416A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	2R0	4	0	4,752,905.60:0	
56	98	329	16:32:19.733	20AA4D	7STAT	17.45,260.8759,5	Stator inertial point	2R0	4	0	4,752,905.90:0	
57	98	329	16:36:13.733	474AA416A4E	7BURN	.260,875896,5.54	ALERT -- Thruster fire	2R0	4	0	4,752,909.77:0	
58	98	329	16:45:37.066	20AA4F	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	4,752,919.12:0	
59	98	329	16:51:29.066	20AA4G	7MODE	CRU	AACS CRUISE MODE	2R0	4	0	4,752,924.85:0	
60	98	329	17:15:45.066	20AA4L	7STAT	17.45,260.8759,5	Stator inertial point	2R0	4	0	4,752,948.85:0	
61	98	329	17:18:45.066	20AA4O	7MODE	INT	AACS INERTIAL MODE	2R0	4	0	4,752,951.82:0	
62	98	329	17:20:45.066	474AA416A4G	7BURN	AT,260.875896,5.5	ALERT -- Thruster fire	2R0	4	0	4,752,953.80:0	
63	98	329	17:29:17.066	20AA4Q	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	4,752,962.29:0	
64	98	329	17:34:09.066	20AA4R	7MODE	CRU	AACS CRUISE MODE	2R0	4	0	4,752,967.12:0	
65	98	329	18:41:41.066	20AB4A	7SAFE	STOP	S/P NO MOVEMENT	2R0	4	0	4,753,033.84:0	
66	98	329	18:42:31.066	20AB4B	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	4,753,034.68:0	
67	98	329	18:55:54.400	432JN431A6A	6RCDL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R0	4	0	4,753,047.90:0	
68	98	329	18:55:55.066	432JN6A	6RTSL1		R/T Select of DDS and	2R0	4	0	4,753,048.00:0	
69	98	329	20:59:56.400	488AG6B	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	2R0	4	0	4,753,170.60:0	
70	98	329	21:53:16.400	488AH6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2R0	4	0	4,753,223.37:0	
71	98	329	22:00:59.733	488AH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,753,231.04:0	
72	98	329	22:01:57.733	176SC6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	2R0	4	0	4,753,232.00:0	
73	98	329	23:02:01.733	488AH6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,753,262.57:0	
74	98	329	23:02:01.733	488AH6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,753,291.37:0	
75	98	330	03:32:28.400	488AH6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,753,558.80:0	
76	98	330	04:19:20.400	488AI6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,753,605.21:0	
77	98	330	04:46:10.400	488AI6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,753,631.70:0	
78	98	330	06:01:48.400	488AI6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,753,706.52:0	
79	98	330	10:45:32.333	488AJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,753,987.17:0	
80	98	330	11:48:04.333	20OB6A	6HICON			2R0	4	0	4,754,049.03:0	
81	98	330	11:59:09.000	432NB431A6A	6RCDL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R0	4	0	4,754,059.90:0	
82	98	330	11:59:09.666	432NB6B	6RTSL2	NIMNCG,AACSEL,RT	AACS SELECT	2R0	4	0	4,754,060.00:0	
83	98	330	11:59:09.666	432NB6A	6RTSL1		R/T Select of DDS and	2R0	4	0	4,754,060.00:0	
84	98	330	13:14:52.333	488AJ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,754,134.80:0	
85	98	330	13:44:44.333	488AJ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,754,164.38:0	
86	98	330	13:50:15.666	488AJ6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,754,169.80:0	
87	98	330	13:55:24.333	488AJ6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2R0	4	0	4,754,174.88:0	
88	98	330	14:10:20.333	488AK6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,754,189.67:0	
89	98	330	18:09:03.000	488AK6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,754,425.75:0	
90	98	330	21:19:08.333	488AL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,754,613.75:0	
91	98	330	22:55:08.333	488AL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,754,708.70:0	
92	98	330	23:23:02.333	488AL6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,754,736.33:0	
93	98	330	23:31:24.333	488AL6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,754,744.58:0	
94	98	331	00:09:01.000	488AL6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,754,781.76:0	
95	98	331	02:54:04.333	488AM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,754,945.07:0	
96	98	331	03:28:12.333	488AM6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,754,978.76:0	
97	98	331	05:57:32.333	488AM6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,755,126.48:0	
98	98	331	08:48:03.666	488AM6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,755,295.16:0	
99	98	331	08:50:20.333	488AM6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2R0	4	0	4,755,297.39:0	
100	98	331	13:32:56.333	488AN6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R0	4	0	4,755,576.84:0	
101	98	331	13:42:36.333	488AN6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,755,586.44:0	
102	98	331	14:53:00.333	488AN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,755,656.10:0	
103	98	331	15:03:11.666	488AN6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,755,666.17:0	
104	98	331	15:32:17.666	488AN6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,755,694.88:0	
105	98	331	20:53:32.266	488AO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,756,012.62:0	
106	98	331	21:17:00.266	488AO6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,756,035.81:0	
107	98	331	22:16:44.266	488AO6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,756,094.88:0	
108	98	331	22:24:37.600	488AO6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,756,102.70:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	98	331	22:51:26.933	488AO6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,756,129:27:0	
110	98	332	02:49:48.266	488AP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,756,365:03:0	
111	98	332	03:21:48.266	488AP6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,756,396:62:0	
112	98	332	05:57:32.266	488AP6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,756,550:64:0	
113	98	332	10:34:52.266	488AQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,756,824:90:0	
114	98	332	13:08:28.266	488AQ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,756,976:82:0	
115	98	332	13:38:20.266	488AQ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,757,006:40:0	
116	98	332	14:08:12.266	488AQ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,757,035:89:0	
117	98	332	15:46:20.266	488AQ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,757,133:03:0	
118	98	332	21:08:28.266	488AR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,757,451:57:0	
119	98	332	22:23:08.266	488AR6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,757,525:43:0	
120	98	333	02:43:24.200	488AR6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,757,782:80:0	
121	98	333	03:21:48.200	488AS6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,757,820:78:0	
122	98	333	05:57:32.200	488AS6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,757,974:80:0	
123	98	333	10:24:12.200	488AT6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,758,238:56:0	
124	98	333	13:04:12.200	488AT6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,758,396:78:0	
125	98	333	13:34:04.200	488AT6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,758,426:36:0	
126	98	333	14:01:48.200	488AT6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,758,453:75:0	
127	98	333	15:46:20.200	488AT6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,758,557:19:0	
128	98	333	20:59:56.200	488AU6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,758,867:33:0	
129	98	333	21:17:00.200	488AU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,758,884:22:0	
130	98	333	22:12:28.200	488AU6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,758,939:09:0	
131	98	334	02:43:24.200	488AU6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,759,207:05:0	
132	98	334	03:17:32.200	488AV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,759,240:74:0	
133	98	334	06:06:04.200	488AV6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,759,407:45:0	
134	98	334	10:09:16.133	488AW6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,759,648:02:0	
135	98	334	11:59:26.133	432NC6B	6RTDS2	NIMNCG,AACDSL,RT	AACS DESELECT	2R0	4	0	4,759,756:89:0	
136	98	334	12:59:56.133	488AW6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,759,816:74:0	
137	98	334	13:29:48.133	488AW6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2R0	4	0	4,759,846:32:0	
138	98	334	13:29:48.800	488AW6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2R0	4	0	4,759,846:33:0	
139	98	334	13:59:40.133	488AW6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,759,875:81:0	
140	98	334	16:09:20.800	488AX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,760,004:13:0	
141	98	334	17:28:40.800	488AX6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,760,082:55:0	
142	98	334	17:57:23.466	176ST6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2R0	4	0	4,760,111:00:0	
143	98	334	17:57:46.800	488AX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,760,111:35:0	
144	98	334	18:02:00.133	20UQ4B	7SLEW	DIS.POS.0.0	Stator movement	2R0	4	0	4,760,115:51:0	
145	98	334	18:03:00.133	20UQ4D	7MODE	SPNL	AACS ALL-SPIN LOW	2R0	4	0	4,760,116:50:0	
146	98	334	18:05:00.133	20UQ4E	7SAFE	UNSTOW	S/P TO 153 deg cone	2R0	4	0	4,760,118:48:0	
147	98	334	18:10:30.133	20UQ4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2R0	4	0	4,760,123:88:0	
148	98	334	18:10:30.800	20UQ4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2R0	4	0	4,760,123:89:0	
149	98	334	18:10:50.800	20UQ4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2R0	4	0	4,760,124:28:0	
150	98	334	18:10:51.466	20UQ4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2R0	4	0	4,760,124:29:0	
151	98	334	18:11:11.466	20UQ4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2R0	4	0	4,760,124:59:0	
152	98	334	18:11:12.133	20UQ4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2R0	4	0	4,760,124:60:0	
153	98	334	18:11:22.133	20UQ4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2R0	4	0	4,760,124:75:0	
154	98	334	18:11:22.800	20UQ4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2R0	4	0	4,760,124:76:0	
155	98	334	18:11:32.800	20UQ4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2R0	4	0	4,760,125:00:0	
156	98	334	18:11:33.466	20UQ4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2R0	4	0	4,760,125:01:0	
157	98	334	18:13:20.133	20UQ4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2R0	4	0	4,760,126:70:0	
158	98	334	18:13:20.800	20UQ4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2R0	4	0	4,760,126:71:0	
159	98	334	18:13:40.800	20UQ4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2R0	4	0	4,760,127:10:0	
160	98	334	18:13:41.466	20UQ4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2R0	4	0	4,760,127:11:0	
161	98	334	18:14:01.466	20UQ4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2R0	4	0	4,760,127:41:0	
162	98	334	18:14:02.133	20UQ4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2R0	4	0	4,760,127:42:0	
163	98	334	18:14:12.133	20UQ4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2R0	4	0	4,760,127:57:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	98	334	18:14:12.800	20UQ4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2R0	4	0	4,760,127:58:0	
165	98	334	18:14:22.800	20UQ4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2R0	4	0	4,760,127:73:0	
166	98	334	18:14:23.466	20UQ4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2R0	4	0	4,760,127:74:0	
167	98	334	18:15:20.133	20UQ4Z	7MODE	CRU	AACS CRUISE MODE	2R0	4	0	4,760,128:68:0	
168	98	334	18:40:04.133	20UJ4A	7SAFE	STOP	S/P NO MOVEMENT	2R0	4	0	4,760,153:19:0	
169	98	334	18:40:54.133	20UJ4B	7SLEW	DIS_POS,0.0	Stator movement	2R0	4	0	4,760,154:03:0	
170	98	334	18:42:53.466	176SU6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	2R0	4	0	4,760,156:00:0	
171	98	334	21:49:00.133	488AX6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,760,340:06:0	
172	98	334	23:03:40.133	488AY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,760,413:83:0	
173	98	335	00:10:06.800	488AY6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,760,479:57:0	
174	98	335	00:36:56.133	488AY6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,760,506:14:0	
175	98	335	02:46:32.800	488AY6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,760,634:31:0	
176	98	335	02:51:56.133	488AY6E	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,760,639:61:0	
177	98	335	08:37:26.800	488AZ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,760,981:35:0	
178	98	335	09:47:56.133	488AZ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,761,051:09:0	
179	98	335	12:49:16.133	488AZ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,761,230:40:0	
180	98	335	13:29:48.133	488AZ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,761,270:48:0	
181	98	335	14:01:48.133	488AZ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,761,302:16:0	
182	98	335	15:52:44.133	488BA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,761,411:81:0	
183	98	335	19:30:14.066	431TMA6A	6RCSEL	DDSEL,PLSNCG,EP	Record Select (DDS on)	2R0	4	0	4,761,627:00:0	
184	98	335	20:34:20.066	488BA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,761,690:36:0	
185	98	335	20:49:16.066	488BA6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,761,705:15:0	
186	98	335	21:10:36.066	488BA6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,761,726:24:0	
187	98	335	22:12:28.066	488BB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,761,787:41:0	
188	98	336	02:34:52.066	488BB6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,762,046:88:0	
189	98	336	03:17:32.066	488BB6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,762,089:15:0	
190	98	336	06:46:36.066	488BC6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2R0	4	0	4,762,295:85:0	
191	98	336	09:13:48.066	488BC6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,762,441:47:0	
192	98	336	12:42:52.066	488BC6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,762,648:26:0	
193	98	336	13:23:24.066	488BD6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R0	4	0	4,762,688:34:0	
194	98	336	13:25:05.400	488BD6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2R0	4	0	4,762,690:04:0	
195	98	336	13:44:44.066	488BD6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,762,709:43:0	
196	98	336	16:38:08.066	488BD6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	4,762,880:88:0	
197	98	336	20:23:40.066	488BE6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,763,104:02:0	
198	98	336	20:34:20.066	488BE6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,763,114:52:0	
199	98	336	21:36:12.066	488BE6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,763,175:69:0	
200	98	336	22:09:00.733	488BE6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,763,208:19:0	
201	98	336	22:38:06.733	488BE6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	4,763,236:90:0	
202	98	337	05:42:36.000	488BF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	4,763,656:74:0	
203	98	337	05:59:53.333	33A4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	260	4	0	4,763,673:83:0	
204	98	337	06:00:54.000	33B4A	37IST	1,0,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	200	4	0	4,763,674:83:0	
205	98	337	06:27:24.000	488BF6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,763,701:11:0	
206	98	337	07:40:26.666	488BF6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	4,763,773:33:0	
207	98	337	08:07:16.000	488BF6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,763,799:81:0	
208	98	337	12:38:36.000	488BG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,764,068:22:0	
209	98	337	13:16:02.666	488BG6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	4,764,105:25:0	
210	98	337	13:19:08.000	488BG6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	200	4	0	4,764,108:30:0	
211	98	337	13:55:24.000	488BG6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	4,764,144:18:0	
212	98	337	15:23:53.333	488BG6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,764,231:65:0	
213	98	337	16:05:32.000	488BH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,764,272:82:0	
214	98	337	20:04:28.000	488BH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,764,509:19:0	
215	98	337	22:18:52.000	488BI6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,764,642:12:0	
216	98	337	22:56:58.000	488BI6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,764,679:74:0	
217	98	337	23:05:48.000	488BI6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	4,764,688:50:0	
218	98	338	00:37:56.000	488BI6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,764,779:61:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	98	338	02:28:28.000	488BI6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,764,888:90:0	
220	98	338	03:11:08.000	488BJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,764,931:17:0	
221	98	338	12:34:19.933	488BK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,765,488:18:0	
222	98	338	12:57:47.933	488BK6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	200	4	0	4,765,511:37:0	
223	98	338	13:16:59.933	488BK6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,765,530:36:0	
224	98	338	14:36:29.266	488BK6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,765,609:01:0	
225	98	338	15:01:31.933	488BK6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	4,765,633:71:0	
226	98	338	15:07:23.266	488BL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,765,639:52:0	
227	98	338	21:08:27.933	488BM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,765,996:62:0	
228	98	338	22:50:27.266	488BM6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,766,097:50:0	
229	98	338	22:52:59.933	488BM6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	200	4	0	4,766,100:06:0	
230	98	338	23:03:39.933	488BM6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	4,766,110:56:0	
231	98	339	00:07:47.933	488BM6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,766,174:04:0	
232	98	339	04:49:15.933	488BN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,766,452:38:0	
233	98	339	06:08:11.933	488BN6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,766,530:44:0	
234	98	339	06:26:45.933	488BN6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,766,548:77:0	
235	98	339	06:35:55.933	488BN6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	4,766,557:83:0	
236	98	339	09:37:43.933	488BN6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,766,737:65:0	
237	98	339	12:27:55.933	488BO6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,766,906:04:0	
238	98	339	13:08:27.933	488BO6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,766,946:12:0	
239	98	339	13:51:07.933	488BO6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,766,988:30:0	
240	98	339	16:35:23.933	488BO6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,767,150:72:0	
241	98	339	17:59:57.200	488BO6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	4,767,234:38:0	
242	98	339	18:02:51.866	488BP6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,767,237:27:0	
243	98	339	20:35:20.533	488BP6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,767,388:09:0	
244	98	339	20:55:39.866	488BP6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,767,408:18:0	
245	98	339	22:16:43.866	488BP6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,767,488:34:0	
246	98	340	02:24:11.866	488BQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,767,733:11:0	
247	98	340	03:11:07.866	488BQ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,767,779:49:0	
248	98	340	12:17:15.866	488BR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,768,319:61:0	
249	98	340	13:04:11.866	488BR6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,768,366:08:0	
250	98	340	13:51:07.866	488BR6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,768,412:46:0	
251	98	340	17:11:39.866	488BR6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,768,610:76:0	
252	98	340	18:39:07.866	488BS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,768,697:31:0	
253	98	340	20:58:29.200	488BS6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	4,768,835:15:0	
254	98	340	21:02:03.866	488BS6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,768,838:64:0	
255	98	341	02:25:09.133	488BT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,769,158:22:0	
256	98	341	02:34:51.800	488BT6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,769,167:77:0	
257	98	341	03:11:07.800	488BT6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,769,203:65:0	
258	98	341	12:12:59.800	488BU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,769,739:57:0	
259	98	341	12:57:47.800	488BU6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,769,783:85:0	
260	98	341	14:26:55.133	488BU6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,769,872:07:0	
261	98	341	15:00:34.466	488BU6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,769,905:33:0	
262	98	341	15:10:03.800	488BU6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,769,914:68:0	
263	98	341	20:32:11.800	488BV6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,770,233:31:0	
264	98	341	22:38:03.800	488BV6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	200	4	0	4,770,357:75:0	
265	98	341	22:39:18.466	488BV6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	200	4	0	4,770,359:05:0	
266	98	341	22:50:51.800	488BV6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	4,770,370:44:0	
267	98	342	00:27:21.133	488BV6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,770,465:83:0	
268	98	342	02:55:30.466	488BW6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	4,770,612:40:0	
269	98	342	05:22:19.133	488BW6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,770,757:58:0	
270	98	342	12:02:19.733	488BX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,771,153:23:0	
271	98	342	12:51:23.733	488BX6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,771,201:71:0	
272	98	342	13:51:07.733	488BX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,771,260:78:0	
273	98	342	21:42:35.733	488BY6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,771,727:13:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
274	98	342	22:36:14.400	488BY6B	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,771,780:18:0	
275	98	343	02:14:52.400	488BY6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,771,996:39:0	
276	98	343	02:26:19.733	488BY6D	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,772,007:69:0	
277	98	343	03:11:07.733	488BY6E	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,772,052:06:0	
278	98	343	08:00:09.066	488BZ6A	6TMSED FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	4,772,337:83:0	
279	98	343	08:03:23.733	488BZ6B	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	4,772,341:11:0	
280	98	343	16:53:00.333	488CA6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,772,864:83:0	
281	98	343	17:07:00.333	20ZZ6B	6MROH 4.5B20,1,A2	read from HLM1A4.5B20,1,A2	200	4	0	4,772,878:69:0	
282	98	343	17:20:00.333	20ZZ6C	6MROH 5.5B20,1,B2	read from HLM1B5.5B20,1,B2	200	4	0	4,772,891:56:0	
283	98	343	18:15:00.333	488CA6B	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	4,772,946:01:0	
284	98	343	18:44:06.333	488CA6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,772,974:72:0	
285	98	343	19:58:03.666	488CA6D	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,773,047:85:0	
286	98	343	22:27:23.666	488CA6E	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	200	4	0	4,773,195:57:0	
287	98	343	22:29:01.666	488CB6A	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	200	4	0	4,773,197:22:0	
288	98	343	22:40:11.666	488CB6B	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,773,208:26:0	
289	98	344	02:14:43.666	488CB6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,773,420:42:0	
290	98	344	02:26:19.666	488CB6D	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,773,431:85:0	
291	98	344	03:11:07.666	488CB6E	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	4,773,476:22:0	
292	98	344	11:47:23.666	488CC6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,773,986:76:0	
293	98	344	12:40:43.666	488CC6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,774,039:53:0	
294	98	344	13:51:07.666	488CC6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,774,109:19:0	
295	98	344	14:31:04.333	20YC6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	4,774,148:65:0	
296	98	344	14:37:00.333	20ZY6B	6MROH 4.5B20,1,A2	read from HLM1A4.5B20,1,A2	200	4	0	4,774,154:53:0	
297	98	344	14:50:00.333	20ZY6C	6MROH 5.5B20,1,B2	read from HLM1B5.5B20,1,B2	200	4	0	4,774,167:40:0	
298	98	344	15:10:00.333	41YA99A	POWER PWR MODE change	Change to Data Taking Mode	200	4	0	4,774,187:20:0	
299	98	344	15:10:04.333	41YA3A	40T1PR	1 PCT Heater 1 OFF (primary relay)	200	4	0	4,774,187:26:0	
300	98	344	15:10:14.333	41YA3B	40T1PR	2 PCT Heater 1 OFF (primary relay)	200	4	0	4,774,187:41:0	
301	98	344	15:10:24.333	41YA3C	40T2R	1 PCT Heater 2 OFF	200	4	0	4,774,187:56:0	
302	98	344	15:10:34.333	41YA3D	40T2R	2 PCT Heater 2 OFF	200	4	0	4,774,187:71:0	
303	98	344	15:19:53.666	176SK6A	6TMREC TPB	TERMINATE PLAYBACK (PB CONTROL) Record Mo	200	4	0	4,774,197:00:0	
304	98	344	15:29:51.000	465KA6A	6DMSC P7,2	DMS Control Tape P/B 7.68kbps	200	4	0	4,774,206:77:0	
305	98	344	15:29:51.000		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5744.77 +/-	200	4	0	4,774,206:77:0	
306	98	344	15:29:52.400		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *5744.89 +/-	200	4	0	4,774,206:79:1	
307	98	344	15:29:57.666		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5746.13 +/-	200	4	0	4,774,206:87:0	
308	98	344	15:29:58.866		DMS: : *RUNUP	P7, TRACK *2, *REV, TIC *5746.19 +/-	200	4	0	4,774,206:88:8	
309	98	344	15:30:00.266		DMS: : *P_SLEW	P7, TRACK 2, REV, TIC *5746.07 +/-	200	4	0	4,774,206:90:9	
310	98	344	15:30:00.266		DMS: : *AT SPD	P7, TRACK 2, REV, TIC 5746.07 +/-	200	4	0	4,774,206:90:9	
311	98	344	15:31:43.666	465KA6B	6DMSC RDY,2	DMS Control Tape stop	200	4	0	4,774,208:64:0	
312	98	344	15:31:43.666		DMS: : *RUNDOWN	P7, TRACK 2, REV, TIC *5721.83 +/-	200	4	0	4,774,208:64:0	
313	98	344	15:31:44.866		DMS: : *READY	RDY, TRACK 2, REV, TIC *5721.77 +/-	200	4	0	4,774,208:65:8	
314	98	344	15:35:03.000	165JA4A	75SCAN NORM,56.923,16.7	Check S/P Position	200	4	0	4,774,211:90:0	
315	98	344	15:39:10.333	118JA	SMOS GS		200	4	0	4,774,216:06:0	
316	98	344	15:39:27.000	118JA110A11A4A	75TRP 0.0014,0.0,0.92,0.	Slew = 3.01	200	4	0	4,774,216:31:0	
317	98	344	15:41:59.666		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5721.77 +/-	200	4	0	4,774,218:78:0	
318	98	344	15:41:59.666	175JA422A6A	6DMSC R115,0	DMS Control Tape runup 115.2kb	200	4	0	4,774,218:78:0	
319	98	344	15:42:00.333	118JA11A	SMOS GE		200	4	0	4,774,218:79:0	
320	98	344	15:42:01.066		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *5721.89 +/-	200	4	0	4,774,218:80:1	
321	98	344	15:42:06.333		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5723.13 +/-	200	4	0	4,774,218:88:0	
322	98	344	15:42:07.533		DMS: : *RUNUP	R115, TRACK *2, *REV, TIC *5723.19 +/-	200	4	0	4,774,218:89:8	
323	98	344	15:42:11.000	175JA176A6A	6TMREC HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	200	4	0	4,774,219:04:0	
324	98	344	15:42:11.533		DMS: : *AT SPD	R115, TRACK 2, REV, TIC 5716.89 +/-	200	4	0	4,774,219:04:8	
325	98	344	15:42:11.533		DMS: : *RECORD	R115, TRACK 2, REV, TIC *5716.89 +/-	200	4	0	4,774,219:04:8	
326	98	344	15:42:15.000	165JB4A	75SCAN NORM,56.923,16.7	Check S/P Position	200	4	0	4,774,219:10:0	
327	98	344	15:42:20.333		DMS: : *RUNDOWN	R115, TRACK 2, REV, TIC *5685.95 +/-	200	4	0	4,774,219:18:0	
328	98	344	15:42:20.333	175JA422A6B	6DMSC RDY,0	DMS Control Tape stop	200	4	0	4,774,219:18:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
329	98	344	15:42:21.533		DMS: : *READY	RDY, TRACK 2, REV, TIC *5684.95 +/-	200	4	0	4,774,219:19:8	
330	98	344	15:44:13.666	118JB	SMOS GS		200	4	0	4,774,221:06:0	
331	98	344	15:44:51.000	118JB110A111A4A	7STRP 0.0014,0.0,0.182,0	Slew = 3.01	200	4	0	4,774,221:62:0	
332	98	344	15:49:54.333	118JB11A	GE		200	4	0	4,774,226:62:0	
333	98	344	15:50:09.000		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5684.95 +/-	200	4	0	4,774,226:84:0	
334	98	344	15:50:09.000	175JB422A6A	6DMSC R115.0	DMS Control Tape runup 115.2kb	200	4	0	4,774,226:84:0	
335	98	344	15:50:10.400		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *5685.07 +/-	200	4	0	4,774,226:86:1	
336	98	344	15:50:15.666		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5686.30 +/-	200	4	0	4,774,227:03:0	
337	98	344	15:50:16.866		DMS: : *RUNUP	R115, TRACK *2, *REV, TIC *5686.36 +/-	200	4	0	4,774,227:04:8	
338	98	344	15:50:20.333	175JB176A6A	6TMREC HIM	115.2 KBPS SSI + NIMS RECORD Record Mode	200	4	0	4,774,227:10:0	
339	98	344	15:50:20.866		DMS: : *AT SPD	R115, TRACK 2, REV, TIC 5680.06 +/-	200	4	0	4,774,227:10:8	
340	98	344	15:50:20.866		DMS: : *RECORD	R115, TRACK 2, REV, TIC *5680.06 +/-	200	4	0	4,774,227:10:8	
341	98	344	15:50:29.666		DMS: : *RUNDOWN	R115, TRACK 2, REV, TIC *5649.13 +/-	200	4	0	4,774,227:24:0	
342	98	344	15:50:29.666	175JB422A6B	6DMSC RDY,0	DMS Control Tape stop	200	4	0	4,774,227:24:0	
343	98	344	15:50:30.866		DMS: : *READY	RDY, TRACK 2, REV, TIC *5648.13 +/-	200	4	0	4,774,227:25:8	
344	98	344	15:51:13.666	165JC4A	7SCAN NORM,56.96,16.78	Check S/P Position	200	4	0	4,774,227:90:0	
345	98	344	15:54:17.000	118JC	SMOS GS		200	4	0	4,774,231:01:0	
346	98	344	15:54:27.000	118JC110A111A4A	7STRP 0.00102,0.0,0.26,0	Slew = 3.01	200	4	0	4,774,231:16:0	
347	98	344	15:55:19.000	118JC110A111A4B	7STRP -0.00612,0.00071	Slew = 3.01	200	4	0	4,774,232:03:0	
348	98	344	15:55:27.666	118JC110A111A4C	7STRP 0.00102,0.0,0.26,0	Slew = 3.01	200	4	0	4,774,232:16:0	
349	98	344	15:56:19.666	118JC110A111A4D	7STRP -0.00612,0.00071	Slew = 3.01	200	4	0	4,774,233:03:0	
350	98	344	15:56:28.333	118JC110A111A4E	7STRP 0.00102,0.0,0.26,0	Slew = 3.01	200	4	0	4,774,233:16:0	
351	98	344	15:57:09.666		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5648.13 +/-	200	4	0	4,774,233:78:0	
352	98	344	15:57:09.666	175JC422A6A	6DMSC R115.0	DMS Control Tape runup 115.2kb	200	4	0	4,774,233:78:0	
353	98	344	15:57:11.066		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *5648.25 +/-	200	4	0	4,774,233:80:1	
354	98	344	15:57:16.333		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5649.48 +/-	200	4	0	4,774,233:88:0	
355	98	344	15:57:17.533		DMS: : *RUNUP	R115, TRACK *2, *REV, TIC *5649.54 +/-	200	4	0	4,774,233:89:8	
356	98	344	15:57:20.333	118JC11A	SMOS GE		200	4	0	4,774,234:03:0	
357	98	344	15:57:21.000	175JC176A6A	6TMREC HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	200	4	0	4,774,234:04:0	
358	98	344	15:57:21.533		DMS: : *RECORD	R115, TRACK 2, REV, TIC *5643.24 +/-	200	4	0	4,774,234:04:8	
359	98	344	15:57:21.533		DMS: : *AT SPD	R115, TRACK 2, REV, TIC 5643.24 +/-	200	4	0	4,774,234:04:8	
360	98	344	15:57:40.333		DMS: : *RUNDOWN	R115, TRACK 2, REV, TIC *5577.15 +/-	200	4	0	4,774,234:33:0	
361	98	344	15:57:40.333	175JC422A6B	6DMSC RDY,0	DMS Control Tape stop	200	4	0	4,774,234:33:0	
362	98	344	15:57:41.533		DMS: : *READY	RDY, TRACK 2, REV, TIC *5576.15 +/-	200	4	0	4,774,234:34:8	
363	98	344	15:57:51.666	165JE4A	7SCAN NORM,301.121998,	Check S/P Position	200	4	0	4,774,234:50:0	
364	98	344	16:01:25.000	118JE	SMOS GS		200	4	0	4,774,238:06:0	
365	98	344	16:02:02.333	118JE110A111A4A	7STRP 0.00102,0.0,0.182,	Slew = 3.01	200	4	0	4,774,238:62:0	
366	98	344	16:06:05.000	118JE11A	SMOS GE		200	4	0	4,774,242:62:0	
367	98	344	16:10:31.000	118JF	SMOS GS		200	4	0	4,774,247:06:0	
368	98	344	16:11:25.666	118JF110A111A4A	7STRP 0.00102,0.0,0.1092	Slew = 3.01	200	4	0	4,774,247:88:0	
369	98	344	16:17:27.000		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5576.15 +/-	200	4	0	4,774,253:84:0	
370	98	344	16:17:27.000	175JD422A6A	6DMSC R115.0	DMS Control Tape runup 115.2kb	200	4	0	4,774,253:84:0	
371	98	344	16:17:28.400		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *5576.27 +/-	200	4	0	4,774,253:86:1	
372	98	344	16:17:29.666	118JF11A	SMOS GE		200	4	0	4,774,253:88:0	
373	98	344	16:17:33.666		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5577.50 +/-	200	4	0	4,774,254:03:0	
374	98	344	16:17:34.866		DMS: : *RUNUP	R115, TRACK *2, *REV, TIC *5577.56 +/-	200	4	0	4,774,254:04:8	
375	98	344	16:17:38.333	175JD176A6A	6TMREC HIM	115.2 KBPS SSI + NIMS RECORD Record Mode	200	4	0	4,774,254:10:0	
376	98	344	16:17:38.866		DMS: : *AT SPD	R115, TRACK 2, REV, TIC 5571.26 +/-	200	4	0	4,774,254:10:8	
377	98	344	16:17:38.866		DMS: : *RECORD	R115, TRACK 2, REV, TIC *5571.26 +/-	200	4	0	4,774,254:10:8	
378	98	344	16:17:47.666		DMS: : *RUNDOWN	R115, TRACK 2, REV, TIC *5540.32 +/-	200	4	0	4,774,254:24:0	
379	98	344	16:17:47.666	175JD422A6B	6DMSC RDY,0	DMS Control Tape stop	200	4	0	4,774,254:24:0	
380	98	344	16:17:48.866		DMS: : *READY	RDY, TRACK 2, REV, TIC *5539.32 +/-	200	4	0	4,774,254:25:8	
381	98	344	16:18:31.666	165JG4A	7SCAN NORM,293.815998,	Check S/P Position	200	4	0	4,774,254:90:0	
382	98	344	16:26:41.666	118JG	SMOS GS		200	4	0	4,774,263:06:0	
383	98	344	16:27:36.333	118JG110A111A4A	7STRP 0.002,0.0,0.182,0,	Slew = 3.01	200	4	0	4,774,263:88:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
384	98	344	16:28:37.000	118JG11A	SMOS GE		200	4	0	4,774,264:88:0	
385	98	344	17:01:56.333		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5539.32 +/-	200	4	0	4,774,297:84:0	
386	98	344	17:01:56.333	175JE422A6A	6DMSC R115.0	DMS Control Tape runup 115.2kb	200	4	0	4,774,297:84:0	
387	98	344	17:01:57.733		DMS: : *US AT_SP	P7, TRACK 1, FWD, TIC *5539.44 +/-	200	4	0	4,774,297:86:1	
388	98	344	17:02:03.000		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5540.68 +/-	200	4	0	4,774,298:03:0	
389	98	344	17:02:04.200		DMS: : *RUNUP	R115, TRACK *2, *REV, TIC *5540.74 +/-	200	4	0	4,774,298:04:8	
390	98	344	17:02:07.666	175JE176A6A	6TMREC HIM	115.2 KBPS SSI + NIMS RECORD Record Mode	200	4	0	4,774,298:10:0	
391	98	344	17:02:08.200		DMS: : *RECORD	R115, TRACK 2, REV, TIC *5534.44 +/-	200	4	0	4,774,298:10:8	
392	98	344	17:02:08.200		DMS: : *AT_SPD	R115, TRACK 2, REV, TIC 5534.44 +/-	200	4	0	4,774,298:10:8	
393	98	344	17:02:17.666		DMS: : *RUNDOWN	R115, TRACK 2, REV, TIC *5501.16 +/-	200	4	0	4,774,298:25:0	
394	98	344	17:02:17.666	175JE422A6B	6DMSC RDY,0	DMS Control Tape stop	200	4	0	4,774,298:25:0	
395	98	344	17:02:18.866		DMS: : *READY	RDY, TRACK 2, REV, TIC *5500.16 +/-	200	4	0	4,774,298:26:8	
396	98	344	17:39:00.000	18NNRELOAD01-	-----START-----		200	4	0	:	:
397	98	344	17:39:11.000	20FA5A	37PL	Program Load (halts microprocessor & unwri	200	4	0	4,774,334:69:0	
398	98	344	17:39:18.333	20FA5B	37MRL	Memory Realocate (software operates from R	200	4	0	4,774,334:80:0	
399	98	344	17:39:25.000	165FA4A	73SCAN	Check S/P Position	200	4	0	4,774,334:90:0	
400	98	344	17:39:26.333	20FA6A	6MCPY NIMS	NIMS,1000,LLM1A,7300,77F7	200	4	0	4,774,335:01:0	
401	98	344	17:39:36.333	20FA6B	6MCPY NIMS	NIMS,1598,LLM1A,77F8,781D	200	4	0	4,774,335:16:0	
402	98	344	17:39:46.333	20FA5C	37IRT	Instrument Reset (goes into POR state)	260	4	0	4,774,335:31:0	
403	98	344	17:39:47.666	20FA5D	37MIN	Memory Normal (software operates from ROM)	260	4	0	4,774,335:33:0	
404	98	344	17:40:19.000	20FA4A	37IST	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,774,335:80:0	
405	98	344	17:40:55.200	18NNRELOAD01-	-----STOP-----		2R0	4	0	:	:
406	98	344	17:41:00.000	18NNSTARCL01-	-----START-----		2R0	4	0	:	:
407	98	344	17:41:22.333	125FA	NIMSINIT GS	##### GROUP START INIT	2R0	4	0	4,774,336:84:0	
408	98	344	17:41:22.333	125FA4A	37IST	Gain State 2	2R0	4	0	4,774,336:84:0	
409	98	344	17:41:22.333	125FA11A	NIMSINIT GE	##### GROUP END INIT	2R0	4	0	4,774,336:84:0	
410	98	344	17:42:23.000	127FA	NIMSTAB GS	%% %% %% GROUP START TAB	2R0	4	0	4,774,337:84:0	
411	98	344	17:42:23.000	127FA4A	37IOP	Fixed Map, Grating Start Position =00	2R7	4	0	4,774,337:84:0	
412	98	344	17:42:23.666	127FA4B	37ETB	Loads wavelength edit table	2R7	4	0	4,774,337:85:0	
413	98	344	17:42:31.666	127FA11A	NIMSTAB GE	%% %% %% GROUP END TAB	2R7	4	0	4,774,338:06:0	
414	98	344	17:43:13.666	175FA422A6A	6DMSC R28.0	DMS Control Tape runup 28.8kbp	2R7	4	0	4,774,338:69:0	
415	98	344	17:43:13.666		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5500.16 +/-	2R7	4	0	4,774,338:69:0	
416	98	344	17:43:15.066	117FA	DMS: : *US RD	P7, TRACK 1, FWD, TIC *5501.51 +/-	2R7	4	0	4,774,338:71:1	
417	98	344	17:43:19.000		CSMOS GS	**** GROUP START CSMOS	2R7	4	0	4,774,338:77:0	
418	98	344	17:43:20.333		DMS: : *RUNUP	P7, TRACK 1, FWD, TIC *5501.57 +/-	2R7	4	0	4,774,338:79:0	
419	98	344	17:43:21.533		DMS: : *US RD	R28, TRACK *2, *REV, TIC *5501.57 +/-	2R7	4	0	4,774,338:80:8	
420	98	344	17:43:23.000	33E4A	37IST	Chopper ON, Sync, 63Hz (Ref)Gain State 4	467	4	0	4,774,338:83:0	
421	98	344	17:43:25.000	175FA176A6A	6TMREC MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	467	4	0	4,774,338:86:0	
422	98	344	17:43:25.533		DMS: : *AT_SPD	R28, TRACK 2, REV, TIC 5500.07 +/-	467	4	0	4,774,338:86:8	
423	98	344	17:43:25.533		DMS: : *RECORD	R28, TRACK 2, REV, TIC *5500.07 +/-	467	4	0	4,774,338:86:8	
424	98	344	17:43:25.533	18NNSTARCL01-	NIMPBK 301DA	NIMS STAR CALIBRATION	467	4	0	:	:
425	98	344	17:43:28.333	117FA105A106A4A	75TRP	Slew = 0.76	467	4	0	4,774,339:00:0	
426	98	344	17:43:34.333	117FA105A106A4B	75TRP	Slew =12.01	467	4	0	4,774,339:09:0	
427	98	344	17:43:39.666	117FA105A106A4C	75TRP	Slew = 0.76	467	4	0	4,774,339:17:0	
428	98	344	17:43:45.666	117FA105A106A4D	75TRP	Slew =12.01	467	4	0	4,774,339:26:0	
429	98	344	17:43:51.000	117FA105A106A4E	75TRP	Slew =-0.76	467	4	0	4,774,339:34:0	
430	98	344	17:43:57.000	117FA105A106A4F	75TRP	Slew =12.01	467	4	0	4,774,339:43:0	
431	98	344	17:44:02.333	117FA105A106A4G	75TRP	Slew =-0.76	467	4	0	4,774,339:51:0	
432	98	344	17:44:08.333	117FA105A106A4H	75TRP	Slew =12.01	467	4	0	4,774,339:60:0	
433	98	344	17:44:13.666	117FA105A106A4I	75TRP	Slew =-0.76	467	4	0	4,774,339:68:0	
434	98	344	17:44:19.666	117FA105A106A4J	75TRP	Slew =12.01	467	4	0	4,774,339:77:0	
435	98	344	17:44:24.333	127FB4A	37IOP 7.1	Fixed Map, Grating Start Position =01	467	4	1	4,774,339:84:0	
436	98	344	17:44:24.333	127FB	NIMSTAB GS	%% %% %% GROUP START TAB	467	4	1	4,774,339:84:0	
437	98	344	17:44:25.000	117FA105A106A4K	75TRP	Slew = 0.76	467	4	1	4,774,339:85:0	
438	98	344	17:44:25.000	127FB4B	37ETB	Loads wavelength edit table	467	4	1	4,774,339:85:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	98	344	17:44:31.000	117FA105A106A4L	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	1	4,774,340:03:0	
440	98	344	17:44:33.000	127FB11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	1	4,774,340:06:0	
441	98	344	17:44:36.333	117FA105A106A4M	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	1	4,774,340:11:0	
442	98	344	17:44:42.333	117FA105A106A4N	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	1	4,774,340:20:0	
443	98	344	17:44:47.666	117FA105A106A4O	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	1	4,774,340:28:0	
444	98	344	17:44:53.666	117FA105A106A4P	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	1	4,774,340:37:0	
445	98	344	17:44:59.000	117FA105A106A4Q	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	1	4,774,340:45:0	
446	98	344	17:45:05.000	117FA105A106A4R	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	1	4,774,340:54:0	
447	98	344	17:45:10.333	117FA105A106A4S	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	1	4,774,340:62:0	
448	98	344	17:45:16.333	117FA105A106A4T	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	1	4,774,340:71:0	
449	98	344	17:45:21.666	117FA105A106A4U	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	1	4,774,340:79:0	
450	98	344	17:45:25.000	127FC	NIMSTAB	GS	%%%%GROUP START TAB	467	4	1	4,774,340:84:0	
451	98	344	17:45:25.000	127FC4A	37IOP	7.2	Fixed Map, Grating Start Position =02	467	4	2	4,774,340:84:0	
452	98	344	17:45:25.666	127FC4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	2	4,774,340:85:0	
453	98	344	17:45:27.666	117FA105A106A4V	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	2	4,774,340:88:0	
454	98	344	17:45:33.000	117FA105A106A4W	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	2	4,774,341:05:0	
455	98	344	17:45:33.666	127FC11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	2	4,774,341:06:0	
456	98	344	17:45:39.000	117FA105A106A4X	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	2	4,774,341:14:0	
457	98	344	17:45:44.333	117FA105A106A4Y	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	2	4,774,341:22:0	
458	98	344	17:45:50.333	117FA105A106A4Z	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	2	4,774,341:31:0	
459	98	344	17:45:55.666	117FA105A106A4AA	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	2	4,774,341:39:0	
460	98	344	17:46:01.666	117FA105A106A4AB	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	2	4,774,341:48:0	
461	98	344	17:46:07.000	117FA105A106A4AC	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	2	4,774,341:56:0	
462	98	344	17:46:13.000	117FA105A106A4AD	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	2	4,774,341:65:0	
463	98	344	17:46:18.333	117FA105A106A4AE	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	2	4,774,341:73:0	
464	98	344	17:46:24.333	117FA105A106A4AF	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	2	4,774,341:82:0	
465	98	344	17:46:25.666	127FD4A	37IOP	7.3	Fixed Map, Grating Start Position =03	467	4	3	4,774,341:84:0	
466	98	344	17:46:25.666	127FD	NIMSTAB	GS	%%%%GROUP START TAB	467	4	3	4,774,341:84:0	
467	98	344	17:46:26.333	127FD4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	3	4,774,341:85:0	
468	98	344	17:46:29.666	117FA105A106A4AG	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	3	4,774,341:90:0	
469	98	344	17:46:34.333	127FD11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	3	4,774,342:06:0	
470	98	344	17:46:35.666	117FA105A106A4AH	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	3	4,774,342:08:0	
471	98	344	17:46:41.000	117FA105A106A4AI	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	3	4,774,342:16:0	
472	98	344	17:46:47.000	117FA105A106A4AJ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	3	4,774,342:25:0	
473	98	344	17:46:52.333	117FA105A106A4AK	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	3	4,774,342:33:0	
474	98	344	17:46:58.333	117FA105A106A4AL	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	3	4,774,342:42:0	
475	98	344	17:47:03.666	117FA105A106A4AM	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	3	4,774,342:50:0	
476	98	344	17:47:09.666	117FA105A106A4AN	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	3	4,774,342:59:0	
477	98	344	17:47:15.000	117FA105A106A4AO	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	3	4,774,342:67:0	
478	98	344	17:47:21.000	117FA105A106A4AP	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	3	4,774,342:76:0	
479	98	344	17:47:26.333	117FA105A106A4AQ	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	3	4,774,342:84:0	
480	98	344	17:47:26.333	127FE4A	37IOP	7.4	Fixed Map, Grating Start Position =04	467	4	4	4,774,342:84:0	
481	98	344	17:47:26.333	127FE	NIMSTAB	GS	%%%%GROUP START TAB	467	4	4	4,774,342:84:0	
482	98	344	17:47:27.000	127FE4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	4	4,774,342:85:0	
483	98	344	17:47:32.333	117FA105A106A4AR	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	4	4,774,343:02:0	
484	98	344	17:47:35.000	127FE11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	4	4,774,343:06:0	
485	98	344	17:47:37.666	117FA105A106A4AS	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	4	4,774,343:10:0	
486	98	344	17:47:43.666	117FA105A106A4AT	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	4	4,774,343:19:0	
487	98	344	17:47:49.000	117FA105A106A4AU	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	4	4,774,343:27:0	
488	98	344	17:47:55.000	117FA105A106A4AV	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	4	4,774,343:36:0	
489	98	344	17:48:00.333	117FA105A106A4AW	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	4	4,774,343:44:0	
490	98	344	17:48:06.333	117FA105A106A4AX	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	4	4,774,343:53:0	
491	98	344	17:48:11.666	117FA105A106A4AY	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	4	4,774,343:61:0	
492	98	344	17:48:17.666	117FA105A106A4AZ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	4	4,774,343:70:0	
493	98	344	17:48:23.000	117FA105A106A4BA	7STRP	0.002,0.0,0.0,0,0	Slew =-0.76	467	4	4	4,774,343:78:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	98	344	17:48:27.000	127FF	NIMSTAB	GS	%%%%GROUP START TAB	467	4	4	4,774,343:84:0	
495	98	344	17:48:27.000	127FF4A	37IOP	7.5	Fixed Map, Grating Start Position =05	467	4	5	4,774,343:84:0	
496	98	344	17:48:27.666	127FF4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	5	4,774,343:85:0	
497	98	344	17:48:29.000	117FA105A106A4BB	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	5	4,774,343:87:0	
498	98	344	17:48:34.333	117FA105A106A4BC	7STRP	-0.002,0.0,0.0,0	Slew =-0.76	467	4	5	4,774,344:04:0	
499	98	344	17:48:35.666	127FF11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	5	4,774,344:06:0	
500	98	344	17:48:40.333	117FA105A106A4BD	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	5	4,774,344:13:0	
501	98	344	17:48:45.666	117FA105A106A4BE	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	5	4,774,344:21:0	
502	98	344	17:48:51.666	117FA105A106A4BF	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	5	4,774,344:30:0	
503	98	344	17:48:57.000	117FA105A106A4BG	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	5	4,774,344:38:0	
504	98	344	17:49:03.000	117FA105A106A4BH	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	5	4,774,344:47:0	
505	98	344	17:49:08.333	117FA105A106A4BI	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	5	4,774,344:55:0	
506	98	344	17:49:14.333	117FA105A106A4BJ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	5	4,774,344:64:0	
507	98	344	17:49:19.666	117FA105A106A4BK	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	5	4,774,344:72:0	
508	98	344	17:49:25.666	117FA105A106A4BL	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	5	4,774,344:81:0	
509	98	344	17:49:27.666	127FG	NIMSTAB	GS	%%%%GROUP START TAB	467	4	5	4,774,344:84:0	
510	98	344	17:49:27.666	127FG4A	37IOP	7.6	Fixed Map, Grating Start Position =06	467	4	6	4,774,344:84:0	
511	98	344	17:49:28.333	127FG4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	6	4,774,344:85:0	
512	98	344	17:49:31.000	117FA105A106A4BM	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	6	4,774,344:89:0	
513	98	344	17:49:36.333	127FG11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	6	4,774,345:06:0	
514	98	344	17:49:37.000	117FA105A106A4BN	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	6	4,774,345:07:0	
515	98	344	17:49:42.333	117FA105A106A4BO	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	6	4,774,345:15:0	
516	98	344	17:49:48.333	117FA105A106A4BP	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	6	4,774,345:24:0	
517	98	344	17:49:53.666	117FA105A106A4BQ	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	6	4,774,345:32:0	
518	98	344	17:49:59.666	117FA105A106A4BR	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	6	4,774,345:41:0	
519	98	344	17:50:05.000	117FA105A106A4BS	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	6	4,774,345:49:0	
520	98	344	17:50:11.000	117FA105A106A4BT	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	6	4,774,345:58:0	
521	98	344	17:50:16.333	117FA105A106A4BU	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	6	4,774,345:66:0	
522	98	344	17:50:22.333	117FA105A106A4BV	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	6	4,774,345:75:0	
523	98	344	17:50:27.666	117FA105A106A4BW	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	6	4,774,345:83:0	
524	98	344	17:50:28.333	127FH	NIMSTAB	GS	%%%%GROUP START TAB	467	4	6	4,774,345:84:0	
525	98	344	17:50:28.333	127FH4A	37IOP	7.7	Fixed Map, Grating Start Position =07	467	4	7	4,774,345:84:0	
526	98	344	17:50:29.000	127FH4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	7	4,774,345:85:0	
527	98	344	17:50:33.666	117FA105A106A4BX	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	7	4,774,346:01:0	
528	98	344	17:50:37.000	127FH11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	7	4,774,346:06:0	
529	98	344	17:50:39.000	117FA105A106A4BY	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	7	4,774,346:09:0	
530	98	344	17:50:45.000	117FA105A106A4BZ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	7	4,774,346:18:0	
531	98	344	17:50:50.333	117FA105A106A4CA	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	7	4,774,346:26:0	
532	98	344	17:50:56.333	117FA105A106A4CB	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	7	4,774,346:35:0	
533	98	344	17:51:01.666	117FA105A106A4CC	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	7	4,774,346:43:0	
534	98	344	17:51:07.666	117FA105A106A4CD	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	7	4,774,346:52:0	
535	98	344	17:51:13.000	117FA105A106A4CE	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	7	4,774,346:60:0	
536	98	344	17:51:19.000	117FA105A106A4CF	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	7	4,774,346:69:0	
537	98	344	17:51:24.333	117FA105A106A4CG	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	7	4,774,346:77:0	
538	98	344	17:51:29.000	127FI	NIMSTAB	GS	%%%%GROUP START TAB	467	4	7	4,774,346:84:0	
539	98	344	17:51:29.000	127FI4A	37IOP	7.8	Fixed Map, Grating Start Position =08	467	4	8	4,774,346:84:0	
540	98	344	17:51:29.666	127FI4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	8	4,774,346:85:0	
541	98	344	17:51:30.333	117FA105A106A4CH	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	8	4,774,346:86:0	
542	98	344	17:51:35.666	117FA105A106A4CI	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	8	4,774,347:03:0	
543	98	344	17:51:37.666	127FI11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	8	4,774,347:06:0	
544	98	344	17:51:41.666	117FA105A106A4CJ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	8	4,774,347:12:0	
545	98	344	17:51:47.000	117FA105A106A4CK	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	8	4,774,347:20:0	
546	98	344	17:51:53.000	117FA105A106A4CL	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	8	4,774,347:29:0	
547	98	344	17:51:58.333	117FA105A106A4CM	7STRP	0.002,0.0,0.0,0	Slew =-0.76	467	4	8	4,774,347:37:0	
548	98	344	17:52:04.333	117FA105A106A4CN	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	8	4,774,347:46:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	98	344	17:52:09.666	117FA105A106A4CO	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	8	4,774,347:54:0	
550	98	344	17:52:15.666	117FA105A106A4CP	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	8	4,774,347:63:0	
551	98	344	17:52:21.000	117FA105A106A4CQ	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	8	4,774,347:71:0	
552	98	344	17:52:27.000	117FA105A106A4CR	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	8	4,774,347:80:0	
553	98	344	17:52:29.666	127FJ	NIMSTAB	GS	%% %% %% GROUP START TAB	467	4	8	4,774,347:84:0	
554	98	344	17:52:29.666	127FJ4A	37IOP	7,9	Fixed Map, Grating Start Position = 09	467	4	9	4,774,347:84:0	
555	98	344	17:52:30.333	127FJ4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	9	4,774,347:85:0	
556	98	344	17:52:32.333	117FA105A106A4CS	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	9	4,774,347:88:0	
557	98	344	17:52:38.333	117FA105A106A4CT	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	9	4,774,348:06:0	
558	98	344	17:52:38.333	127FJ11A	NIMSTAB	GE	%% %% %% GROUP END TAB	467	4	9	4,774,348:06:0	
559	98	344	17:52:43.666	117FA105A106A4CU	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	9	4,774,348:14:0	
560	98	344	17:52:49.666	117FA105A106A4CV	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	9	4,774,348:23:0	
561	98	344	17:52:55.000	117FA105A106A4CW	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	9	4,774,348:31:0	
562	98	344	17:53:01.000	117FA105A106A4CX	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	9	4,774,348:40:0	
563	98	344	17:53:06.333	117FA105A106A4CY	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	9	4,774,348:48:0	
564	98	344	17:53:12.333	117FA105A106A4CZ	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	9	4,774,348:57:0	
565	98	344	17:53:17.666	117FA105A106A4DA	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	9	4,774,348:65:0	
566	98	344	17:53:23.666	117FA105A106A4DB	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	9	4,774,348:74:0	
567	98	344	17:53:29.000	117FA105A106A4DC	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	9	4,774,348:82:0	
568	98	344	17:53:30.333	127FK4A	37IOP	7,10	Fixed Map, Grating Start Position = 10	467	4	10	4,774,348:84:0	
570	98	344	17:53:31.000	127FK4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	10	4,774,348:85:0	
571	98	344	17:53:35.000	117FA105A106A4DD	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	10	4,774,349:00:0	
572	98	344	17:53:39.000	127FK11A	NIMSTAB	GE	%% %% %% GROUP END TAB	467	4	10	4,774,349:06:0	
573	98	344	17:53:40.333	117FA105A106A4DE	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	10	4,774,349:08:0	
574	98	344	17:53:46.333	117FA105A106A4DF	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	10	4,774,349:17:0	
575	98	344	17:53:51.666	117FA105A106A4DG	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	10	4,774,349:25:0	
576	98	344	17:53:57.666	117FA105A106A4DH	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	10	4,774,349:34:0	
577	98	344	17:54:03.000	117FA105A106A4DI	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	10	4,774,349:42:0	
578	98	344	17:54:09.000	117FA105A106A4DJ	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	10	4,774,349:51:0	
579	98	344	17:54:14.333	117FA105A106A4DK	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	10	4,774,349:59:0	
580	98	344	17:54:20.333	117FA105A106A4DL	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	10	4,774,349:68:0	
581	98	344	17:54:25.666	117FA105A106A4DM	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	10	4,774,349:76:0	
582	98	344	17:54:31.000	127FL4A	37IOP	7,11	Fixed Map, Grating Start Position = 11	467	4	11	4,774,349:84:0	
584	98	344	17:54:31.666	127FL4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	11	4,774,349:84:0	
585	98	344	17:54:31.666	117FA105A106A4DN	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	11	4,774,349:85:0	
586	98	344	17:54:37.000	117FA105A106A4DO	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	11	4,774,350:02:0	
587	98	344	17:54:39.666	127FL11A	NIMSTAB	GE	%% %% %% GROUP END TAB	467	4	11	4,774,350:06:0	
588	98	344	17:54:43.000	117FA105A106A4DP	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	11	4,774,350:11:0	
589	98	344	17:54:48.333	117FA105A106A4DQ	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	11	4,774,350:19:0	
590	98	344	17:54:54.333	117FA105A106A4DR	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	11	4,774,350:28:0	
591	98	344	17:54:59.666	117FA105A106A4DS	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	11	4,774,350:36:0	
592	98	344	17:55:05.666	117FA105A106A4DT	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	11	4,774,350:45:0	
593	98	344	17:55:11.000	117FA105A106A4DU	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	11	4,774,350:53:0	
594	98	344	17:55:17.000	117FA105A106A4DV	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	11	4,774,350:62:0	
595	98	344	17:55:22.333	117FA105A106A4DW	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	11	4,774,350:70:0	
596	98	344	17:55:28.333	117FA105A106A4DX	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	11	4,774,350:79:0	
597	98	344	17:55:31.666	127FM4A	37IOP	7,12	Fixed Map, Grating Start Position = 12	467	4	12	4,774,350:84:0	
599	98	344	17:55:31.666	127FM4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	12	4,774,350:84:0	
600	98	344	17:55:33.666	117FA105A106A4DY	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	12	4,774,350:87:0	
601	98	344	17:55:39.666	117FA105A106A4DZ	7STRP	-0.002,0.0,0.0,0.0	Slew = 12.01	467	4	12	4,774,351:05:0	
602	98	344	17:55:40.333	127FM11A	NIMSTAB	GE	%% %% %% GROUP END TAB	467	4	12	4,774,351:06:0	
603	98	344	17:55:45.000	117FA105A106A4EA	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	12	4,774,351:13:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	98	344	17:55:51.000	117FA105A106A4EB	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	12	4,774,351:22:0	
605	98	344	17:55:56.333	117FA105A106A4EC	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	12	4,774,351:30:0	
606	98	344	17:56:02.333	117FA105A106A4ED	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	12	4,774,351:39:0	
607	98	344	17:56:07.666	117FA105A106A4EE	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	12	4,774,351:47:0	
608	98	344	17:56:13.666	117FA105A106A4EF	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	12	4,774,351:56:0	
609	98	344	17:56:19.000	117FA105A106A4EG	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	12	4,774,351:64:0	
610	98	344	17:56:25.000	117FA105A106A4EH	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	12	4,774,351:73:0	
611	98	344	17:56:30.333	117FA105A106A4EI	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	12	4,774,351:81:0	
612	98	344	17:56:32.333	127FN4A	37IOP	7,13	Fixed Map, Grating Start Position =13	467	4	13	4,774,351:84:0	
613	98	344	17:56:32.333	127FN	NIMSTAB	GS	Loads wavelength edit table	467	4	13	4,774,351:84:0	
614	98	344	17:56:33.000	127FN4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	13	4,774,351:85:0	
615	98	344	17:56:36.333	117FA105A106A4EJ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	13	4,774,351:90:0	
616	98	344	17:56:41.000	127FN1A	NIMSTAB	GE	Loads wavelength edit table	467	4	13	4,774,352:06:0	
617	98	344	17:56:41.666	117FA105A106A4EK	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	13	4,774,352:07:0	
618	98	344	17:56:47.666	117FA105A106A4EL	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	13	4,774,352:16:0	
619	98	344	17:56:53.000	117FA105A106A4EM	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	13	4,774,352:24:0	
620	98	344	17:56:59.000	117FA105A106A4EN	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	13	4,774,352:33:0	
621	98	344	17:57:04.333	117FA105A106A4EO	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	13	4,774,352:41:0	
622	98	344	17:57:10.333	117FA105A106A4EP	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	13	4,774,352:50:0	
623	98	344	17:57:15.666	117FA105A106A4EQ	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	13	4,774,352:58:0	
624	98	344	17:57:21.666	117FA105A106A4ER	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	13	4,774,352:67:0	
625	98	344	17:57:27.000	117FA105A106A4ES	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	13	4,774,352:75:0	
626	98	344	17:57:33.000	117FA105A106A4ET	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	13	4,774,352:84:0	
627	98	344	17:57:33.000	127FO	NIMSTAB	GS	Loads wavelength edit table	467	4	13	4,774,352:84:0	
628	98	344	17:57:33.666	127FO4A	37IOP	7,14	Fixed Map, Grating Start Position =14	467	4	14	4,774,352:84:0	
629	98	344	17:57:33.666	127FO4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	14	4,774,352:85:0	
630	98	344	17:57:38.333	117FA105A106A4EU	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	14	4,774,353:01:0	
631	98	344	17:57:41.666	127FO1A	NIMSTAB	GE	Loads wavelength edit table	467	4	14	4,774,353:06:0	
632	98	344	17:57:44.333	117FA105A106A4EV	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	14	4,774,353:10:0	
633	98	344	17:57:49.666	117FA105A106A4EW	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	14	4,774,353:18:0	
634	98	344	17:57:55.666	117FA105A106A4EX	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	14	4,774,353:27:0	
635	98	344	17:58:01.000	117FA105A106A4EY	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	14	4,774,353:35:0	
636	98	344	17:58:07.000	117FA105A106A4EZ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	14	4,774,353:44:0	
637	98	344	17:58:12.333	117FA105A106A4FA	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	14	4,774,353:52:0	
638	98	344	17:58:18.333	117FA105A106A4FB	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	14	4,774,353:61:0	
639	98	344	17:58:23.666	117FA105A106A4FC	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	14	4,774,353:69:0	
640	98	344	17:58:29.666	117FA105A106A4FD	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	14	4,774,353:78:0	
641	98	344	17:58:33.666	127FP	NIMSTAB	GS	Loads wavelength edit table	467	4	14	4,774,353:84:0	
642	98	344	17:58:33.666	127FP4A	37IOP	7,15	Fixed Map, Grating Start Position =15	467	4	15	4,774,353:84:0	
643	98	344	17:58:34.333	127FP4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	15	4,774,353:85:0	
644	98	344	17:58:35.000	117FA105A106A4FE	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	15	4,774,353:86:0	
645	98	344	17:58:41.000	117FA105A106A4FF	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	15	4,774,354:04:0	
646	98	344	17:58:42.333	127FP1A	NIMSTAB	GE	Loads wavelength edit table	467	4	15	4,774,354:06:0	
647	98	344	17:58:46.333	117FA105A106A4FG	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	15	4,774,354:12:0	
648	98	344	17:58:52.333	117FA105A106A4FH	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	15	4,774,354:21:0	
649	98	344	17:58:57.666	117FA105A106A4FI	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	15	4,774,354:29:0	
650	98	344	17:59:03.666	117FA105A106A4FJ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	15	4,774,354:38:0	
651	98	344	17:59:09.000	117FA105A106A4FK	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	15	4,774,354:46:0	
652	98	344	17:59:15.000	117FA105A106A4FL	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	15	4,774,354:55:0	
653	98	344	17:59:20.333	117FA105A106A4FM	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	15	4,774,354:63:0	
654	98	344	17:59:26.333	117FA105A106A4FN	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	15	4,774,354:72:0	
655	98	344	17:59:31.666	117FA105A106A4FO	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	15	4,774,354:80:0	
656	98	344	17:59:34.333	127FQ4A	37IOP	7,16	Fixed Map, Grating Start Position =16	467	4	16	4,774,354:84:0	
657	98	344	17:59:34.333	127FQ	NIMSTAB	GS	Loads wavelength edit table	467	4	16	4,774,354:84:0	
658	98	344	17:59:35.000	127FQ4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	16	4,774,354:85:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	98	344	17:59:37.666	117FA105A106A4FP	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	16	4,774,354:89:0	
660	98	344	17:59:43.000	127FQ11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	16	4,774,355:06:0	
661	98	344	17:59:43.000	117FA105A106A4FQ	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	16	4,774,355:06:0	
662	98	344	17:59:49.000	117FA105A106A4FR	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	16	4,774,355:15:0	
663	98	344	17:59:54.333	117FA105A106A4FS	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	16	4,774,355:23:0	
664	98	344	18:00:00.333	117FA105A106A4FT	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	16	4,774,355:32:0	
665	98	344	18:00:05.666	117FA105A106A4FU	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	16	4,774,355:40:0	
666	98	344	18:00:11.666	117FA105A106A4FV	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	16	4,774,355:49:0	
667	98	344	18:00:17.000	117FA105A106A4FW	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	16	4,774,355:57:0	
668	98	344	18:00:23.000	117FA105A106A4FX	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	16	4,774,355:66:0	
669	98	344	18:00:28.333	117FA105A106A4FY	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	16	4,774,355:74:0	
670	98	344	18:00:34.333	117FA105A106A4FZ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	16	4,774,355:83:0	
671	98	344	18:00:35.000	127FR	NIMSTAB	GS	%%%%GROUP START TAB	467	4	16	4,774,355:84:0	
672	98	344	18:00:35.000	127FR4A	37IOP	7,17	Fixed Map, Grating Start Position =17	467	4	17	4,774,355:84:0	
673	98	344	18:00:35.666	127FR4B	37ETB	04:C4;1B;FF;FF	Loads wavelength edit table	467	4	17	4,774,355:85:0	
674	98	344	18:00:39.666	117FA105A106A4GA	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	17	4,774,356:00:0	
675	98	344	18:00:43.666	127FR11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	17	4,774,356:06:0	
676	98	344	18:00:45.666	117FA105A106A4GB	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	17	4,774,356:09:0	
677	98	344	18:00:51.000	117FA105A106A4GC	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	17	4,774,356:17:0	
678	98	344	18:00:57.000	117FA105A106A4GD	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	17	4,774,356:26:0	
679	98	344	18:01:02.333	117FA105A106A4GE	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	17	4,774,356:34:0	
680	98	344	18:01:08.333	117FA105A106A4GF	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	17	4,774,356:43:0	
681	98	344	18:01:13.666	117FA105A106A4GG	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	17	4,774,356:51:0	
682	98	344	18:01:19.666	117FA105A106A4GH	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	17	4,774,356:60:0	
683	98	344	18:01:25.000	117FA105A106A4GI	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	17	4,774,356:68:0	
684	98	344	18:01:31.000	117FA105A106A4GJ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	17	4,774,356:77:0	
685	98	344	18:01:35.666	127FS	NIMSTAB	GS	%%%%GROUP START TAB	467	4	17	4,774,356:84:0	
686	98	344	18:01:35.666	127FS4A	37IOP	7,18	Fixed Map, Grating Start Position =18	467	4	18	4,774,356:84:0	
687	98	344	18:01:36.333	117FA105A106A4GK	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	18	4,774,356:85:0	
688	98	344	18:01:36.333	127FS4B	37ETB	04:C4;1B;FF;FF	Loads wavelength edit table	467	4	18	4,774,356:85:0	
689	98	344	18:01:42.333	117FA105A106A4GL	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	18	4,774,357:03:0	
690	98	344	18:01:44.333	127FS11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	18	4,774,357:06:0	
691	98	344	18:01:47.666	117FA105A106A4GM	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	18	4,774,357:11:0	
692	98	344	18:01:53.666	117FA105A106A4GN	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	18	4,774,357:20:0	
693	98	344	18:01:59.000	117FA105A106A4GO	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	18	4,774,357:28:0	
694	98	344	18:02:05.000	117FA105A106A4GP	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	18	4,774,357:37:0	
695	98	344	18:02:10.333	117FA105A106A4GQ	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	18	4,774,357:45:0	
696	98	344	18:02:16.333	117FA105A106A4GR	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	18	4,774,357:54:0	
697	98	344	18:02:21.666	117FA105A106A4GS	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	18	4,774,357:62:0	
698	98	344	18:02:27.666	117FA105A106A4GT	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	18	4,774,357:71:0	
699	98	344	18:02:33.000	117FA105A106A4GU	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	18	4,774,357:79:0	
700	98	344	18:02:36.333	127FT	NIMSTAB	GS	%%%%GROUP START TAB	467	4	18	4,774,357:84:0	
701	98	344	18:02:36.333	127FT4A	37IOP	7,19	Fixed Map, Grating Start Position =19	467	4	19	4,774,357:84:0	
702	98	344	18:02:37.000	127FT4B	37ETB	04:C4;1B;FF;FF	Loads wavelength edit table	467	4	19	4,774,357:85:0	
703	98	344	18:02:39.000	117FA105A106A4GV	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	19	4,774,357:88:0	
704	98	344	18:02:44.333	117FA105A106A4GW	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	19	4,774,358:05:0	
705	98	344	18:02:45.000	127FT11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	19	4,774,358:06:0	
706	98	344	18:02:50.333	117FA105A106A4GX	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	19	4,774,358:14:0	
707	98	344	18:02:55.666	117FA105A106A4GY	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	19	4,774,358:22:0	
708	98	344	18:03:01.666	117FA105A106A4GZ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	19	4,774,358:31:0	
709	98	344	18:03:07.000	117FA105A106A4HA	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	19	4,774,358:39:0	
710	98	344	18:03:13.000	117FA105A106A4HB	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	19	4,774,358:48:0	
711	98	344	18:03:18.333	117FA105A106A4HC	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	19	4,774,358:56:0	
712	98	344	18:03:24.333	117FA105A106A4HD	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	19	4,774,358:65:0	
713	98	344	18:03:29.666	117FA105A106A4HE	7STRP	0.002,0.0,0.0,0.0	Slew =-0.76	467	4	19	4,774,358:73:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	98	344	18:03:35.666	117FA105A106A4HF	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	19	4,774,358:82:0	
715	98	344	18:03:37.000	127FU	NIMSTAB	GS	%%%%GROUP START TAB	467	4	19	4,774,358:84:0	
716	98	344	18:03:37.000	127FU4A	37IOP	7,20	Fixed Map, Grating Start Position =20	467	4	20	4,774,358:84:0	
717	98	344	18:03:37.666	127FU4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	20	4,774,358:85:0	
718	98	344	18:03:41.000	117FA105A106A4HG	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	20	4,774,358:90:0	
719	98	344	18:03:45.666	127FU11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	20	4,774,359:06:0	
720	98	344	18:03:47.000	117FA105A106A4HH	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	20	4,774,359:08:0	
721	98	344	18:03:52.333	117FA105A106A4HI	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	20	4,774,359:16:0	
722	98	344	18:03:58.333	117FA105A106A4HJ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	20	4,774,359:25:0	
723	98	344	18:04:03.666	117FA105A106A4HK	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	20	4,774,359:33:0	
724	98	344	18:04:09.666	117FA105A106A4HL	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	20	4,774,359:42:0	
725	98	344	18:04:15.000	117FA105A106A4HM	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	20	4,774,359:50:0	
726	98	344	18:04:21.000	117FA105A106A4HN	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	20	4,774,359:59:0	
727	98	344	18:04:26.333	117FA105A106A4HO	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	20	4,774,359:67:0	
728	98	344	18:04:32.333	117FA105A106A4HP	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	20	4,774,359:76:0	
729	98	344	18:04:37.666	127FV	NIMSTAB	GS	%%%%GROUP START TAB	467	4	20	4,774,359:84:0	
730	98	344	18:04:37.666	117FA105A106A4HQ	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	20	4,774,359:84:0	
731	98	344	18:04:37.666	127FV4A	37IOP	7,21	Fixed Map, Grating Start Position =21	467	4	21	4,774,359:84:0	
732	98	344	18:04:38.333	127FV4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	21	4,774,359:85:0	
733	98	344	18:04:43.666	117FA105A106A4HR	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	21	4,774,360:02:0	
734	98	344	18:04:46.333	127FV11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	21	4,774,360:06:0	
735	98	344	18:04:49.000	117FA105A106A4HS	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	21	4,774,360:10:0	
736	98	344	18:04:55.000	117FA105A106A4HT	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	21	4,774,360:19:0	
737	98	344	18:05:00.333	117FA105A106A4HU	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	21	4,774,360:27:0	
738	98	344	18:05:06.333	117FA105A106A4HV	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	21	4,774,360:36:0	
739	98	344	18:05:11.666	117FA105A106A4HW	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	21	4,774,360:44:0	
740	98	344	18:05:17.666	117FA105A106A4HX	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	21	4,774,360:53:0	
741	98	344	18:05:23.000	117FA105A106A4HY	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	21	4,774,360:61:0	
742	98	344	18:05:29.000	117FA105A106A4HZ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	21	4,774,360:70:0	
743	98	344	18:05:34.333	117FA105A106A4IA	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	21	4,774,360:78:0	
744	98	344	18:05:38.333	127FW	NIMSTAB	GS	%%%%GROUP START TAB	467	4	21	4,774,360:84:0	
745	98	344	18:05:38.333	127FW4A	37IOP	7,22	Fixed Map, Grating Start Position =22	467	4	22	4,774,360:84:0	
746	98	344	18:05:39.000	127FW4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	22	4,774,360:85:0	
747	98	344	18:05:40.333	117FA105A106A4IB	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	22	4,774,360:87:0	
748	98	344	18:05:45.666	117FA105A106A4IC	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	22	4,774,361:04:0	
749	98	344	18:05:47.000	127FW11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	22	4,774,361:06:0	
750	98	344	18:05:51.666	117FA105A106A4ID	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	22	4,774,361:13:0	
751	98	344	18:05:57.000	117FA105A106A4IE	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	22	4,774,361:21:0	
752	98	344	18:06:03.000	117FA105A106A4IF	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	22	4,774,361:30:0	
753	98	344	18:06:08.333	117FA105A106A4IG	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	22	4,774,361:38:0	
754	98	344	18:06:14.333	117FA105A106A4IH	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	22	4,774,361:47:0	
755	98	344	18:06:19.666	117FA105A106A4II	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	22	4,774,361:55:0	
756	98	344	18:06:25.666	117FA105A106A4IJ	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	22	4,774,361:64:0	
757	98	344	18:06:31.000	117FA105A106A4IK	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	22	4,774,361:72:0	
758	98	344	18:06:37.000	117FA105A106A4IL	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	22	4,774,361:81:0	
759	98	344	18:06:39.000	127FX4A	37IOP	7,23	Fixed Map, Grating Start Position =23	467	4	23	4,774,361:84:0	
760	98	344	18:06:39.000	127FX	NIMSTAB	GS	%%%%GROUP START TAB	467	4	23	4,774,361:84:0	
761	98	344	18:06:39.666	127FX4B	37ETB	04,C4,1B,FF,FF	Loads wavelength edit table	467	4	23	4,774,361:85:0	
762	98	344	18:06:42.333	117FA105A106A4IM	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	23	4,774,361:89:0	
763	98	344	18:06:47.666	127FX11A	NIMSTAB	GE	%%%%GROUP END TAB	467	4	23	4,774,362:06:0	
764	98	344	18:06:48.333	117FA105A106A4IN	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	23	4,774,362:07:0	
765	98	344	18:06:53.666	117FA105A106A4IO	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	23	4,774,362:15:0	
766	98	344	18:06:59.666	117FA105A106A4IP	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	23	4,774,362:24:0	
767	98	344	18:07:05.000	117FA105A106A4IQ	7STRP	0.002,0.0,0.0,0	Slew =0.76	467	4	23	4,774,362:32:0	
768	98	344	18:07:11.000	117FA105A106A4IR	7STRP	-0.002,0.0,0.0,0	Slew =12.01	467	4	23	4,774,362:41:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	98	344	18:07:11.000	18NNSTARCL01-	DESEL	300DA	NIMS STAR CALIBRATION	467	4	23	:	:
770	98	344	18:07:13.666	175FA422A6B	6DMSC	RDY,0	DMS Control Tape stop	467	4	23	4,774,362:45:0	
771	98	344	18:07:13.666		DMS:	: *RUNDOWN	R28, TRACK 2, REV, TIC *4244.88 +/-	467	4	23	4,774,362:45:0	
772	98	344	18:07:14.866		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4244.58 +/-	467	4	23	4,774,362:46:8	
773	98	344	18:07:16.333	117FA105A106A4IS	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	23	4,774,362:49:0	
774	98	344	18:07:22.333	117FA105A106A4IT	7STRP	0.002,0.0,0.0,0.0	Slew = 12.01	467	4	23	4,774,362:58:0	
775	98	344	18:07:27.666	117FA105A106A4IU	7STRP	0.002,0.0,0.0,0.0	Slew = 0.76	467	4	23	4,774,362:66:0	
776	98	344	18:07:33.666	117FA11A	CSMOS	GE	***** GROUP END CSMOS	467	4	23	4,774,362:75:0	
777	98	344	18:16:45.666	127FY4A	37IOP	0.0	Safe, Grating Start Position = 00	460	4	0	4,774,371:84:0	
778	98	344	18:16:45.666	127FY	NIMSTAB	GS	%% %% %% GROUP START TAB	460	4	0	4,774,371:84:0	
779	98	344	18:16:46.333	127FY4B	37IOP	0.0	Loads wavelength edit table	460	4	0	4,774,371:85:0	
780	98	344	18:16:54.333	127FY11A	NIMSTAB	GE	%% %% %% GROUP END TAB	460	4	0	4,774,372:06:0	
781	98	344	18:19:47.666	125FY	NIMSINIT	GS	##### GROUP START INIT	460	4	0	4,774,374:84:0	
782	98	344	18:19:47.666	125FY4A	37IST	1.0,0,OFF,0.0,0.0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	4,774,374:84:0	
783	98	344	18:20:48.333	125FY4B	37IST	1.1,0,OFF,0.0,0.0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	4,774,375:84:0	
784	98	344	18:21:49.000	125FY4C	37IMB	0.0,0.0,0.0,0.0	Selects mirror (spatial) edit table	400	4	0	4,774,376:84:0	
785	98	344	18:21:49.000	125FY11A	NIMSINIT	GE	##### GROUP END INIT	400	4	0	4,774,376:84:0	
786	98	344	18:22:00.000	18NNSTARCL01-		-----STOP-----		400	4	0	:	:
787	98	344	19:00:04.333	20YA4A	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,774,414:69:0	
788	98	344	19:10:00.333	41YB99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	400	4	0	4,774,424:53:0	
789	98	344	19:11:54.333	41YB3G	40T1P		1 PCT Heater 1 ON (primary relay)	400	4	0	4,774,426:42:0	
790	98	344	19:12:04.333	41YB3H	40T1P		2 PCT Heater 1 ON (primary relay)	400	4	0	4,774,426:57:0	
791	98	344	19:12:14.333	41YB3I	40T2		1 PCT Heater 2 ON	400	4	0	4,774,426:72:0	
792	98	344	19:12:24.333	41YB3J	40T2		2 PCT Heater 2 ON	400	4	0	4,774,426:87:0	
793	98	344	19:36:31.666	175JF422A6A	6DMSC	R7,2	P7, TRACK *1, *FWD, TIC 4244.58 +/-	400	4	0	4,774,450:74:0	
794	98	344	19:36:31.666		DMS:	: *US-RUNUP	DMS Control	400	4	0	4,774,450:74:0	
795	98	344	19:36:33.066		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *4244.70 +/-	400	4	0	4,774,450:76:1	
796	98	344	19:36:38.333		DMS:	: *US RD	P7, TRACK 1, FWD, TIC *4245.93 +/-	400	4	0	4,774,450:84:0	
797	98	344	19:36:39.533		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *4245.99 +/-	400	4	0	4,774,450:85:8	
798	98	344	19:36:40.333	282NA431A6A	6RCSEL	DDSNCG,PLSSEL,EP	Record Select (DDS on)	400	4	0	4,774,450:87:0	
799	98	344	19:36:40.333	175JF176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	400	4	0	4,774,450:87:0	
800	98	344	19:36:40.933		DMS:	: *AT SPD	R7, TRACK 2, REV, TIC 4245.87 +/-	400	4	0	4,774,450:87:9	
801	98	344	19:36:40.933		DMS:	: *RECORD	R7, TRACK 2, REV, TIC *4245.87 +/-	400	4	0	4,774,450:87:9	
802	98	344	19:36:43.000	431OC6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS on)	400	4	0	4,774,451:00:0	
803	98	344	21:27:39.666	488CD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,774,560:66:0	
804	98	344	22:30:57.000	488CD6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,774,623:29:0	
805	98	344	00:23:54.333	432OC431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	400	4	0	4,774,735:03:0	
806	98	345	00:23:55.000	432OC6A	6RTSL1		R/T Select of DDS and	400	4	0	4,774,735:04:0	
807	98	345	00:23:57.000		DMS:	: *RUNDOWN	R7, TRACK 2, REV, TIC * 206.17 +/-	400	4	0	4,774,735:07:0	
808	98	345	00:23:57.000	175JF422A6B	6DMSC	RDY,0	DMS Control Tape stop	400	4	0	4,774,735:07:0	
809	98	345	00:23:58.200		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 206.11 +/-	400	4	0	4,774,735:08:8	
810	98	345	00:23:58.333	282NB431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	400	4	0	4,774,735:09:0	
811	98	345	00:24:47.000	282NB432A431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	400	4	0	4,774,735:82:0	
812	98	345	00:24:47.666	282NB432A6A	6RTSL1		R/T Select of DDS and	400	4	0	4,774,735:83:0	
813	98	345	01:56:53.600	465KB6A	6DMST		RDY, TRACK 1, FWD, TIC 206.11 +/-	400	4	0	4,774,827:00:0	
814	98	345	01:56:53.600		DMS:	: *SLEW-TIC	5976 DMS Slew to TIC	400	4	0	4,774,827:00:0	
815	98	345	01:56:53.600		DMS:	: *RUNUP	P7, TRACK *1, *FWD, TIC 206.11 +/-	400	4	0	4,774,827:00:0	
816	98	345	01:57:00.266		DMS:	: *AT SPD	P7, TRACK 1, FWD, TIC 206.11 +/-	400	4	0	4,774,827:10:0	
817	98	345	01:57:01.666	488CD6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,774,827:12:1	
818	98	345	02:09:35.600	488CD6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,774,839:51:0	
819	98	345	02:19:55.600	488CD6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,774,849:71:0	
820	98	345	03:11:07.600		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *5973.94 +/-	400	4	0	4,774,900:38:0	
821	98	345	08:47:09.733		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5974.00 +/-	400	4	0	4,775,232:69:2	
822	98	345	08:47:10.933	20YB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,775,232:71:0	
823	98	345	08:55:04.266		7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,775,240:53:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
824	98	345	08:55:54.266	20YB4B	7SLEW DIS,POS.0.0	Stator movement	400	4	0	4,775.241:37:0	
825	98	345	09:01:33.600	176SL6A	6TMREC IPB	INITIATE PLAYBACK (PB CONTROL) Record Mod	400	4	0	4,775.247:00:0	
826	98	345	11:36:43.600	488CE6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,775.400:42:0	
827	98	345	12:32:11.600	488CE6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,775.455:29:0	
828	98	345	12:45:54.266	488CE6C	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,775.468:80:0	
829	98	345	12:51:23.600	488CE6D	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,775.474:28:0	
830	98	345	13:27:39.600	488CE6E	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,775.510:16:0	
831	98	345	16:52:43.600	488CF6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,775.712:90:0	
832	98	345	18:15:17.600	488CF6B	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,775.794:59:0	
833	98	345	18:44:23.600	488CF6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,775.823:39:0	
834	98	345	19:06:51.600	488CF6D	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,775.845:59:0	
835	98	345	19:57:46.266	176SV6A	6TMREC PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,775.896:00:0	
836	98	345	20:02:00.266	20UR4B	7SLEW DIS,POS.0.0	Stator movement	400	4	0	4,775.900:17:0	
837	98	345	20:03:00.266	20UR4D	7MODE SPNL	AACS ALL-SPIN LOW	400	4	0	4,775.901:16:0	
838	98	345	20:05:00.266	20UR4E	7SAFE UNSTOW	S/P TO 153 deg cone	400	4	0	4,775.903:14:0	
839	98	345	20:10:30.266	20UR4G	7VENT 0.611,1.333,8	ALERT -- Thruster fire	400	4	0	4,775.908:54:0	
840	98	345	20:10:30.933	20UR4H	7VENT 0.611,1.0989,8	ALERT -- Thruster fire	400	4	0	4,775.908:55:0	
841	98	345	20:10:50.933	20UR4I	7VENT 0.611,1.333,6	ALERT -- Thruster fire	400	4	0	4,775.908:85:0	
842	98	345	20:10:51.600	20UR4J	7VENT 0.611,1.0989,6	ALERT -- Thruster fire	400	4	0	4,775.908:86:0	
843	98	345	20:11:11.600	20UR4K	7VENT 0.611,1.333,4	ALERT -- Thruster fire	400	4	0	4,775.909:25:0	
844	98	345	20:11:12.266	20UR4L	7VENT 0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,775.909:26:0	
845	98	345	20:11:22.266	20UR4M	7VENT 0.611,1.333,4	ALERT -- Thruster fire	400	4	0	4,775.909:41:0	
846	98	345	20:11:22.933	20UR4N	7VENT 0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,775.909:42:0	
847	98	345	20:11:32.933	20UR4O	7VENT 1.211,1.333,10	ALERT -- Thruster fire	400	4	0	4,775.909:57:0	
848	98	345	20:11:33.600	20UR4P	7VENT 1.211,0.666,12	ALERT -- Thruster fire	400	4	0	4,775.909:58:0	
849	98	345	20:13:20.266	20UR4S	7VENT 0.611,1.333,7	ALERT -- Thruster fire	400	4	0	4,775.911:36:0	
850	98	345	20:13:20.933	20UR4T	7VENT 0.611,1.0989,7	ALERT -- Thruster fire	400	4	0	4,775.911:37:0	
851	98	345	20:13:40.933	20UR4U	7VENT 0.611,1.333,1	ALERT -- Thruster fire	400	4	0	4,775.911:67:0	
852	98	345	20:13:41.600	20UR4V	7VENT 0.611,1.0989,1	ALERT -- Thruster fire	400	4	0	4,775.911:68:0	
853	98	345	20:14:01.600	20UR4AC	7VENT 0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,775.912:07:0	
854	98	345	20:14:02.266	20UR4AD	7VENT 0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,775.912:08:0	
855	98	345	20:14:12.266	20UR4AE	7VENT 0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,775.912:23:0	
856	98	345	20:14:12.933	20UR4AF	7VENT 0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,775.912:24:0	
857	98	345	20:14:22.933	20UR4AW	7VENT 1.211,1.333,9	ALERT -- Thruster fire	400	4	0	4,775.912:39:0	
858	98	345	20:14:23.600	20UR4X	7VENT 1.211,0.666,11	ALERT -- Thruster fire	400	4	0	4,775.912:40:0	
859	98	345	20:15:20.266	20UR4Z	7MODE CRU	AACS CRUISE MODE	400	4	0	4,775.913:34:0	
860	98	345	20:30:59.600	432OE431A6A	6RCDSL DDSNCG,PLSNCG,EP	Record Deselect (DDS o	400	4	0	4,775.928:78:0	
861	98	345	20:31:00.266	432OE6A	6RTSL1	R/T Select of DDS and	400	4	0	4,775.928:79:0	
862	98	345	20:40:04.266	20UK4A	7SAFE STOP	S/P NO MOVEMENT	400	4	0	4,775.937:76:0	
863	98	345	20:40:54.266	20UK4B	7SLEW DIS,POS.0.0	Stator movement	400	4	0	4,775.938:60:0	
864	98	345	20:42:15.600	176SW6A	6TMREC RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,775.940:00:0	
865	98	345	22:16:43.600	488CF6E	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,776.033:39:0	
866	98	345	22:28:43.600	488CG6A	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,776.045:27:0	
867	98	345	22:40:11.600	488CG6B	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,776.056:58:0	
868	98	346	02:04:26.266	488CG6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,776.258:58:0	
869	98	346	02:15:39.600	488CG6D	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,776.269:67:0	
870	98	346	03:15:23.600	488CG6E	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,776.328:74:0	
871	98	346	11:28:11.533	488CH6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,776.816:18:0	
872	98	346	12:27:55.533	488CH6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,776.875:25:0	
873	98	346	12:44:56.200	488CH6C	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,776.892:09:0	
874	98	346	12:47:07.533	488CH6D	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,776.894:24:0	
875	98	346	13:02:03.533	488CH6E	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,776.909:03:0	
876	98	347	02:04:18.200	488C6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,777.682:62:0	
877	98	347	02:15:39.533	488C6B	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,777.693:83:0	
878	98	347	02:31:55.533	432NE6A	6RTSL1	R/T Select of DDS and	400	4	0	4,777.710:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
879	98	347	03:15:23.533	488C6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,777,752:90:0	
880	98	347	11:17:31.533	488C6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,778,229:75:0	
881	98	347	12:21:31.533	488C6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,778,293:11:0	
882	98	347	13:55:23.533	488C6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,778,385:87:0	
883	98	347	21:02:03.466	488CK6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,778,807:85:0	
884	98	347	22:19:27.466	488CK6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,778,884:44:0	
885	98	347	22:23:07.466	488CK6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,778,888:10:0	
886	98	347	22:33:47.466	488CK6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,778,898:60:0	
887	98	348	01:59:09.466	488CK6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,779,101:70:0	
888	98	348	03:07:51.466	488CL6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,779,169:65:0	
889	98	348	03:41:30.133	488CL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,779,202:90:0	
890	98	348	04:04:27.466	488CL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,779,225:63:0	
891	98	348	10:26:19.466	488CM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,779,603:33:0	
892	98	348	12:32:11.466	488CM6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,779,727:77:0	
893	98	348	12:49:15.466	488CM6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,779,744:66:0	
894	98	348	13:42:55.466	488CM6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,779,797:73:0	
895	98	348	14:08:11.466	488CM6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,779,822:72:0	
896	98	348	14:13:53.466	488CN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,779,828:39:0	
897	98	348	20:51:23.466	488CO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,780,221:51:0	
898	98	348	22:14:03.466	488CO6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,780,303:29:0	
899	98	348	22:16:43.466	488CO6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,780,305:87:0	
900	98	348	22:27:23.466	488CO6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,780,316:46:0	
901	98	349	12:38:57.400	488CP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,781,158:65:0	
902	98	349	13:07:33.400	432NG6A	6RTSL1		R/T Select of DDS and	400	4	0	4,781,187:00:0	
903	98	349	14:03:55.400	488CP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,781,242:68:0	
904	98	349	19:47:23.400	488CQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,781,582:40:0	
905	98	349	20:49:15.400	488CQ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,781,643:57:0	
906	98	350	01:41:31.400	488CQ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,781,932:62:0	
907	98	350	02:09:15.400	488CR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,781,960:10:0	
908	98	350	03:23:55.400	488CR6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,782,033:87:0	
909	98	350	07:34:15.400	488CR6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,782,281:49:0	
910	98	350	07:37:47.400	488CR6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,782,285:03:0	
911	98	350	16:52:01.333	488CS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,782,833:16:0	
912	98	350	20:25:47.333	488CS6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,783,044:54:0	
913	98	350	21:53:14.000	488CS6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,783,131:07:0	
914	98	350	22:26:53.333	488CS6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,783,164:33:0	
915	98	350	22:44:27.333	488CS6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,783,181:67:0	
916	98	351	01:41:31.333	488CT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,783,356:78:0	
917	98	351	02:09:15.333	488CT6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,783,384:26:0	
918	98	351	03:06:02.666	488CT6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,783,440:41:0	
919	98	351	03:28:11.333	488CT6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,783,462:32:0	
920	98	351	03:33:29.333	488CT6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,783,467:54:0	
921	98	351	10:36:59.333	488CU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,783,886:40:0	
922	98	351	11:55:55.333	488CU6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,783,964:46:0	
923	98	351	12:23:55.333	488CU6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,783,992:18:0	
924	98	351	12:25:47.333	488CU6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,783,994:04:0	
925	98	351	12:40:43.333	488CU6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,784,008:74:0	
926	98	351	16:36:52.600	488CV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,784,242:34:0	
927	98	351	19:36:43.266	488CV6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,784,420:22:0	
928	98	351	20:00:11.266	488CV6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,784,443:41:0	
929	98	351	21:08:21.933	488CV6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,784,510:80:0	
930	98	351	21:42:01.266	488CV6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,784,544:15:0	
931	98	351	23:03:39.266	488CW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,784,624:82:0	
932	98	352	01:43:39.266	488CW6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,784,783:13:0	
933	98	352	02:57:33.933	488CW6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,784,856:22:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
934	98	352	03:29:23.266	488CW6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,784,887.65:0	
935	98	352	05:51:07.266	488CX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,785,027.81:0	
936	98	352	08:41:47.266	488CX6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,785,196.62:0	
937	98	352	12:10:51.266	488CY6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,785,403.41:0	
938	98	352	12:34:19.266	488CY6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,785,426.60:0	
939	98	352	13:33:27.933	488CY6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,785,485.14:0	
940	98	352	14:07:07.266	488CY6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,785,518.40:0	
941	98	352	14:14:35.266	488CY6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,785,525.75:0	
942	98	352	15:22:59.933	488CZ6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,785,593.44:0	
943	98	352	15:27:33.933	176SD6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,785,598.00:0	
944	98	352	15:38:59.933	20BA4C	7STAT	17.45.70.4498.59	Stator inertial point	400	4	0	4,785,609.28:0	
945	98	352	15:59:59.933	474BA416A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,785,630.07:0	
946	98	352	16:01:59.933	474BA416A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,785,632.05:0	
947	98	352	16:02:19.933	20BA4D	7STAT	17.45.70.4498.59	Stator inertial point	400	4	0	4,785,632.35:0	
948	98	352	16:06:13.933	474BA416A4E	7BURN	DIS,70.4498.59.2	ALERT -- Thruster fire	400	4	0	4,785,636.22:0	
949	98	352	16:13:59.933	20BA4F	7SLEW	DIS,POS.0.0	Stator movement	400	4	0	4,785,643.84:0	
950	98	352	16:19:51.933	20BA4G	7MODE	GRU	AACS CRUISE MODE	400	4	0	4,785,649.66:0	
951	98	352	16:44:07.933	20BA4L	7STAT	17.45.70.4498.59	Stator inertial point	400	4	0	4,785,673.66:0	
952	98	352	16:47:07.933	20BA4O	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,785,676.63:0	
953	98	352	16:49:07.933	474BA416A4G	7BURN	LAT,70.4498.59.2	ALERT -- Thruster fire	400	4	0	4,785,678.61:0	
954	98	352	16:55:23.933	20BA4Q	7SLEW	DIS,POS.0.0	Stator movement	400	4	0	4,785,684.79:0	
955	98	352	17:00:15.933	20BA4R	7MODE	GRU	AACS CRUISE MODE	400	4	0	4,785,689.62:0	
956	98	352	18:07:47.933	20BB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,785,756.43:0	
957	98	352	18:08:37.933	20BB4B	7SLEW	DIS,POS.0.0	Stator movement	400	4	0	4,785,757.27:0	
958	98	352	18:09:20.600	176BA6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,785,758.00:0	
959	98	352	19:32:14.600	432JP431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	400	4	0	4,785,839.90:0	
960	98	352	19:32:15.266	432JP6A	6RTSL1		R/T Select of DDS and	400	4	0	4,785,840.00:0	
961	98	352	19:36:43.266	488CZ6B	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	400	4	0	4,785,844.38:0	
962	98	352	20:00:11.266	488CZ6C	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,785,867.57:0	
963	98	352	20:30:59.933	488CZ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,785,898.09:0	
964	98	352	20:31:54.600	176SE6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,785,899.00:0	
965	98	352	21:08:29.933	488CZ6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,785,935.17:0	
966	98	352	21:42:09.266	488DA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,785,968.43:0	
967	98	352	23:44:11.266	488DA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,786,089.15:0	
968	98	353	01:30:51.200	488DA6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,786,194.60:0	
969	98	353	02:09:15.200	488DA6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,786,232.58:0	
970	98	353	02:56:18.533	488DA6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,786,279.16:0	
971	98	353	03:25:24.533	488DB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,786,307.87:0	
972	98	353	03:43:07.200	488DB6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,786,325.43:0	
973	98	353	10:07:07.200	488DC6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,787,283.33:0	
974	98	353	11:47:23.200	488DC6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,786,804.38:0	
975	98	353	12:17:15.200	488DC6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,786,833.87:0	
976	98	353	12:34:19.200	488DC6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,786,850.76:0	
977	98	353	14:23:07.200	488DC6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,786,958.40:0	
978	98	353	19:51:39.200	488DD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,787,283.33:0	
979	98	353	21:51:07.200	488DD6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,787,401.47:0	
980	98	353	21:57:37.200	488DD6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,787,407.86:0	
981	98	354	12:09:36.466	488DE6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,788,250.52:0	
982	98	354	12:19:23.133	488DE6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,788,260.22:0	
983	98	354	12:39:21.800	432NI6A	6RTSL1		R/T Select of DDS and	400	4	0	4,788,280.00:0	
984	98	354	14:29:31.133	488DE6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,788,388.86:0	
985	98	354	19:40:59.133	488DF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,788,696.90:0	
986	98	354	21:46:51.133	488DF6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,788,821.43:0	
987	98	354	21:52:29.800	488DF6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,788,827.05:0	
988	98	354	22:03:55.133	488DF6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,788,838.32:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
989	98	354	23:36:26.466	488DF6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,788,929:78:0	
990	98	355	01:26:35.133	488DG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,789,038:72:0	
991	98	355	02:04:59.133	488DG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,789,076:70:0	
992	98	355	03:58:03.133	488DG6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,789,188:54:0	
993	98	355	07:07:12.466	488DG6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,789,375:61:0	
994	98	355	07:10:03.133	488DG6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,789,378:44:0	
995	98	355	12:19:28.466	488DH6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,789,684:46:0	
996	98	355	12:42:51.133	488DH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,789,707:57:0	
997	98	355	13:38:52.466	488DH6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,789,763:03:0	
998	98	355	14:12:31.133	488DH6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,789,796:28:0	
999	98	355	17:22:59.733	488DH6E	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,789,984:63:0	
1000	98	355	17:27:21.066	176TF6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,789,989:00:0	
1001	98	355	17:35:59.733	20WC4C	7STAT	17.45,175.70,3.1	Stator inertial point	400	4	0	4,789,997:50:0	
1002	98	355	17:55:01.733	490UA412A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,790,016:34:0	
1003	98	355	17:59:59.733	490UA412A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,790,021:26:0	
1004	98	355	18:00:19.733	20WC4D	7STAT	17.45,175.70,3.1	Stator inertial point	400	4	0	4,790,021:56:0	
1005	98	355	18:04:09.733	490UA412A4E	7VECT		Inert vect update UTC	400	4	0	4,790,025:37:0	
1006	98	355	18:04:13.733	490UA412A4F	7TURN	2,RTH	ALERT Thruster	400	4	0	4,790,025:43:0	
1007	98	355	18:08:01.733	490UA412A406A4A	7STAR	16,217,100.73	Star catalog update	400	4	0	4,790,029:21:0	
1008	98	355	18:08:03.733	490UA412A406A4B	7STAR	2,178,256.88	Star catalog update	400	4	0	4,790,029:24:0	
1009	98	355	18:08:05.733	490UA412A406A4C	7STAR	3,111,99.056999,	Star catalog update	400	4	0	4,790,029:27:0	
1010	98	355	18:08:07.733	490UA412A406A4D	7STAR	4,0,0,0,0,0	Star catalog update	400	4	0	4,790,029:30:0	
1011	98	355	18:08:09.733	490UA412A406A4E	7STAR	5,0,0,0,0,0	Star catalog update	400	4	0	4,790,029:33:0	
1012	98	355	18:08:11.733	490UA412A406A4F	7STAR	6,0,0,0,0,0	Star catalog update	400	4	0	4,790,029:36:0	
1013	98	355	18:18:05.733	20TA4F	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,790,039:17:0	
1014	98	355	18:26:09.733	490UA412A4A	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,790,047:15:0	
1015	98	355	19:33:59.066	432OG431A6A	6RGDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	400	4	0	4,790,114:22:0	
1016	98	355	19:33:59.733	432OG6A	6RTSL1		R/T Select of DDS and	400	4	0	4,790,114:23:0	
1017	98	355	19:45:15.066	488DJ6A	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	400	4	0	4,790,125:35:0	
1018	98	355	19:54:59.733	488DJ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,790,135:02:0	
1019	98	355	20:00:03.733	20TA4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,790,140:03:0	
1020	98	355	20:00:53.733	20TA4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,790,140:78:0	
1021	98	355	20:02:03.066	176TG6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,790,142:00:0	
1022	98	355	21:21:15.066	488DJ6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,790,220:30:0	
1023	98	355	21:41:54.400	488DJ6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,790,240:69:0	
1024	98	355	21:55:23.066	488DJ6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,790,254:08:0	
1025	98	355	22:31:39.066	488DJ6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,790,289:87:0	
1026	98	356	05:21:16.400	488DK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,790,695:07:0	
1027	98	356	09:21:53.066	488DK6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,790,933:04:0	
1028	98	356	09:26:35.066	488DK6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,790,937:63:0	
1029	98	356	13:03:00.400	488DL6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,791,151:67:0	
1030	98	356	19:26:03.066	488DM6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,791,530:52:0	
1031	98	356	19:58:03.066	488DM6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,791,562:20:0	
1032	98	357	03:08:59.000	488DN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,791,988:38:0	
1033	98	357	10:15:39.000	488DO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,792,410:36:0	
1034	98	357	11:55:55.000	488DO6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,792,509:51:0	
1035	98	357	11:59:11.000	488DO6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,792,512:72:0	
1036	98	357	12:06:35.000	488DO6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,792,520:10:0	
1037	98	357	12:42:51.000	488DO6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,792,555:89:0	
1038	98	357	16:52:51.666	488DP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,792,803:22:0	
1039	98	357	18:14:10.333	488DP6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,792,883:60:0	
1040	98	357	18:47:49.666	488DP6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,792,916:86:0	
1041	98	357	19:30:19.000	488DP6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,792,958:88:0	
1042	98	357	21:14:51.000	488DP6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,793,062:32:0	
1043	98	357	21:44:43.000	488DQ6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,793,091:81:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1044	98	357	22:49:11.000	488DQ6B	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,793,155:59:0	
1045	98	357	23:22:50.333	488DQ6C	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,793,188:85:0	
1046	98	358	01:15:55.000	488DQ6D	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,793,300:70:0	
1047	98	358	01:32:59.000	488DQ6E	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,793,317:59:0	
1048	98	358	02:39:07.000	488DR6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,793,383:05:0	
1049	98	358	02:39:08.333	488DR6B	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,793,383:07:0	
1050	98	358	03:12:51.666	488DR6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,793,416:39:0	
1051	98	358	06:49:07.000	488DR6D	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,793,630:28:0	
1052	98	358	06:59:23.000	488DR6E	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,793,640:42:0	
1053	98	359	08:05:51.600	488DS6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,795,130:35:0	
1054	98	359	09:59:50.266	488DS6B	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,795,243:10:0	
1055	98	359	10:04:58.933	488DS6C	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,795,248:18:0	
1056	98	359	11:45:14.933	488DS6D	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,795,347:33:0	
1057	98	359	11:55:54.933	488DS6E	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,795,357:83:0	
1058	98	359	12:32:10.933	488DT6A	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,795,393:71:0	
1059	98	360	01:18:53.533	488DU6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,796,152:06:0	
1060	98	360	01:28:42.866	488DU6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,796,161:71:0	
1061	98	360	01:36:00.866	432NK6A	6RTSL1	R/T Select of DDS and	400	4	0	4,796,169:00:0	
1062	98	360	03:02:34.866	488DU6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,796,254:56:0	
1063	98	360	10:00:42.866	488DV6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,796,668:14:0	
1064	98	360	11:40:58.866	488DV6B	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,796,767:29:0	
1065	98	360	12:23:38.866	488DV6C	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,796,809:47:0	
1066	98	360	13:17:26.200	488DV6D	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,796,862:65:0	
1067	98	360	13:54:30.866	488DV6E	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,796,899:35:0	
1068	98	360	14:08:10.866	488DW6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,796,912:82:0	
1069	98	360	19:19:38.866	488DW6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,797,220:86:0	
1070	98	360	19:21:43.533	488DW6C	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,797,223:00:0	
1071	98	361	01:13:45.466	488DX6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,797,571:15:0	
1072	98	361	01:22:18.800	488DX6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,797,579:57:0	
1073	98	361	02:58:18.800	488DX6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,797,674:52:0	
1074	98	361	09:54:18.800	488DY6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,798,086:00:0	
1075	98	361	11:40:58.800	488DY6B	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,798,191:45:0	
1076	98	361	11:41:55.466	488DY6C	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,798,192:39:0	
1077	98	361	11:55:54.800	488DY6D	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,798,206:24:0	
1078	98	361	11:56:39.466	176SN6A	6TMREC PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,798,207:00:0	
1079	98	361	12:02:43.466	465SA6A	6DMST	5000 DMS Slew to TIC	400	4	0	4,798,213:00:0	
1080	98	361	12:02:43.466		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5974.00 +/-	400	4	0	4,798,213:00:0	
1081	98	361	12:02:43.466		DMS: : *SLEW-TIC	P7, TRACK *2, *REV, TIC 5974.00 +/-	400	4	0	4,798,213:00:0	
1082	98	361	12:02:44.866		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *5974.12 +/-	400	4	0	4,798,213:02:1	
1083	98	361	12:02:50.133		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5975.35 +/-	400	4	0	4,798,213:10:0	
1084	98	361	12:02:51.333		DMS: : *RUNUP	P7, TRACK *2, *REV, TIC *5975.41 +/-	400	4	0	4,798,213:11:8	
1085	98	361	12:02:52.733		DMS: : *AT SPD	P7, TRACK 2, REV, TIC *5975.29 +/-	400	4	0	4,798,213:13:9	
1086	98	361	12:32:10.800	488DY6E	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,798,242:12:0	
1087	98	361	13:12:04.266		DMS: : *RUNDOWN	P7, TRACK 2, REV, TIC *5002.06 +/-	400	4	0	4,798,281:53:2	
1088	98	361	13:12:05.466		DMS: : *READY	RDY, TRACK 2, REV, TIC *5002.00 +/-	400	4	0	4,798,281:55:0	
1089	98	361	17:56:24.800		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5002.00 +/-	400	4	0	4,798,562:73:0	
1090	98	361	17:56:24.800	465SB6A	6DMSC P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	4,798,562:73:0	
1091	98	361	17:56:26.200		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *5002.12 +/-	400	4	0	4,798,562:75:1	
1092	98	361	17:56:31.466		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5003.35 +/-	400	4	0	4,798,562:83:0	
1093	98	361	17:56:32.666		DMS: : *RUNUP	P100, TRACK *4, *REV, TIC *5003.41 +/-	400	4	0	4,798,562:84:8	
1094	98	361	17:56:36.533		DMS: : *P_SLEW	P100, TRACK 4, REV, TIC *4997.91 +/-	400	4	0	4,798,562:90:6	
1095	98	361	17:56:36.533		DMS: : *AT SPD	P100, TRACK 4, REV, TIC 4997.91 +/-	400	4	0	4,798,562:90:6	
1096	98	361	18:22:16.800	465SB6B	6DMSC RDY.4	DMS Control Tape stop	400	4	0	4,798,588:35:0	
1097	98	361	18:22:16.800		DMS: : *RUNDOWN	P100, TRACK 4, REV, TIC * 259.79 +/-	400	4	0	4,798,588:35:0	
1098	98	361	18:22:18.000		DMS: : *READY	RDY, TRACK 4, REV, TIC * 258.99 +/-	400	4	0	4,798,588:36:8	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1099	98	361	19:12:40.133	488DZ6A	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,798,638:20:0	
1100	98	361	19:28:10.800	488DZ6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,798,653:51:0	
1101	98	361	20:20:04.800	465SC6A	6DTRN CMD,6DTRN,465SC6	DMS TRACK TURNAROUND	400	4	0	4,798,704:81:0	
1102	98	361	20:20:04.800		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 258.99 +/-	400	4	0	4,798,704:81:0	
1103	98	361	20:20:04.800		DMS: : *DMS-TURN	P7, TRACK 4, REV, TIC 258.99 +/-	400	4	0	4,798,704:81:0	
1104	98	361	20:20:06.200		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *259.11 +/-	400	4	0	4,798,704:83:1	
1105	98	361	20:20:11.466		DMS: : *US RD	P7, TRACK 1, FWD, TIC *260.34 +/-	400	4	0	4,798,705:00:0	
1106	98	361	20:20:12.666		DMS: : *RUNUP	P7, TRACK *4, *REV, TIC *260.40 +/-	400	4	0	4,798,705:01:8	
1107	98	361	20:20:14.066		DMS: : *AT SPD	P7, TRACK 4, REV, TIC *260.28 +/-	400	4	0	4,798,705:03:9	
1108	98	361	20:24:09.466	488DZ6C	6TMSED NORM,AH3	Sci, Eng, and D/L Chan	400	4	0	4,798,708:84:0	
1109	98	361	20:24:31.800		DMS: : *REVERSE	P7, TRACK 4, REV, TIC *199.87 +/-	400	4	0	4,798,709:26:5	
1110	98	361	20:24:33.000		DMS: : *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	4,798,709:28:3	
1111	98	361	20:24:33.000		DMS: : *TURNARND	P7, TRACK *1, *FWD, TIC *199.81 +/-	400	4	0	4,798,709:28:3	
1112	98	361	20:24:34.400		DMS: : *AT SPD	P7, TRACK 1, FWD, TIC *199.93 +/-	400	4	0	4,798,709:30:4	
1113	98	361	20:24:46.400		DMS: : *AUTOSTOP	P7, TRACK 1, FWD, TIC *202.06 +/-	400	4	0	4,798,709:48:4	
1114	98	361	20:24:47.600		DMS: : *READY	RDY, TRACK 1, FWD, TIC *202.12 +/-	400	4	0	4,798,709:50:2	
1115	98	361	20:27:54.800	488DZ6D	6TMSED NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,798,712:58:0	
1116	98	361	20:30:07.466	465SD6A	6DMSC P100.1	DMS Control Tape P/B 100.8kbps	400	4	0	4,798,714:75:0	
1117	98	361	20:30:07.466		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,798,714:75:0	
1118	98	361	20:30:14.133		DMS: : *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,798,714:85:0	
1119	98	361	20:30:18.000		DMS: : *AT SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	400	4	0	4,798,714:90:8	
1120	98	361	20:30:18.000		DMS: : *P_SLEW	P100, TRACK 1, FWD, TIC *207.62 +/-	400	4	0	4,798,714:90:8	
1121	98	361	20:34:41.466	488DZ6E	6TMSED FILL,AH4	Sci, Eng, and D/L Chan	400	4	0	4,798,719:31:0	
1122	98	361	21:02:01.466	465SD6B	6DMSC RDY,1	DMS Control Tape stop	400	4	0	4,798,746:34:0	
1123	98	361	21:02:01.466		DMS: : *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	400	4	0	4,798,746:34:0	
1124	98	361	21:02:02.666		DMS: : *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	400	4	0	4,798,746:35:8	
1125	98	361	21:08:20.133	488EA6A	6TMSED NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,798,752:56:0	
1126	98	361	21:17:37.466	465SE6A	6DMSC P100.2	DMS Control Tape P/B 100.8kbps	400	4	0	4,798,761:73:0	
1127	98	361	21:17:37.466		DMS: : *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	400	4	0	4,798,761:73:0	
1128	98	361	21:17:38.866		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	400	4	0	4,798,761:75:1	
1129	98	361	21:17:44.133		DMS: : *US RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	400	4	0	4,798,761:83:0	
1130	98	361	21:17:45.333		DMS: : *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	400	4	0	4,798,761:84:8	
1131	98	361	21:17:49.200		DMS: : *AT SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	400	4	0	4,798,761:90:6	
1132	98	361	21:17:49.200		DMS: : *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	400	4	0	4,798,761:90:6	
1133	98	361	21:49:45.466		DMS: : *RUNDOWN	P100, TRACK 2, REV, TIC *164.96 +/-	400	4	0	4,798,793:53:0	
1134	98	361	21:49:45.466	465SF6A	6DMSC P100.3	DMS Control Tape P/B 100.8kbps	400	4	0	4,798,793:53:0	
1135	98	361	21:49:46.666		DMS: : *RUNUP	P100, TRACK *3, *FWD, TIC *164.16 +/-	400	4	0	4,798,793:54:8	
1136	98	361	21:49:50.533		DMS: : *P_SLEW	P100, TRACK 3, FWD, TIC *169.66 +/-	400	4	0	4,798,793:60:6	
1137	98	361	21:49:50.533		DMS: : *AT SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	400	4	0	4,798,793:60:6	
1138	98	361	22:21:46.133		DMS: : *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	400	4	0	4,798,825:22:0	
1139	98	361	22:21:46.133	465SF6B	6DMSC RDY,3	DMS Control Tape stop	400	4	0	4,798,825:22:0	
1140	98	361	22:21:47.333		DMS: : *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	400	4	0	4,798,825:23:8	
1141	98	361	22:36:29.466		DMS: : *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	400	4	0	4,798,839:73:0	
1142	98	361	22:36:29.466	465SG6A	6DMSC P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	4,798,839:73:0	
1143	98	361	22:36:30.866		DMS: : *US AT SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	400	4	0	4,798,839:75:1	
1144	98	361	22:36:36.133		DMS: : *US RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	400	4	0	4,798,839:83:0	
1145	98	361	22:36:37.333		DMS: : *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	400	4	0	4,798,839:84:8	
1146	98	361	22:36:41.200		DMS: : *AT SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	400	4	0	4,798,839:90:6	
1147	98	361	22:36:41.200		DMS: : *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	400	4	0	4,798,839:90:6	
1148	98	361	23:08:36.800		DMS: : *RUNDOWN	P100, TRACK 4, REV, TIC *166.38 +/-	400	4	0	4,798,871:52:0	
1149	98	361	23:08:36.800	465SH6A	6DMSC P100.3	DMS Control Tape P/B 100.8kbps	400	4	0	4,798,871:52:0	
1150	98	361	23:08:38.000		DMS: : *RUNUP	P100, TRACK *3, *FWD, TIC *165.58 +/-	400	4	0	4,798,871:53:8	
1151	98	361	23:08:41.866		DMS: : *AT SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	400	4	0	4,798,871:59:6	
1152	98	361	23:08:41.866		DMS: : *P_SLEW	P100, TRACK 3, FWD, TIC *171.08 +/-	400	4	0	4,798,871:59:6	
1153	98	361	23:09:42.800	465SH6B	6DMSC RDY,3	DMS Control Tape stop	400	4	0	4,798,872:60:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1154	98	361	23:09:42.800		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	400	4	0	4,798,872:60:0	
1155	98	361	23:09:44.000		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	400	4	0	4,798,872:61:8	
1156	98	361	23:10:59.466	488EA6B	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,798,873:84:0	
1157	98	361	23:24:12.800		DMS:	: *READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	400	4	0	4,798,887:00:0	
1158	98	361	23:24:12.800	465SI6A	6DMS	RDY, 4	DMS Control Tape stop	400	4	0	4,798,887:00:0	
1159	98	361	23:25:06.800		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	400	4	0	4,798,887:81:0	
1160	98	361	23:25:06.800	465SJ6A	6DTRN	CMD,6DTRN,465S,J6	DMS TRACK TURNAROUND	400	4	0	4,798,887:81:0	
1161	98	361	23:25:06.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	400	4	0	4,798,887:81:0	
1162	98	361	23:25:08.200		DMS:	: *US AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	400	4	0	4,798,887:83:1	
1163	98	361	23:25:13.466		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	400	4	0	4,798,888:00:0	
1164	98	361	23:25:14.666		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	400	4	0	4,798,888:01:8	
1165	98	361	23:25:16.066		DMS:	: *AT SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	400	4	0	4,798,888:03:9	
1166	98	361	23:36:41.866		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	400	4	0	4,798,899:31:6	
1167	98	361	23:36:43.066		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	400	4	0	4,798,899:33:4	
1168	98	361	23:36:43.066		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	4,798,899:33:4	
1169	98	361	23:36:44.466		DMS:	: *AT SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	400	4	0	4,798,899:35:5	
1170	98	361	23:36:56.466		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	400	4	0	4,798,899:53:5	
1171	98	361	23:36:57.666		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	400	4	0	4,798,899:55:3	
1172	98	361	23:55:04.133	20UG4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,798,917:47:0	
1173	98	361	23:55:54.133	20UG4B	7SLEW	DIS,POS,0.0	Resator movement	400	4	0	4,798,918:31:0	
1174	98	361	23:57:34.800	176SO6A	6TMSD	RIPB	STATUS PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,798,920:00:0	
1175	98	362	00:58:20.800	488EA6C	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,798,980:09:0	
1176	98	362	01:05:14.800	488EA6D	6TMSD	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,798,986:84:0	
1177	98	362	01:13:37.466	488EA6E	6TMSD	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,798,995:19:0	
1178	98	362	01:22:18.800	488EB6A	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,799,003:73:0	
1179	98	362	02:24:43.466	488EB6B	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,799,065:48:0	
1180	98	362	02:54:02.800	488EB6C	6TMSD	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,799,094:48:0	
1181	98	362	02:57:02.800	488EB6D	6TMSD	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,799,097:45:0	
1182	98	362	06:35:54.133	488EB6E	6TMSD	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,799,313:86:0	
1183	98	362	06:40:10.800	488EC6A	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,799,318:16:0	
1184	98	362	18:52:12.733	488ED6A	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,800,042:15:0	
1185	98	362	20:40:42.733	488ED6B	6TMSD	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,800,149:43:0	
1186	98	362	21:19:06.733	488ED6C	6TMSD	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,800,187:41:0	
1187	98	362	21:20:13.400	488ED6D	6TMSD	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,800,188:50:0	
1188	98	362	21:38:18.733	488ED6E	6TMSD	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,800,206:40:0	
1189	98	363	05:20:21.400	488EE6A	6TMSD	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,800,663:37:0	
1190	98	363	05:42:11.400	432NM6A	6RTSL1		R/T Select of DDS and	400	4	0	4,800,685:00:0	
1191	98	363	09:54:18.733	488EE6B	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,800,934:32:0	
1192	98	363	11:29:58.066	488EF6A	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,801,028:87:0	
1193	98	363	11:34:34.733	488EF6B	6TMSD	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,801,033:47:0	
1194	98	363	12:10:50.733	488EF6C	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,801,069:35:0	
1195	98	363	19:07:04.666	488EG6A	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,801,481:04:0	
1196	98	363	20:34:18.666	488EG6B	6TMSD	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,801,567:29:0	
1197	98	363	21:19:06.666	488EG6C	6TMSD	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,801,611:57:0	
1198	98	364	00:58:23.333	488EG6D	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,801,828:45:0	
1199	98	364	01:07:22.666	488EH6A	6TMSD	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,801,837:35:0	
1200	98	364	05:20:14.666	488EH6B	6TMSD	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,802,087:43:0	
1201	98	364	09:54:18.666	488E6A	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,802,358:48:0	
1202	98	364	11:30:18.666	488E6B	6TMSD	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,802,453:43:0	
1203	98	364	11:33:30.000	488E6C	6TMSD	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,802,456:57:0	
1204	98	364	11:40:58.666	488E6D	6TMSD	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,802,464:02:0	
1205	98	364	12:17:14.666	488E6E	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,802,499:81:0	
1206	98	364	16:51:57.333	488E6A	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,802,771:53:0	
1207	98	364	18:45:30.666	488E6B	6TMSD	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,802,883:81:0	
1208	98	364	19:13:14.666	488E6C	6TMSD	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,802,911:29:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1209	98	364	20:08:42.666	488EJ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,802,966:16:0	
1210	98	364	20:25:04.000	488EJ6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,802,982:32:0	
1211	98	364	20:58:43.333	488EK6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,803,015:58:0	
1212	98	364	21:07:10.666	176SX6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,803,024:00:0	
1213	98	364	21:12:00.000	20US4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,803,028:70:0	
1214	98	364	21:13:00.000	20US4D	7MODE	SPNL	AACS ALL-SPIN LOW	400	4	0	4,803,029:69:0	
1215	98	364	21:15:00.000	20US4E	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,803,031:67:0	
1216	98	364	21:20:30.000	20US4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	400	4	0	4,803,037:16:0	
1217	98	364	21:20:30.666	20US4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	400	4	0	4,803,037:17:0	
1218	98	364	21:20:50.666	20US4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	400	4	0	4,803,037:47:0	
1219	98	364	21:20:51.333	20US4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	400	4	0	4,803,037:48:0	
1220	98	364	21:21:11.333	20US4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	4,803,037:78:0	
1221	98	364	21:21:12.000	20US4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,803,037:79:0	
1222	98	364	21:21:22.000	20US4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	4,803,038:03:0	
1223	98	364	21:21:22.666	20US4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,803,038:04:0	
1224	98	364	21:21:32.666	20US4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	400	4	0	4,803,038:19:0	
1225	98	364	21:21:33.333	20US4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	400	4	0	4,803,038:20:0	
1226	98	364	21:23:20.000	20US4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	400	4	0	4,803,039:89:0	
1227	98	364	21:23:20.666	20US4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	400	4	0	4,803,039:90:0	
1228	98	364	21:23:40.666	20US4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	400	4	0	4,803,040:29:0	
1229	98	364	21:23:41.333	20US4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	400	4	0	4,803,040:30:0	
1230	98	364	21:24:01.333	20US4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,803,040:60:0	
1231	98	364	21:24:02.000	20US4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,803,040:61:0	
1232	98	364	21:24:12.000	20US4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,803,040:76:0	
1233	98	364	21:24:12.666	20US4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,803,040:77:0	
1234	98	364	21:24:22.666	20US4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	400	4	0	4,803,041:01:0	
1235	98	364	21:24:23.333	20US4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	400	4	0	4,803,041:02:0	
1236	98	364	21:25:20.000	20US4Z	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,803,041:87:0	
1237	98	364	21:40:59.333	432O1431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	400	4	0	4,803,057:40:0	
1238	98	364	21:41:00.000	432O16A	6RTSL1		R/T Select of DDS and	400	4	0	4,803,057:41:0	
1239	98	364	21:50:04.000	20UL4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,803,066:38:0	
1240	98	364	21:50:54.000	20UL4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,803,067:22:0	
1241	98	364	21:52:40.666	176SY6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,803,069:00:0	
1242	98	364	23:59:02.600	432NN6B	6RTDS2	NIMNCG,AACDSL,RT	AACS DESELECT	400	4	0	4,803,193:89:0	
1243	98	365	00:01:05.266	431TNN6A	6RCSEL	DDSSSEL,PLSNCG,EP	Record Select (DDS onl	400	4	0	4,803,196:00:0	
1244	98	365	00:54:34.600	488EK6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,803,248:82:0	
1245	98	365	01:11:38.600	488EK6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,803,265:71:0	
1246	98	365	02:20:05.933	488EK6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,803,333:44:0	
1247	98	365	02:45:30.600	488EK6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,803,358:56:0	
1248	98	365	02:51:07.266	488EL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,803,364:15:0	
1249	98	365	06:50:29.266	488EL6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,803,600:82:0	
1250	98	365	06:55:06.600	488EL6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,803,605:43:0	
1251	98	365	12:23:11.266	488EM6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,803,929:86:0	
1252	98	365	13:27:38.600	488EM6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,803,993:63:0	
1253	98	365	13:45:09.266	488EM6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,804,011:01:0	
1254	98	365	14:18:48.600	488EM6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,804,044:27:0	
1255	98	365	18:49:46.600	488EN6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,804,312:26:0	
1256	98	365	19:21:46.600	488EN6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,804,343:85:0	
1257	98	365	20:15:11.266	488EN6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,804,396:69:0	
1258	98	365	20:48:50.600	488EN6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,804,430:04:0	
1259	98	1	00:43:08.200	488EN6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,804,661:71:0	
1260	98	1	00:52:25.533	488EO6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,804,670:88:0	
1261	98	1	08:04:58.866	488EP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,805,098:70:0	
1262	98	1	09:54:17.533	488EP6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,805,206:80:0	
1263	98	1	11:21:38.866	488EP6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,805,293:25:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1264	99	1	11:23:53.533	488EP6D	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,805,295:45:0	
1265	99	2	00:53:00.866	488EQ6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,806,095:66:0	
1266	99	2	01:03:05.533	488EQ6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,806,105:63:0	
1267	99	2	02:22:01.533	488EQ6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,806,183:69:0	
1268	99	2	09:54:17.533	488ER6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,806,631:05:0	
1269	99	2	11:19:37.533	488ER6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,806,715:41:0	
1270	99	2	11:21:38.866	488ER6C	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,806,717:41:0	
1271	99	2	11:30:17.533	488ER6D	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,806,726:00:0	
1272	99	2	12:06:33.533	488ER6E	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,806,761:79:0	
1273	99	2	19:06:35.533	488ES6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,807,177:26:0	
1274	99	2	20:30:01.533	488ES6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,807,259:73:0	
1275	99	2	21:08:25.533	488ES6C	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,807,297:71:0	
1276	99	3	00:32:16.133	488ES6D	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,807,499:35:0	
1277	99	3	00:39:37.466	488ES6E	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,807,506:60:0	
1278	99	3	00:56:54.133	488ET6A	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,807,523:68:0	
1279	99	3	01:03:05.466	488ET6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,807,529:79:0	
1280	99	3	01:47:53.466	488ET6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,807,574:16:0	
1281	99	3	02:05:28.133	488ET6D	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,807,591:51:0	
1282	99	3	02:39:07.466	488ET6E	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,807,624:77:0	
1283	99	3	10:24:09.466	488EU6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,808,084:70:0	
1284	99	3	11:09:10.133	488EU6B	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,808,129:26:0	
1285	99	3	11:15:21.466	488EU6C	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,808,135:37:0	
1286	99	3	11:51:37.466	488EU6D	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,808,171:25:0	
1287	99	3	19:06:27.466	488EV6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,808,601:30:0	
1288	99	3	20:30:01.466	488EV6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,808,683:89:0	
1289	99	3	21:01:22.133	488EV6C	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,808,714:89:0	
1290	99	3	21:04:09.466	488EV6D	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,808,717:67:0	
1291	99	3	21:19:05.466	488EV6E	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,808,732:46:0	
1292	99	4	00:47:46.800	488EW6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,808,938:82:0	
1293	99	4	00:56:41.466	488EW6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,808,947:65:0	
1294	99	4	02:07:05.466	488EW6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,809,017:31:0	
1295	99	4	09:54:17.400	488EX6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,809,479:37:0	
1296	99	4	11:15:21.400	488EX6B	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,809,559:53:0	
1297	99	4	11:36:41.400	488EX6C	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,809,580:62:0	
1298	99	4	12:44:07.400	488EX6D	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,809,647:34:0	
1299	99	4	12:51:21.400	488EX6E	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,809,654:48:0	
1300	99	4	13:19:17.400	488EY6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,809,682:14:0	
1301	99	4	19:34:33.400	488EZ6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,810,053:27:0	
1302	99	4	20:44:57.400	488EZ6B	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,810,122:84:0	
1303	99	4	20:59:22.733	488EZ6C	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,810,137:17:0	
1304	99	4	21:16:57.400	488EZ6D	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,810,154:52:0	
1305	99	5	05:19:30.733	488FA6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,810,631:75:0	
1306	99	5	09:58:33.400	488FA6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,810,907:73:0	
1307	99	5	11:07:42.733	488FA6C	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,810,976:18:0	
1308	99	5	11:13:13.400	488FA6D	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,810,981:59:0	
1309	99	5	11:49:29.400	488FB6A	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,811,017:47:0	
1310	99	5	18:41:34.000	488FC6A	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,811,425:06:0	
1311	99	5	18:47:37.333	488FC6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,811,431:05:0	
1312	99	5	19:26:01.333	488FC6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,811,469:03:0	
1313	99	5	20:05:47.333	488FC6D	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,811,508:33:0	
1314	99	5	20:39:26.666	488FC6E	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,811,541:59:0	
1315	99	6	01:52:09.333	488FD6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,811,850:84:0	
1316	99	6	02:03:35.333	488FD6B	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,811,862:21:0	
1317	99	6	02:32:41.333	488FD6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,811,891:01:0	
1318	99	6	06:04:30.666	488FD6D	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,812,100:46:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1319	99	6	06:08:09.333	488FD6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,812,104:0	
1320	99	6	16:51:07.333	488FE6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,812,740:0	
1321	99	6	20:30:01.333	488FE6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,812,956:46:0	
1322	99	6	20:56:25.333	488FE6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,812,982:56:0	
1323	99	6	20:59:53.333	488FE6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,812,986:04:0	
1324	99	6	21:14:49.333	488FE6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,813,000:74:0	
1325	99	7	00:36:05.266	488FF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,813,199:79:0	
1326	99	7	01:41:29.266	488FF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,813,264:50:0	
1327	99	7	09:58:33.266	488FG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,813,756:14:0	
1328	99	7	11:03:15.266	488FG6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,813,820:13:0	
1329	99	7	11:08:57.266	488FG6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,813,825:71:0	
1330	99	7	11:45:13.266	488FG6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,813,861:59:0	
1331	99	7	14:00:05.933	18NRCRLT01-	-----START-----			400	4	0	:	
1332	99	7	14:00:05.933	41XE99A	POWER	PWR MODE change	Change to Calib/Decon Mode	400	4	0	4,813,995:04:0	
1333	99	7	14:00:09.933	41XE31	40T1PR		1 PCT Heater 1 OFF (primary relay)	400	4	0	4,813,995:10:0	
1334	99	7	14:00:19.933	41XE3J	40T1PR		2 PCT Heater 1 OFF (primary relay)	400	4	0	4,813,995:25:0	
1335	99	7	14:00:29.933	41XE3K	40T2R		1 PCT Heater 2 OFF	400	4	0	4,813,995:40:0	
1336	99	7	14:00:39.933	41XE3L	40T2R		2 PCT Heater 2 OFF	400	4	0	4,813,995:55:0	
1337	99	7	14:11:10.600	176XU6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,814,006:00:0	
1338	99	7	14:14:15.266	20XE4A	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,814,009:04:0	
1339	99	7	14:18:21.933	20DA4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,814,013:10:0	
1340	99	7	14:19:11.933	20DA4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,814,013:85:0	
1341	99	7	14:21:17.266	176XV6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,814,016:00:0	
1342	99	7	14:22:17.933	185XE10A3A	40HRP		1 RCT Heater ON (primary relay)	400	4	0	4,814,017:00:0	
1343	99	7	14:22:23.266	185XE10B3A	40HRP		2 RCT Heater ON (primary relay)	400	4	0	4,814,017:08:0	
1344	99	7	19:00:59.266	488FH6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,814,292:57:0	
1345	99	7	20:23:37.266	488FH6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,814,374:32:0	
1346	99	7	20:47:41.933	488FH6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,814,398:15:0	
1347	99	7	20:53:29.266	488FH6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,814,403:81:0	
1348	99	7	21:08:25.266	488FH6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,814,418:60:0	
1349	99	8	00:04:11.933	488FI6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,814,592:46:0	
1350	99	8	01:58:33.266	488FI6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,814,705:55:0	
1351	99	8	02:17:04.600	125XE	NIMSINIT	GS	##### GROUP START INIT	400	4	0	4,814,723:84:0	
1352	99	8	02:17:04.600	125XE4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	4,814,723:84:0	
1353	99	8	02:17:45.266	488FI6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	460	4	0	4,814,724:54:0	
1354	99	8	02:18:05.266	125XE4B	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	4R0	4	0	4,814,724:84:0	
1355	99	8	02:19:05.933	125XE4C	37IST	0,2,0,OFF,0,1,3	Gain State 1	1R0	4	0	4,814,725:84:0	
1356	99	8	02:20:06.600	125XE11A	NIMSINIT	GE	##### GROUP END INIT	1R0	4	0	4,814,726:84:0	
1357	99	8	02:20:06.600	125XE4D	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	1R0	4	0	4,814,726:84:0	
1358	99	8	02:22:07.933	127XE4A	37IOP	3,0	Long Map, Grating Start Position =00	1R3	4	0	4,814,728:84:0	
1359	99	8	02:22:07.933	127XE	NIMSTAB	GS	%%%%GROUP START TAB	1R3	4	0	4,814,728:84:0	
1360	99	8	02:22:08.600	127XE4B	37ETB	0A,CA,18,03,FF,1	Loads wavelength edit table	1R3	4	0	4,814,728:85:0	
1361	99	8	02:22:15.266	127XE11A	NIMSTAB	GE	%%%%GROUP END TAB	1R3	4	0	4,814,729:04:0	
1362	99	8	02:26:15.266	176XE6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1R3	4	0	4,814,733:00:0	
1363	99	8	02:32:19.266	192XE4A	7CONE	17,0,119,7	Check S/P Position	1R3	4	0	4,814,739:00:0	
1364	99	8	02:34:40.600	432XE6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	1R3	4	0	4,814,741:30:0	
1365	99	8	02:35:39.933	432XF6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	1R3	4	0	4,814,742:28:0	
1366	99	8	02:38:23.266	192XE4B	7CONE	17,0,0,0	Check S/P Position	1R3	4	0	4,814,745:00:0	
1367	99	8	02:40:44.600	432XU6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	1R3	4	0	4,814,747:30:0	
1368	99	8	02:42:44.600	432XW6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	1R3	4	0	4,814,749:28:0	
1369	99	8	02:44:27.266	192XE4C	7CONE	17,0,119,7	Check S/P Position	1R3	4	0	4,814,751:00:0	
1370	99	8	02:46:28.600	185XE10C3A	40HRPR		1 RCT Heater OFF (primary relay)	1R3	4	0	4,814,753:00:0	
1371	99	8	02:46:33.933	185XE10D3A	40HRPR		2 RCT Heater OFF (primary relay)	1R3	4	0	4,814,753:08:0	
1372	99	8	02:46:48.600	432XW6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	1R3	4	0	4,814,753:30:0	
1373	99	8	02:47:47.933	432XY6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	1R3	4	0	4,814,754:28:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1374	99	8	02:49:25.933	125DC11A	NIMSINIT	GE	##### GROUP END INIT	1R3	4	0	4,814,755:84:0	
1375	99	8	02:49:25.933	125DC4A	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R3	4	0	4,814,755:84:0	
1376	99	8	02:49:25.933	125DC	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,814,755:84:0	
1377	99	8	02:50:26.600	127DC	NIMSTAB	GS	%%%% GROUP START TAB	4R3	4	0	4,814,756:84:0	
1378	99	8	02:50:26.600	127DC4A	37IOP	3,0	Longs wavelength edit table	4R3	4	0	4,814,756:84:0	
1379	99	8	02:50:27.266	127DC4B	37ETB	07,C7,31,80,00,0	Load Map, Grating Start Position =00	4R3	4	0	4,814,756:85:0	
1380	99	8	02:50:31.266	192XE4D	7CONE	17,0,153.0	Check S/P Position	4R3	4	0	4,814,757:00:0	
1381	99	8	02:50:33.933	127DC11A	NIMSTAB	GE	%%%% GROUP END TAB	4R3	4	0	4,814,757:04:0	
1382	99	8	02:50:51.266	432DC6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	4R3	4	0	4,814,757:30:0	
1383	99	8	02:51:27.266	125DD11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,814,757:84:0	
1384	99	8	02:51:27.266	125DD	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,814,757:84:0	
1385	99	8	02:51:27.266	125DD4A	37IST	0,2,1,OFF,1,0,1	OPCAL	4R3	4	0	4,814,757:84:0	
1386	99	8	02:53:28.600	125DE11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,814,759:84:0	
1387	99	8	02:53:28.600	125DE	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,814,759:84:0	
1388	99	8	02:53:28.600	125DE4A	37IST	0,2,1,OFF,1,0,1	OPCAL	4R3	4	0	4,814,759:84:0	
1389	99	8	02:53:51.933	432DE6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	4R3	4	0	4,814,760:28:0	
1390	99	8	02:57:31.266	127XF4A	37IOP	0,0	Safe, Grating Start Position =00	4R0	4	0	4,814,763:84:0	
1391	99	8	02:57:31.266	127XF	NIMSTAB	GS	%%%% GROUP START TAB	4R0	4	0	4,814,763:84:0	
1392	99	8	02:57:31.933	127XF4B	37ETB	04,C4,02,00,00	Loads wavelength edit table	4R0	4	0	4,814,763:85:0	
1393	99	8	02:57:38.600	127XF11A	NIMSTAB	GE	%%%% GROUP END TAB	4R0	4	0	4,814,764:04:0	
1394	99	8	03:00:33.266	125XF	NIMSINIT	GS	##### GROUP START INIT	4R0	4	0	4,814,766:84:0	
1395	99	8	03:00:33.266	125XF4A	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	4R0	4	0	4,814,766:84:0	
1396	99	8	03:01:33.933	125XF4B	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	4,814,767:84:0	
1397	99	8	03:02:34.600	125XF11A	NIMSINIT	GE	##### GROUP END INIT	460	4	0	4,814,768:84:0	
1398	99	8	03:02:34.600	125XF4C	37IST	1,1,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	4,814,768:84:0	
1399	99	8	03:08:45.933	41XU99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	400	4	0	4,814,775:04:0	
1400	99	8	03:10:39.933	41XU3G	40T1P		1 PCT Heater 1 ON (primary relay)	400	4	0	4,814,776:84:0	
1401	99	8	03:10:49.933	41XU3H	40T1P		2 PCT Heater 1 ON (primary relay)	400	4	0	4,814,777:08:0	
1402	99	8	03:10:59.933	41XU3I	40T2		1 PCT Heater 2 ON	400	4	0	4,814,777:23:0	
1403	99	8	03:11:09.933	41XU3J	40T2		2 PCT Heater 2 ON	400	4	0	4,814,777:38:0	
1404	99	8	03:15:50.599	18NNRCTRLT01-		-----STOP-----		400	4	0	:	
1405	99	8	03:18:56.600	20DB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,814,785:10:0	
1406	99	8	03:19:46.600	20DB4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,814,785:85:0	
1407	99	8	03:21:51.933	176XF6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,814,788:00:0	
1408	99	8	09:58:33.200	488FJ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,815,180:30:0	
1409	99	8	10:58:49.200	488FJ6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,815,239:85:0	
1410	99	8	11:04:41.200	488FJ6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,815,245:67:0	
1411	99	8	11:40:57.200	488FJ6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,815,281:55:0	
1412	99	8	15:05:54.533	488FJ6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,815,484:28:0	
1413	99	8	15:14:59.866	488FK6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,815,493:27:0	
1414	99	8	15:18:44.533	176TC6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,815,497:00:0	
1415	99	8	15:44:29.866	20SY4I	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,815,522:43:0	
1416	99	8	15:59:29.866	20SY4K	7SLEW	INIT,POS,17.45	Stator movement	400	4	0	4,815,537:28:0	
1417	99	8	16:11:29.866	20SY4L	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,815,549:16:0	
1418	99	8	16:18:29.866	20SY4M	7SLEW	INIT,NEG,17.45	Stator movement	400	4	0	4,815,556:09:0	
1419	99	8	16:30:29.866	20SY4N	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,815,567:88:0	
1420	99	8	16:37:29.866	20SY4O	7SLEW	INIT,POS,4.36	Stator movement	400	4	0	4,815,574:81:0	
1421	99	8	16:49:29.866	20SY4P	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,815,586:69:0	
1422	99	8	16:56:29.866	20SY4Q	7SLEW	INIT,NEG,4.36	Stator movement	400	4	0	4,815,593:62:0	
1423	99	8	17:08:29.866	20SY4R	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,815,605:50:0	
1424	99	8	17:20:29.866	20SY4AH	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,815,617:38:0	
1425	99	8	17:34:03.866	20SK4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,815,630:76:0	
1426	99	8	17:34:53.866	20SK4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,815,631:60:0	
1427	99	8	17:36:15.200	176TD6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,815,633:00:0	
1428	99	8	17:37:59.866	488FK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,815,634:66:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1429	99	8	18:13:29.200	488FK6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,815,669:75:0	
1430	99	8	18:41:13.200	488FK6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,815,697:23:0	
1431	99	8	19:11:05.200	488FK6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,815,726:72:0	
1432	99	8	19:56:08.533	488FL6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,815,771:32:0	
1433	99	8	20:29:47.200	488FL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,815,804:57:0	
1434	99	9	00:12:12.533	488FL6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,816,024:55:0	
1435	99	9	00:30:51.200	488FL6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,816,043:04:0	
1436	99	9	01:30:49.200	488FL6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,816,102:32:0	
1437	99	9	01:43:55.200	488FM6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,816,115:28:0	
1438	99	9	02:13:01.866	488FM6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,816,144:09:0	
1439	99	9	09:58:33.200	488FN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,816,604:46:0	
1440	99	9	10:53:40.533	488FN6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,816,659:02:0	
1441	99	9	10:58:17.200	488FN6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,816,663:53:0	
1442	99	9	11:34:33.200	488FN6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,816,699:41:0	
1443	99	9	19:05:46.466	488FO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,817,145:65:0	
1444	99	9	20:23:37.133	488FO6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,817,222:64:0	
1445	99	9	20:47:33.133	488FO6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,817,246:34:0	
1446	99	9	20:53:29.133	488FO6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,817,252:22:0	
1447	99	9	21:08:25.133	488FO6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,817,267:01:0	
1448	99	10	02:40:44.466	488FP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,817,595:62:0	
1449	99	10	04:12:57.133	488FP6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,817,686:80:0	
1450	99	10	04:19:59.800	488FP6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,817,693:77:0	
1451	99	10	04:32:09.133	488FP6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,817,705:79:0	
1452	99	10	09:18:55.800	488FQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,817,989:45:0	
1453	99	10	09:58:33.133	488FQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,818,028:62:0	
1454	99	10	10:52:39.133	488FQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,818,082:17:0	
1455	99	10	10:58:17.133	488FQ6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,818,087:69:0	
1456	99	10	11:34:33.133	488FQ6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,818,123:57:0	
1457	99	10	18:26:01.133	488FR6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,818,530:52:0	
1458	99	10	18:30:33.133	488FR6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,818,535:05:0	
1459	99	10	18:56:09.133	488FR6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,818,560:34:0	
1460	99	10	19:46:21.133	488FR6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,818,610:02:0	
1461	99	10	20:20:00.466	488FR6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,818,643:28:0	
1462	99	11	00:11:59.066	488FS6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,818,872:67:0	
1463	99	11	00:20:25.066	488FS6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,818,881:07:0	
1464	99	11	02:13:50.400	488FS6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,818,993:23:0	
1465	99	11	04:25:45.066	488FS6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,819,123:65:0	
1466	99	11	06:52:57.066	488FT6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,819,269:27:0	
1467	99	11	09:58:33.066	488FT6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,819,452:78:0	
1468	99	11	10:48:13.066	488FT6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,819,501:89:0	
1469	99	11	10:54:01.066	488FT6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,819,507:65:0	
1470	99	11	11:30:17.066	488FT6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,819,543:53:0	
1471	99	11	18:50:33.733	488FU6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,819,979:02:0	
1472	99	11	20:19:21.066	488FU6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,820,066:76:0	
1473	99	11	20:39:33.733	488FU6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,820,086:75:0	
1474	99	11	20:49:13.066	488FU6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,820,096:34:0	
1475	99	11	21:04:09.066	488FU6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,820,111:13:0	
1476	99	12	05:17:50.400	488FV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,820,599:37:0	
1477	99	12	07:22:49.000	488FV6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,820,723:01:0	
1478	99	12	09:58:33.000	488FV6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,820,877:03:0	
1479	99	12	10:45:44.333	488FV6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,820,923:64:0	
1480	99	12	10:47:37.000	488FV6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,820,925:51:0	
1481	99	12	18:10:47.666	488FW6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,821,363:79:0	
1482	99	12	18:15:37.000	488FW6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,821,368:58:0	
1483	99	12	18:45:29.000	488FW6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,821,398:16:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1484	99	12	19:41:34.333	488FW6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,821,453:59:0	
1485	99	12	20:15:13.666	488FW6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,821,486:85:0	
1486	99	13	01:05:13.000	488FX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,821,773:67:0	
1487	99	13	01:39:21.666	488FX6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,821,807:46:0	
1488	99	13	02:08:27.666	488FX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,821,836:26:0	
1489	99	13	03:21:45.000	488FX6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,821,908:70:0	
1490	99	13	04:05:17.000	488FX6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,821,951:75:0	
1491	99	13	04:08:41.000	488FY6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,821,955:17:0	
1492	99	13	18:16:40.266	488FZ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,822,793:78:0	
1493	99	13	18:26:16.933	488FZ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,822,803:33:0	
1494	99	13	19:51:36.933	488FZ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,822,887:69:0	
1495	99	14	00:28:56.933	488GA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,823,162:04:0	
1496	99	14	00:56:40.933	488GA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,823,189:43:0	
1497	99	14	03:06:48.933	488GA6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,823,318:16:0	
1498	99	14	07:52:40.933	488GB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,823,600:82:0	
1499	99	14	09:52:08.933	488GB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,823,719:05:0	
1500	99	14	10:37:36.933	488GB6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,823,764:02:0	
1501	99	14	10:43:20.933	488GB6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,823,769:63:0	
1502	99	14	11:19:36.933	488GB6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,823,805:51:0	
1503	99	14	16:35:15.600	488GC6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,824,117:67:0	
1504	99	14	18:01:46.266	488GC6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,824,203:27:0	
1505	99	14	18:35:25.600	488GC6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,824,236:53:0	
1506	99	14	19:43:04.933	488GC6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,824,303:45:0	
1507	99	14	20:27:52.933	488GC6E	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,824,347:73:0	
1508	99	14	20:28:16.266	488GD6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,824,348:17:0	
1509	99	14	20:44:56.933	488GD6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,824,364:62:0	
1510	99	15	00:10:13.533	488GD6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,824,567:64:0	
1511	99	15	00:50:16.866	488GD6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,824,607:29:0	
1512	99	15	02:45:28.866	488GE6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,824,721:23:0	
1513	99	15	07:59:04.866	488GE6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,825,031:37:0	
1514	99	15	09:52:08.866	488GF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,825,143:21:0	
1515	99	15	10:36:18.866	488GF6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,825,186:83:0	
1516	99	15	10:39:04.866	488GF6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,825,189:59:0	
1517	99	15	10:54:00.866	488GF6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,825,204:38:0	
1518	99	15	14:18:22.866	488GF6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,825,406:49:0	
1519	99	15	17:32:56.866	488GG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,825,598:88:0	
1520	99	15	19:36:40.866	488GG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,825,721:31:0	
1521	99	15	23:58:51.533	488GH6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,825,980:58:0	
1522	99	16	00:03:20.866	488GH6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,825,985:07:0	
1523	99	16	00:10:07.533	488GH6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,825,991:71:0	
1524	99	16	00:46:00.866	488GH6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,826,027:25:0	
1525	99	16	02:41:12.866	488GH6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,826,141:19:0	
1526	99	16	07:59:04.800	488GI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,826,455:53:0	
1527	99	16	09:52:08.800	488GI6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,826,567:37:0	
1528	99	16	10:32:40.800	488GI6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,826,607:45:0	
1529	99	16	10:49:44.800	488GI6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,826,624:34:0	
1530	99	16	11:21:44.800	488GI6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,826,656:02:0	
1531	99	16	12:01:56.133	488GJ6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,826,695:70:0	
1532	99	16	12:35:35.466	488GJ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,826,729:05:0	
1533	99	16	19:38:48.800	488GK6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,827,147:57:0	
1534	99	16	20:14:18.800	488GK6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,827,182:67:0	
1535	99	16	20:25:44.800	488GK6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,827,194:04:0	
1536	99	17	00:05:01.466	488GK6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,827,410:83:0	
1537	99	17	00:46:00.800	488GK6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,827,451:41:0	
1538	99	17	02:34:48.800	488GL6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,827,559:05:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1539	99	17	07:56:56.800	488GL6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,827,877:59:0	
1540	99	17	09:47:52.800	488GM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,827,987:33:0	
1541	99	17	10:28:24.800	488GM6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,828,027:41:0	
1542	99	17	10:45:28.800	488GM6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,828,044:30:0	
1543	99	17	13:25:28.800	488GM6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,828,202:52:0	
1544	99	17	17:28:40.733	488GN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,828,443:09:0	
1545	99	17	20:08:40.733	488GN6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,828,601:31:0	
1546	99	17	20:24:56.066	488GN6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,828,617:38:0	
1547	99	17	20:27:52.733	488GN6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,828,620:30:0	
1548	99	17	20:42:48.733	488GN6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,828,635:09:0	
1549	99	17	23:59:55.400	488GO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,828,830:04:0	
1550	99	18	00:00:00.066	481UC4A	7VECT		Inert vect update UTC	400	4	0	4,828,830:11:0	
1551	99	18	00:39:36.733	488GO6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,828,869:27:0	
1552	99	18	02:30:32.733	488GO6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,828,979:01:0	
1553	99	18	07:56:56.733	488GP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,829,301:75:0	
1554	99	18	09:43:36.733	488GP6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,829,407:29:0	
1555	99	18	10:28:24.733	488GP6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,829,451:57:0	
1556	99	18	10:45:28.733	488GP6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,829,468:46:0	
1557	99	18	11:15:20.733	488GP6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,829,498:04:0	
1558	99	18	11:57:08.066	488GQ6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,829,539:34:0	
1559	99	18	12:30:47.400	488GQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,829,572:60:0	
1560	99	18	19:32:24.733	488GR6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,829,989:59:0	
1561	99	18	20:12:56.733	488GR6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,830,029:67:0	
1562	99	18	20:13:01.400	488GR6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,830,029:74:0	
1563	99	18	20:30:00.733	488GR6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,830,046:56:0	
1564	99	19	05:17:08.000	488GS6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,830,567:86:0	
1565	99	19	07:52:40.666	488GS6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,830,721:71:0	
1566	99	19	09:02:43.333	488GS6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,830,791:05:0	
1567	99	19	09:07:20.666	488GS6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,830,795:57:0	
1568	99	19	17:50:06.000	488GT6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,831,312:58:0	
1569	99	19	17:56:24.666	488GT6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,831,318:80:0	
1570	99	19	18:15:36.666	488GT6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,831,337:79:0	
1571	99	19	19:17:15.333	488GT6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,831,398:76:0	
1572	99	19	19:50:54.666	488GT6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,831,432:11:0	
1573	99	19	21:35:00.000	488GU6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,831,535:06:0	
1574	99	19	21:38:58.666	176NV6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,831,539:00:0	
1575	99	19	22:09:00.000	20SV4I	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,831,568:63:0	
1576	99	19	22:24:00.000	20SV4K	7SLEW	INIT,POS,17.45	Stator movement	400	4	0	4,831,583:48:0	
1577	99	19	22:36:00.000	20SV4L	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,831,595:36:0	
1578	99	19	22:43:00.000	20SV4M	7SLEW	INIT,NEG,17.45	Stator movement	400	4	0	4,831,602:29:0	
1579	99	19	22:55:00.000	20SV4N	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,831,614:17:0	
1580	99	19	23:07:00.000	20SV4AH	7MODE	GRU	AACS CRUISE MODE	400	4	0	4,831,626:05:0	
1581	99	19	23:23:04.000	20SU4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,831,641:86:0	
1582	99	19	23:23:54.000	20SU4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,831,642:70:0	
1583	99	19	23:24:08.000	176TE6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,831,643:00:0	
1584	99	19	23:41:04.000	488GU6B	6TMSED	FILL,AH4	Sci, Eng, and D/L Chan	400	4	0	4,831,659:68:0	
1585	99	19	23:43:00.000	488GU6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,831,661:60:0	
1586	99	19	23:54:44.666	488GU6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,831,673:25:0	
1587	99	20	00:35:20.666	488GU6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,831,713:39:0	
1588	99	20	01:15:03.333	488GV6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,831,752:64:0	
1589	99	20	01:44:09.333	488GV6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,831,781:44:0	
1590	99	20	02:19:52.666	488GV6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,831,816:74:0	
1591	99	20	04:44:02.666	488GV6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,831,959:36:0	
1592	99	20	04:47:04.666	488GV6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,831,962:36:0	
1593	99	20	17:46:00.600	488GW6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,832,732:70:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1594	99	20	17:56:24.600	488GW6B	6TMS	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,832,743:05:0	
1595	99	20	19:19:36.600	488GW6C	6TMS	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,832,825:31:0	
1596	99	20	19:57:41.266	176TJ6A	6TMRE	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,832,863:00:0	
1597	99	20	20:01:59.933	20UT4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,832,867:24:0	
1598	99	20	20:02:59.933	20UT4D	7MODE	UNSTOW	AACS ALL-SPIN LOW	400	4	0	4,832,868:23:0	
1599	99	20	20:04:59.933	20UT4E	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,832,870:21:0	
1600	99	20	20:10:29.933	20UT4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	400	4	0	4,832,875:61:0	
1601	99	20	20:10:30.600	20UT4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	400	4	0	4,832,875:62:0	
1602	99	20	20:10:50.600	20UT4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	400	4	0	4,832,876:01:0	
1603	99	20	20:10:51.266	20UT4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	400	4	0	4,832,876:02:0	
1604	99	20	20:11:11.266	20UT4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	4,832,876:32:0	
1605	99	20	20:11:11.933	20UT4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,832,876:33:0	
1606	99	20	20:11:21.933	20UT4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	4,832,876:48:0	
1607	99	20	20:11:22.600	20UT4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,832,876:49:0	
1608	99	20	20:11:32.600	20UT4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	400	4	0	4,832,876:64:0	
1609	99	20	20:11:33.266	20UT4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	400	4	0	4,832,876:65:0	
1610	99	20	20:13:19.933	20UT4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	400	4	0	4,832,878:43:0	
1611	99	20	20:13:20.600	20UT4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	400	4	0	4,832,878:44:0	
1612	99	20	20:13:40.600	20UT4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	400	4	0	4,832,878:74:0	
1613	99	20	20:13:41.266	20UT4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	400	4	0	4,832,878:75:0	
1614	99	20	20:14:01.266	20UT4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,832,879:14:0	
1615	99	20	20:14:01.933	20UT4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,832,879:15:0	
1616	99	20	20:14:11.933	20UT4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,832,879:30:0	
1617	99	20	20:14:12.600	20UT4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,832,879:31:0	
1618	99	20	20:14:22.600	20UT4AW	7VENT	1.211,1.333,9	ALERT -- Thruster fire	400	4	0	4,832,879:46:0	
1619	99	20	20:14:23.266	20UT4AX	7VENT	1.211,0.666,11	ALERT -- Thruster fire	400	4	0	4,832,879:47:0	
1620	99	20	20:15:19.933	20UT4Z	7MODE	GRU	AACS CRUISE MODE	400	4	0	4,832,880:41:0	
1621	99	20	20:40:03.933	20UUA4	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,832,904:83:0	
1622	99	20	20:40:53.933	20ULU4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,832,905:67:0	
1623	99	20	20:42:10.600	176TK6A	6TMRE	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,832,907:00:0	
1624	99	21	02:19:52.600	488GX6A	6TMS	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,833,240:90:0	
1625	99	21	07:48:24.600	488GX6B	6TMS	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,833,565:83:0	
1626	99	21	09:32:56.600	488GY6A	6TMS	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,833,669:27:0	
1627	99	21	10:15:21.266	488GY6B	6TMS	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,833,711:22:0	
1628	99	21	10:17:44.600	488GY6C	6TMS	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,833,713:55:0	
1629	99	21	10:32:40.600	488GY6D	6TMS	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,833,728:34:0	
1630	99	21	15:17:48.533	488GY6E	6TMS	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,834,010:34:0	
1631	99	21	16:52:59.866	488GZ6A	6TMS	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,834,104:47:0	
1632	99	21	16:56:40.533	488GZ6B	6TMS	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,834,108:14:0	
1633	99	21	16:57:31.866	176TH6A	6TMRE	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,834,109:00:0	
1634	99	21	17:05:59.866	20WD4C	7STAT	17.45,178.14,2.2	Stator inertial point	400	4	0	4,834,117:34:0	
1635	99	21	17:25:01.866	490UB412A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,834,136:18:0	
1636	99	21	17:29:59.866	490UB412A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,834,141:10:0	
1637	99	21	17:30:19.866	20WD4D	7STAT	17.45,178.14,2.2	Stator inertial point	400	4	0	4,834,141:40:0	
1638	99	21	17:34:09.866	490UB412A4E	7VECT		Inert vect update UTC	400	4	0	4,834,145:21:0	
1639	99	21	17:34:13.866	490UB412A4F	7TURN	2,RTH	ALERT Thruster	400	4	0	4,834,145:27:0	
1640	99	21	17:38:01.866	490UB412A40A4A	7STAR	16,217,100.73	Star catalog update	400	4	0	4,834,149:05:0	
1641	99	21	17:38:03.866	490UB412A40A4B	7STAR	2,125,259.73	Star catalog update	400	4	0	4,834,149:08:0	
1642	99	21	17:38:05.866	490UB412A40A4C	7STAR	3,130,228.55	Star catalog update	400	4	0	4,834,149:11:0	
1643	99	21	17:38:07.866	490UB412A40A4D	7STAR	4,371,138.16,-69	Star catalog update	400	4	0	4,834,149:14:0	
1644	99	21	17:38:09.866	490UB412A40A4E	7STAR	5,0,0,0,0.0	Star catalog update	400	4	0	4,834,149:17:0	
1645	99	21	17:38:11.866	490UB412A40A4F	7STAR	6,0,0,0,0.0	Star catalog update	400	4	0	4,834,149:20:0	
1646	99	21	17:48:05.866	20WD4F	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,834,159:01:0	
1647	99	21	17:56:09.866	490UB412A4G	7MODE	GRU	AACS CRUISE MODE	400	4	0	4,834,166:90:0	
1648	99	21	19:24:59.866	488GZ6C	6TMS	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,834,254:77:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1649	99	21	19:30:03.866	20TB4A	7SAFE STOP	S/P NO MOVEMENT	400	4	0	4,834,259:78:0	
1650	99	21	19:30:53.866	20TB4B	7SLEW DIS,POS,0,0	Stator movement	400	4	0	4,834,260:62:0	
1651	99	21	19:32:13.866	176TI6A	6TMREC RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,834,262:00:0	
1652	99	21	19:43:04.533	488GZ6D	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,834,272:66:0	
1653	99	21	20:06:36.533	488GZ6E	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,834,296:00:0	
1654	99	21	20:12:56.533	488HA6A	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,834,302:24:0	
1655	99	21	20:27:52.533	488HA6B	6TMSED FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,834,317:03:0	
1656	99	22	00:02:46.533	488HA6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,834,529:52:0	
1657	99	22	01:32:56.533	488HA6D	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,834,618:68:0	
1658	99	22	04:02:28.533	488HB6A	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,834,766:58:0	
1659	99	22	04:36:07.200	488HB6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,834,799:83:0	
1660	99	22	09:26:32.533	488HB6C	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,835,087:13:0	
1661	99	22	10:01:12.533	488HB6D	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,835,121:39:0	
1662	99	22	10:07:04.533	488HC6A	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,835,127:21:0	
1663	99	22	10:43:20.533	488HC6B	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,835,163:09:0	
1664	99	22	13:04:30.533	488HC6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,835,302:65:0	
1665	99	22	19:36:40.533	488HD6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,835,690:52:0	
1666	99	22	20:04:09.200	488HD6B	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,835,717:68:0	
1667	99	22	20:06:32.533	488HD6C	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,835,720:10:0	
1668	99	22	20:21:28.533	488HD6D	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,835,734:80:0	
1669	99	22	23:44:28.466	488HD6E	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,835,935:59:0	
1670	99	23	00:39:36.466	488HE6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,835,990:16:0	
1671	99	23	03:30:16.466	488HE6B	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,836,158:88:0	
1672	99	23	06:27:20.466	488HE6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,836,334:08:0	
1673	99	23	09:11:36.466	488HF6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,836,496:50:0	
1674	99	23	10:05:50.466	488HF6B	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,836,550:17:0	
1675	99	23	10:11:20.466	488HF6C	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,836,555:57:0	
1676	99	23	10:47:36.466	488HF6D	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,836,591:45:0	
1677	99	23	17:35:44.466	488HG6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,836,995:13:0	
1678	99	23	17:45:44.466	488HG6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,837,005:03:0	
1679	99	23	19:40:56.466	488HG6C	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,837,118:88:0	
1680	99	23	23:37:44.466	488HH6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,837,353:15:0	
1681	99	24	00:35:20.466	488HH6B	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,837,410:12:0	
1682	99	24	03:11:04.466	488HH6C	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,837,564:14:0	
1683	99	24	06:38:00.400	488HI6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,837,768:74:0	
1684	99	24	09:11:36.400	488HI6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,837,920:66:0	
1685	99	24	10:01:25.066	488HI6C	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,837,969:90:0	
1686	99	24	10:07:04.400	488HI6D	6TMSED FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,837,975:53:0	
1687	99	24	10:43:20.400	488HI6E	6TMSED FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,838,011:41:0	
1688	99	24	11:10:41.733	488HJ6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,838,038:46:0	
1689	99	24	11:19:36.400	488HJ6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,838,047:29:0	
1690	99	24	12:37:40.400	488HJ6C	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,838,124:48:0	
1691	99	24	13:11:19.733	488HJ6D	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,838,157:74:0	
1692	99	24	18:51:52.400	488HK6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,838,494:56:0	
1693	99	24	19:47:20.400	488HK6B	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,838,549:43:0	
1694	99	24	19:57:21.733	488HK6C	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,838,559:35:0	
1695	99	24	20:15:04.400	488HK6D	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,838,576:82:0	
1696	99	24	23:39:18.400	488HK6E	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,838,778:81:0	
1697	99	25	00:31:04.400	488HL6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,838,830:08:0	
1698	99	25	02:54:00.400	488HL6B	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,838,971:41:0	
1699	99	25	06:46:32.400	488HM6A	6TMSED NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,839,201:39:0	
1700	99	25	09:07:20.400	488HM6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,839,340:62:0	
1701	99	25	10:02:48.400	488HM6C	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,839,395:49:0	
1702	99	25	10:19:52.400	488HM6D	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,839,412:38:0	
1703	99	25	11:08:56.400	488HM6E	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,839,460:86:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1704	99	25	11:32:44.400	488HN6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,839,484:44:0	
1705	99	25	12:06:23.733	488HN6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,839,517:70:0	
1706	99	25	18:51:52.333	488HO6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,839,918:72:0	
1707	99	25	19:47:20.333	488HO6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,839,973:59:0	
1708	99	25	19:57:16.333	488HO6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,839,983:43:0	
1709	99	25	20:15:04.333	488HO6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,840,001:07:0	
1710	99	26	05:16:32.333	488HP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,840,536:54:0	
1711	99	26	06:52:56.333	488HP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,840,631:85:0	
1712	99	26	09:07:20.333	488HP6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,840,764:78:0	
1713	99	26	09:54:29.000	488HP6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,840,811:44:0	
1714	99	26	09:56:24.333	488HP6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,840,813:35:0	
1715	99	26	17:24:31.000	488HQ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,841,256:52:0	
1716	99	26	17:30:48.333	488HQ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,841,262:72:0	
1717	99	26	18:00:40.333	488HQ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,841,292:30:0	
1718	99	26	18:52:50.333	488HQ6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,841,343:84:0	
1719	99	26	19:26:29.666	488HQ6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,841,377:19:0	
1720	99	27	00:20:24.266	488HR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,841,667:81:0	
1721	99	27	01:00:37.600	488HR6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,841,707:61:0	
1722	99	27	01:29:43.600	488HR6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,841,736:41:0	
1723	99	27	02:34:48.266	488HR6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,841,800:74:0	
1724	99	27	04:43:35.600	488HR6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,841,928:17:0	
1725	99	27	04:47:04.266	488HS6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,841,931:57:0	
1726	99	27	17:19:26.933	488HT6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,842,675:67:0	
1727	99	27	17:24:24.266	488HT6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,842,680:58:0	
1728	99	27	17:54:16.266	488HT6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,842,710:16:0	
1729	99	27	18:47:54.266	488HT6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,842,763:20:0	
1730	99	27	18:59:48.266	432MC431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	400	4	0	4,842,774:90:0	
1731	99	27	18:59:48.933	432MC6A	6RTSL1		R/T Select of DDS and	400	4	0	4,842,775:00:0	
1732	99	27	19:21:33.600	488HT6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,842,796:46:0	
1733	99	28	00:20:24.266	488HU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,843,092:06:0	
1734	99	28	00:55:41.600	488HU6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,843,126:88:0	
1735	99	28	01:24:47.600	488HU6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,843,155:68:0	
1736	99	28	02:30:32.266	488HU6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,843,220:70:0	
1737	99	28	03:00:00.266	481UA4A	7VECT	BB1	Inert vect update UTC	400	4	0	4,843,249:83:0	
1738	99	28	06:46:32.200	488HV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,843,473:87:0	
1739	99	28	09:00:56.200	488HV6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,843,606:80:0	
1740	99	28	09:37:12.200	488HV6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,843,642:68:0	
1741	99	28	10:04:56.200	488HV6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,843,670:16:0	
1742	99	28	10:54:00.200	488HV6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,843,718:64:0	
1743	99	28	11:22:57.533	488HW6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,843,747:31:0	
1744	99	28	11:56:36.200	488HW6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,843,780:56:0	
1745	99	28	17:07:20.200	488HW6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,844,087:85:0	
1746	99	28	17:30:48.200	488HX6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,844,111:13:0	
1747	99	28	18:47:58.200	488HX6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,844,187:42:0	
1748	99	28	19:13:12.200	488HX6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,844,212:38:0	
1749	99	28	19:18:55.533	488HX6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,844,218:07:0	
1750	99	28	19:23:00.200	488HX6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,844,222:10:0	
1751	99	28	19:27:56.866	176SF6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,844,227:00:0	
1752	99	28	19:39:00.200	20CA4C	7STAT	17.45,89,209,-25	Stator inertial point	400	4	0	4,844,237:85:0	
1753	99	28	20:00:00.200	474CA416A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,844,258:64:0	
1754	99	28	20:02:00.200	474CA416A4D	7SAFE	INSTOW	S/P TO 153 deg cone	400	4	0	4,844,260:62:0	
1755	99	28	20:02:20.200	20CA4D	7STAT	17.45,89,209,-25	Stator inertial point	400	4	0	4,844,261:01:0	
1756	99	28	20:06:14.200	474CA416A4E	7BURN	PULZ,89,209,-25.	ALERT -- Thruster fire	400	4	0	4,844,264:79:0	
1757	99	28	20:13:02.200	20CA4F	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,844,271:54:0	
1758	99	28	20:18:54.200	20CA4G	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,844,277:36:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1759	99	28	20:43:10.200	20CA4L	7STAT	17.45.89.209,-25	Stator inertial point	400	4	0	4,844,301:36:0	
1760	99	28	20:46:10.200	20CA4O	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,844,304:33:0	
1761	99	28	20:48:10.200	474CA416A4G	7BURN	LAT,89.209,-25.7	ALERT -- Thruster fire	400	4	0	4,844,306:31:0	
1762	99	28	20:55:44.200	20CA4Q	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,844,313:75:0	
1763	99	28	21:00:36.200	20CA4R	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,844,318:58:0	
1764	99	28	22:08:08.200	20CB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,844,385:39:0	
1765	99	28	22:08:58.200	20CB4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,844,386:23:0	
1766	99	28	22:09:43.533	176CA6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,844,387:00:0	
1767	99	28	23:22:48.200	488HY6A	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	400	4	0	4,844,459:25:0	
1768	99	28	23:59:04.200	488HY6B	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,844,495:13:0	
1769	99	29	00:31:00.200	488HY6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,844,526:66:0	
1770	99	29	00:31:16.866	176SG6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,844,527:00:0	
1771	99	29	00:35:00.200	41AC99A	POWER	PWR MODE change	Change to Data Taking Mode	400	4	0	4,844,530:62:0	
1772	99	29	00:35:04.200	41AC3A	40T1PR		1 PCT Heater 1 OFF (primary relay)	400	4	0	4,844,530:68:0	
1773	99	29	00:35:14.200	41AC3B	40T1PR		2 PCT Heater 1 OFF (primary relay)	400	4	0	4,844,530:83:0	
1774	99	29	00:35:24.200	41AC3C	40T2R		2 PCT Heater 2 OFF	400	4	0	4,844,531:07:0	
1775	99	29	00:35:34.200	41AC3D	40T2R		2 PCT Heater 2 OFF	400	4	0	4,844,531:22:0	
1776	99	29	00:47:59.533	488HY6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,844,543:48:0	
1777	99	29	01:21:38.200	488HY6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,844,576:73:0	
1778	99	29	07:26:50.866	176SP6A	6TMREC	TPB	TERMINATE PLAYBACK (PB CONTROL) Record Mo	400	4	0	4,844,938:00:0	
1779	99	29	07:32:54.866		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,844,944:00:0	
1780	99	29	07:32:54.866		DMS:	:*SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,844,944:00:0	
1781	99	29	07:32:54.866	465TA6A	6DMST		5000 DMS Slew to TIC	400	4	0	4,844,944:00:0	
1782	99	29	07:32:54.866		DMS:	:*TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,844,944:00:0	
1783	99	29	07:33:01.533		DMS:	:*RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,844,944:10:0	
1784	99	29	07:33:02.933		DMS:	:*AT SPD	P7, TRACK 1, FWD, TIC *202.24 +/-	400	4	0	4,844,944:12:1	
1785	99	29	09:11:36.200	488HZ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,845,041:55:0	
1786	99	29	09:41:28.200	488HZ6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,845,071:13:0	
1787	99	29	10:00:40.200	488HZ6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,845,090:12:0	
1788	99	29	10:49:44.200	488HZ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,845,138:60:0	
1789	99	29	11:08:01.533	488HZ6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,845,156:68:0	
1790	99	29	11:51:40.200	488IA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,845,199:83:0	
1791	99	29	13:14:03.666		DMS:	:*RUNDOWN	P7, TRACK 1, FWD, TIC *4997.94 +/-	400	4	0	4,845,281:36:2	
1792	99	29	13:14:04.866		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	400	4	0	4,845,281:38:0	
1793	99	29	13:26:36.200	465TB6A	6DMSC	P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	4,845,293:73:0	
1794	99	29	13:26:36.200		DMS:	:*US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	400	4	0	4,845,293:73:0	
1795	99	29	13:26:37.600		DMS:	:*US AT SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	400	4	0	4,845,293:75:1	
1796	99	29	13:26:42.866		DMS:	:*US RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	400	4	0	4,845,293:83:0	
1797	99	29	13:26:44.066		DMS:	:*RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	400	4	0	4,845,293:84:8	
1798	99	29	13:26:47.933		DMS:	:*AT SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	400	4	0	4,845,293:90:6	
1799	99	29	13:26:47.933		DMS:	:*P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	400	4	0	4,845,293:90:6	
1800	99	29	13:52:28.200	465TB6B	6DMSC	RDY.4	DMS Control Tape stop	400	4	0	4,845,319:35:0	
1801	99	29	13:52:28.200		DMS:	:*RUNDOWN	P100, TRACK 4, REV, TIC *255.79 +/-	400	4	0	4,845,319:35:0	
1802	99	29	13:52:29.400		DMS:	:*READY	RDY, TRACK 4, REV, TIC *254.99 +/-	400	4	0	4,845,319:36:8	
1803	99	29	15:50:16.133	465TC6A	6DTRN	CMD;6DTRN,465TC6	DMS TRACK TURNAROUND	400	4	0	4,845,435:81:0	
1804	99	29	15:50:16.133		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	400	4	0	4,845,435:81:0	
1805	99	29	15:50:16.133		DMS:	:*DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	400	4	0	4,845,435:81:0	
1806	99	29	15:50:17.533		DMS:	:*US AT SP	P7, TRACK 1, FWD, TIC *255.11 +/-	400	4	0	4,845,435:83:1	
1807	99	29	15:50:22.800		DMS:	:*US RD	P7, TRACK 1, FWD, TIC *256.34 +/-	400	4	0	4,845,436:00:0	
1808	99	29	15:50:24.000		DMS:	:*RUNUP	P7, TRACK *4, *REV, TIC *256.40 +/-	400	4	0	4,845,436:01:8	
1809	99	29	15:50:25.400		DMS:	:*AT SPD	P7, TRACK 4, REV, TIC *256.28 +/-	400	4	0	4,845,436:03:9	
1810	99	29	15:54:09.466	488IA6B	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,845,439:67:0	
1811	99	29	15:54:26.066		DMS:	:*REVERSE	P7, TRACK 4, REV, TIC *199.87 +/-	400	4	0	4,845,440:00:9	
1812	99	29	15:54:27.266		DMS:	:*TURNARND	P7, TRACK *1, *FWD, TIC *199.81 +/-	400	4	0	4,845,440:02:7	
1813	99	29	15:54:27.266		DMS:	:*RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	4,845,440:02:7	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1814	99	29	15:54:28.666		DMS: : *AT SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	400	4	0	4,845,440:04:8	
1815	99	29	15:54:40.666		DMS: : *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	400	4	0	4,845,440:22:8	
1816	99	29	15:54:41.866		DMS: : *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	400	4	0	4,845,440:24:6	
1817	99	29	16:00:18.800		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,845,445:75:0	
1818	99	29	16:00:18.800	465TD6A	6DMSC P100.1	DMS Control Tape P/B 100.8kbps	400	4	0	4,845,445:75:0	
1819	99	29	16:00:25.466		DMS: : *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,845,445:85:0	
1820	99	29	16:00:29.333		DMS: : *P SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	400	4	0	4,845,445:90:8	
1821	99	29	16:00:29.333		DMS: : *AT SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	400	4	0	4,845,445:90:8	
1822	99	29	16:32:12.800		DMS: : *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	400	4	0	4,845,477:34:0	
1823	99	29	16:32:12.800	465TD6B	6DMSC RDY,1	DMS Control Tape stop	400	4	0	4,845,477:34:0	
1824	99	29	16:32:14.000		DMS: : *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	400	4	0	4,845,477:35:8	
1825	99	29	16:47:48.800	465TE6A	6DMSC P100.2	DMS Control Tape P/B 100.8kbps	400	4	0	4,845,492:73:0	
1826	99	29	16:47:48.800		DMS: : *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	400	4	0	4,845,492:73:0	
1827	99	29	16:47:50.200		DMS: : *US AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	400	4	0	4,845,492:75:1	
1828	99	29	16:47:55.466		DMS: : *US RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	400	4	0	4,845,492:83:0	
1829	99	29	16:47:56.666		DMS: : *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	400	4	0	4,845,492:84:8	
1830	99	29	16:48:00.533		DMS: : *AT SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	400	4	0	4,845,492:90:6	
1831	99	29	16:48:00.533		DMS: : *P SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	400	4	0	4,845,492:90:6	
1832	99	29	17:19:56.800	465TF6A	6DMSC P100.3	DMS Control Tape P/B 100.8kbps	400	4	0	4,845,524:53:0	
1833	99	29	17:19:56.800		DMS: : *RUNDOWN	P100, TRACK 2, REV, TIC * 164.96 +/-	400	4	0	4,845,524:53:0	
1834	99	29	17:19:58.000		DMS: : *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	400	4	0	4,845,524:54:8	
1835	99	29	17:20:01.866		DMS: : *AT SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	400	4	0	4,845,524:60:6	
1836	99	29	17:20:01.866		DMS: : *P SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	400	4	0	4,845,524:60:6	
1837	99	29	17:51:57.466		DMS: : *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	400	4	0	4,845,556:22:0	
1838	99	29	17:51:57.466	465TF6B	6DMSC RDY,3	DMS Control Tape stop	400	4	0	4,845,556:22:0	
1839	99	29	17:51:58.666		DMS: : *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	400	4	0	4,845,556:23:8	
1840	99	29	18:06:40.800	465TG6A	6DMSC P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	4,845,570:73:0	
1841	99	29	18:06:40.800		DMS: : *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	400	4	0	4,845,570:73:0	
1842	99	29	18:06:42.200		DMS: : *US AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	400	4	0	4,845,570:75:1	
1843	99	29	18:06:47.466		DMS: : *US RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	400	4	0	4,845,570:83:0	
1844	99	29	18:06:48.666		DMS: : *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	400	4	0	4,845,570:84:8	
1845	99	29	18:06:52.533		DMS: : *P SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	400	4	0	4,845,570:90:6	
1846	99	29	18:06:52.533		DMS: : *AT SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	400	4	0	4,845,570:90:6	
1847	99	29	18:38:48.133		DMS: : *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	400	4	0	4,845,602:52:0	
1848	99	29	18:38:48.133	465TH6A	6DMSC P100.3	DMS Control Tape P/B 100.8kbps	400	4	0	4,845,602:52:0	
1849	99	29	18:38:49.333		DMS: : *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	400	4	0	4,845,602:53:8	
1850	99	29	18:38:53.200		DMS: : *P SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	400	4	0	4,845,602:59:6	
1851	99	29	18:38:53.200		DMS: : *AT SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	400	4	0	4,845,602:59:6	
1852	99	29	18:39:54.133		DMS: : *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	400	4	0	4,845,603:60:0	
1853	99	29	18:39:54.133	465TH6B	6DMSC RDY,3	DMS Control Tape stop	400	4	0	4,845,603:60:0	
1854	99	29	18:39:55.333		DMS: : *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	400	4	0	4,845,603:61:8	
1855	99	29	18:40:59.466	488IB6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,845,604:67:0	
1856	99	29	18:41:12.133	488IB6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,845,604:86:0	
1857	99	29	18:54:24.133		DMS: : *READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	400	4	0	4,845,618:00:0	
1858	99	29	18:54:24.133	465TI6A	6DMSC RDY,4	DMS Control Tape stop	400	4	0	4,845,618:00:0	
1859	99	29	18:55:18.133		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	400	4	0	4,845,618:81:0	
1860	99	29	18:55:18.133	465TJ6A	6DTRN CMD,6DTRN,465TJ6	DMS TRACK TURNAROUND	400	4	0	4,845,618:81:0	
1861	99	29	18:55:18.133		DMS: : *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	400	4	0	4,845,618:81:0	
1862	99	29	18:55:19.533		DMS: : *US AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	400	4	0	4,845,618:83:1	
1863	99	29	18:55:24.800		DMS: : *US RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	400	4	0	4,845,619:00:0	
1864	99	29	18:55:26.000		DMS: : *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	400	4	0	4,845,619:01:8	
1865	99	29	18:55:27.400		DMS: : *AT SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	400	4	0	4,845,619:03:9	
1866	99	29	19:06:53.200		DMS: : *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	400	4	0	4,845,630:31:6	
1867	99	29	19:06:54.400		DMS: : *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	400	4	0	4,845,630:33:4	
1868	99	29	19:06:54.400		DMS: : *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	4,845,630:33:4	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1869	99	29	19:06:55.800		DMS: : *AT SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	400	4	0	4,845,630:35:5	
1870	99	29	19:07:07.800		DMS: : *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	400	4	0	4,845,630:53:5	
1871	99	29	19:07:09.000		DMS: : *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	400	4	0	4,845,630:55:3	
1872	99	29	19:36:40.133	488IB6C	6TMSED NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,845,659:73:0	
1873	99	29	19:42:00.133	488IB6D	6TMSED FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,845,665:07:0	
1874	99	29	20:00:08.133	488IB6E	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,845,683:01:0	
1875	99	30	21:38:55.466	488IC6A	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,847,204:81:0	
1876	99	30	23:08:05.400	488IC6B	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,847,293:07:0	
1877	99	30	23:33:28.066	488IC6C	6TMSED FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,847,318:16:0	
1878	99	30	23:37:46.066	488IC6D	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,847,322:39:0	
1879	99	31	00:00:00.066	481UD4A	7VECT	Inert vect update UTC	400	4	0	4,847,344:38:0	
1880	99	31	00:42:14.733	488IC6E	6TMSED FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,847,386:18:0	
1881	99	31	01:14:04.066	488ID6A	6TMSED NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,847,417:61:0	
1882	99	31	02:00:00.000	20A3EW	37A Final Condition	NIMS Power ON	400	4	0	4,847,463:08:9	
1883	99	31	02:00:00.000	20A3EX	37HR Final Condition	Replacement Heaters OFF	400	4	0	4,847,463:08:9	
1884	99	31	02:00:00.000	20A3EY	37C1PR Final Condition	Optics Heater 1 OFF (primary relay)	400	4	0	4,847,463:08:9	
1885	99	31	02:00:00.000	20A3EZ	37C2PR Final Condition	Optics Heater 2 OFF (primary relay)	400	4	0	4,847,463:08:9	
1886	99	31	02:00:00.000	20A3FA	37F1PR Final Condition	Radiator Flash Heater OFF (primary relay)	400	4	0	4,847,463:08:9	
1887	99	31	02:00:00.000	20A3FB	37F2PR Final Condition	Shield Flash Heater OFF (primary relay)	400	4	0	4,847,463:08:9	
1888	99	31	02:00:00.000	20A3FD	40HRPR Final Condition	RCT Heater OFF (primary relay)	400	4	0	4,847,463:08:9	
1889	99	31	02:00:00.000	20A3FE	40T1PR Final Condition	PCT Heater 1 OFF (primary relay)	400	4	0	4,847,463:08:9	
1890	99	31	02:00:00.000	20A3FF	40T2R Final Condition	PCT Heater 2 OFF	400	4	0	4,847,463:08:9	
1891	99	31	02:00:00.066		DMS: : READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,847,463:09:0	

18JNJUPRTS01

```

OAPEL: 18JNJUPRTS01      ALIAS: 18JNJUPRTS01
EXT: R                   PSID: DA
SCLK1: 04747302:00:0     SCLK2: 04747321:12:0
SCET1: 1998-325/18:06:04.533 SCET2: 1998-325/18:25:25.200
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, 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

18JNWHTOVL01

OAPEL: 18JNWHTOVL01 ALIAS: 18JNWHTOVL01
EXT: A PSID: DJ
SCLK1: 04747683:00:0 SCLK2: 04747698:85:0
SCET1: 98-326/00:31:18.533 SCET2: 98-326/00:47:25.866
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: 253 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: 0326253001 03 26 253 001
WTGRP_SIZ: 26

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	11DC3	1,0001,1101,1100,0011
1	11DC3	1,0001,1101,1100,0011
2	11DC3	1,0001,1101,1100,0011
3	11DC3	1,0001,1101,1100,0011
4	13DC3	1,0011,1101,1100,0011
5	13DC3	1,0011,1101,1100,0011
6	13DC7	1,0011,1101,1100,0111
7	1BDC7	1,1011,1101,1100,0111
8	1BD87	1,1011,1101,1000,0111
9	1BDC7	1,1011,1101,1100,0111
10	0BDC7	0,1011,1101,1100,0111
11	0BDC7	0,1011,1101,1100,0111
12	0BDC7	0,1011,1101,1100,0111
13	0BDC7	0,1011,1101,1100,0111
14	0BDC7	0,1011,1101,1100,0111
15	0BDC7	0,1011,1101,1100,0111
16	1BD87	1,1011,1101,1000,0111
17	1BD87	1,1011,1101,1000,0111
18	1BD07	1,1011,1101,0000,0111
19	1BD07	1,1011,1101,0000,0111
20	1BD87	1,1011,1101,1000,0111
21	1BD87	1,1011,1101,1000,0111
22	1BD87	1,1011,1101,1000,0111
23	1B987	1,1011,1001,1000,0111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

18JNJUPRTS02

```

OAPEL: 18JNJUPRTS02      ALIAS: 18JNJUPRTS02
EXT: R                    PSID: DB
SCLK1: 04747773:00:0     SCLK2: 04747782:12:0
SCET1: 1998-326/02:02:18.533 SCET2: 1998-326/02:11:32.200
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, 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

18HNSTRCAL01

```

OAPEL: 18HNSTRCAL01      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774339:00:8     SCLK2: 04774339:90:0
SCET1: 98-344/17:43:28.866 SCET2: 98-344/17:44:28.333
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                  GRAT_OFF: 4
PTAB_A: 1 1 0 0 012     PTAB_B: 1 1 0 0 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL02

```

OAPEL: 18HNSTRCAL02      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774340:00:0     SCLK2: 04774340:90:0
SCET1: 98-344/17:44:29.000 SCET2: 98-344/17:45:29.000
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                  GRAT_OFF: 4
PTAB_A: 1 1 0 1 012     PTAB_B: 1 1 0 1 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL03

```

OAPEL: 18HNSTRCAL03          ALIAS: 18HNSTARCAL1
EXT: A                        PSID: FA
SCLK1: 04774341:00:0        SCLK2: 04774341:90:0
SCET1: 98-344/17:45:29.666  SCET2: 98-344/17:46:29.666
TARGET: SKY                  PARTITION: 1
  
```

```

MODE: 7                      GAIN: 4
CHOP: 1                      GRAT_OFF: 4
PTAB_A: 1 1 0 2 012        PTAB_B: 1 1 0 2 012
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: 15              TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001        07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL04

```

OAPEL: 18HNSTRCAL04      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774342:00:0     SCLK2: 04774342:90:0
SCET1: 98-344/17:46:30.333 SCET2: 98-344/17:47:30.333
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                  GRAT_OFF: 4
PTAB_A: 1 1 0 3 012     PTAB_B: 1 1 0 3 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL05

```

OAPEL: 18HNSTRCAL05          ALIAS: 18HNSTARCAL1
EXT: A                        PSID: FA
SCLK1: 04774343:00:0        SCLK2: 04774343:90:0
SCET1: 98-344/17:47:31.000  SCET2: 98-344/17:48:31.000
TARGET: SKY                  PARTITION: 1
  
```

```

MODE: 7                      GAIN: 4
CHOP: 1                      GRAT_OFF: 4
PTAB_A: 1 1 0 4 012        PTAB_B: 1 1 0 4 012
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: 15              TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001        07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL06

```

OAPEL: 18HNSTRCAL06          ALIAS: 18HNSTARCAL1
EXT: A                        PSID: FA
SCLK1: 04774344:00:0         SCLK2: 04774344:90:0
SCET1: 98-344/17:48:31.666  SCET2: 98-344/17:49:31.666
TARGET: SKY                   PARTITION: 1
  
```

```

MODE: 7                       GAIN: 4
CHOP: 1                       GRAT_OFF: 4
PTAB_A: 1 1 0 5 012          PTAB_B: 1 1 0 5 012
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: 15                  TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001           07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL07

```

OAPEL: 18HNSTRCAL07      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774345:00:0     SCLK2: 04774345:90:0
SCET1: 98-344/17:49:32.333 SCET2: 98-344/17:50:32.333
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                 GRAT_OFF: 4
PTAB_A: 1 1 0 6 012     PTAB_B: 1 1 0 6 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL08

```

OAPEL: 18HNSTRCAL08      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774346:00:0     SCLK2: 04774346:90:0
SCET1: 98-344/17:50:33.000 SCET2: 98-344/17:51:33.000
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                  GRAT_OFF: 4
PTAB_A: 1 1 0 7 012     PTAB_B: 1 1 0 7 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL09

```

OAPEL: 18HNSTRCAL09      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774347:00:0     SCLK2: 04774347:90:0
SCET1: 98-344/17:51:33.666 SCET2: 98-344/17:52:33.666
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                 GRAT_OFF: 4
PTAB_A: 1 1 0 8 012    PTAB_B: 1 1 0 8 012
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: 15          TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL10

```

OAPEL: 18HNSTRCAL10      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774348:00:0     SCLK2: 04774348:90:0
SCET1: 98-344/17:52:34.333 SCET2: 98-344/17:53:34.333
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                 GRAT_OFF: 4
PTAB_A: 1 1 0 9 012    PTAB_B: 1 1 0 9 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL13

```

OAPEL: 18HNSTRCAL13          ALIAS: 18HNSTARCAL1
EXT: A                        PSID: FA
SCLK1: 04774351:00:0        SCLK2: 04774351:90:0
SCET1: 98-344/17:55:36.333  SCET2: 98-344/17:56:36.333
TARGET: SKY                  PARTITION: 1
  
```

```

MODE: 7                      GAIN: 4
CHOP: 1                      GRAT_OFF: 4
PTAB_A: 1 1 012 012        PTAB_B: 1 1 012 012
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: 15              TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001        07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL14

```

OAPEL: 18HNSTRCAL14      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774352:00:0     SCLK2: 04774352:90:0
SCET1: 98-344/17:56:37.000 SCET2: 98-344/17:57:37.000
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                  GRAT_OFF: 4
PTAB_A: 1 1 013 012     PTAB_B: 1 1 013 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL15

```

OAPEL: 18HNSTRCAL15          ALIAS: 18HNSTARCAL1
EXT: A                        PSID: FA
SCLK1: 04774353:00:0        SCLK2: 04774353:90:0
SCET1: 98-344/17:57:37.666  SCET2: 98-344/17:58:37.666
TARGET: SKY                  PARTITION: 1
  
```

```

MODE: 7                      GAIN: 4
CHOP: 1                      GRAT_OFF: 4
PTAB_A: 1 1 014 012         PTAB_B: 1 1 014 012
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: 15              TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001        07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL16

```

OAPEL: 18HNSTRCAL16      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774354:00:0     SCLK2: 04774354:90:0
SCET1: 98-344/17:58:38.333 SCET2: 98-344/17:59:38.333
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                 GRAT_OFF: 4
PTAB_A: 1 1 015 012    PTAB_B: 1 1 015 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL17

```

OAPEL: 18HNSTRCAL17      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774355:00:0     SCLK2: 04774355:90:0
SCET1: 98-344/17:59:39.000 SCET2: 98-344/18:00:39.000
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                 GRAT_OFF: 4
PTAB_A: 1 1 016 012    PTAB_B: 1 1 016 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL18

```

OAPEL: 18HNSTRCAL18      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774356:00:0     SCLK2: 04774356:90:0
SCET1: 98-344/18:00:39.666 SCET2: 98-344/18:01:39.666
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                  GRAT_OFF: 4
PTAB_A: 1 1 017 012     PTAB_B: 1 1 017 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL19

```

OAPEL: 18HNSTRCAL19      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774357:00:0     SCLK2: 04774357:90:0
SCET1: 98-344/18:01:40.333 SCET2: 98-344/18:02:40.333
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                 GRAT_OFF: 4
PTAB_A: 1 1 018 012    PTAB_B: 1 1 018 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL20

```

OAPEL: 18HNSTRCAL20      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774358:00:0     SCLK2: 04774358:90:0
SCET1: 98-344/18:02:41.000 SCET2: 98-344/18:03:41.000
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                  GAIN: 4
CHOP: 1                 GRAT_OFF: 4
PTAB_A: 1 1 019 012    PTAB_B: 1 1 019 012
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: 15           TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001     07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL21

```

OAPEL: 18HNSTRCAL21           ALIAS: 18HNSTARCAL1
EXT: A                         PSID: FA
SCLK1: 04774359:00:0         SCLK2: 04774359:90:0
SCET1: 98-344/18:03:41.666   SCET2: 98-344/18:04:41.666
TARGET: SKY                   PARTITION: 1
  
```

```

MODE: 7                       GAIN: 4
CHOP: 1                       GRAT_OFF: 4
PTAB_A: 1 1 020 012         PTAB_B: 1 1 020 012
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: 15              TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001         07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL22

OAPEL: 18HNSTRCAL22 ALIAS: 18HNSTARCAL1
 EXT: A PSID: FA
 SCLK1: 04774360:00:0 SCLK2: 04774360:90:0
 SCET1: 98-344/18:04:42.333 SCET2: 98-344/18:05:42.333
 TARGET: SKY PARTITION: 1

MODE: 7 GAIN: 4
 CHOP: 1 GRAT_OFF: 4
 PTAB_A: 1 1 021 012 PTAB_B: 1 1 021 012
 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: 15 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: 0713015001 07 13 015 001
 WTGRP_SIZ: 13

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL23

```

OAPEL: 18HNSTRCAL23          ALIAS: 18HNSTARCAL1
EXT: A                        PSID: FA
SCLK1: 04774361:00:0        SCLK2: 04774361:90:0
SCET1: 98-344/18:05:43.000  SCET2: 98-344/18:06:43.000
TARGET: SKY                  PARTITION: 1
  
```

```

MODE: 7                      GAIN: 4
CHOP: 1                      GRAT_OFF: 4
PTAB_A: 1 1 022 012        PTAB_B: 1 1 022 012
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: 15              TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001        07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18HNSTRCAL24

```

OAPEL: 18HNSTRCAL24      ALIAS: 18HNSTARCAL1
EXT: A                    PSID: FA
SCLK1: 04774362:00:0     SCLK2: 04774362:41:0
SCET1: 98-344/18:06:43.666 SCET2: 98-344/18:07:11.000
TARGET: SKY              PARTITION: 1
  
```

```

MODE: 7                   GAIN: 4
CHOP: 1                   GRAT_OFF: 4
PTAB_A: 1 1 023 012      PTAB_B: 1 1 023 012
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: 15            TLMFMT: MPW
  
```

```

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

```

WETGID: 0713015001      07 13 015 001
WTGRP_SIZ: 13
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BDFF	1,1011,1101,1111,1111
1	1BDFF	1,1011,1101,1111,1111
2	1BDFF	1,1011,1101,1111,1111
3	1BDFF	1,1011,1101,1111,1111
4	1BDFF	1,1011,1101,1111,1111
5	1BDFF	1,1011,1101,1111,1111
6	1BDFF	1,1011,1101,1111,1111
7	1BDFF	1,1011,1101,1111,1111
8	1BDFF	1,1011,1101,1111,1111
9	1BDFF	1,1011,1101,1111,1111
10	1BDFF	1,1011,1101,1111,1111
11	1BDFF	1,1011,1101,1111,1111
12	00000	0,0000,0000,0000,0000

18NNRCTRLT01

```

OAPEL: 18NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: R                    PSID: XU
SCLK1: 04814742:00:0     SCLK2: 04814742:12:0
SCET1: 1999-008/02:35:21.266 SCET2: 1999-008/02:35:29.266
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, 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

18NNRCTRLT01

```

OAPEL: 18NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: S                    PSID: XU
SCLK1: 04814748:00:0     SCLK2: 04814749:12:0
SCET1: 1999-008/02:40:85.266 SCET2: 1999-008/02:42:33.933
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, 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

18NNRCTRLT01

```

OAPEL: 18NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: T                    PSID: XU
SCLK1: 04814754:00:0     SCLK2: 04814754:12:0
SCET1: 1999-008/02:47:29.266  SCET2: 1999-008/02:47:37.266
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, 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

18NNOPCAL_01

```

OAPEL: 18NNOPCAL_01      ALIAS: LSNNOPCAL_01
EXT: R                    PSID: DC
SCLK1: 04814758:00:0     SCLK2: 04814760:12:0
SCET1: 1999-008/02:51:31.933 SCET2: 1999-008/02:53:41.266
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, 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

NIMS E18 OBSTAB

This is a time-ordered ASCII TABLE (listing) of GALILEO NIMS observation parameters for use by downlink data processing of the NIMS E18 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
 <tbdb> 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: <tbdb>
* 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=freeerun
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
PTAB_B(6) 12 89 - 100  .Second PTAB |...grating start, grating delta... 37MPT, unless special sequence (modes 12-15)
.         .         |...number of grating positions) in which case values come from 37SS
                                         parameters <tbd>
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 SEF: 37MB data byte 1, bits 4-8 <tbd>
                                         position blocking, down scan)
# RTISELUP 5 112 - 116     .RTI select, 5 binary bits (for mirror SEF: 37MB data byte 2, bits 4-8 <tbd>
                                         position blocking, up scan)
<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     .
NWAVERTOT 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: mmeelll1nnn 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 BHHH 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 ).
-----

```


Chapter 5 - Detailed Observation Designs

Contents

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5.2	NIMS E18 Observations	3-28

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.

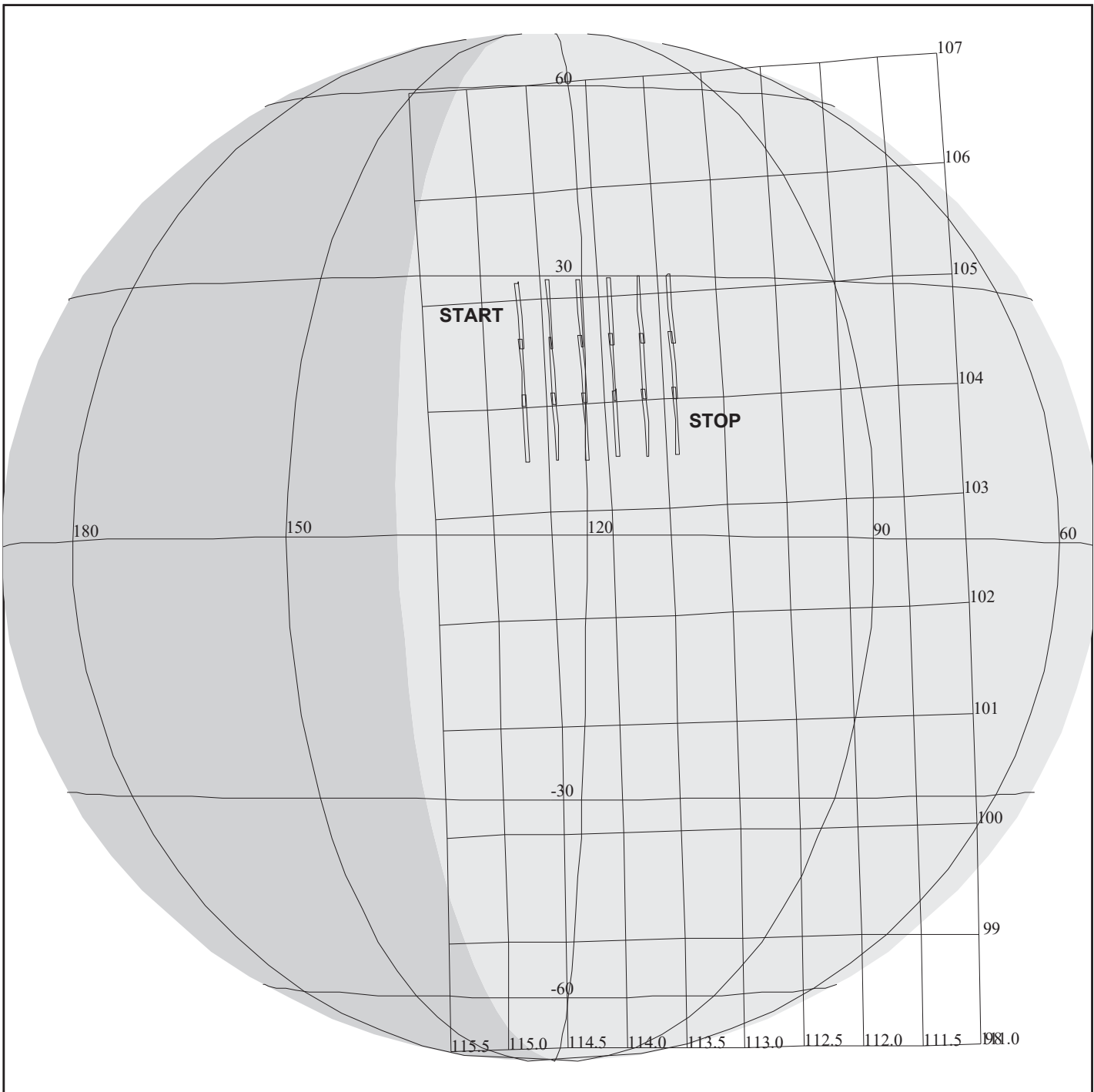
The Pointer plots have the spatial extent of the actual data returned outlined with a thick line. When no data were returned for a particular observation, its Pointer plot has a single slash across the plot with the text "NO DATA RETURNED" printed in the upper left corner of the plot.

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 return 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: 18NNJUPRTS01-	
		START TIME: 98-325/17:50:58.534	
Activity ID: Orbit 18 Target N Inst N OAPEL JUPRTS SeqNo 01 -			
Title	NIMS Software Reload		Instrument
Requestor	NIMS-SWG/M. SEGURA		NIMS SWG
	Team	NIMS	Working Group
Time System	CDS	Load ID	Calendar Date 11/21/98 Week 47
Start	JEE-CDS 00000811:00:0	98-325/17:50:58.534	JEE-000/13:40:00.666
End	JEE-CDS 00000801:00:0	98-325/18:01:05.200	JEE-000/13:29:54.000
Duration	00000010:00:0	000/00:10:06.666	000/00:10:06.666
Top Label	18NNJUPRTS01		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	0	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
NIMS Software Reload			
<p>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.</p> <p>The NIMS E18 reload OAPELs are: 18NNJUPRTS01, 18NNWHTOVL01, 18NNJUPRTS02, 18NNGLOBAL01, 18NNSUCOMP01, 18NNSUCOMP03, 18NNGLOBAL02, 18NNJUPRTS03, 18NNHRSPEC01, 18NNRELOAD01</p> <p>18ENSUCOMP02 did not have a RELOAD.</p>			
Design Detail			
<p>Use a standard set of commands to halt the instrument, load the software and reinitialize the instrument.</p> <p>37PL - Halt NIMS Processor 37MRL - Memory Reallocate 6MCOPI - Copy flight software from CDS to NIMS 1000 6MCOPI - Copy flight software from CDS to NIMS 1598 37IRT - Instrument Reset 37MN - Memory Normal 37IST - Chopper Reference</p>			
Galileo Activity Plan Form		11/03/98 17:30:33	rev 6/95



18JNJUPRTS01

165DA:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/7894 TC= 1(25 127)
 A= 728 pD= 3266 SR=17.450 RA50=284.58 DEC50=-21.54 cone=114.68 clock=104.86
 117DA:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/7894
 1:#s= 3 Cs= -20.90 XCs= 0.00 Cr= 26.60 XCr= -8.10 sD= 1052 rD= 18

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18JNJUPRTS01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

START:JEE 98-326/07:30:59.200 -CDS 796:00:0

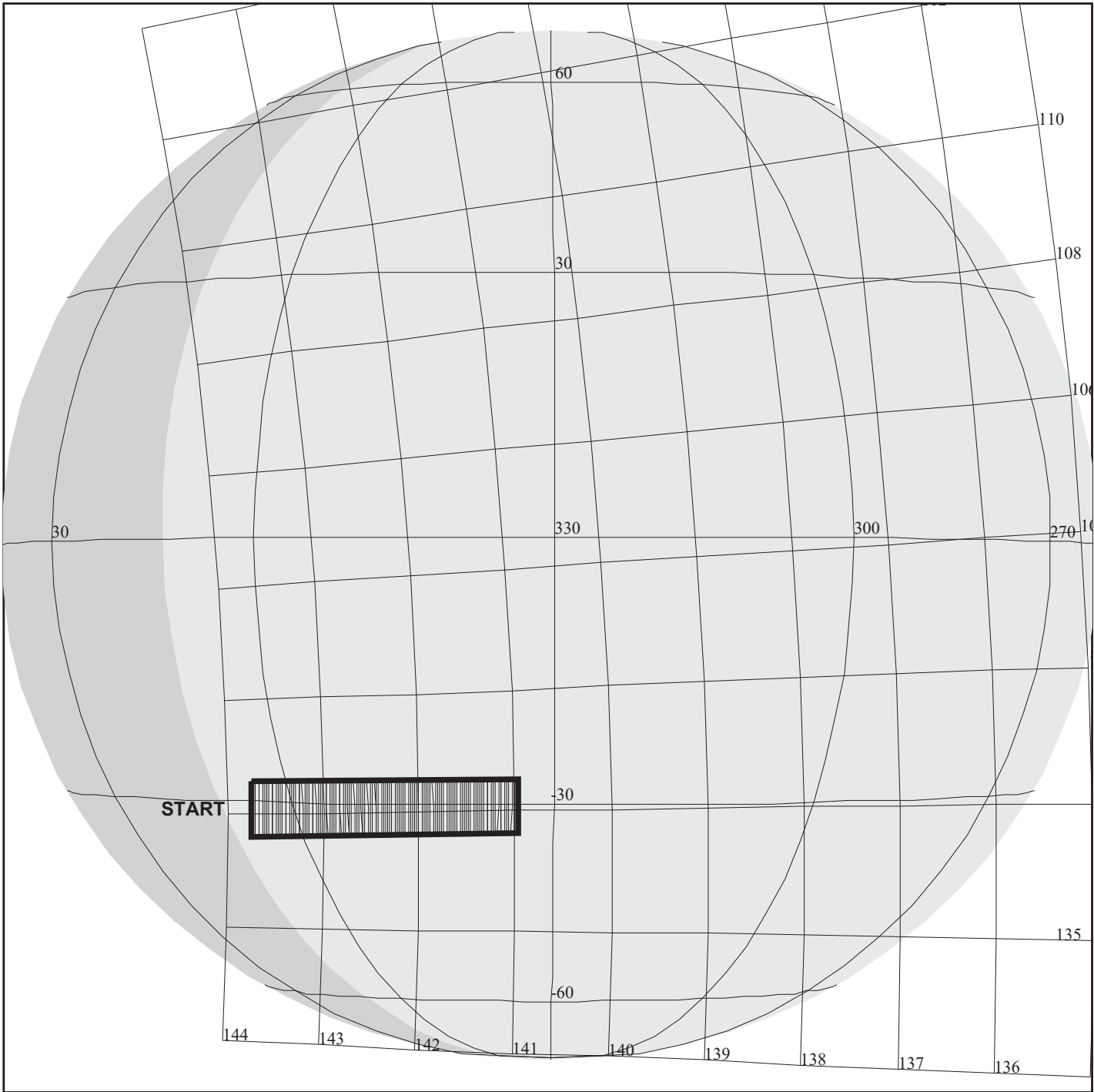
OBSERVATION:18JNJUPRTS01

THINNING:NIM 7

BODY PLOT TIME:TARGET-TIME D= 3266 S= 1.000

DESCRIP:Jupiter_Realtime_Observation

Jupiter Realtime Observation		ACTIVITY ID:	18JNJUPRTS01*		
		START TIME:	98-325/18:02:05.867		
Activity ID: Orbit 18 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	11/21/98	Week 47
Start	JEE-CDS 00000800:00:0		98-325/18:02:05.867	JEE-000/13:28:53.333	
End	JEE-CDS 00000776:00:0		98-325/18:26:21.867	JEE-000/13:04:37.333	
Duration	00000024:00:0		000/00:24:16.000	000/00:24:16.000	
Top Label	18JNJUPRTS01*				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH		Scan Platform
CDS Source	OAP	Spin State	DUAL		Yes
			DMS		No
Observation Objective					
Search for Jupiter atmospheric composition and thermal variations over time.					
FREE_RTS= 0.32 Mbits					
Data Returned					
Design Detail					
Long map. Three scans Total duration 20 RIMS long. Nyquist sampling not necessary. Longitude - not dependent. No overlap in FOV.					
Long Map (LM), Gain 2, Grating Start 0, R/T, E18JLM408					
Galileo Activity Plan Form			11/03/98	17:30:34	rev 6/95



18JNWHTOVL01

165DJ:TT= 0 TMC= 1 C= 55.00 XC= 0.00 BS= 0/7236 TC= 1(-30 330)
 A= 728 pD= 3084 SR=17.450 RA50=315.87 DEC50=-19.76 cone=143.75 clock=100.09
 117DJ:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/7236
 1:#s= 1 Cs= -30.80 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 3084 rD= 2

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18JNWHTOVL01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

START:JEE 98-326/07:30:59.200 -CDS 415:00:0

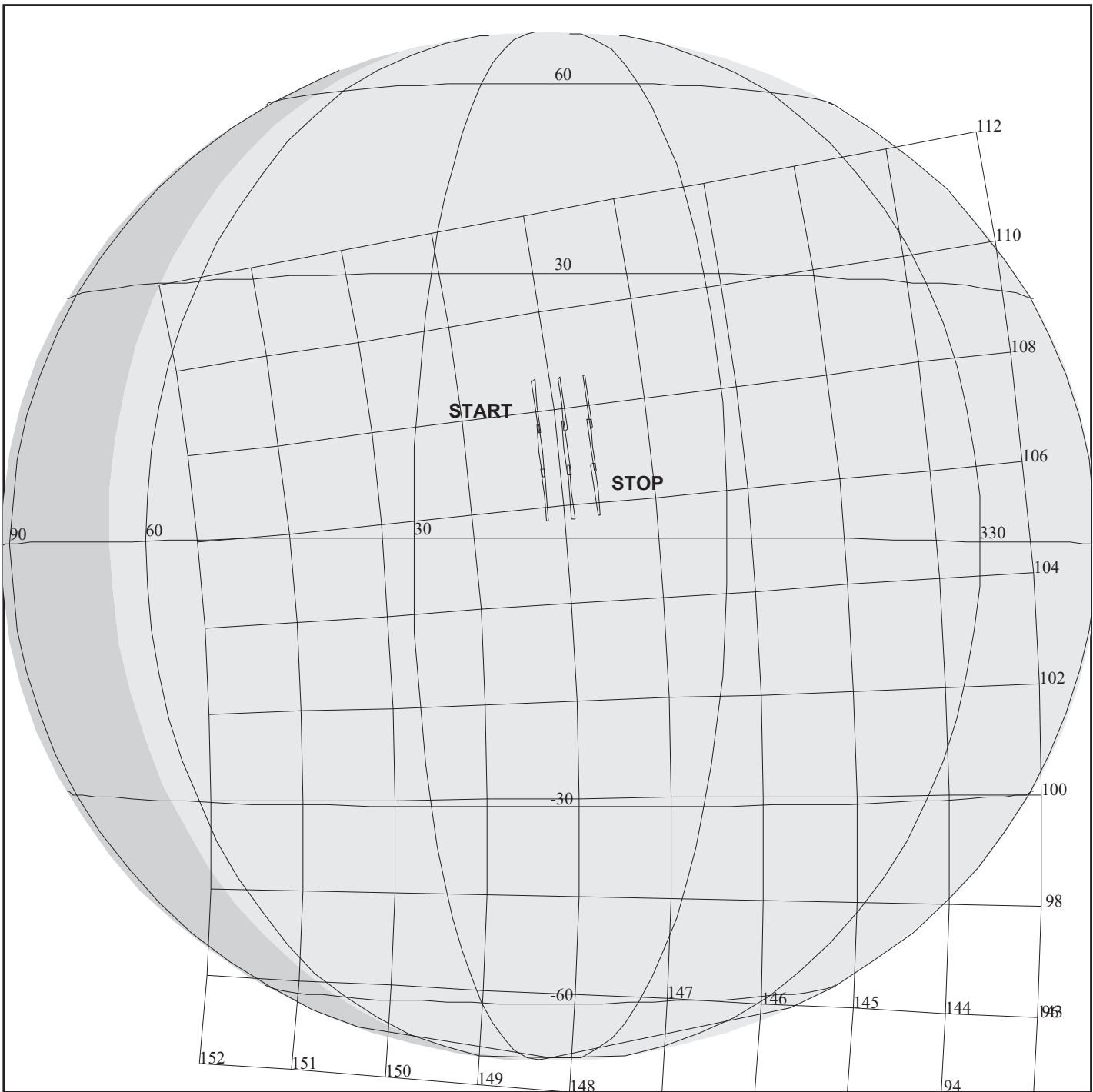
OBSERVATION:18JNWHTOVL01

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 3084 S= 1.000

DESCRIP:JUPITER_WHITE_OVAL

Jupiter White Oval		ACTIVITY ID:	18JNWHTOVL01-		
		START TIME:	98-326/00:27:19.867		
Activity ID: Orbit 18 Target J Inst N OAPEL WHTOVL SeqNo 01 -					
Title	Jupiter White Oval		Instrument		NIMS
Requestor	NIMS-AWG/K. BAINES		Team	NIMS Working Group	AWG
Time System	CDS	Load ID	Calendar Date	11/22/98	Week 47
Start	JEE-CDS	00000419:00:0	98-326/00:27:19.867	JEE-000/07:03:39.333	
End	JEE-CDS	00000398:00:0	98-326/00:48:33.867	JEE-000/06:42:25.333	
Duration		00000021:00:0	000/00:21:14.000	000/00:21:14.000	
Top Label	18JNWHTOVL01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH		
CDS Source	OAP	Spin State	ALL	Scan Platform	No
				DMS	No
Observation Objective					
<p>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. This data set will provide a second view of this new feature first observed by NIMS in E17.</p>					
Data Returned					
Design Detail					
<p>4 Rims of targeting time, one scan 12 Rims long. Longitude coverage: 350 degrees to 357 degrees (centered) Latitude: 30 degrees South Long map mode, Nyquist sampling</p>					
Long Map (LM), Gain 2, Grating Start 0, MPW, E18JSB253B, E18JSB253B					
Galileo Activity Plan Form			11/03/98	17:30:34	rev 6/95



165DB:TT= 0 TMC= 1 C= 4.00 XC= 8.00 BS= 0/3434 TC= 1(10 16)
 A= 728 pD= 1628 SR=17.450 RA50=319.13 DEC50=-14.27 cone=148.19 clock=108.11
 117DB:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/3434
 1:#s= 3 Cs= -10.15 XCs= 0.00 Cr= 14.00 XCr= -8.00 sD= 514 rD= 36

18JNJUPRTS02

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18JNJUPRTS02

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

START:JEE 98-326/07:30:59.200 -CDS 326:00:0

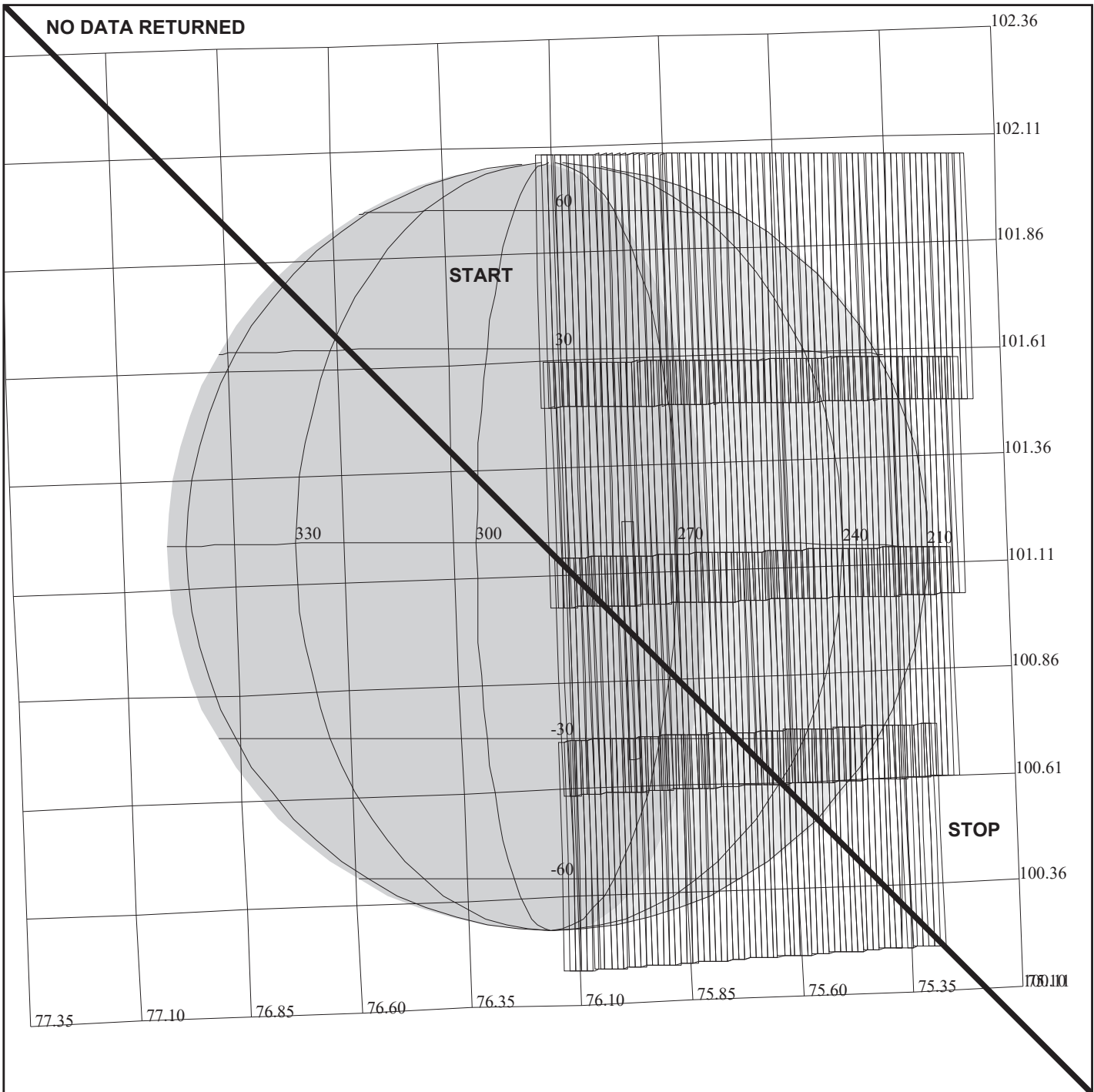
OBSERVATION:18JNJUPRTS02

THINNING:NIM 7

BODY PLOT TIME:TARGET-TIME D= 1628 S= 1.000

DESCRIP:Jupiter_Realtime_Observation

Jupiter Realtime Observation		ACTIVITY ID:	18JNJUPRTS02*		
		START TIME:	98-326/01:57:19.200		
Activity ID: Orbit 18 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	11/22/98	Week 47
Start	JEE-CDS	00000330:00:0	98-326/01:57:19.200	JEE-000/05:33:40.000	
End	JEE-CDS	00000316:00:0	98-326/02:11:28.534	JEE-000/05:19:30.666	
Duration		00000014:00:0	000/00:14:09.334	000/00:14:09.334	
Top Label	18JNJUPRTS02*				
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. Three scans, each three RIMS long. Nyquist sampling not necessary - lit surface only not longitude dependent. No overlap in FOV. NIMS R/T only returns every seventh FOV.					
Long Map (LM), Gain 2, Grating Start 0, R/T, E18JLM408					
Galileo Activity Plan Form			11/03/98	17:30:34	rev 6/95



165DC:TT= 0 TMC= 1 C= 0.00 XC= 10.50 BS= 0/3484 TC= 3
 A= 728 pD= 6892 SR=17.450 RA50=242.85 DEC50=-21.73 cone= 76.13 clock=101.80
 117DC:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/3484
 1:#s= 4 Cs= -17.00 XCs= 0.00 Cr= 17.00 XCr= -8.00 sD= 1708 rD= 20

18ENGLOBAL01

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18ENGLOBAL01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

START:EEE 98-326/11:38:42.533 -CDS 296:00:0

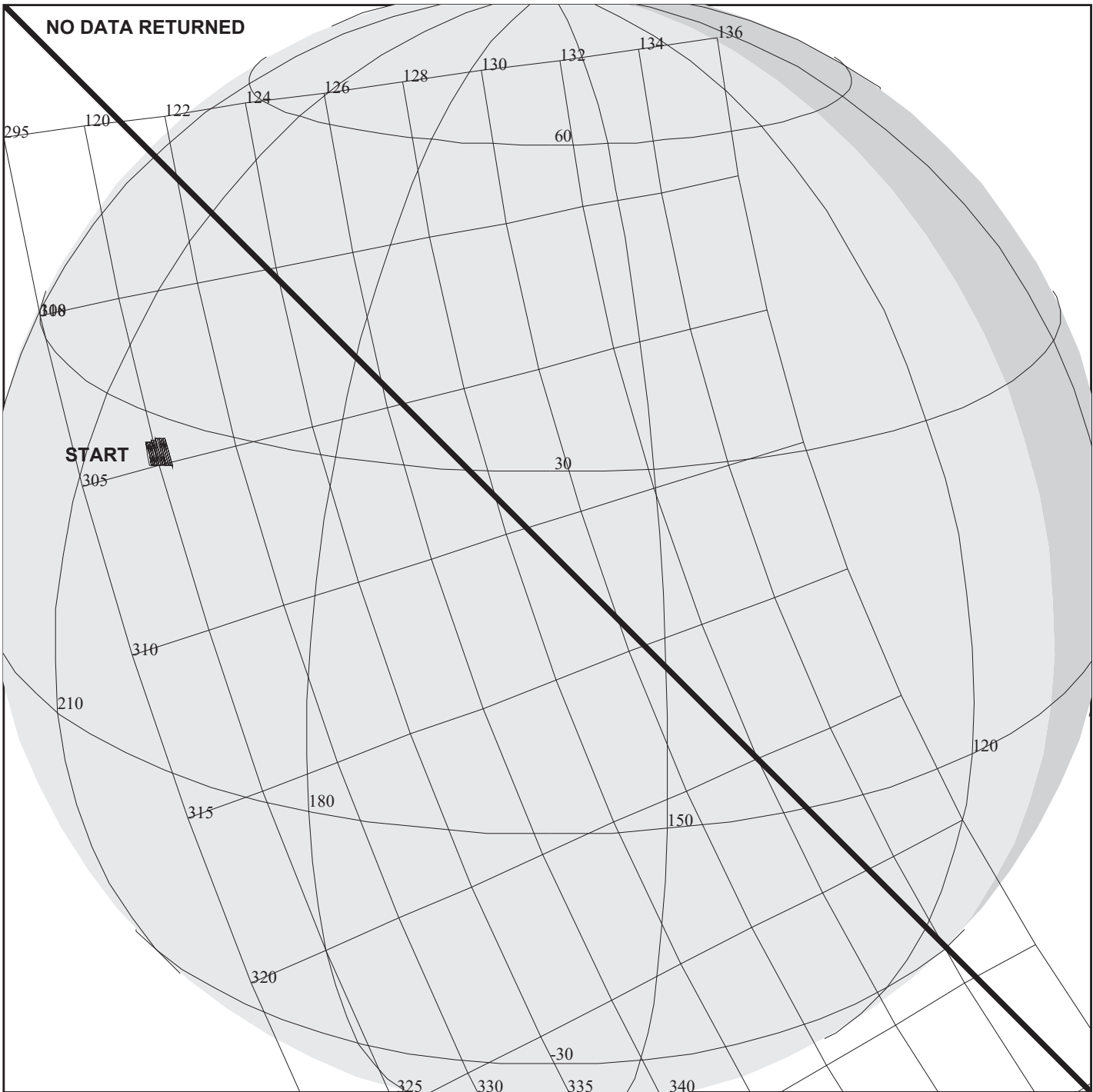
OBSERVATION:18ENGLOBAL01

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 6892 S= 0.700

DESCRIP:Europa_Global_Observation

Europa Global Observation		ACTIVITY ID: 18ENGLOBAL01-	
		START TIME: 98-326/06:35:22.533	
Activity ID: Orbit 18 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 11/22/98 Week 47
Start	EEE-CDS 300:00:0	98-326/06:35:22.533	EEE-000/05:03:20.000
End	EEE-CDS 00000264:00:0	98-326/07:11:46.533	EEE-000/04:26:56.000
Duration	00000036:00:0	000/00:36:24.000	000/00:36:24.000
Top Label	18ENGLOBAL01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	150	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	Yes
		DMS	Yes
Observation Objective			
Europa global mosaic of the trailing hemisphere covering West longitudes 290-213 degrees at 50 KM resolution.			
No Data Returned, S/C Safed			
Design Detail			
NIMS mode = LM Record FMT = MPW Gain state = 4,3,4 Grating position = 0 Tics = 1848, PPR_RA=0.349			
Galileo Activity Plan Form		11/03/98 17:30:34	rev 6/95



18ENSUCOMP01

165DD:TT= 0 TMC= 1 C= -3.50 XC= 0.00 BS= 0/9903 TC= 1(27 200)
 A= 182 pD= 718 SR=17.450 RA50= 50.54 DEC50= -1.73 cone=119.79 clock=304.57
 117DD:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/9903
 1:#s= 1 Cs= 7.10 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 718 rD= 2

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18ENSUCOMP01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

START:EEE 98-326/11:38:42.533 +CDS 14:00:0

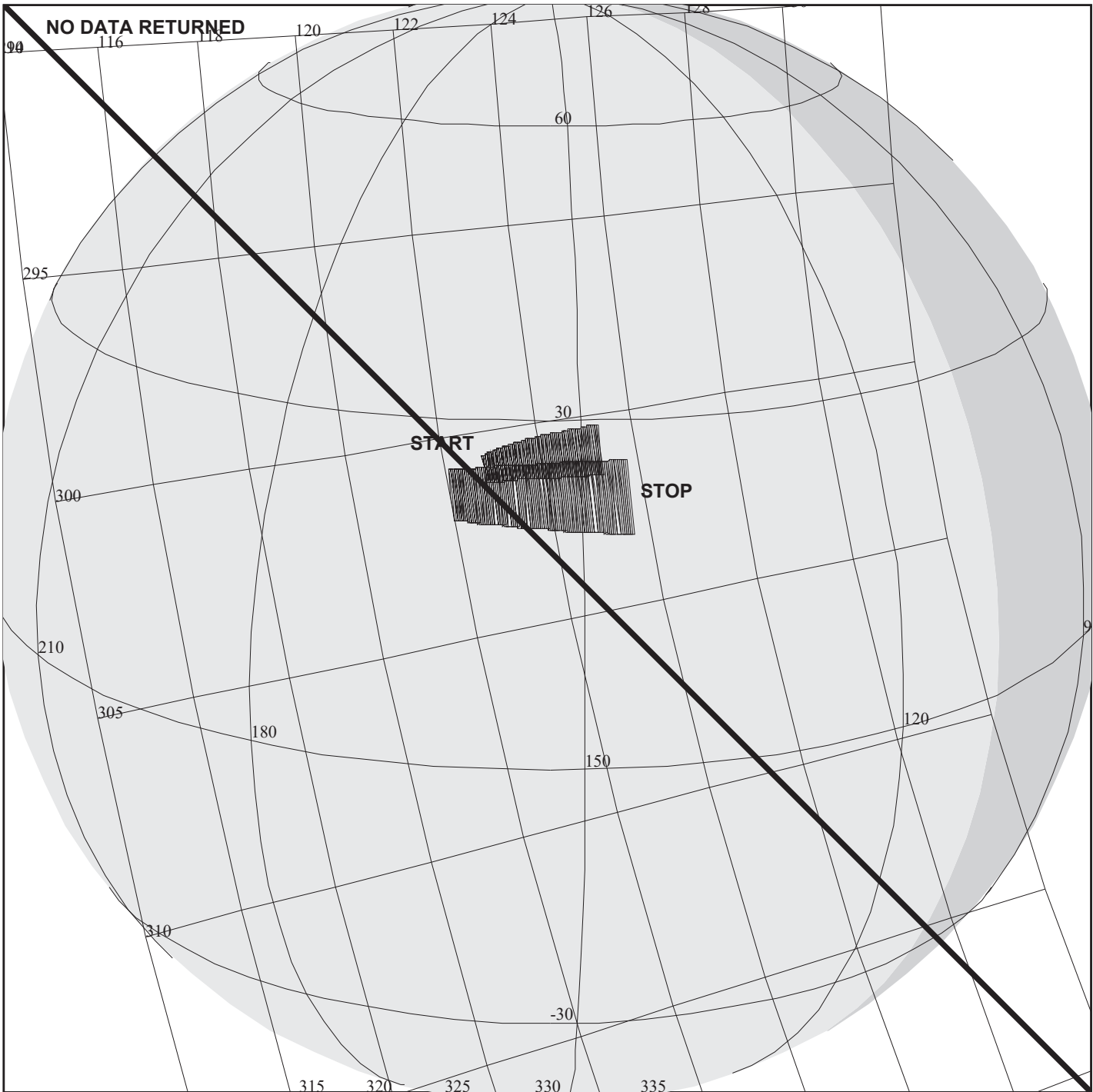
OBSERVATION:18ENSUCOMP01

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 718 S= 1.000

DESCRIP:Europa_Surface_Composition

Europa Surface Composition		ACTIVITY ID:	18ENSUCOMP01-		
		START TIME:	98-326/11:51:51.199		
Activity ID: Orbit 18 Target E Inst N OAPEL SUCOMP SeqNo 01 -					
Title	Europa Surface Composition		Instrument		NIMS
Requestor	NIMS-SWG/J. SHIRLEY		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/22/98	Week 47
Start	EEE+CDS 13:00:0		98-326/11:51:51.199	EEE+000/00:13:08.666	
End	EEE+CDS 00000018:00:0		98-326/11:56:54.533	EEE+000/00:18:12.000	
Duration	00000005:00:0		000/00:05:03.334	000/00:05:03.334	
Top Label	18ENSUCOMP01-				
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 centered at latitude 27 degrees and West longitude 200 degrees covering complex intersecting dark linea.					
No Data Returned, S/C Safed					
Design Detail					
NIMS mode = LM Record FMT = MPW Gain state = 3					
Grating position = 0 Tics = 213					
Galileo Activity Plan Form			11/03/98	17:30:35	rev 6/95



18ENSUCOMP02

165DE:TT= 0 TMC= 1 C= -15.00 XC= -6.00 BS= 0/0813 TC= 1(25 155)
 A= 182 pD= 5632 SR=17.450 RA50= 47.18 DEC50= 1.01 cone=122.81 clock=300.93
 117DE:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0813
 1:s= 2 Cs= 27.95 XCs= 0.00 Cr= -29.90 XCr= 7.00 sD= 2802 rD= 22

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18ENSUCOMP02

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

START:EEE 98-326/11:38:42.533 +CDS 19:00:0

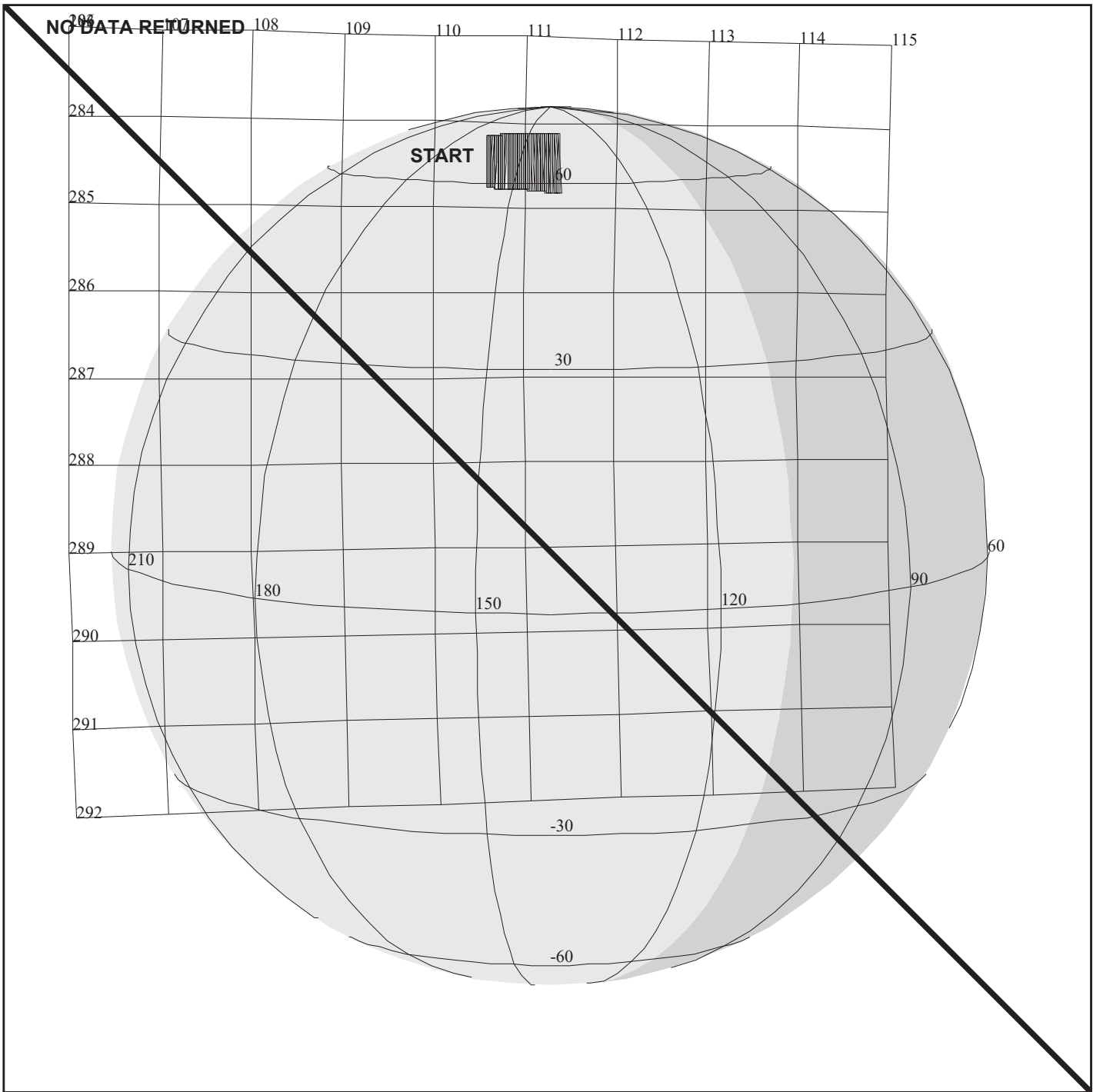
OBSERVATION:18ENSUCOMP02

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 5632 S= 1.000

DESCRIP:NIMS_EUROPA_SURFACE_COMPOSITION_

Europa Surface Composition		ACTIVITY ID:	18ENSUCOMP02-		
		START TIME:	98-326/11:56:54.533		
Activity ID: Orbit 18 Target E Inst N OAPEL SUCOMP SeqNo 02 -					
Title	Europa Surface Composition		Instrument		NIMS
Requestor	NIMS-SWG/J. SHIRLEY		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/22/98	Week 47
Start	EEE+CDS 18:00:0		98-326/11:56:54.533	EEE+000/00:18:12.000	
End	EEE+CDS 00000050:00:0		98-326/12:29:15.866	EEE+000/00:50:33.333	
Duration	00000032:00:0		000/00:32:21.333	000/00:32:21.333	
Top Label	18ENSUCOMP02-				
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 centered on latitude +25 degrees and West longitude at 155 degrees, imaging sharply defined dark linea.					
No Data Returned, S/C Safed					
Design Detail					
NIMS mode = LM Record FMT = MPW Gain state = 3 Grating position = 0 Tics = 1637					
Galileo Activity Plan Form			11/03/98	17:30:35	rev 6/95



18ENSUCOMP03

165DF:TT= 0 TMC= 1 C= -6.25 XC= 0.00 BS= 0/6637 TC= 1(65 150)
 A= 182 pD= 1264 SR=17.450 RA50= 56.49 DEC50= 17.75 cone=110.59 clock=284.46
 117DF:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/6637
 1:#s= 1 Cs= 12.50 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1264 rD= 2

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18ENSUCOMP03

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

THINNING:NIM 1

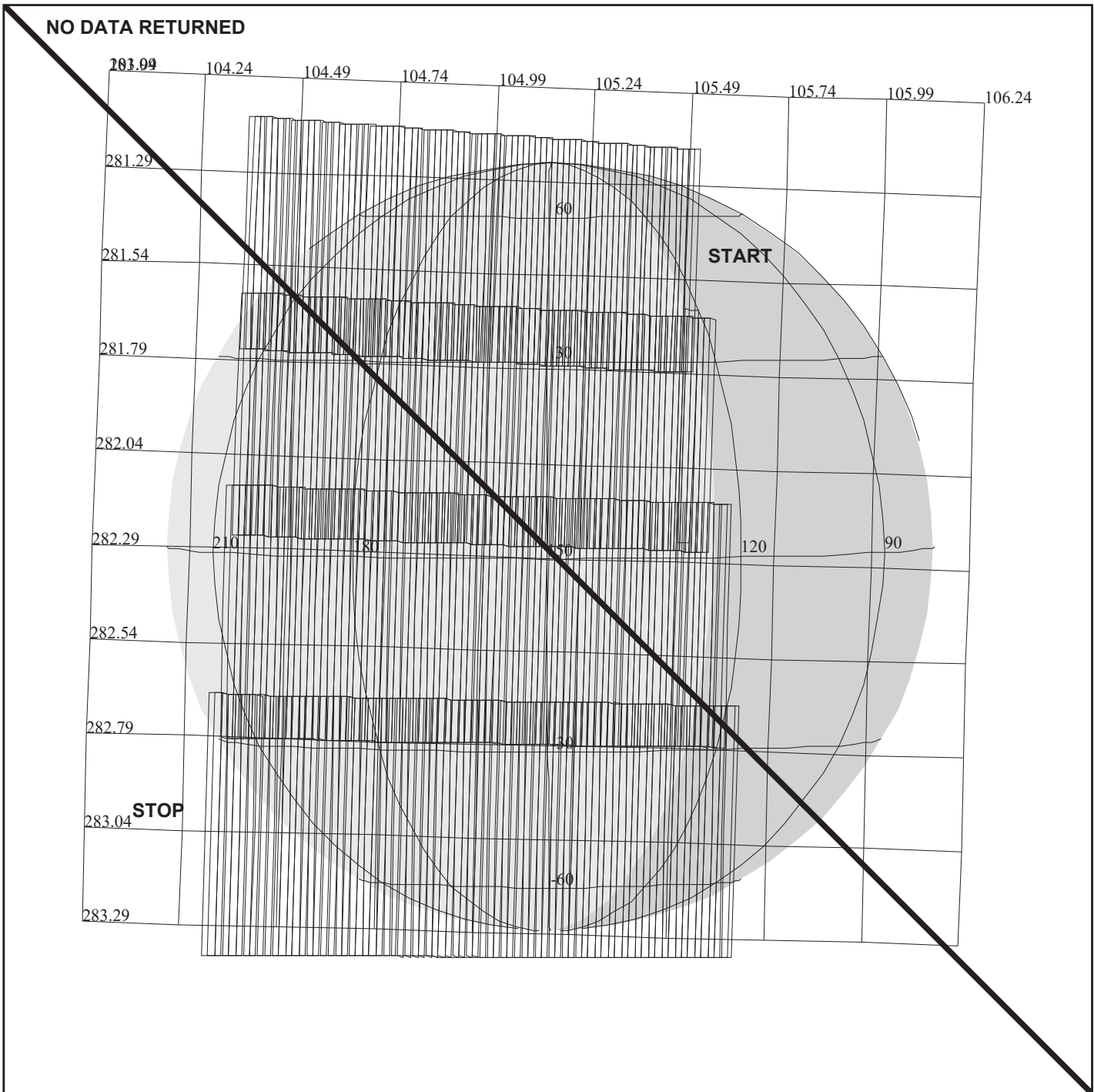
START:EEE 98-326/11:38:42.533 +CDS 51:00:0

BODY PLOT TIME:TARGET-TIME D= 1264 S= 0.800

OBSERVATION:18ENSUCOMP03

DESCRIP:Europa_Surface_Composition

Europa Surface Composition		ACTIVITY ID:	18ENSUCOMP03-		
		START TIME:	98-326/12:29:15.866		
Activity ID: Orbit 18 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	11/22/98	Week 47
Start	EEE+CDS	50:00:0	98-326/12:29:15.866	EEE+000/00:50:33.333	
End	EEE+CDS	00000058:00:0	98-326/12:37:21.199	EEE+000/00:58:38.666	
Duration		00000008:00:0	000/00:08:05.333	000/00:08:05.333	
Top Label	18ENSUCOMP03-				
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 North polar region centered at latitude +83 degrees and West longitude 150 degrees.					
No Data Returned, S/C Safed					
Design Detail					
NIMS mode = LM Record FMT = MPW Gain state = 4 Grating position = 0 Tics = 372, PPR_RA=0.070					
Galileo Activity Plan Form			11/03/98	17:30:35	rev 6/95



165DG:TT= 0 TMC=1 C= 6.00 XC= -13.00 BS= 0/3583 TC= 3
 A= 182 pD= 7998 SR=17.450 RA50= 61.06 DEC50= 21.67 cone=105.51 clock=281.49
 117DG:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/3583
 1:#s= 4 Cs= -19.60 XCs= 0.00 Cr= 20.00 XCr= 8.00 sD= 1980 rD= 20

18ENGLOBAL02

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18ENGLOBAL02

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

START:EEE 98-326/11:38:42.533 +CDS 254:00:0

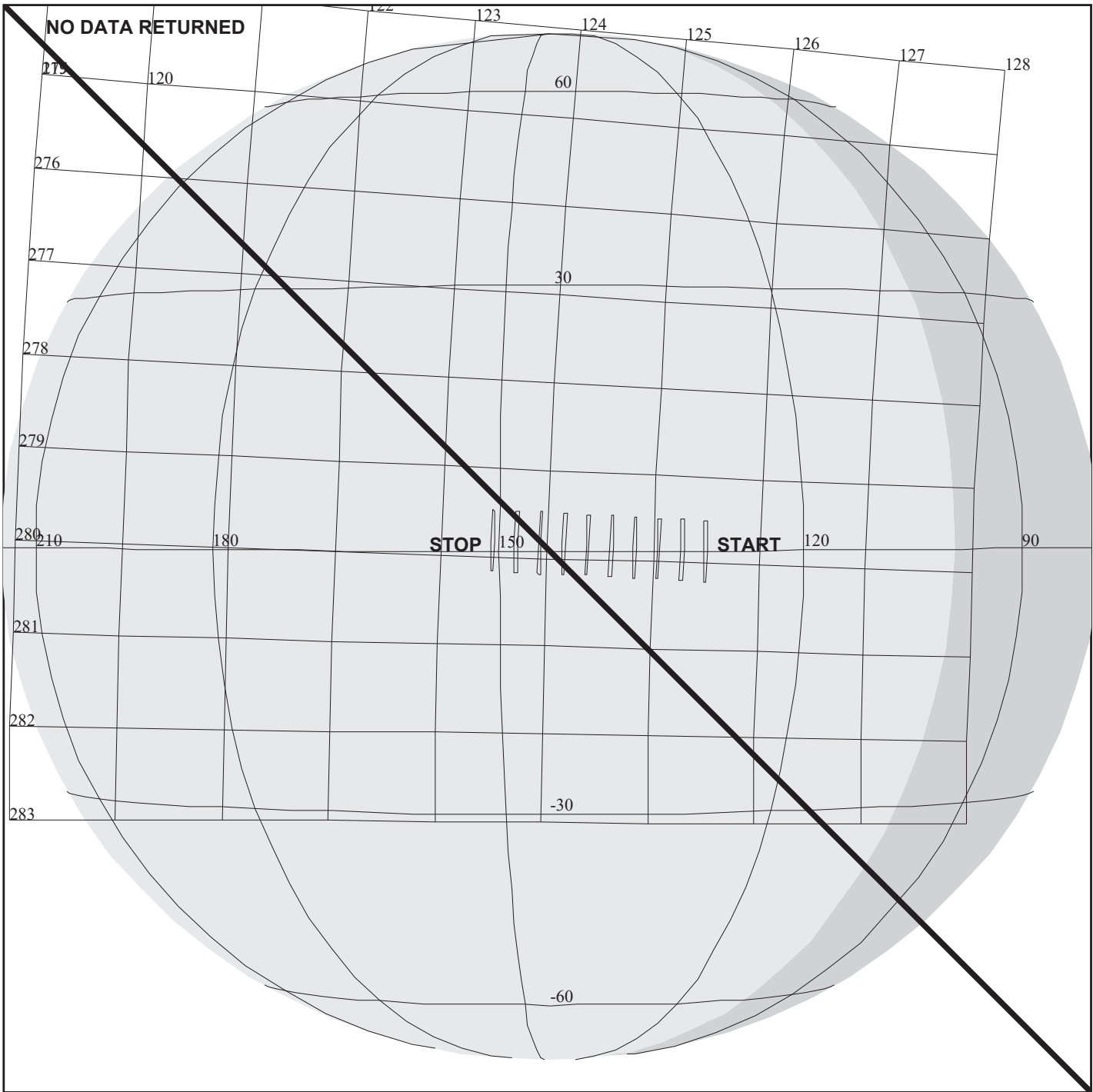
OBSERVATION:18ENGLOBAL02

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 7998 S= 0.700

DESCRIP:Europa_Global_Observation

Europa Global Observation		ACTIVITY ID:	18ENGLOBAL02-		
		START TIME:	98-326/16:42:02.533		
Activity ID: Orbit 18 Target E Inst N OAPEL GLOBAL SeqNo 02 -					
Title	Europa Global Observation		Instrument		NIMS
Requestor	NIMS-SWG/A. OCAMPO		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/22/98	Week 47
Start	EEE+CDS	00000300:00:0	98-326/16:42:02.533	EEE+000/05:03:20.000	
End	EEE+CDS	00000345:00:0	98-326/17:27:32.533	EEE+000/05:48:50.000	
Duration		00000045:00:0	000/00:45:30.000	000/00:45:30.000	
Top Label	18ENGLOBAL02-				
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 imaging portions of the leading and trailing hemispheres, covering West longitudes 210-120 degrees at ~50 KM resolution.					
No Data Returned, S/C Safed					
Design Detail					
NIMS mode = LM Record FMT = MPW TICS=2340, PPR_RA= 0.439					
Gain state = 3,4,3,4,3,4,3 Grating position = 0					
Galileo Activity Plan Form			11/03/98	17:30:35	rev 6/95



18JNJUPRTS03

165DH:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/4877 TC= 1(0 130)
 A= 728 pD= 1810 SR=17.450 RA50= 40.29 DEC50= 17.28 cone=125.51 clock=279.85
 117DH:#SB= 1 OR= 0.070 RR=12.000 BM=F RC= 1 BS= 0/4877
 1:#s= 1 Cs= -48.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1810 rD= 40

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18JNJUPRTS03

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

THINNING:NIM 7

START:JEE 98-326/07:30:59.200 +CDS 616:00:0

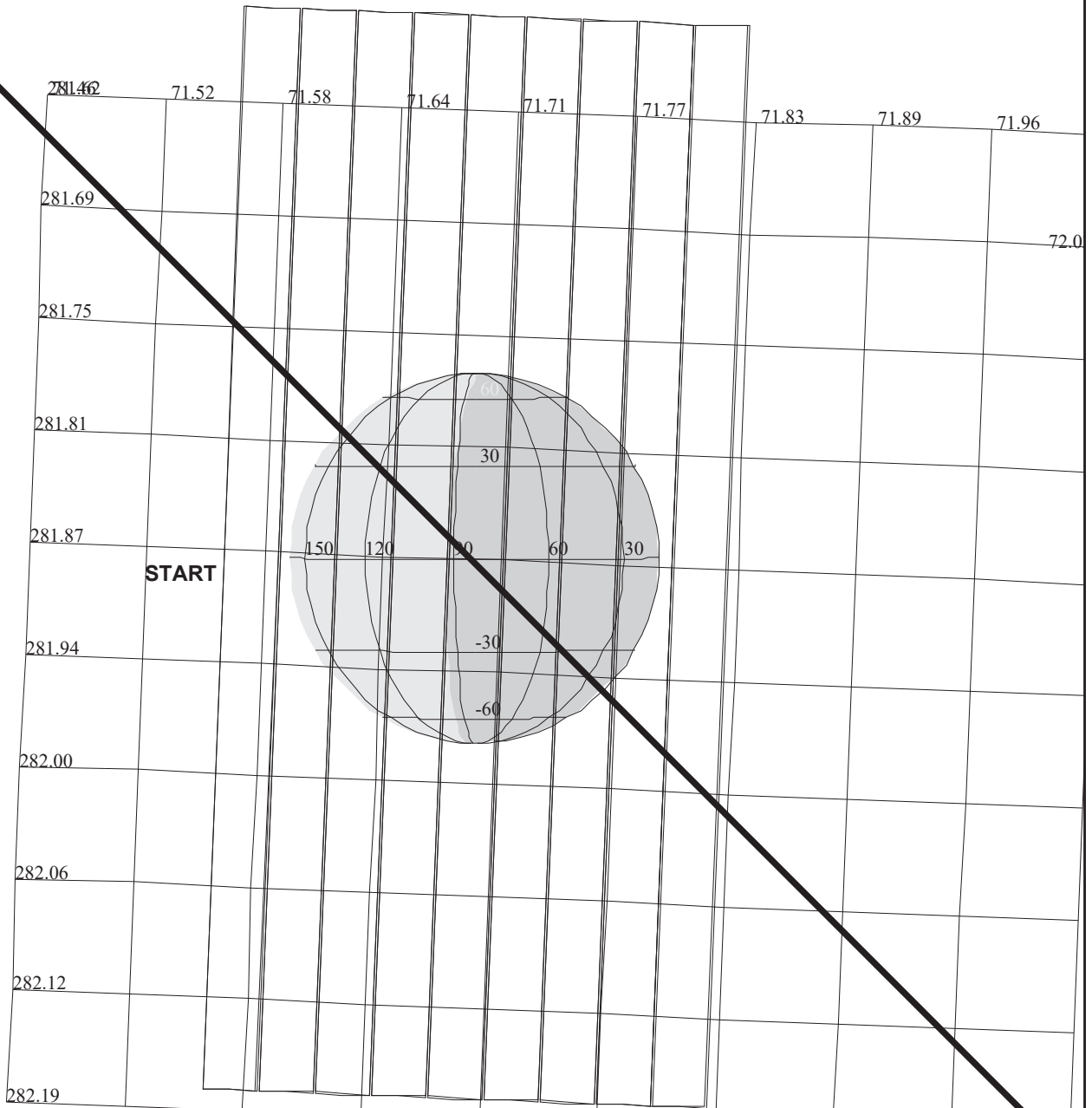
BODY PLOT TIME:TARGET-TIME D= 1810 S= 1.000

OBSERVATION:18JNJUPRTS03

DESCRIP:Jupiter_Realtime_Observation

Jupiter Realtime Observation		ACTIVITY ID:	18JNJUPRTS03*		
		START TIME:	98-326/17:49:47.200		
Activity ID: Orbit 18 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	11/22/98	Week 47
Start	JEE+CDS	00000612:00:0	98-326/17:49:47.200	JEE+000/10:18:48.000	
End	JEE+CDS	00000626:00:0	98-326/18:03:56.533	JEE+000/10:32:57.333	
Duration		00000014:00:0	000/00:14:09.333	000/00:14:09.333	
Top Label	18JNJUPRTS03*				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH		
CDS Source	OAP	Spin State	DUAL	Scan Platform	Yes
				DMS	No
Observation Objective					
Search for Jupiter atmospheric composition and thermal variations over time.					
FREE_RTS= 0.16 Mbits					
No Data Returned, S/C Safed					
Design Detail					
Long map. One scan, ten RIMS long.					
Equator - Nyquist sampling not necessary.					
Longitude - not dependent. No overlap in FOV.					
Galileo Activity Plan Form			11/03/98	17:30:36	rev 6/95

NO DATA RETURNED



18INHRSPEC01

165DI:TT= 0 TMC= 1 C= -2.20 XC= 0.00 BS= 0/4077 TC= 3
 A= 728 pD= 900 SR=17.450 RA50= 97.94 DEC50= 24.62 cone= 71.57 clock=281.87
 117DI:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/4077
 1:#s= 2 Cs= 4.38 XCs= 0.00 Cr= -4.48 XCr= 0.00 sD= 442 rD= 16

TARGET G3.1 lisac:10/30/1998 14:54:21

FILE:P.18INHRSPEC01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/T-980928-tour.NS

PERIAPSIS:

START:IEE 98-327/11:11:13.866 -CDS 426:00:0

OBSERVATION:18INHRSPEC01

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 900 S= 0.300

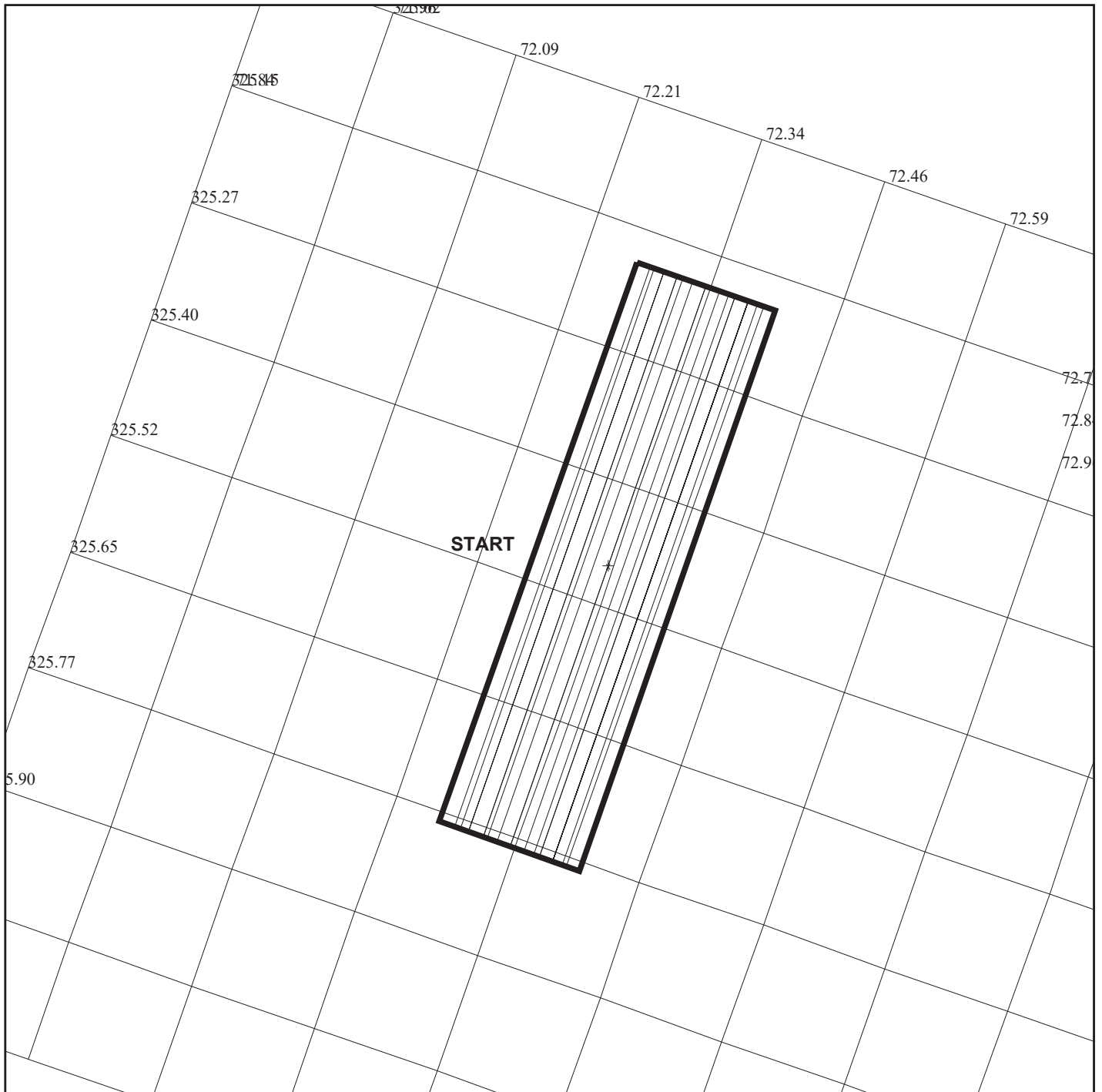
DESCRIP:lo_Monitoring_at_High_Spec_Res

Io Monitoring at High Spectral Resolutio		ACTIVITY ID:	18INHRSPEC01-		
		START TIME:	98-327/03:56:27.200		
Activity ID: Orbit 18 Target I Inst N OAPEL HRSPEC SeqNo 01 -					
Title	Io Monitoring at High Spectral ResolutioInstrument				NNIMS
Requestor	NIMS-SWG/R. LOPES		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/23/98	Week 47
Start	IEE-CDS	00000430:00:0	98-327/03:56:27.200	IEE-000/07:14:46.666	
End	IEE-CDS	00000421:16:0	98-327/04:05:22.533	IEE-000/07:05:51.333	
Duration		00000008:75:0	000/00:08:55.333	000/00:08:55.333	
Top Label	18INHRSPEC01-				
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					
<p>Io monitoring at high spectral resolution in preparation of the I24 and I25 orbits. Data provides another opportunity to accomplish a time sample of the hot spot monitoring campaign continued through the prime mission.</p>					
<p>No Data Returned, S/C Safed</p>					
Design Detail					
<p>Global Mosaic in Long Map, 360 wavelengths, record mode is MPW. Central longitude is approximately 65 degrees West. NIMS resolution is approximately 500 km/pixel. Cost is approximately 1.5 Mbits, 250 tics.</p>					
Galileo Activity Plan Form			11/03/98	17:30:36	rev 6/95

NIMS Chopper Off		ACTIVITY ID: 18NNCHOPOF01-	
		START TIME: 98-327/04:28:48.533	
Activity ID: Orbit 18 Target N Inst N OAPEL CHOPOF SeqNo 01 -			
Title	NIMS Chopper Off		Instrument
Requestor	NIMS-SWG/M. SEGURA		NIMS
	Team	NIMS	Working Group
Time System	CDS	Load ID	Calendar Date 11/23/98 Week 47
Start	IEE-CDS 00000398:00:0		98-327/04:28:48.533 IEE-000/06:42:25.333
End	IEE-CDS 00000388:00:0		98-327/04:38:55.200 IEE-000/06:32:18.666
Duration	00000010:00:0		000/00:10:06.667 000/00:10:06.667
Top Label	18NNCHOPOF01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	0	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
NIMS Chopper Off			
Commands Not Executed, S/C Safed			
Design Detail			
Galileo Activity Plan Form			
11/03/98 17:30:36 rev 6/95			

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NIMS Star Calibration		ACTIVITY ID: 18HNSTRCAL01-	
		START TIME: 98-344/17:41:00.000	
Activity ID: Orbit 18 Target H Inst N OAPEL STRCAL SeqNo 01 -			
Title	NIMS Star Calibration		Instrument
Requestor	NIMS-SWG/M. SEGURA		NIMS SWG
	Team	NIMS Working Group	
Time System	CDS	Load ID	Calendar Date 12/10/98 Week 50
Start	98-344/17:41:00.000		
End	98-344/18:22:00.000		
Duration	000/00:41:00.000		
Top Label	18HNSTRCAL01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	0	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
NIMS Star Calibration.			
Build up a NIMS star calibration spectrum of the star Sirius.			
Data Returned			
Design Detail			
Scan back and forth across the star (Sirius) in Fixed Map mode, gain state 4, MPW. Start at grating start position 0 and increment the grating start position by 1 every Rim. A total of 24 Rims recorded.			
One scan cycle every 17 mf, roughly 5 1/3 times per Rim (grating position).			
The star is sub-pixel.			
This observation is performed in Cruise mode.			
Fixed Map (XM), Gain 4, Grating Start 0, MPW, E18STRCAL17, E18STRCAL15			
Galileo Activity Plan Form		11/03/98 17:30:36	rev 6/95



165FA:TT= 0 TMC= 1 C= -1.00 XC= 0.00 BS= 0/8625 TC=14(Sirius)
 A= 728 pD= 0 SR=17.450 RA50=100.79 DEC50=-16.65 cone= 72.28 clock=325.48
 117FA:#SB= 1 OR= 0.760 RR=12.000 BM=F RC= 1 BS= 0/8625
 1:#s=128 Cs= 2.00 XCs= 0.00 Cr= -2.00 XCr= 0.00 sD= 18 rD= 16

18HNSTARCAL1

DESIGN G3.2 lisac:12/ 3/1998 10:38:23

FILE:P.18HNSTARCAL1

CENTRAL BODY:JUPITER III

MINI:m.18HNSTARCAL1

S/C EPH:/DATA/NAVIO/E19-T-981116.NS

PERIAPSIS:

START:RDC 98-344/15:30:04.333 +CDS 132:00:0

OBSERVATION:18HNSTARCAL1

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 0 S= 1.000

DESCRIP:NIMS_E18_PRIME_STAR_CALIBRATION

NIMS RCT Real Time Calibration		ACTIVITY ID:	18NNRCTRLT01-		
		START TIME:	99-007/14:00:05.933		
Activity ID: Orbit 18 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	01/07/99	Week 54
Start	RTA+CDS 00000000:00:0		99-007/14:00:05.933	RTA+000/00:00:00.000	
End	RTA+CDS 00000787:00:0		99-008/03:15:50.599	RTA+000/13:15:44.666	
Duration	00000787:00:0		000/13:15:44.666	000/13:15:44.666	
Top Label	18NNRCTRLT01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	450	Report Options	BOTH		
CDS Source	OAP	Spin State	DUAL	Scan Platform	No
				DMS	No
Observation Objective					
<p>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.</p>					
Data Returned					
Design Detail					
a Library Sequence.					
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					
Galileo Activity Plan Form			11/03/98	17:30:36	rev 6/95

Chapter 6 - Edit Tables

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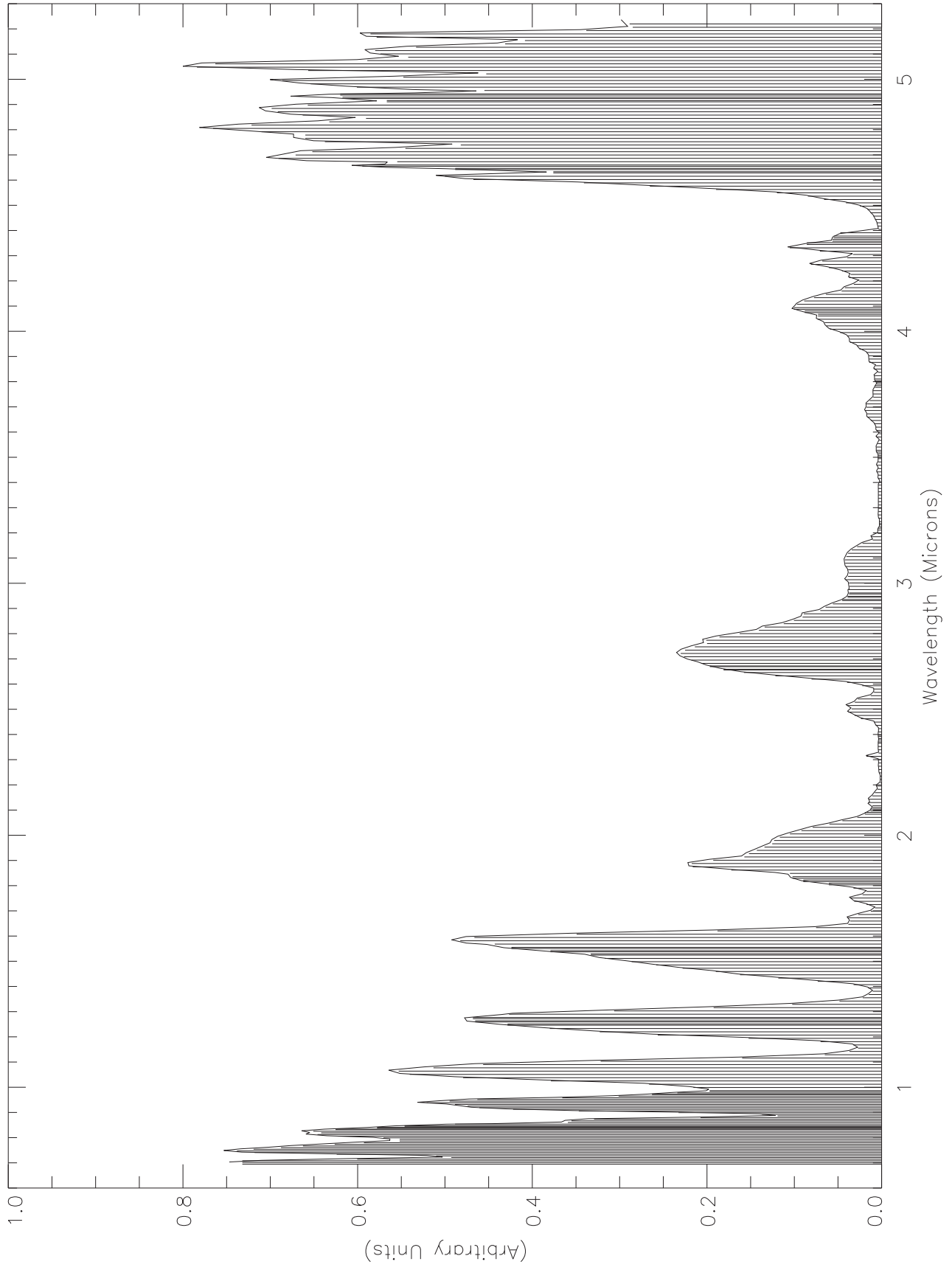
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6.3	JSB253B	4
6.4	OPCAL48	5
6.5	RCT252	6
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Introduction to Chapter 6

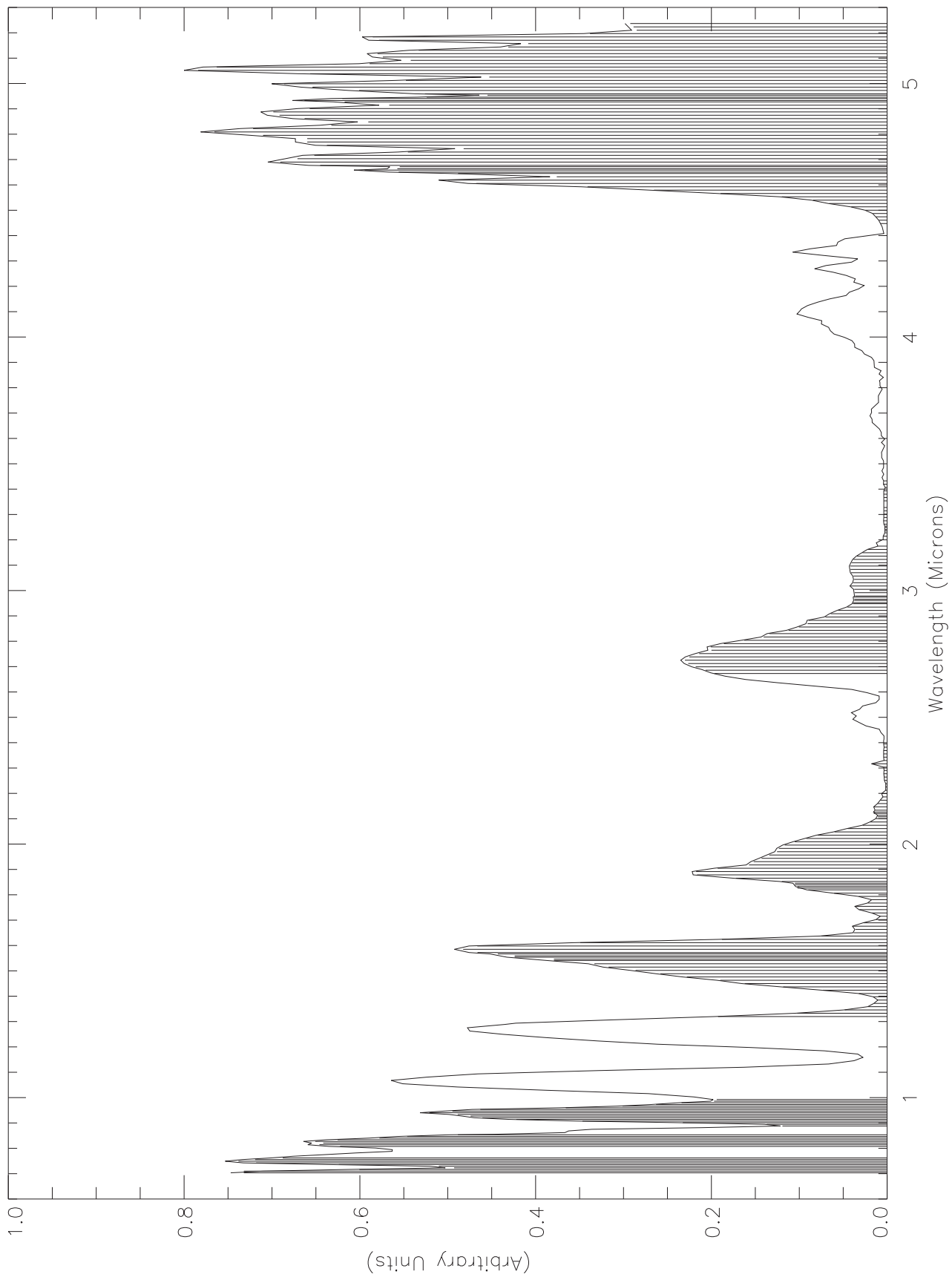
NIMS Edit Table Plots

This chapter contains plots of the NIMS Edit Tables used in E18. 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.

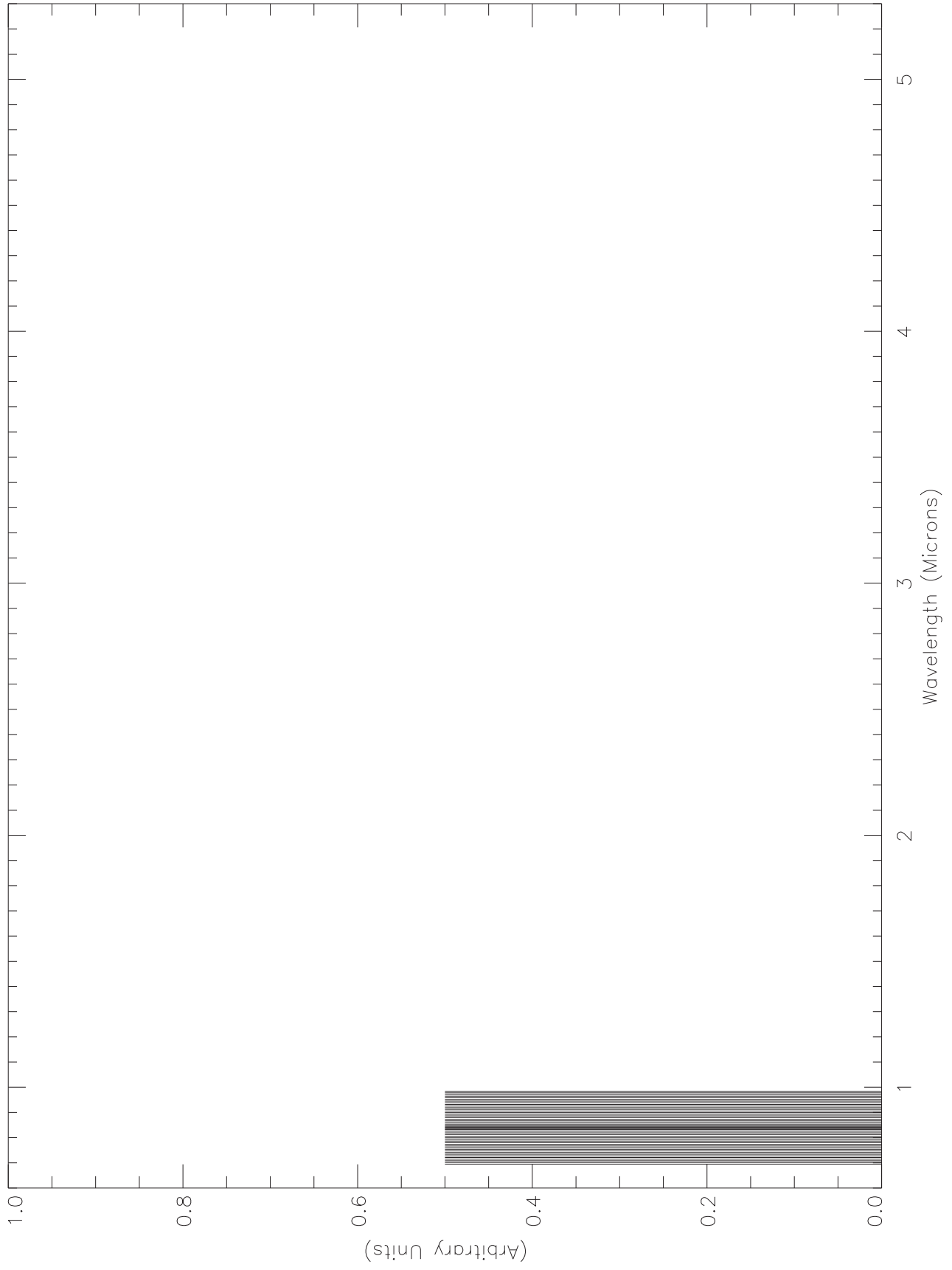
JLM408



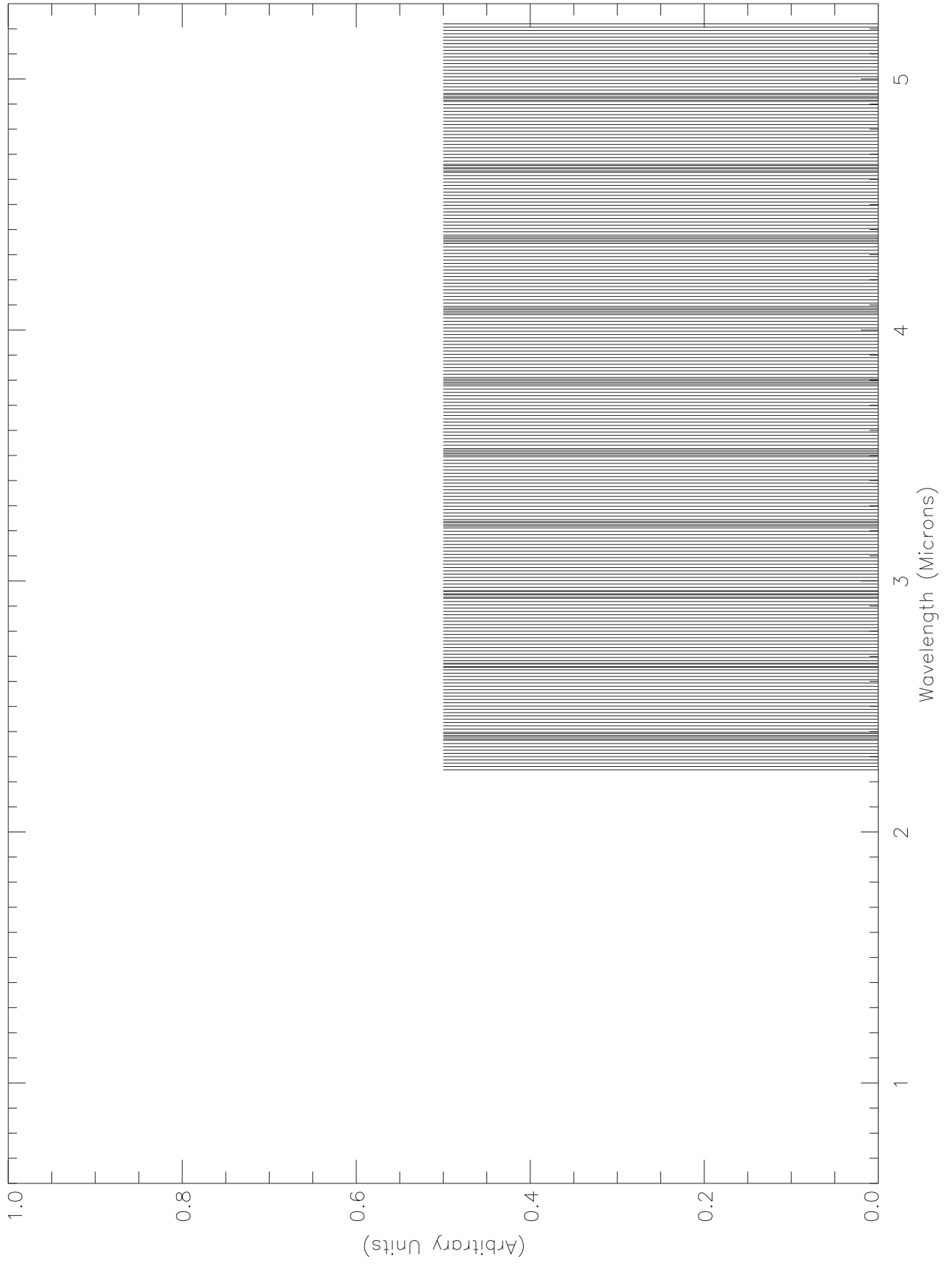
JSB253B.ETB



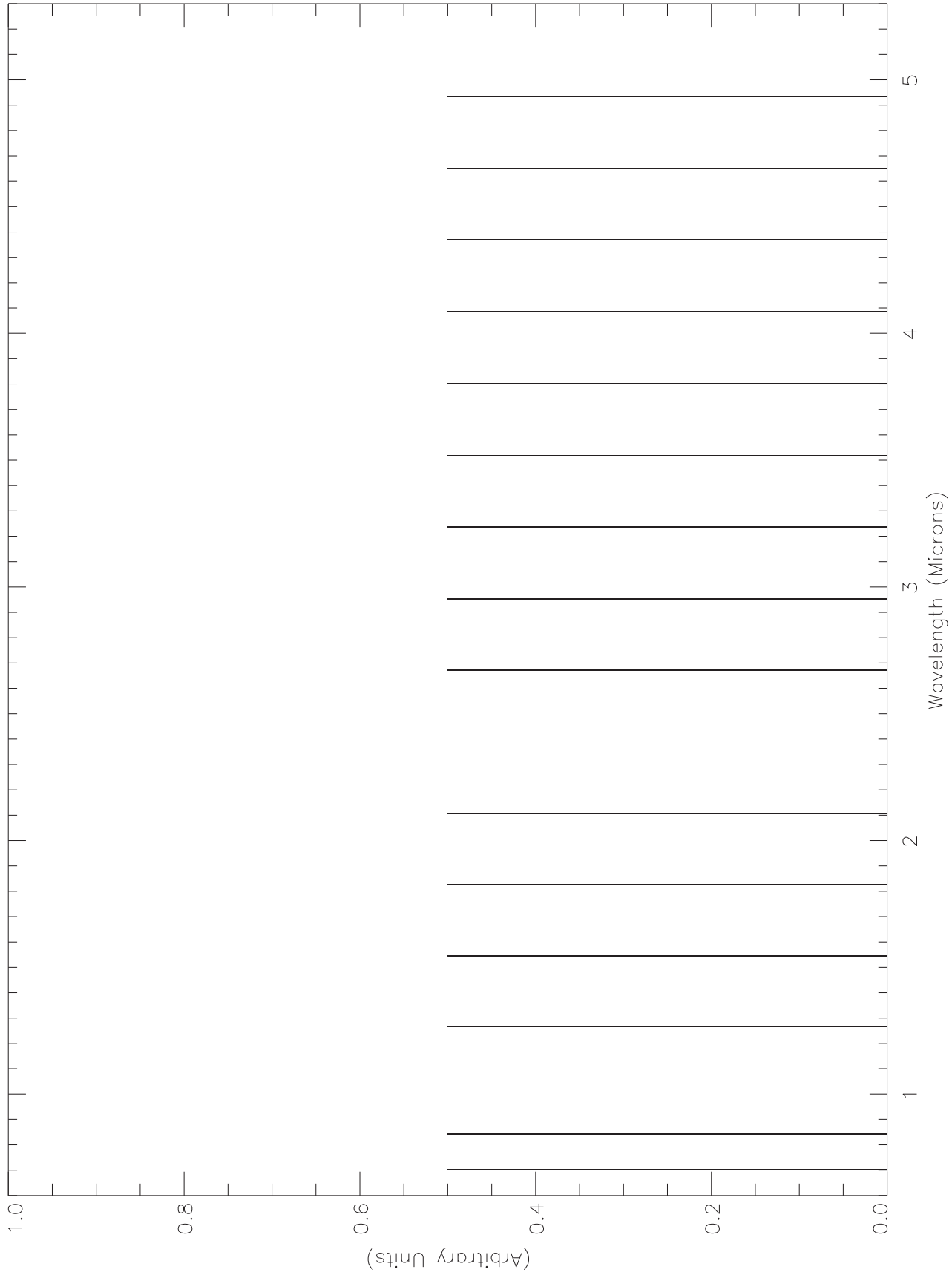
OPCAL48.ETB



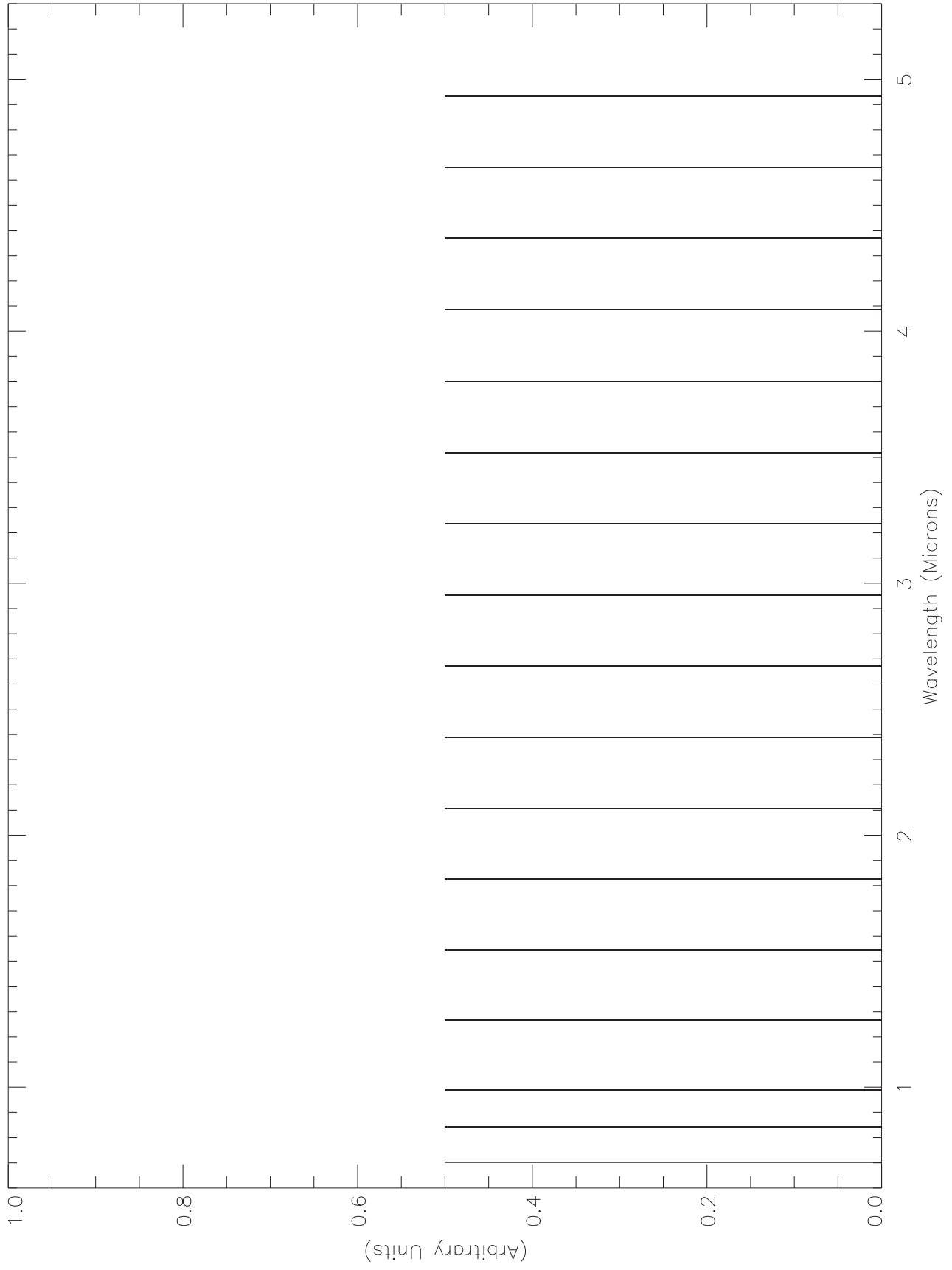
RCT252.PBK



STRCAL15.PBK



STRCAL17.ETB



Chapter 7 - Data Return

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7.3	NIMS Calibration Geometry Plot	4
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7.5	Recap of E18 Playback Events	7
7.6	Timeline of E18 Playback Events	7-10
7.7	E18 NIMS Anomaly Discussion	11
7.8	NIMS Archived EDRs and CUBEs	12
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7.10	Understanding the NIMS Mask	15

Introduction to Chapter 7

This chapter is a report on the NIMS data return for the E18 orbit. Due to the low downlink data rates available for Galileo Jupiter Operations and other unforeseen and unpredictable events during the E18 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 nine autonomous reloads of the NIMS RAM code from CDS during the E18 encounter, one just before each science observation. No observations were lost due to a NIMS processor halt. 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 two Despun Bus Reset Errors that safed the spacecraft, the first about 2 hours before E18 perijove and the second about 20 hours later. The perijove and outbound portions of the E18 encounter were lost.

Two Jupiter realtime observations and one recorded Jupiter observation were performed before the spacecraft safing event.

Spacecraft safing during the E18 encounter caused a portion of E17 data not to be recorded over in E18. Thus, additional E17 data were returned during E18 playback. The extra tape was used to record a NIMS star calibration during cruise.

The plots on the pages 3 and 4 show the geometry of the NIMS E18 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 and 6 summarize the 'final' playback model for the 'returned' E18 and E17 data returned during E18 cruise.

The text on page 7 gives a 'recap' of the E18 playback events which affected which observations were returned.

A Timeline of E18 playback events is on pages 7 through 10.

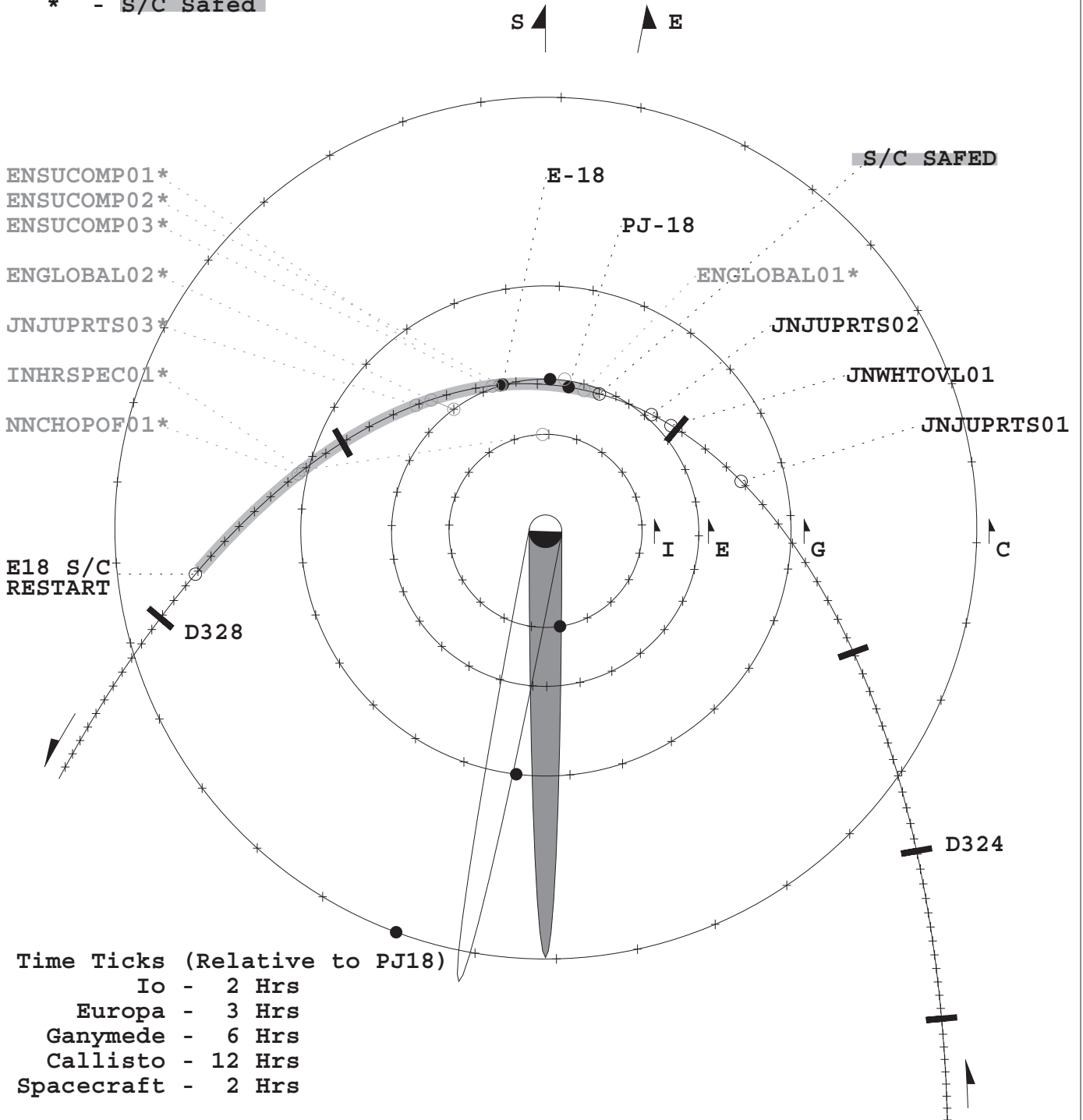
The text on page 11 describes the E18 NIMS and Spacecraft Anomalies.

The text on page 12 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 13 and 14.

The text on page 15 is a guide to understanding the NIMS MASK.

NIMS E18 OBSERVATIONS

Bold - Returned
 Gray - Not Returned
 * - S/C Safed



Time Ticks (Relative to PJ18)
 Io - 2 Hrs
 Europa - 3 Hrs
 Ganymede - 6 Hrs
 Callisto - 12 Hrs
 Spacecraft - 2 Hrs

Europa Flyby (E18): 22-NOV-1998 (D326) 11:48:06 UTC
 Perijove (PJ18): 22-NOV-1998 (D326) 07:35:04 UTC

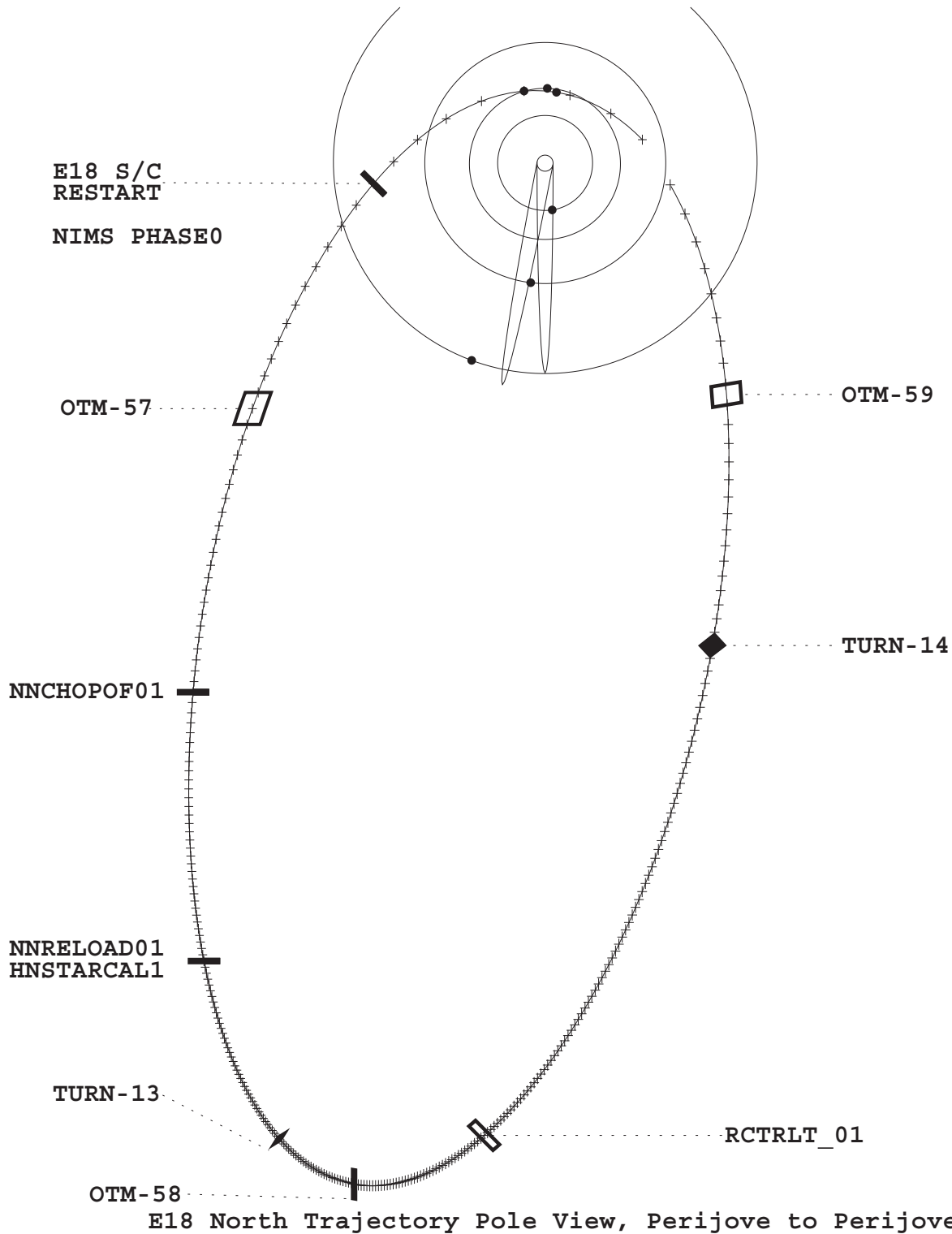
E18 North Trajectory Pole View

NIMS E18 CRUISE CALIBRATIONS

Europa Flyby (E18): 22-NOV-1998 (D326) 11:48:06 UTC
 Perijove (PJ18): 22-NOV-1998 (D326) 07:35:04 UTC
 Apojove (AJ18): 27-DEC-1998 (D361) 17:00:00 UTC

Time Ticks (Relative to E18)
 Spacecraft - 6 Hours

S ▲ ▲ E



NIMS E18 DATA RETURN

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
18JNJUPRTS01*	Jupiter Realtime Observation	E18JLM408/MB	R/T	LM	2	0	4	R/T	
18JNWHTOVL01-	Jupiter White Oval	E18JSB253B	E18JSB253B	LM	2	0	4	LPU	
18JNJUPRTS02*	Jupiter Realtime Observation	E18JLM408/MB	R/T	LM	2	0	4	R/T	
17ENSUCOMP01-gf	Europa Surface Composition	E17ELM442	E17ELM360	LM	4	0	4	MPW	
17ENSUCOMP02-gf	Europa Surface Composition	E17ELM442	E17ELM360	LS	4	0	4	MPW	
17ENSUCOMP03-gf	Europa Surface Composition	E17ELM442	E17ELM360	LM	4	0	4	MPW	
18JNWHTOVL01-	Jupiter White Oval	E18JSB253B	E18JSB253B	LM	2	0	4	LPU	
E18 Cruise Recording									
18NNSTARCL01-		E18STRCAL17	E18STRCAL15		4				
18NNSTARCL01-gf		E18STRCAL17	E18STRCAL15		4				

3/28/00

NIMS E18 DATA RETURN

Activity ID	Mode	Record	Wave- lengths	Record Time	PB Time	Selected Bits of Tape	Total Bits of Tape	Mode Cycle	Comp Thold	RT MBits	Total BTG Mbits	Data Reduct Factor	Pass
				Returned (sec.)	(sec.)	sBOI(MBITS)	BOT (Mbits)	(sec)		MBits (4% ahead)	(sBOT/BOT)		
18JNJUPRTS01	LM	R/T	360							0.16			
18JNWHTOVL01	LM	LPU	253	969	967.33	5.97	5.98	8.667	1.67	0	3.52	1.70	1
18JNJUPRTS02	LM	R/T	360							0.16			
17ENSUCOMP01	LM	MPW	360	1200	217	2.50	13.82	8.667	1.3	0	1.44	1.73	2
17ENSUCOMP02	LM	MPW	360	1020	66	0.76	11.75	8.667	1.46	0	0.39	1.95	2
17ENSUCOMP03	LM	MPW	360	1320	283	3.26	15.21	8.667	1.3	0	1.88	1.73	2
18JNWHTOVL01	LM	LPU	253	969	967.33	5.97	5.98	8.667	1.67	0	3.52	1.70	2
				1428	1426	16.43		0.333	2.47	0	5.41	3.04	1
				1428	68	0.78		0.333	2.47	0	0.26	3.04	2
TOTAL											16.41		

3/28/00

RECAP OF E18 PLAYBACK EVENTS

The Galileo spacecraft experienced a "despun bus reset" fault in E18, similar to that which caused the loss of the E16 encounter. The results were similar. In this case, two NIMS Jupiter realtime observations and one recorded Jupiter white oval observation were performed before the safing occurred.

E18 was a relatively bit-rich orbit, with NIMS' original downlink allocation at about 44 Megabits. In the end we were able to retrieve data amounting to about 40% of that total (16.4 Mbits).

In addition to receiving our E18 data, we were able to fill many significant gaps in our E17 Europa surface composition observations. And, following playback of this data and during E18 cruise, we were able to record and play back a long (24 RIMS) star calibration.

No details of the originally planned observations or the changes in our strategy before the safing event are included here, as those observations were not executed.

The following timeline details the most significant events of the E18 playback period. Most of the text below is excerpted from messages issued at the time.

E18 Playback Events Timeline (11-06-98: to 01-30-99)

- 11-06-98: (K. Schimmels) NIMS playback bits allocation is 44.28 Megabits.
- 11-13-98: Today's update has produced the final pre-uplink version of the playback table.
- 11-22-98: (J. Erickson) 4:00 am PST: The Galileo spacecraft has experienced an anomaly just prior to it's Europa 18 encounter. It is presently in safing, and is stable. Analysis is proceeding, but appears to show that the spacecraft has experienced another despun bus reset, similar to the reset at Europa 16. The preliminary analysis shows the reset occurred at 9:34 pm PST on November 21, approximately 2 hours prior to Jupiter closest approach, and 6 hours prior to Europa closest approach. The reset appears to have happened on both strings simultaneously (within one minor frame, two thirds of a second). After analysis confirms the sequence of events leading to the safing, a recovery plan will be developed and executed.
- 11-22-98: Perijove occurs at 07:35:04 UTC, followed by Europa closest approach at 11:48:06.

E18 Playback Events Timeline (11-06-98: to 01-30-99)

- 11-22-98: (J. Erickson) 11:30 am PST: The Galileo spacecraft is still in safing, with no health or safety concerns. Recovery planning is in process, with an expected return to normal operations at approximately 5:00 pm PST on November 23. Memory readouts from the Command and Data System (CDS) have verified that the spacecraft safing was induced by a simultaneous despun bus reset on each of the semi-redundant CDS halves. After the spacecraft is back to normal operations, a plan will be developed to best utilize the available playback time in the Europa 18 cruise sequence. This plan will include elements of playing back the limited data taken at Europa 18, additional recovery of Europa 17 data, and real-time cruise science.
- 11-23-98: (Message to project concerning uses of available E18 downlink) NIMS would like to return 18JNWHTOVL01 which was recorded on the tape successfully (as far as we know). That was a fairly large observation that will require about 3.2 Mb to return. Hopefully it was not recorded on top of 17ENGLOBAL01. We left 132 wavelengths behind on the tape there. It would require 4.3 Mbits to retrieve the rest of it. In addition we could obtain the balance of the 253 wavelengths NIMS recorded for 17JNWHTOVL01 and 02. NIMS received only 66 thermal wavelengths there. Note, these are dark-side observations. It is estimated that NIMS will need another 2.8 Mbits (total) to recover the additional wavelengths for these. Lastly NIMS has a very large number of significant gaps in the global observations and in 17ENSUCOMP01-03. We would like to request an initial allocation of 6 Mbits for gap fills. This number could go either up or down (but more likely down) as we find out precisely what the gaps amount to.
- 11-24-98: The E18 encounter did not execute successfully due to a 'despun bus reset' that placed the spacecraft in safe mode. The cause is attributed to erroneous readings from the gyros, which indicated high rates of motion. This case is similar to the problem experienced in E16. In both cases, safing occurred some hours prior to perijove. This time we received two extended Jupiter realtime observations before safing. 18JNWHTOVL01 was recorded successfully in inertial mode before safing, and will be returned to Earth within a week or so. E18 activities resulted in re-recording one track of the tape recorder (track 1), leaving considerable E17 data intact. In our case, the four Europa SUCOMPs remain. To utilize our downlink and improve E17 science we are commanding return of data that did not reach the ground successfully in E17. 17ENSUCOMP01 playback consists of the

E18 Playback Events Timeline (11-06-98: to 01-30-99)

10 sets of gap-filling commands that were included in the last E17 table. These did not execute then due to our loss of downlink allocation in connection with the Voyager 2 anomaly investigations. Likewise four sets of commands to fill gaps in 17ENSUCOMP02 are in the table, along with 5 new sets of commands to recover nearly 2 Mbits of gaps that afflicted our original playback of 17ENSUCOMP03. We did not require gap filling for 17ENSUCOMP04. Gap fill amounts to about 3 Mbits in the current playback table. At the request of the playback coordinator, we are playing back 18JNWHTOVL01 in full a second time, at the end of the second playback pass. We are also requesting additional playback of AACS data from E17. As you recall we recorded most of our E17 observations in cruise mode. By having all the available AACS we may be able to reduce the pointing uncertainty. Observations where we formerly requested only a portion of the AACS are 17ENSUCOMP01 and 02. An open issue at present concerns the possibility of performing some calibrations during the cruise period. We are requesting one starcal and one dark observation.

11-30-98: (K. Schimmels) Ok, here is the general info you will need for developing your E18 Cruise Recordings:
There will be an epoch defined as follows:
Epoch RDC = 98-344/15:30, set to mf 6.
OAPEL times will be as follows:
SSI: CDS RDC+5:00:0 - CDS RDC+35:00:0
NIMS: CDS RDC+37:00:0 - CDS RDC+97:00:0
MWG: CDS RDC+100:00:0 - CDS RDC+700:00:0
Tape motion commands will be from RDC - RDC+4:00:0, and after RDC+701:00:0.
We are recording on track 2, so remember the one-minute wait rule between tape commands if you have multiple SCIRECs. As for the schedule, tentatively, I would like to see the DMS commands early - so internal DMS delivery on Wed. (Dec. 2) ~ noon. If this is not possible, let me know soon so we can find a time that is. I believe the pointer files and DMS files will be due to SST Thursday, most likely EOD - again, this is tentative still. Playback will start with E18 encounter data, at the beginning of track 2. We have one more pass through this data prior to doing the recording in cruise, so the gaps that currently exist in WHTOVAL may be filled. If they are not, Playback should start with gaps in E18 encounter data, followed by the PPR RCT Cal, and followed by the Record during cruise (RDC) data. MWG is planning on splitting their playback into multiple segments to allow updates to it. NIMS and SSI do not have that luxury due to the small amount of MB to be played back. All data will be tagged as Pass 1 in your SINGLES. As of this time we are not planning on continuing with E17 playback again.

E18 Playback Events Timeline (11-06-98: to 01-30-99)

- 12-03-98: Playback of E18 data and E17 gap fills is completed.
- 12-08-98: The second pass playback of 18JNWHTOVL01 was successful in filling the existing gaps in that observation. E18 playback included portions of NIMS' Europa observations recorded in E17. In E17 we were not able to fill the substantial gaps in 17ENSUCOMP01-02-03. However, our E18 playback of the gaps was successful, and thus final products for these observations will be nearly, if not 100%, complete. E18 now continues with recorded observations that will be obtained in a few days. NIMS will record a star calibration with Sirius as the target. This is designed to obtain 24 Rims of data, one for each step of the NIMS long map grating cycle. Playback of this observation will begin soon after. The estimated downlink bits requirement is 6.2 Mbits. We are requesting 100% of the AACS data also for this period.
- 12-10-98: NIMS starcal is recorded (day 344, 17:43 UTC).
- 12-14-98: (R. Mehlman) Star and booms are plainly visible in a DN tube of the first 10 1/2 RIMS of the E18 star calibration observations. Each observation is in fixed map mode, gain state 4, one RIM long, with the grating position changing each RIM, 0-23. But the first 10 1/2 RIMS have been processed into a single DN tube. Compression ratio was 2.47. The rest of the data should be down in a few days -- it seems to be coming down faster than expected. Only a couple of gaps so far, of 1 packet and 8 packets.
- 01-11-99 (K. Schimmels) We have approval to do another pass through the tape in E18, so here is the current plan:
We have ~16.2 MB capability remaining expected at the end of Pass 1. This will be allocated as follows:
SSI: 9.2 MB
MWG: 3.0 MB
Slewing: 4.0 MB
- 01-13-99 The availability of downlink bits has presented us with the opportunity to send up gap-fill playback commands to complete the STARCAL. The new playback table has 3 sets of singles, amounting to about 1 Rim of data, estimated to require about 0.26 Mbits to play back. E18 playback will terminate, and the E19 encounter will begin, on January 30.

NIMS Anomaly Report - E18 Sequence

There were no NIMS processor halts detected during the E18 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 two despun bus resets, the first about 2 hours before E18 perijove and the second about 20 hours later. The perijove and outbound portion of the E18 encounter were lost.

Processor Halts

There were no NIMS processor halts in E18.

Spacecraft Anomaly

The spacecraft suffered a despun bus reset and safed about 2 hours before E18 perijove, very similar to the spacecraft safing that took place near 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 outbound portion of the E18 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.

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.