

NIMS GUIDE TO THE E14 ORBIT

Original: March 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 E14 Orbit for the NIMS Team. The aim of this guide is to provide detailed information on the various NIMS E14 observations and calibrations. Also included in this document is background information on the E14 orbit. This guide was produced before the start of the E14 orbit. After analysis of the NIMS E14 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 E14 orbit. Chapter 2 gives an overview of the E14 orbit and summarizes the NIMS science objectives for the E14 orbit using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry for the E14 orbit. Chapter 4 summarizes the NIMS E14 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 E14 orbit.

For more information on the E14 orbit, please refer to the Galileo Orbit Planning guide and the Galileo Orbit Activity Plan for the E14 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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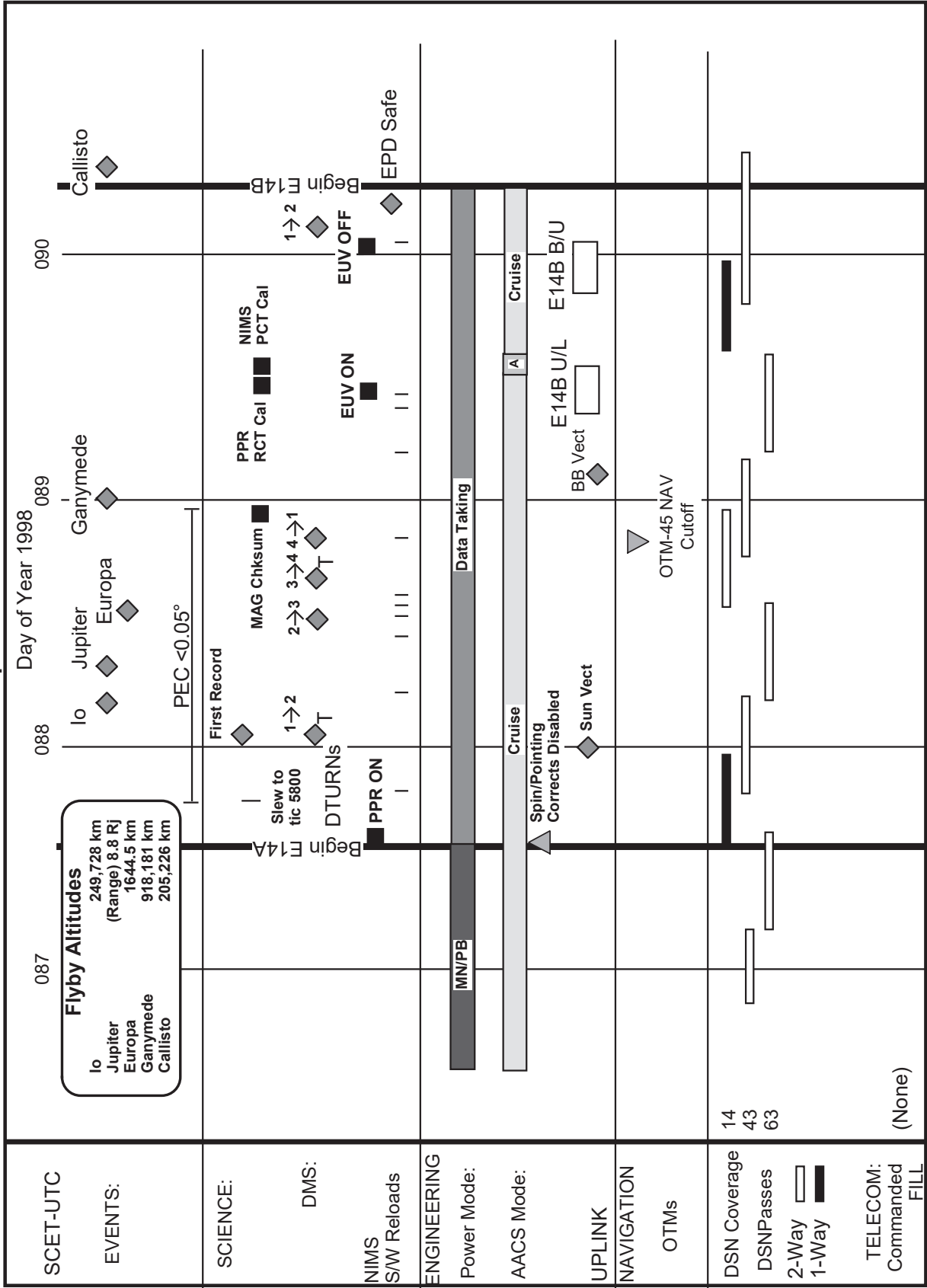
Introduction

This E14 orbit is the fourteenth of twenty-five orbits in Galileo's Tour of the Jovian system and the third orbit in the Galileo Europa Mission (GEM). This orbit has a targetted satellite flyby of Europa. NIMS will make observations of Jupiter, Io, Europa and Callisto in this orbit.

There are 12 autonomous reloads of the NIMS RAM code from CDS planned during the E14A 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 E14 orbit is divided into 2 sequence loads: one Encounter Load (E14A) and one Orbital Cruise Load (E14B). The E14A load begins on D087 (03/28/98) and ends on D090 (03/30/98). This load contains the flybys of Jupiter, Europa, Io and Callisto. The Cruise Load E14B runs from D090 to D150. Playback of the recorded data takes place during the Cruise phase, E14B. A high-level overview timeline of the E14 orbit can be found on the following three pages.

E14A Sequence Overview



Introduction

The following table lists the major events during E14, including NIMS Real Time observations, in UTC.

03/28/98	98-087/13:00:00	E14 Encounter Start
03/28/98	98-087/18:20:20	NIMS RAM Reload 01
03/28/98	98-087/18:28:25	NIMS R/T Jupiter 01
03/29/98	98-088/04:42:10	NIMS RAM Reload 02
03/29/98	98-088/04:48:00	Io Closest Approach
03/29/98	98-088/08:01:26	Jupiter Closest Approach
03/29/98	98-088/11:59:59	NIMS RAM Reload 03
03/29/98	98-088/13:24:05	Europa Closest Approach
03/29/98	98-088/13:25:55	NIMS RAM Reload 04
03/29/98	98-088/14:01:19	NIMS RAM Reload 05
03/29/98	98-088/14:20:31	NIMS RAM Reload 06
03/29/98	98-088/21:41:22	NIMS R/T Jupiter 02
03/30/98	98-089/04:10:39	NIMS RAM Reload 07
03/30/98	98-089/07:10:37	NIMS RAM Reload 08
03/30/98	98-089/09:10:57	NIMS RAM Reload 09
03/30/98	98-089/13:36:05	NIMS R/T PCT CAL
03/30/98	98-089/17:49:39	NIMS RAM Reload 10
03/31/98	98-090/00:57:21	NIMS RAM Reload 11
03/31/98	98-090/04:31:00	Callisto Closest Approach
03/30/98	98-090/02:15:00	Start E14 Playback
05/12/98	98-132/07:59:34	NIMS R/T RCT CAL
05/31/98	98-151/00:00:00	End E14 Playback

Chapter 2 - Orbit Overview

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Introduction to Chapter 2

This chapter gives an overview of the NIMS observations in the E14 Orbit.

The text on page 3 summarizes the NIMS science objectives for E14. The NIMS calibrations are discussed on page 3. Early data return and E14 playback are also discussed on page 3.

The table on page 4 is a time-ordered listing of the NIMS Oapels for E14.

The plot on page 5 shows the geometry of the NIMS E14 observations using a north trajectory pole view projection. The plot on page 6 shows the NIMS Europa regional observations along the trajectory of the E14 Europa flyby. The plot on page 7 shows the geometry of the NIMS E14 calibrations.

The table on page 8 lists various NIMS E14 observing parameters: target latitude/longitude, range, cone angle, incidence angle (light), emission angle (view) and phase angle.

The spreadsheet on page 9 summarizes the various inputs for the NIMS E14 Observations. The spreadsheet on pages 10 and 11 summarizes the resource usage for the NIMS E14 observations.

The timeline on page 12 shows the placement of the E14 observations for all instruments during the E14 Encounter Period.

The tapemap on page 13 shows the placement of the E14 observations on the spacecraft's tape recorder.

The timeline on pages 14 through 22 shows the preliminary E14 playback schedule.

The NIMS E14 mosaic designs are summarized on page 23 and 24 in time-order.

NIMS E14 SCIENCE OVERVIEW

Jupiter Science

There are two realtime Jupiter observations in E14. Both observations look at the North Equatorial Belt region at about 7 degrees North. JUPRTS01 returns 10 Rims of 408 wavelengths in gain state 2. JUPRTS02 returns 20 Rims of 408 wavelengths, 11 nightside Rims in gains state 4 and 9 dayside Rims in gain state 2.

Io Science

INHRSPEC is a high spatial and spectral resolution observation of Io's dayside, covered in two swaths.

Europa Science

There are seven Europa observations planned for E14: Four regional observations and three distant global observations. ICERAF is a regional mosaic which covers prominent intersecting lineae. SUCOMP01 is a single swath that includes dark spots and a pull-apart wedge-shaped area. SUCOMP02 is a single swath that covers bright plains, wedges and dark material. SUCOMP03 is a single-nimseel swath (Long Spectrometer) that crosses intersecting triple-band terrain. EUR15H, EUR17H and EUR20H are distant global observations that observe Europa at 15, 17 and 20 hours after closest approach. Each of the global observations consist of two identical swaths, the first in gain state 3, the second in gain state 4.

Callisto Science

CNGLOBAL is a global mosaic of Callisto in three swaths.

Ganymede Science

Ganymede was not observed in E14.

Calibration

There are three NIMS calibration observations planned for E14: one PCT cal, one RCT cal and one OPCAL.

Early Data Return

There are five realtime observations in E14: Two 408 wavelength Jupiter observations (JUPRTS), one PCT calibration, one RCT calibration and one OPCAL

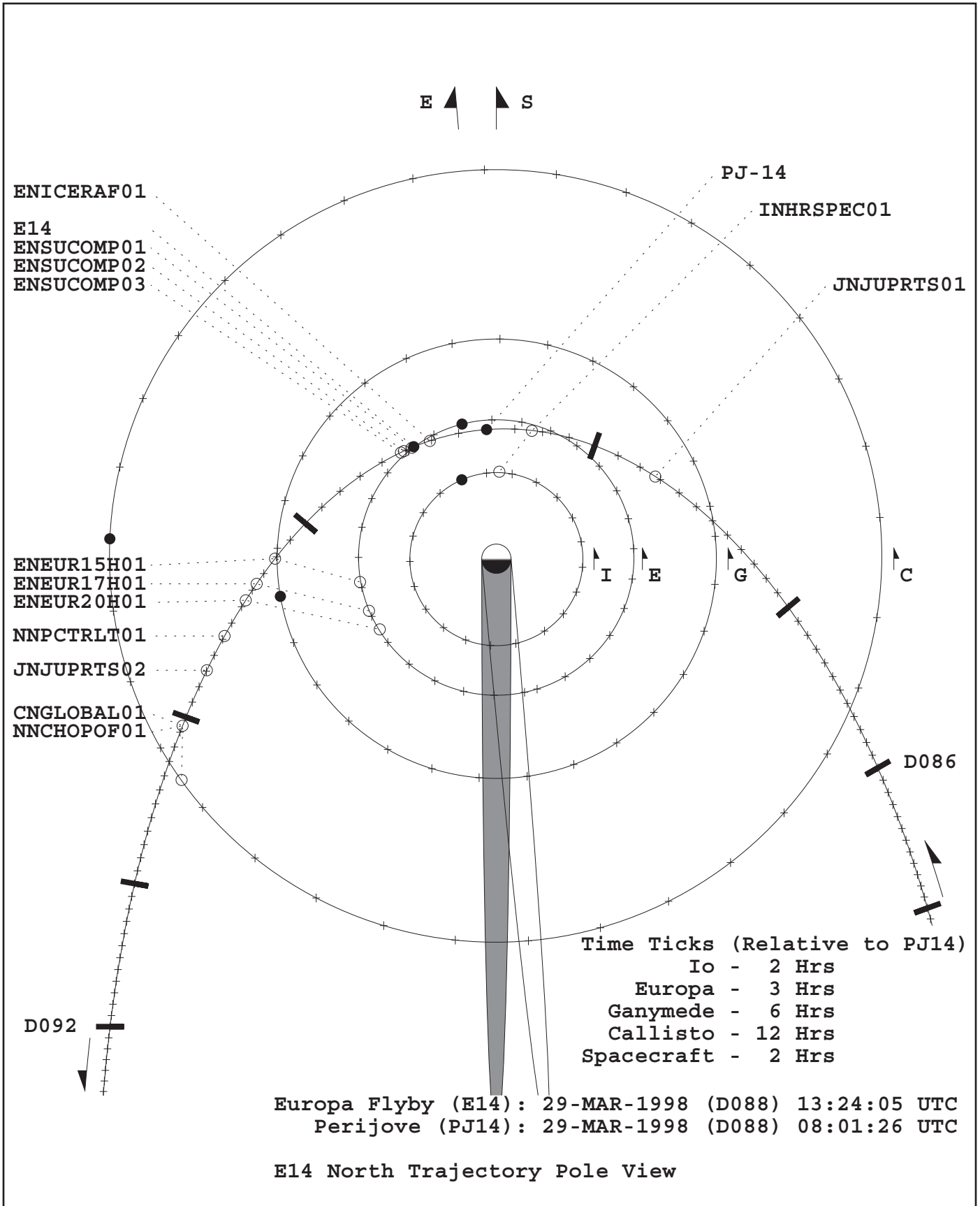
E14 Playback

E14 playback is split into two passes through the tape.

E14 Time-Ordered Listing

OAPEL	Start (UTC)	End (UTC)	Duration
14NNJUPRTS01-	98-087/18:20:20	98-087/18:24:23	000/00:04:02
14JNJUPRTS01*	98-087/18:28:25	98-087/18:44:36	000/00:16:10
14NNHRSPEC01-	98-088/04:42:10	98-088/04:46:13	000/00:04:02
14INHRSPEC01-	98-088/04:46:13	98-088/05:11:29	000/00:25:16
14NNICERAF01-	98-088/11:59:59	98-088/12:04:01	000/00:04:02
14ENICERAF01-	98-088/12:07:03	98-088/12:50:32	000/00:43:28
14NNSUCOMP01-	98-088/13:25:55	98-088/13:28:57	000/00:03:02
14ENSUCOMP01-	98-088/13:29:58	98-088/13:51:12	000/00:21:14
14NNSUCOMP02-	98-088/14:01:19	98-088/14:05:21	000/00:04:02
14ENSUCOMP02-	98-088/14:05:21	98-088/14:20:31	000/00:15:10
14NNSUCOMP03-	98-088/14:20:31	98-088/14:24:34	000/00:04:02
14ENSUCOMP03-	98-088/14:24:34	98-088/14:47:49	000/00:23:15
14NNEUR15H01-	98-089/04:10:39	98-089/04:14:41	000/00:04:02
14ENEUR15H01-	98-089/04:14:41	98-089/04:41:59	000/00:27:18
14NNEUR17H01-	98-089/07:10:37	98-089/07:14:40	000/00:04:02
14ENEUR17H01-	98-089/07:15:41	98-089/07:41:58	000/00:26:17
14NNEUR20H01-	98-089/09:10:57	98-089/09:14:59	000/00:04:02
14ENEUR20H01-	98-089/09:14:59	98-089/09:42:17	000/00:27:18
14NNPCTRLT01-	98-089/13:36:05	98-089/14:40:41	000/01:04:36
14NNJUPRTS02-	98-089/17:49:39	98-089/17:53:41	000/00:04:09
14JNJUPRTS02*	98-089/17:54:42	98-089/18:20:59	000/00:26:17
14NNGLOBAL01-	98-090/00:57:21	98-090/01:01:23	000/00:04:02
14CNGLOBAL01*	98-090/01:06:27	98-090/01:39:49	000/00:33:22
14NNCHOPOF01-	98-090/01:52:57	98-090/01:59:01	000/00:06:04
14NNRCTRLT01-	98-132/07:59:34	98-132/21:22:23	000/13:22:49

NIMS E14 OBSERVATIONS

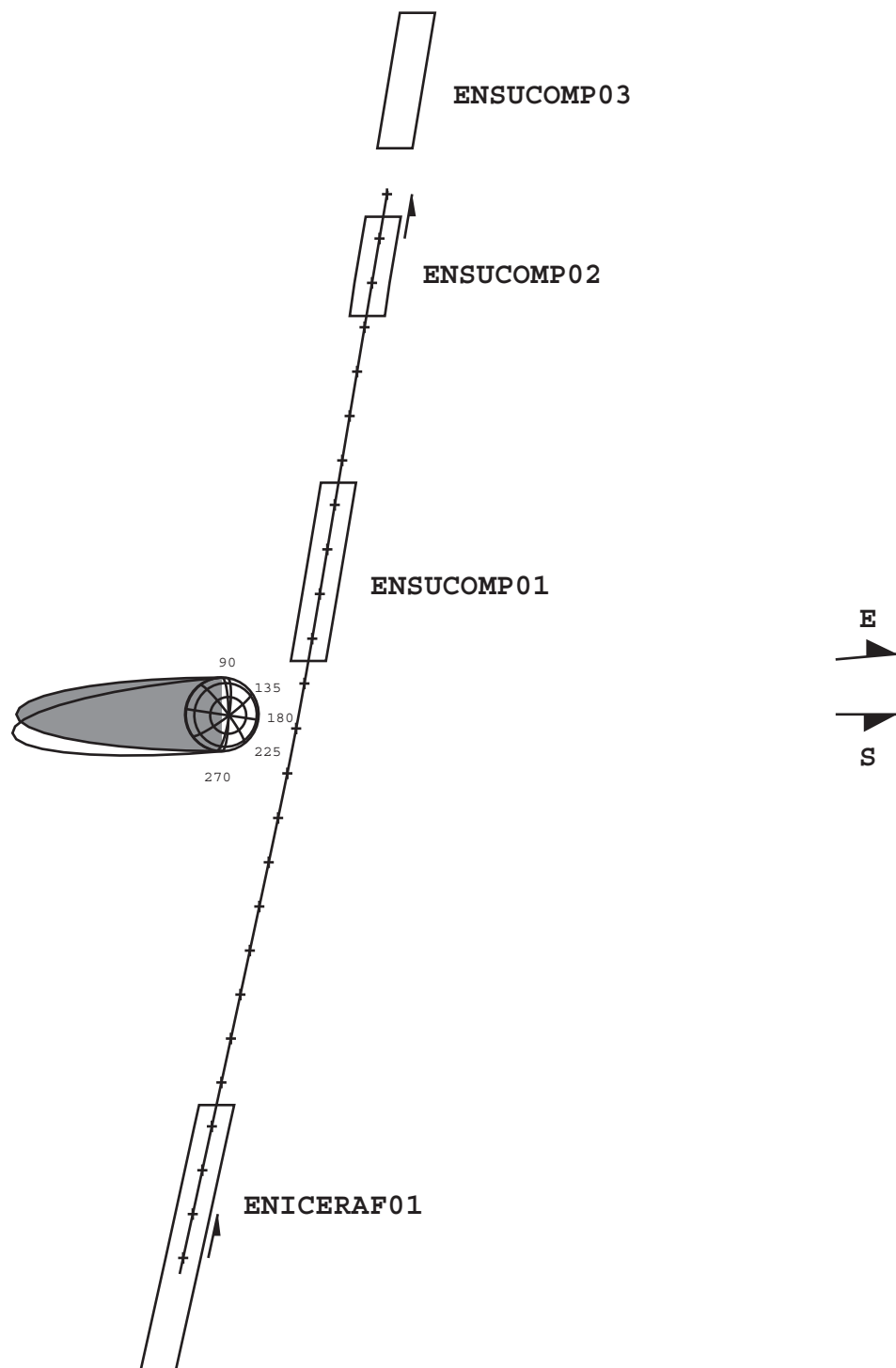


NIMS E14 EUROPA FLYBY OBSERVATIONS

Europa Flyby (E14): 29-MAR-1998 (D088) 13:24:05 UTC

Time Ticks (Relative to E14)

Spacecraft - 5 Minutes



E14 North Trajectory Pole View, +/- 1 Hour

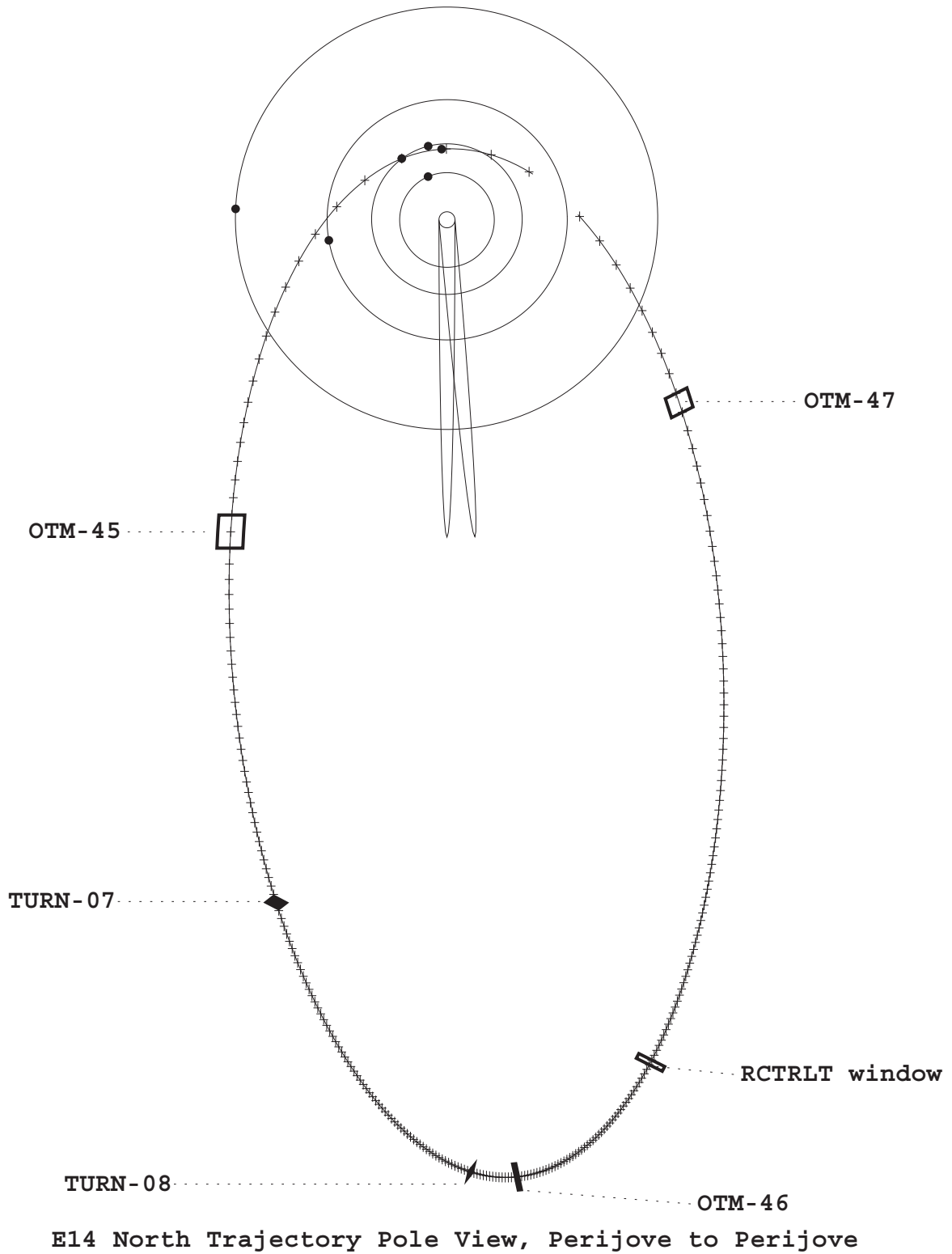
NIMS E14 CRUISE CALIBRATIONS

Europa Flyby (E14): 29-MAR-1998 (D088) 13:24:05 UTC
Perijove (PJ14): 29-MAR-1998 (D088) 08:01:26 UTC
Apojove (AJ14): 30-APR-1998 (D120) 16:00:00 UTC

Time Ticks (Relative to E14)

Spacecraft - 6 Hours

E  S



NIMS E14 OBSERVING GEOMETRY

OAPEL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
14JNJUPRTS01	+3 to +10	327 to 349	800K	113	62 to 89	8 to 30	61
14INHRSPEC01	-90 to +90	123 to 303	250K	140	26 to 121	26 to 90	34
14ENICERAF01	-10 to +15	267 to 286	20K	80	54 to 71	23 to 43	95
14ENSUCOMP01	-30 to -25	162 to 185	8K	128	44 to 62	35 to 50	58
14ENSUCOMP02	-20 to -10	164 to 182	20K	112	41 to 60	23 to 39	74
14ENSUCOMP03	+20 to +90	172 to 214	27K	109	21 to 52	30 to 68	76
14ENEUR15H01	-90 to +90	181 to 296	440K	109	0 to 100	0 to 90	76
14ENEUR17H01	-90 to +90	189 to 307	570K	108	4 to 105	0 to 90	77
14ENEUR20H01	-90 to +90	196 to 314	670K	106	11 to 106	0 to 90	79
14JNJUPRTS02	+3 to +10	350 to 90	1430K	75	38 to 136	1 to 74	110
14CNGLOBAL01	-90 to +90	210 to 30	230K	170	2 to 95	2 to 90	3

E14 NIMS INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
14NNJUPRTS01	- NIMS Software Reload								DA
14JNJUPRTS01*	Jupiter Realtime Observation	E14JLM442/MB	R/T	LM	2	0	4	R/T	DA
14NNHRSPREC01	- NIMS Software Reload								DB
14INHRSPEC01	- Io Monitoring at High Spectral Resolution	E14ILM442		LM	2	0	4	MPW	DB
14NNICERAF01	- NIMS Software Reload								DC
14ENICERAF01	- Europa Ice Rift	E14ELM442		LM	2	0	4	MPW	DC
14NNSUCOMP01	- NIMS Software Reload								DD
14ENSUCOMP01	- Europa Surface Composition	E14ELM442		LM	2	0	4	MPW	DD
14NNSUCOMP02	- NIMS Software Reload								DE
14ENSUCOMP02	- Europa Surface Composition	E14ELM442		LM	2	0	4	MPW	DE
14NNSUCOMP03	- NIMS Software Reload								DF
14ENSUCOMP03	- Europa Surface Composition	E14ELM442		LS	2	0	4	MPW	DF
14NNEUR15H01	- NIMS Software Reload								DI
14ENEUR15H01	- Europa Obs at Plus 15 Hours	E14B_ELM240V	E14B_ELM168V	LM	3	0	4	LPU	DI
14ENEUR15H01	- Europa Obs at Plus 15 Hours	E14ELM442		LM	4	0	4	MPW	EI
14NNEUR17H01	- NIMS Software Reload								DJ
14ENEUR17H01	- Europa Obs beyond 15 Rj	E14B_ELM240V	E14B_ELM240V	LM	3	0	4	LPU	DJ
14ENEUR17H01	- Europa Obs beyond 15 Rj	E14B_ELM240T	E14B_ELM240T	LM	4	0	4	LPU	EJ
14NNEUR20H01	- NIMS Software Reload								DK
14ENEUR20H01	- Europa Obs beyond 15 Rj	E14B_ELM240V	E14B_ELM240V	LM	3	0	4	LPU	DK
14ENEUR20H01	- Europa Obs beyond 15 Rj	E14B_ELM240T	E14B_ELM240T	LM	4	0	4	LPU	EK
14NNPCTRLT01	- NIMS Real-Time PCT Calibration	E14PCT252	R/T	LM	4	0	4	R/T	FA
14NNJUPRTS02	- NIMS Software Reload								DG
14JNJUPRTS02*	Jupiter Realtime Observation	E14JLM442/MB	R/T	LM	4, 2	0	4	R/T	DG
14NNGLOBAL01	- NIMS Software Reload								DH
14CNGLOBAL01*	Callisto Global Map	E14CLM243C		LM	4	0	4	LPU	DH
14NNCHOPOF01	- Chopper off								DL
14NNRCTRLT01	- NIMS RCT Real-Time Calibration	E14RCT252	R/T	LM	1	0	4	R/T	XE

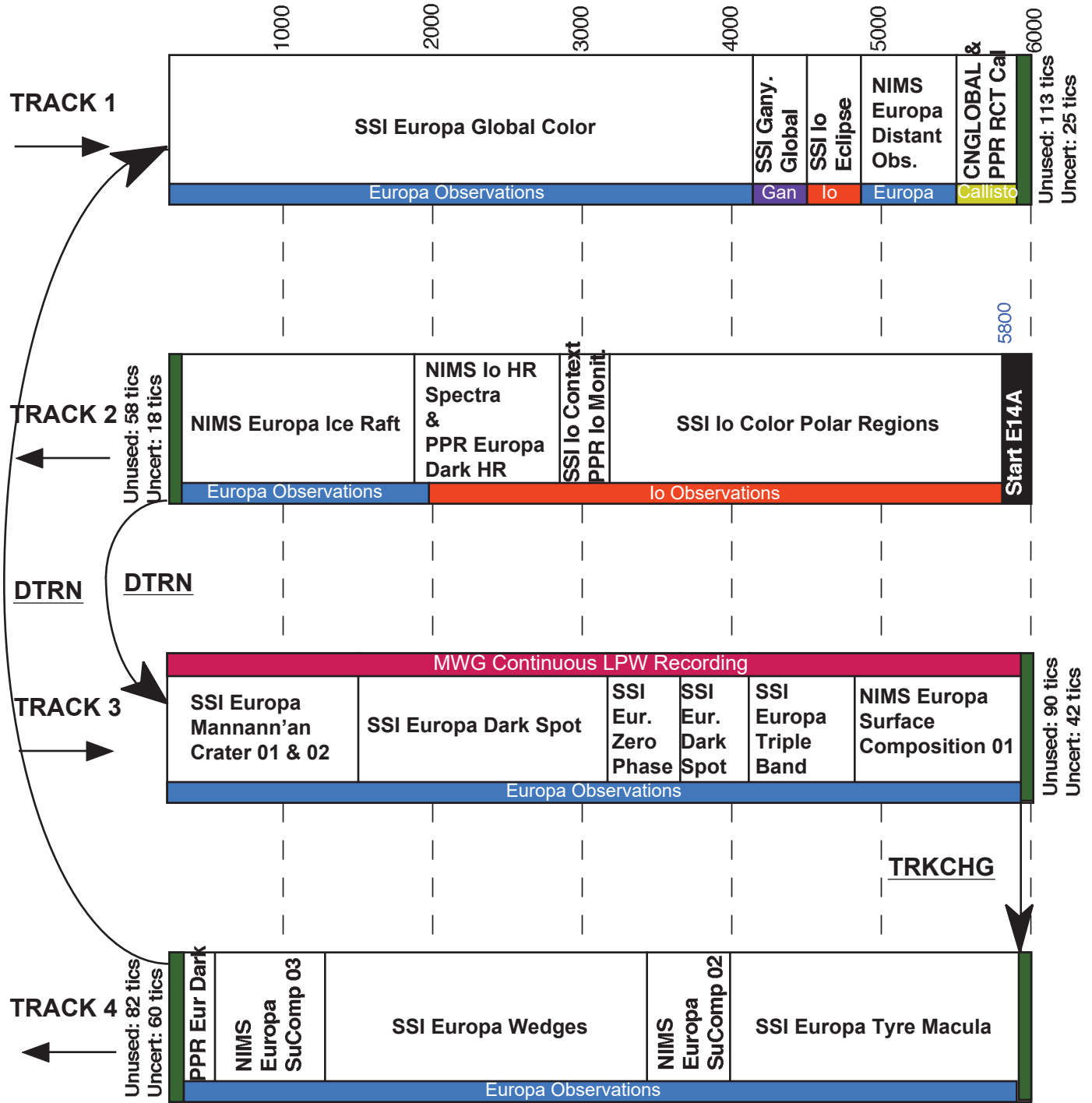
E14 NIMS RESOURCES

Activity ID	NIMS Record Mode	Obs. Cost (tracks)	Obs. Cost (ticks)	Number Wavelengths Returned	Obs Record (sec.)	Obs Playback (sec.)	Selected Bits to Tape sBOT (MBITS)	Bits to Tape MBOT (Mbit)	Mode Cycle time (sec)	
14JNJUPRTS01	LM	R/T		360						
14INHRSPEC01	LM	MPW	0.168353689	980.996948	324	1113.32	481	5.54112	12.8254464	8.667
14ENICERAF01	LM	MPW	0.285001382	1660.703052	360	1886.68	121	1.39392	21.7345536	8.667
14ENSUCOMP01	LM	MPW	0.172377896	1004.446	360	1140	460	5.2992	13.1328	8.667
14ENSUCOMP02	LM	MPW	0.099978377	582.574	360	660	3.335	0.0384192	7.6032	8.667
14ENSUCOMP03	LS	MPW	0.172377896	1004.446	360	1140	182	2.09664	13.1328	8.667
14ENEUR15H01	LM	LPU	0.012010131	69.983032	168	290.03	285.36	1.76010048	1.78890504	8.667
14ENEUR15H01	LM	MPW	0.043268436	252.125178	240	284.02	283.33	3.2639616	3.2719104	8.667
14ENEUR17H01	LM	LPU	0.010105002	58.881848	240	242.67	0	1.49678856	8.667	8.667
14ENEUR17H01	LM	LPU	0.010105002	58.881848	240	242.67	240.67	1.48445256	1.49678856	8.667
14ENEUR20H01	LM	LPU	0.008603346	50.131696	240	205.34	0	1.26653712	8.667	8.667
14ENEUR20H01	LM	LPU	0.008603346	50.131696	240	205.34	196.67	1.21306056	1.26653712	8.667
14NNRCTRLT01	LM	R/T		252						
14JNJUPRTS02	LM	R/T		360						8.667
14CNGLOBAL01	LM	LPU	0.090424111	526.901296	15	2239.34	868	5.353824	13.81224912	8.667
14CNGLOBAL01	LM	LPU	0.090424111	526.901296	228	2239.34	495.33	3.05519544	13.81224912	8.667
14CNGLOBAL01	LM	LPU	0.090424111	526.901296	15	2239.34	850.67	5.24693256	13.81224912	8.667
14NNRCTRLT01	LM	R/T		252						
14INHRSPEC01	LM	MPW	0.168353689	980.996948	324	1113.32	481	5.54112	12.8254464	8.667
14ENICERAF01	LM	MPW	0.285001382	1660.703052	228	1886.68	0	21.7345536	8.667	8.667
14ENSUCOMP01	LM	MPW	0.172377896	1004.446	360	1140	121	1.39392	13.1328	8.667
14ENEUR17H01	LM	LPU	0.010105002	58.881848	240	242.67	240.67	1.48445256	1.49678856	8.667
14CNGLOBAL01	LM	LPU	0.090424111	526.901296	228	2239.34	244	1.504992	13.81224912	8.667
14CNGLOBAL01	LM	LPU	0.090424111	526.901296	228	2239.34	244	1.504992	13.81224912	8.667
14NNRCTRLT01	LM	R/T		252						
Total Resources Allocation			1.093703147	6373.008238						

E14 NIMS RESOURCES

Activity ID	AACS Mbits	Thold Comp	Total MBTG (4% overhead)	Data Reduct Factor	Pass (sBOT/BTG)
14JNJUPRTS01*					
14INHRSP01-	0.0277056	2	1.2	3.116760125	1.777846154
14ENICERAF01-	0.0069696	0	1.3	0.804153686	1.7334
14ENSUCOMP01-	0.026496	0	1.3	3.057113188	1.7334
14ENSUCOMP02-	0.000192096		1.3		1
14ENSUCOMP03-	0.0104832	0	1.3	1.209553479	1.7334
14ENEUR15H01-	0.016436736	0	1.5	0.767018179	2.294731113
14ENEUR15H01-	0.016319808	0	1.5	1.087945356	3.000115385
14ENEUR17H01-	0		1.6		
14ENEUR17H01-	0.013862592		1.6		2
14ENEUR20H01-	0		1.6		
14ENEUR20H01-	0.011328192	0	1.6	0.70798477	1.713399231
14NNPCTRLT01-		0			
14JNJUPRTS02*		0			
14CNGLOBAL01_A*	0.0499968	2	2	0.156233991	34.26798462
14CNGLOBAL01_C*	0.028531008	0	2	1.355170758	2.254472672
14NNCHOPOF01-				#DIV/0!	
14CNGLOBAL01_E*	0.048998592	2	2	0.153114711	34.26798462
14NNPCTRLT01-		0		0.08	
14INHRSP01-	0.0277056	0	1.2	3.116760125	1.777846154
14ENICERAF01-	0		1.3		2
14ENSUCOMP01-	0.0069696	0	1.3	0.804153686	1.7334
14ENEUR17H01-	0.013862592	0	1.6	0.866378678	1.713399231
14CNGLOBAL01_B*	0.0140544	2	2	0.667558325	2.254472672
14CNGLOBAL01_D*	0.0140544	2	2	0.667558325	2.254472672
14NNPCTRLT01-		0		0.17	
		Delay		2.694	
		Total		21.48145738	
		Alloc		21.369	
		Over/Under		0.112457381	

E14 HIGH-LEVEL TAPEMAP



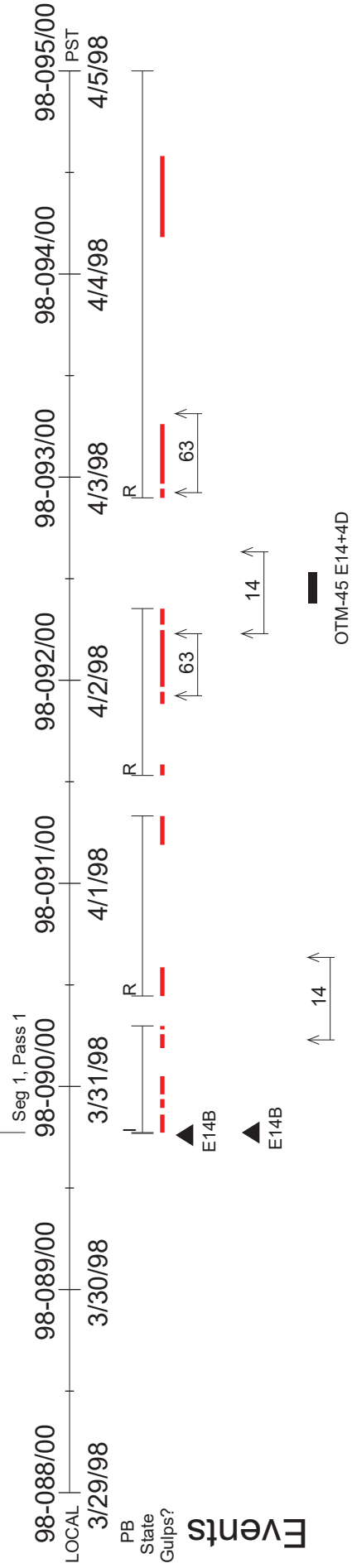
J. Gross, 03/04/98

E14PCB

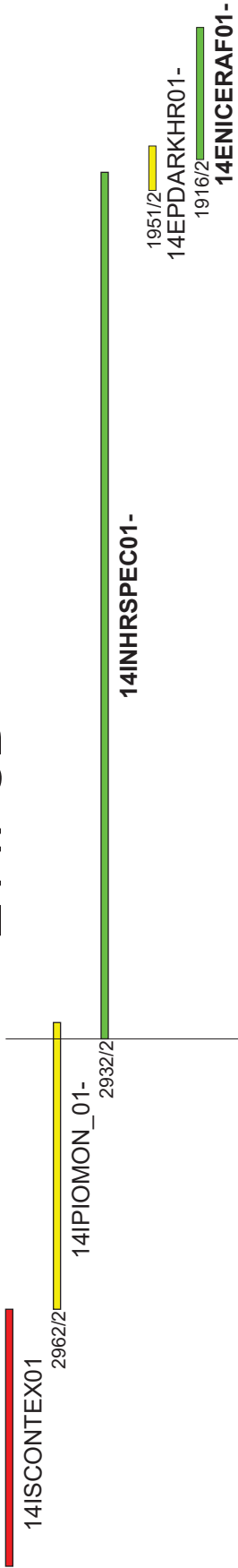
5733/2 14ISPOLAR_01

3142/2
14ISCONTEX01

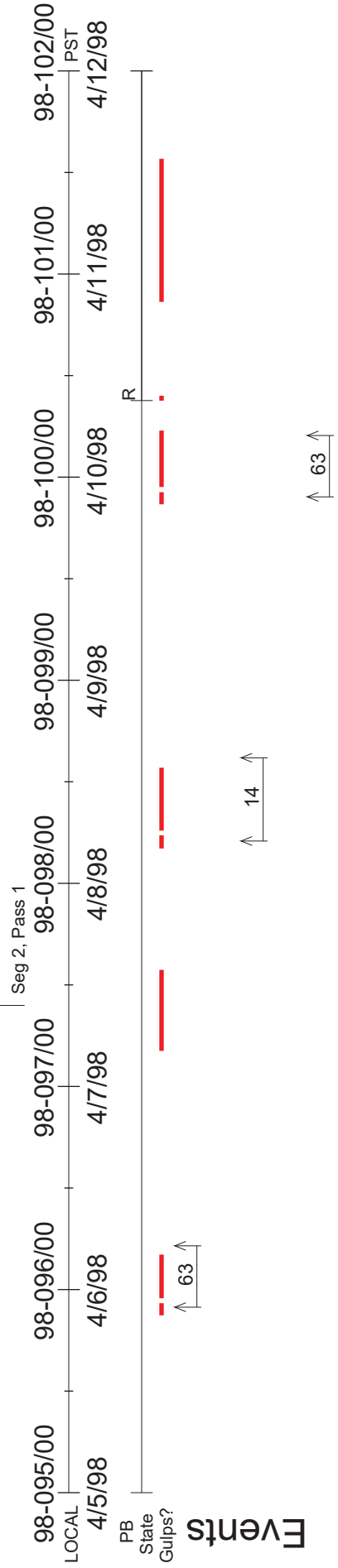
Playback / Date Returned



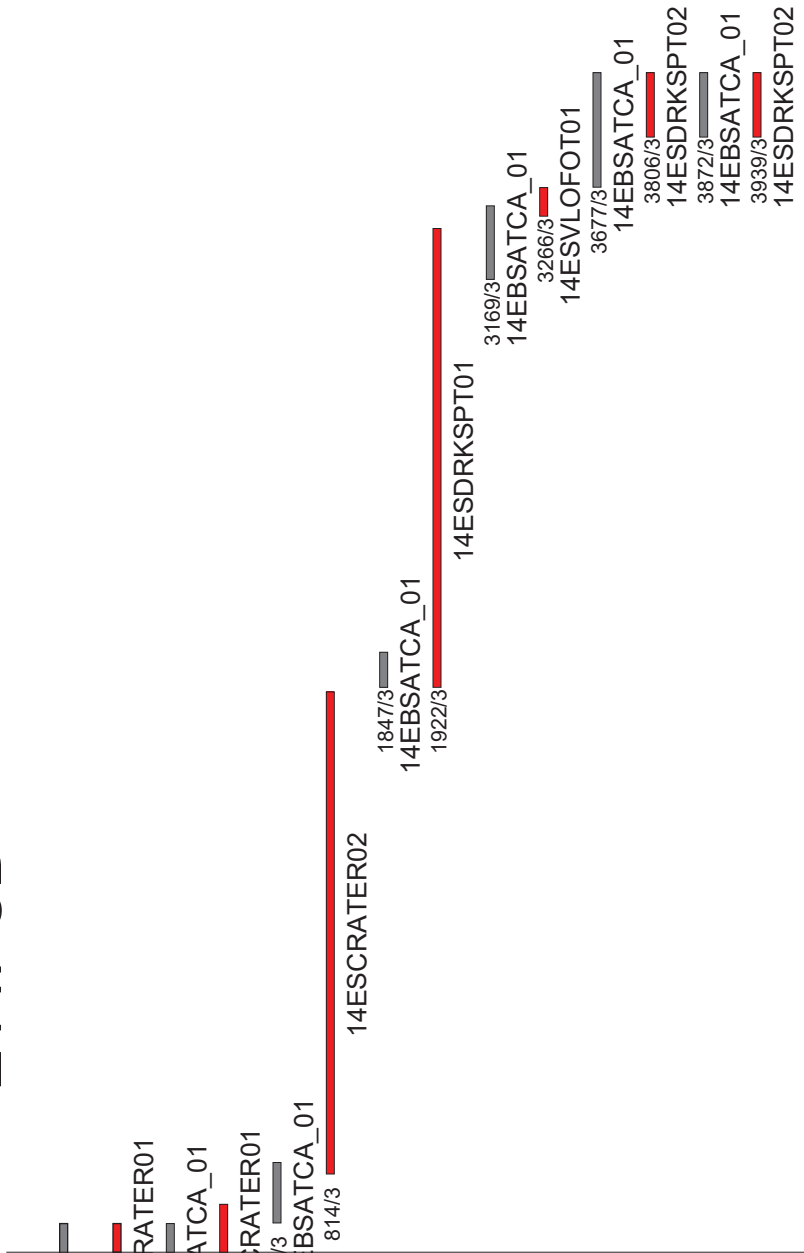
E14PCB



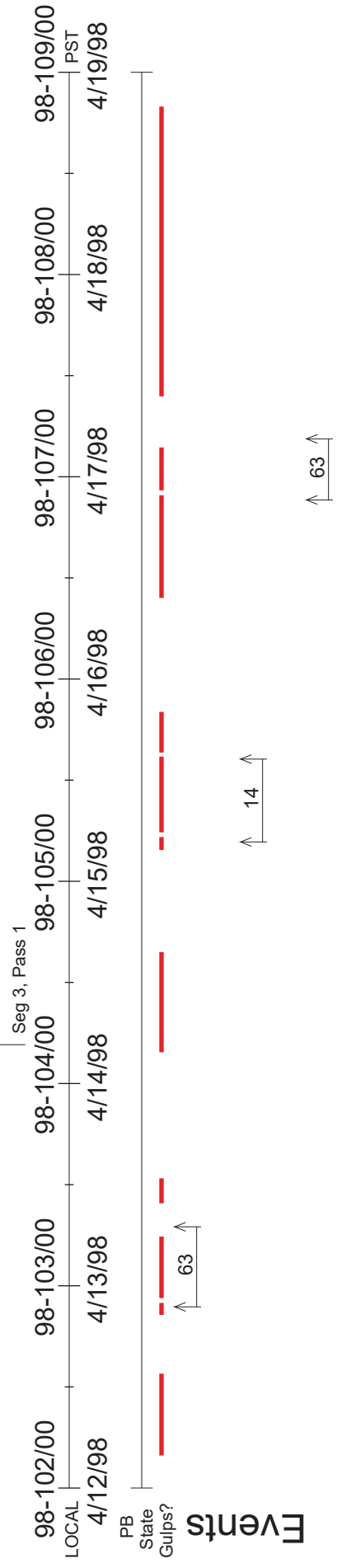
Playback / Date Returned



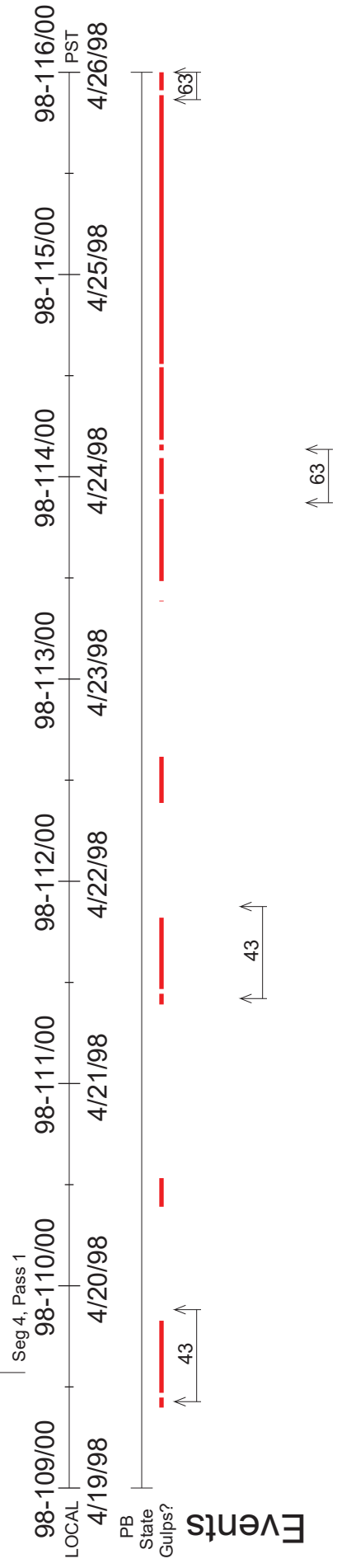
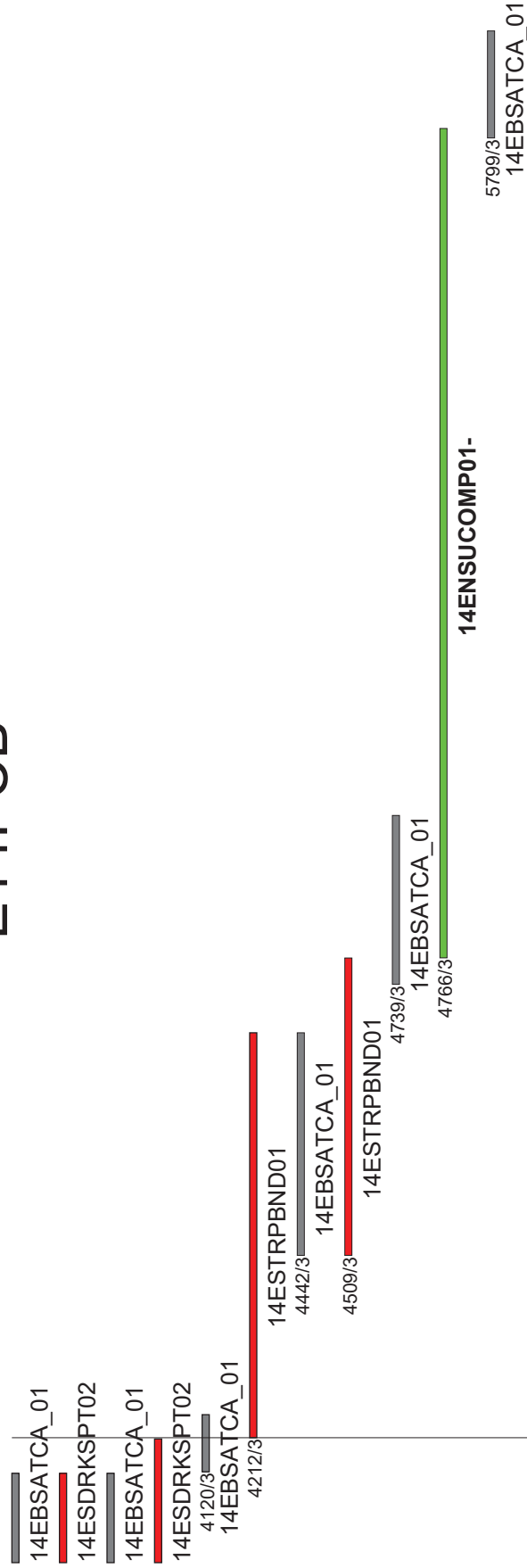
E14PCB



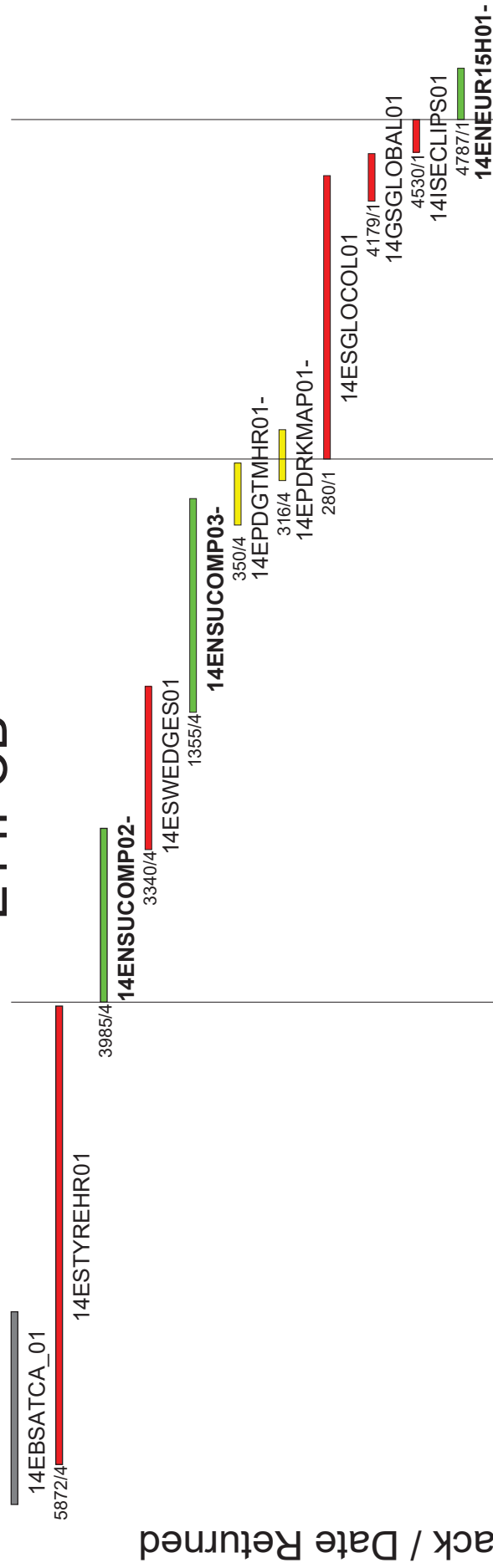
Playback / Date Returned



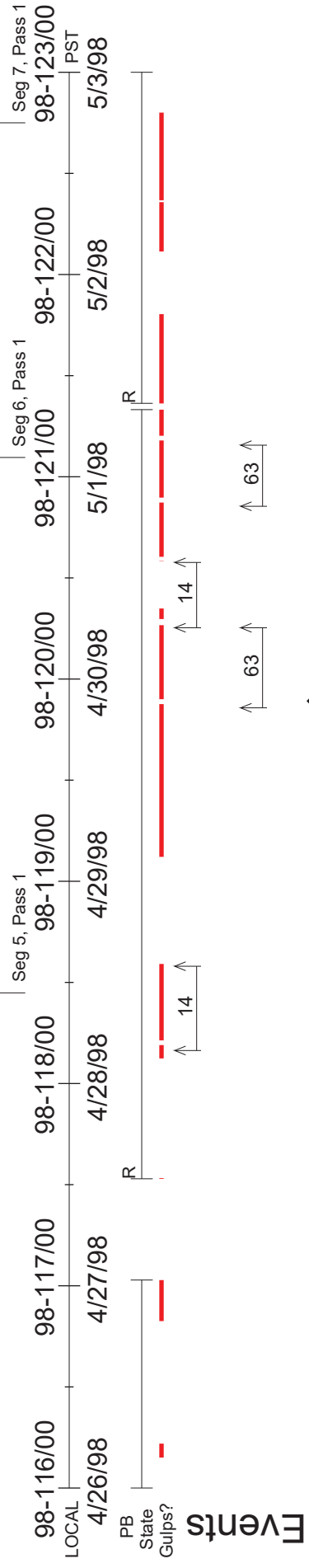
E14PCB



E14PCB

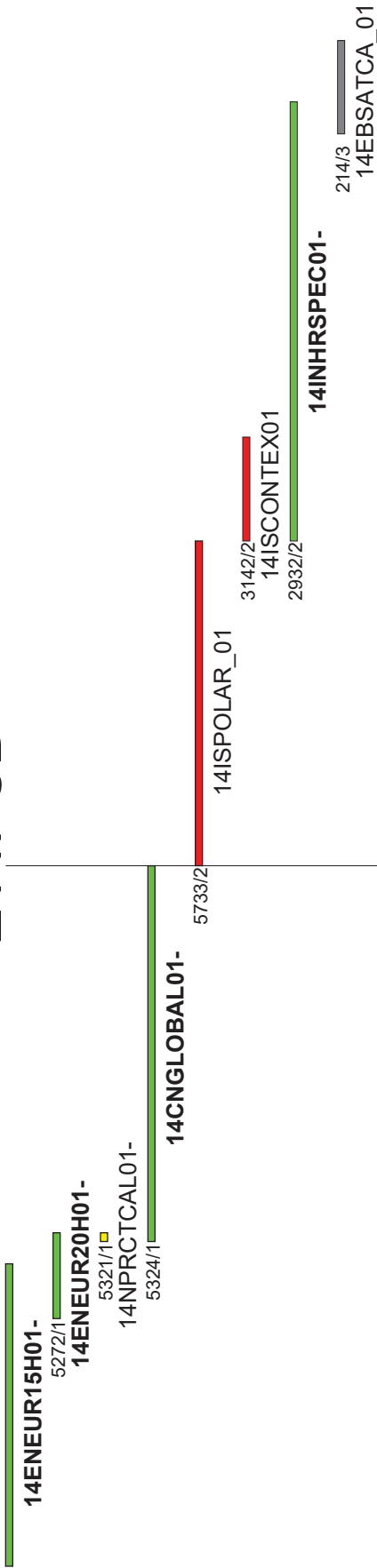


Playback / Date Returned

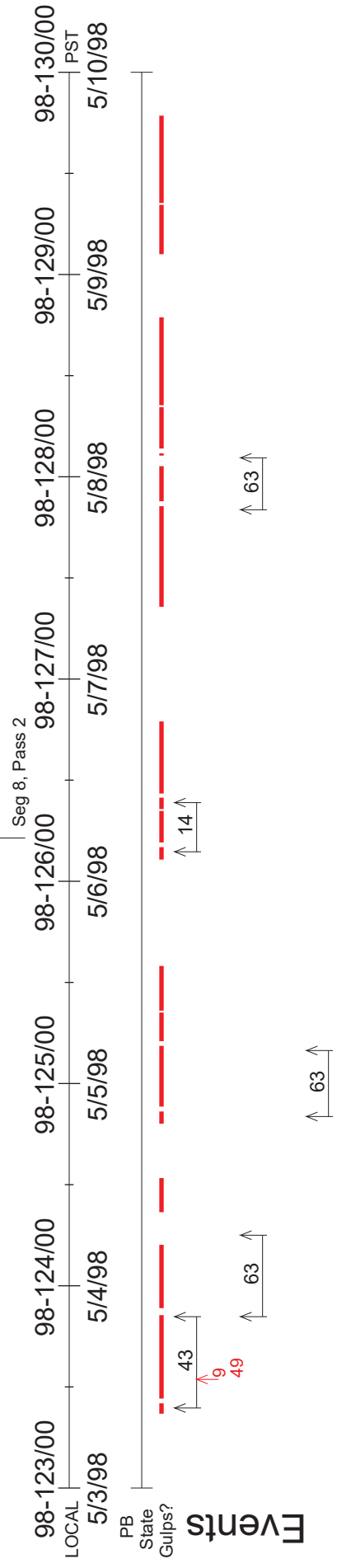


119.7 RJ

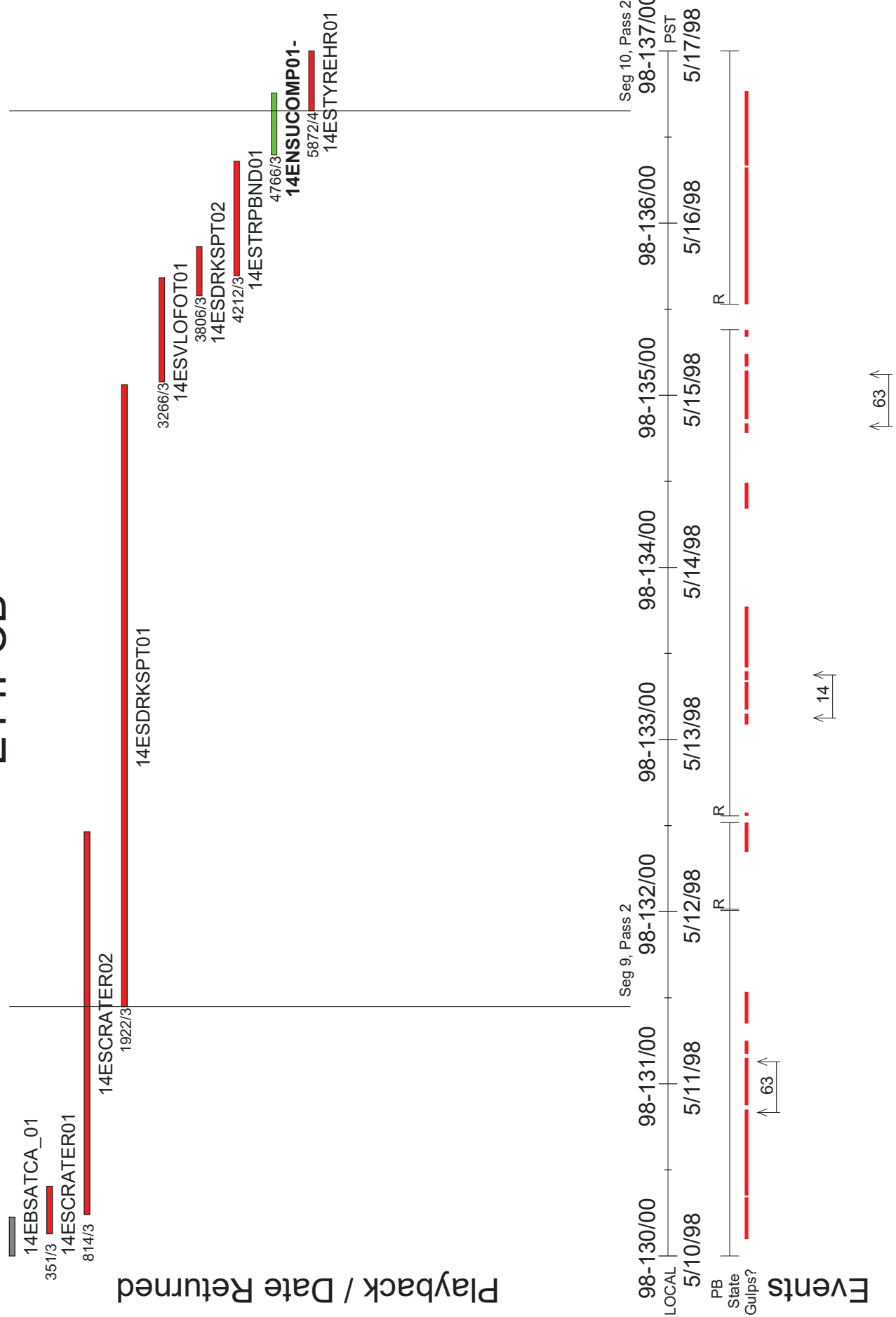
E14PCB



Playback / Date Returned



E14PCB



E14PCB

14ESTYREHR01

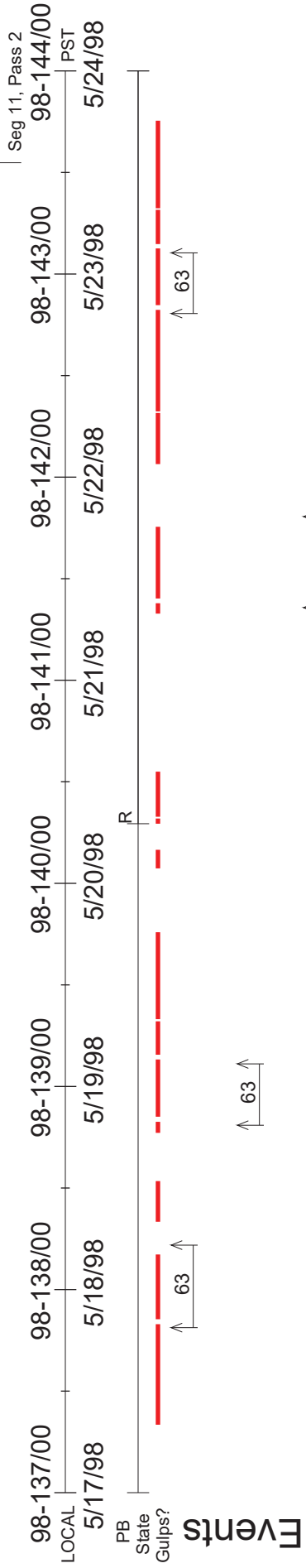
3340/4

14ESWEDGES01

280/1

14ESGLOCOL01

Playback / Date Returned

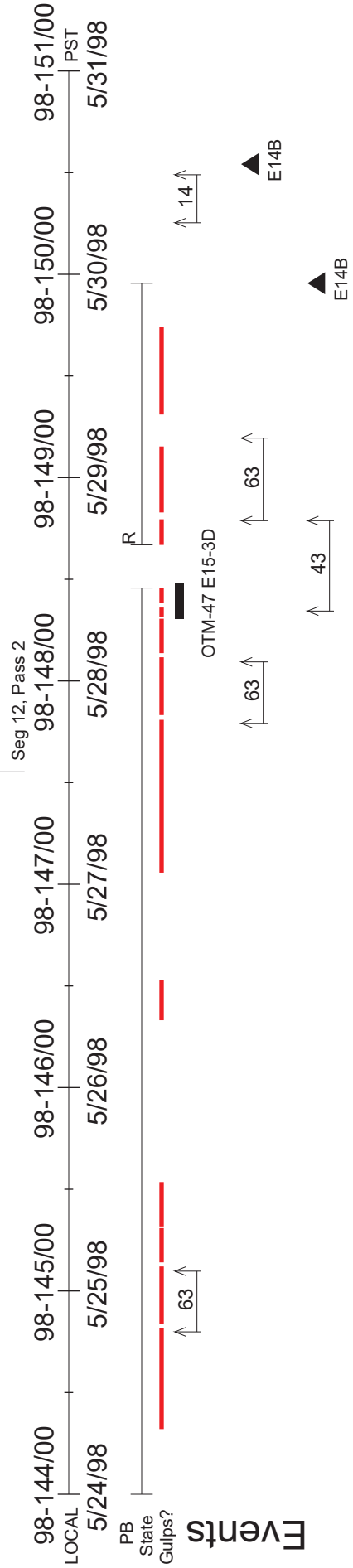


E14PCB

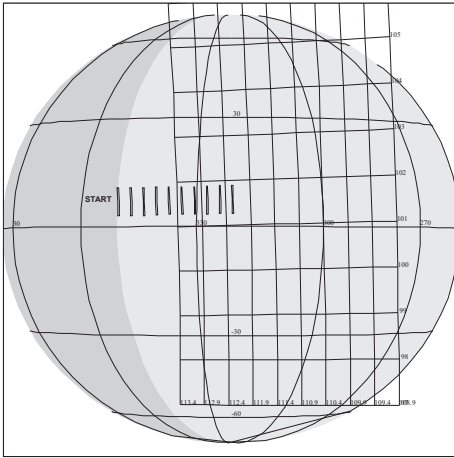
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- 4179/1 14GSGLOBAL01
- 4530/1 14ISECLIPS01
- 5167/1 14ENEUR17H01-
- 5324/1 14CNGLOBAL01-

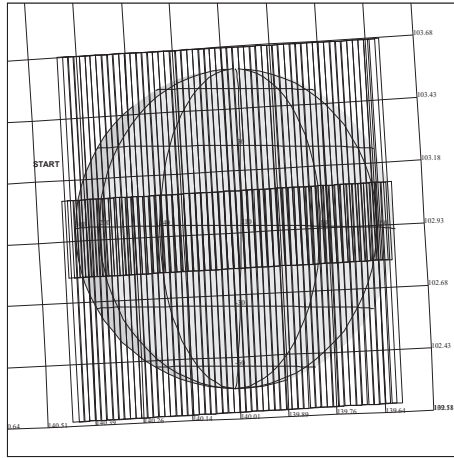
Playback / Date Returned



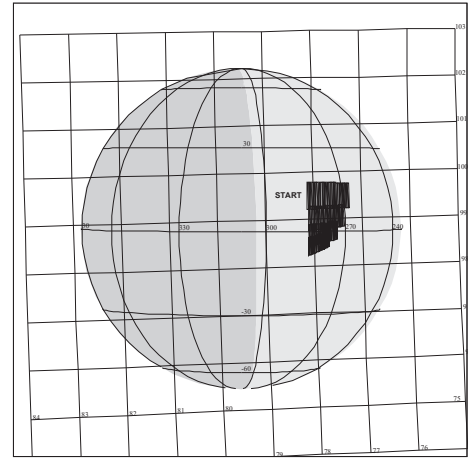
E14 NIMS A



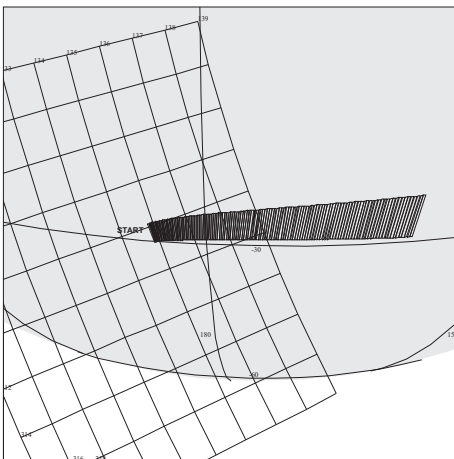
14JNJUPRTS01
98-087/18:28:25



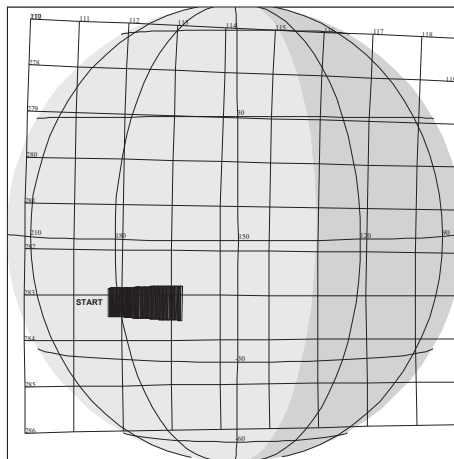
14INHRSPEC01
98-088/04:46:13



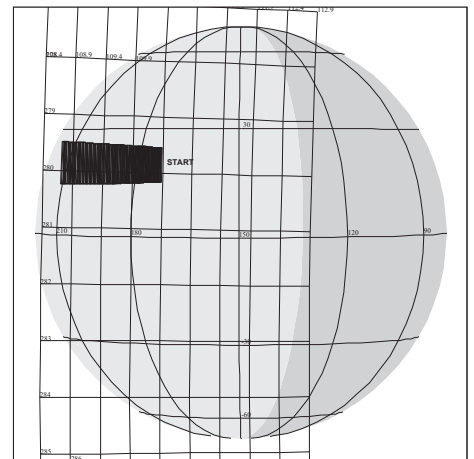
14ENICERAF01
98-088/12:07:03



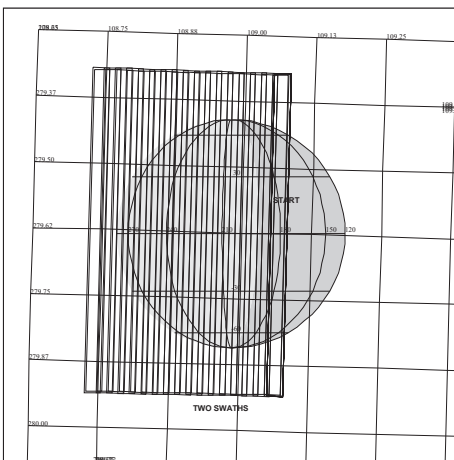
14ENSUCOMP01
98-088/13:29:58



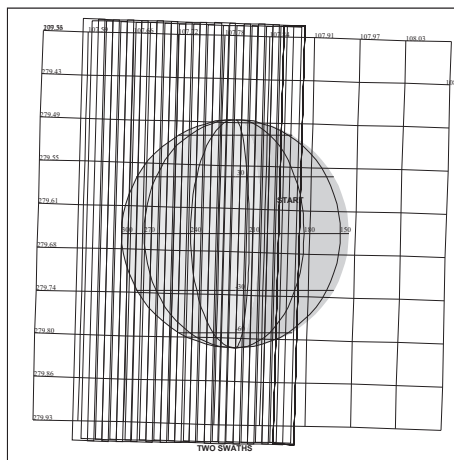
14ENSUCOMP02
98-088/14:05:21



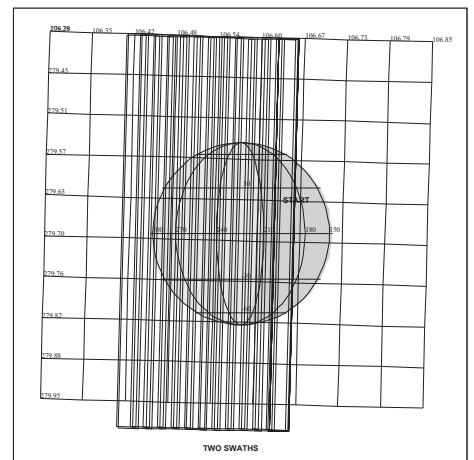
14ENSUCOMP03
98-088/14:24:34



14ENEUR15H01
98-089/04:14:41

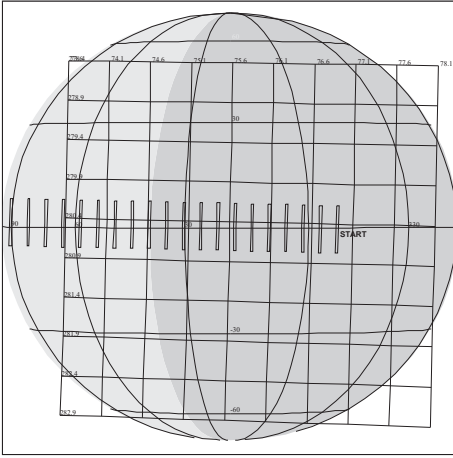


14ENEUR17H01
98-089/07:15:41

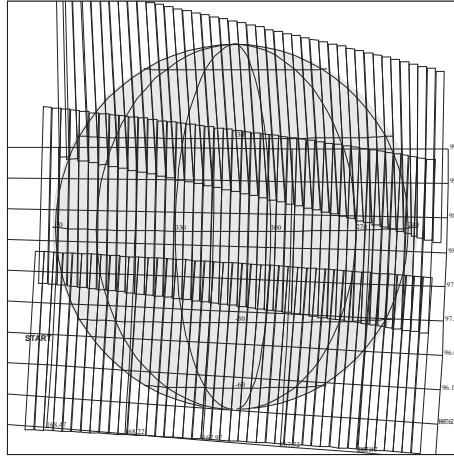


14ENEUR20H01
98-089/09:14:59

E14 NIMS B



14JNJUPRTS02
98-089/17:54:42



14CNGLOBAL01
98-090/01:06:27

Chapter 3 - Orbit Geometries

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Introduction to Chapter 3

This chapter contains diagrams of various aspects of geometry for the E14 Orbit.

The figure on page 3 is a North Trajectory Pole View of the E14 Orbit from apoapsis to apoapsis.

The figure on page 4 is a North Trajectory Pole View of the E14 Orbit from +/- 5 days of Europa closest approach.

The figure on page 5 is a North Trajectory Pole View of the E14 Orbit from +/- 2 days of Europa closest approach.

The figure on page 6 is a North Trajectory Pole View of the E14 Orbit from +/- 1 day of Europa closest approach.

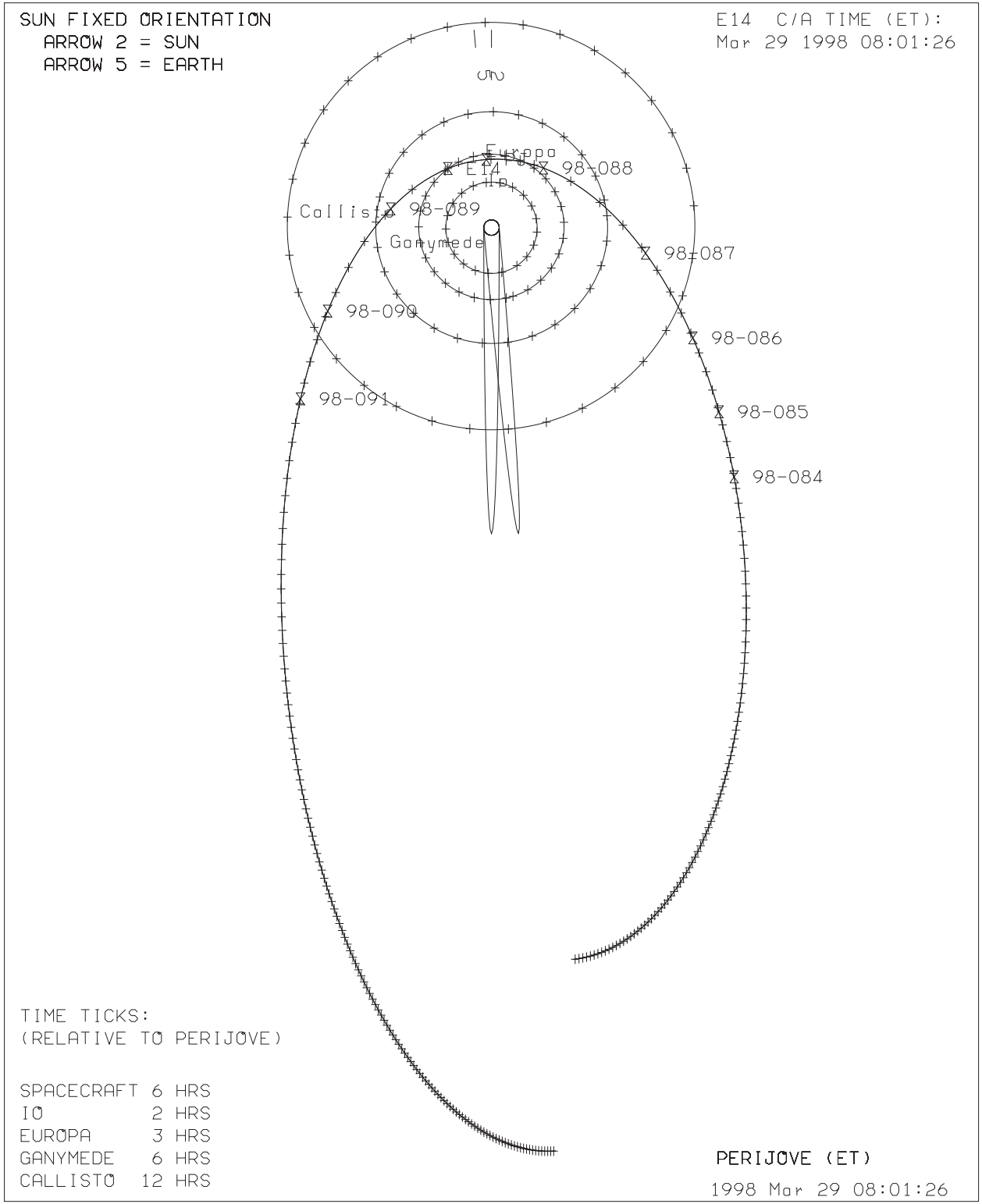
The figure on page 7 is a North Trajectory Pole View of the E14 Orbit from +/- 6 hours of Europa closest approach.

The figure on page 8 is a North Trajectory Pole View of the E14 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.

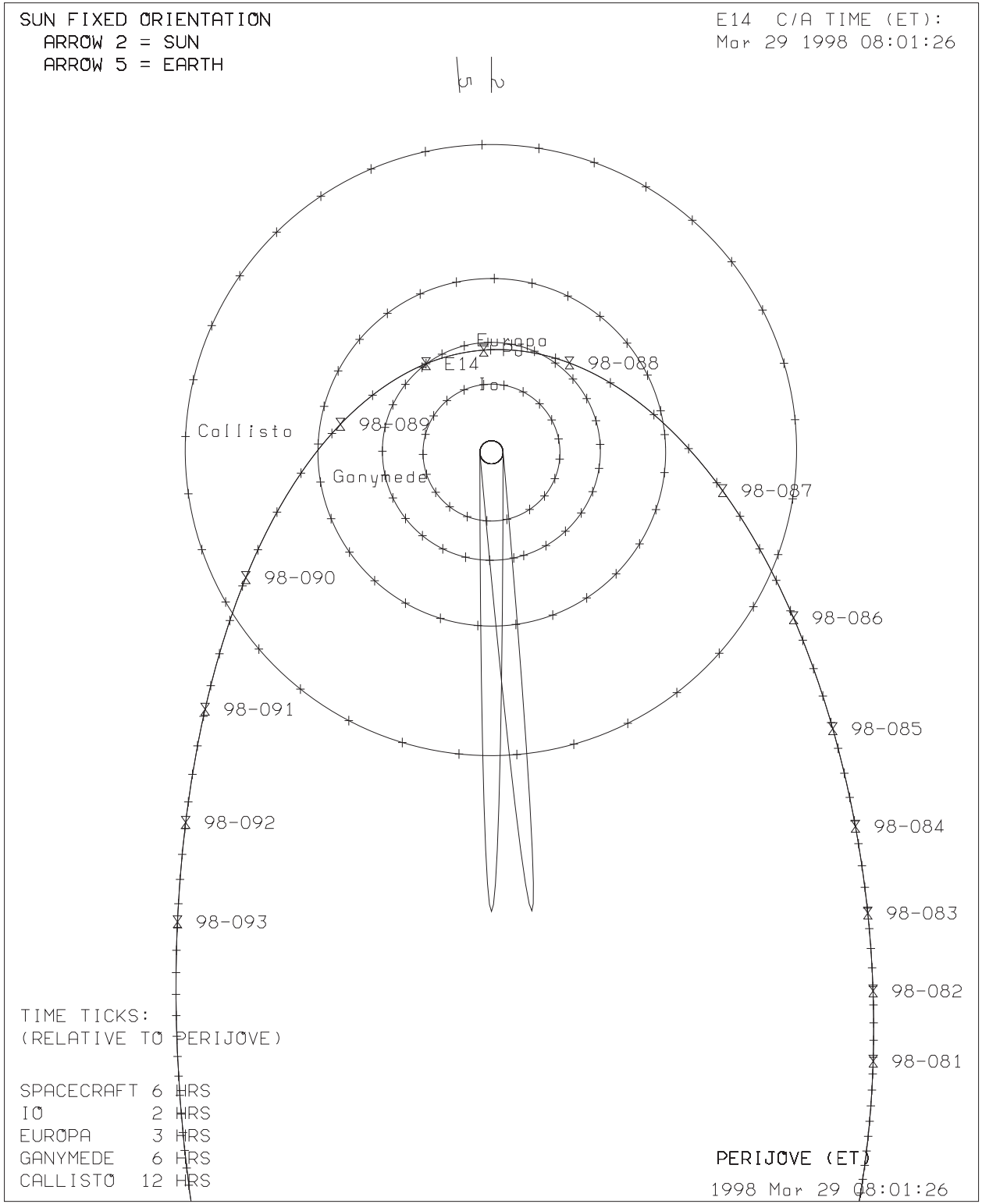
JUPITER 14: N. TRAJ. POLE VIEW (APO TO APO)



GEM-970401

NAV Apr 24, 1997

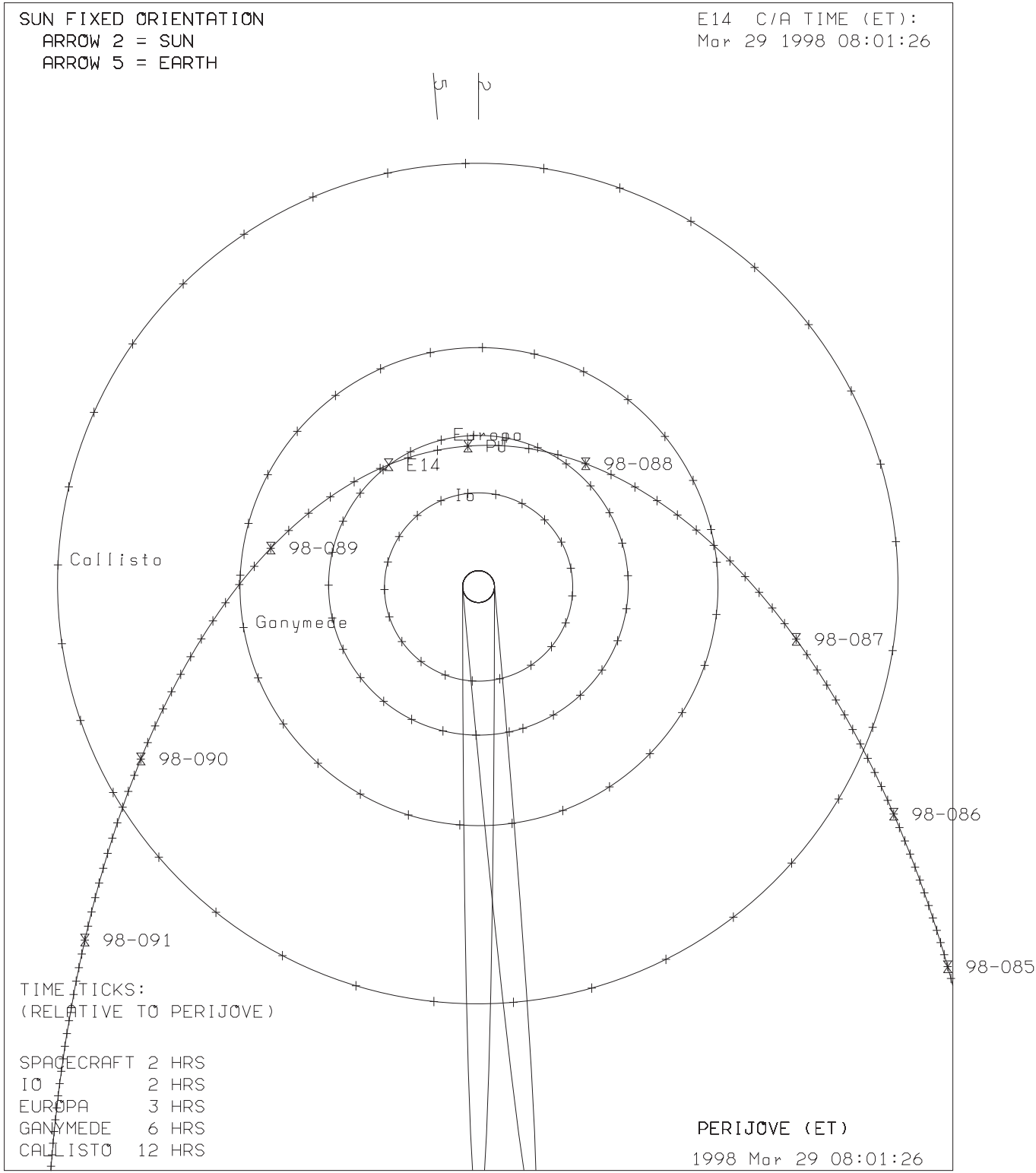
JUPITER 14: N. TRAJ. POLE VIEW (+/- 5 DAYS)



GEM-970401

NAV Apr 24, 1997

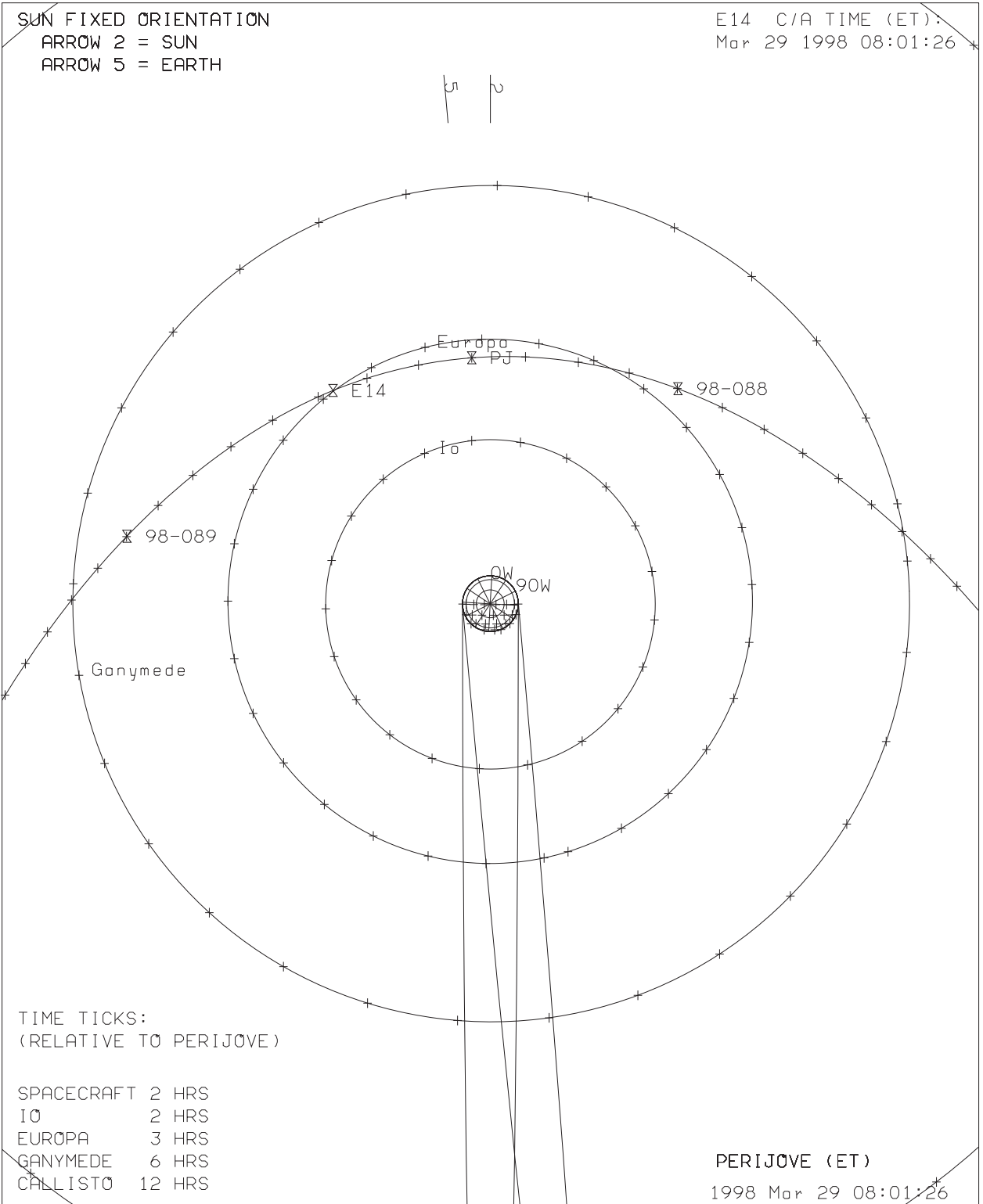
JUPITER 14: N. TRAJ. POLE VIEW (+/- 2 DAYS)



GEM-970401

NAV Apr 24, 1997

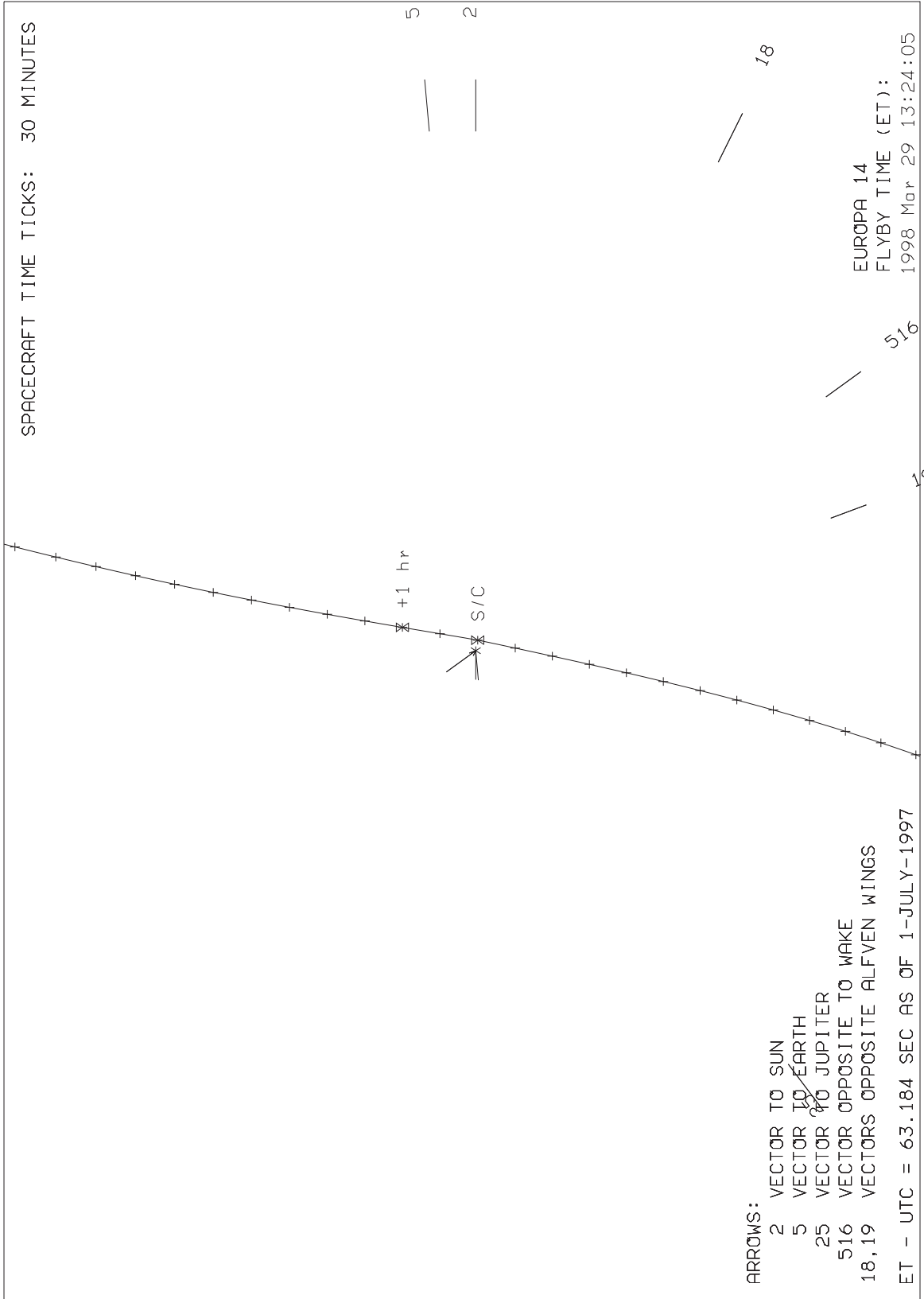
JUPITER 14: N. TRAJ. POLE VIEW (+/- 1 DAY)



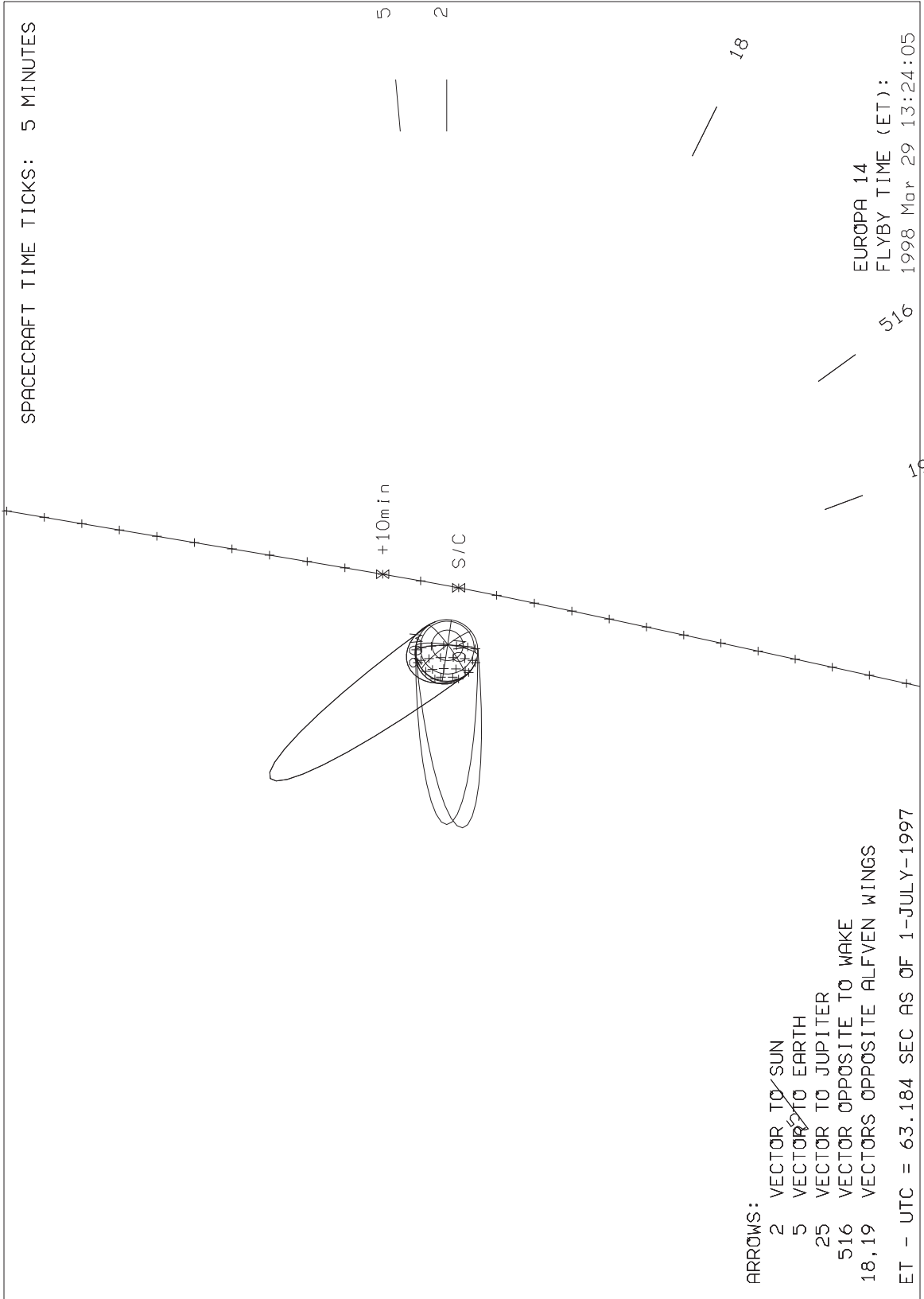
GEM-970401

NAV Apr 24, 1997

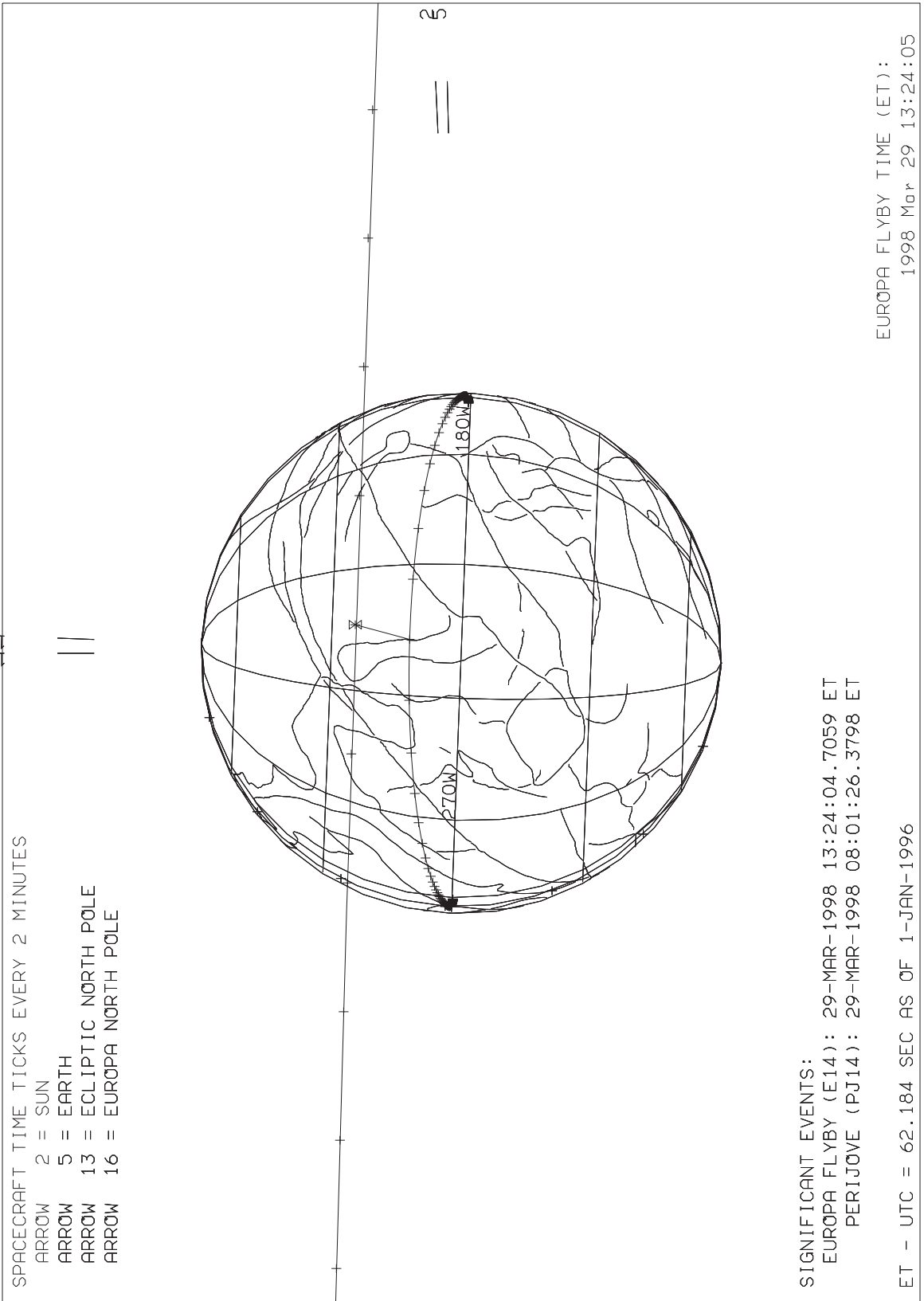
EUROPA 14: N. TRAJ POLE VIEW (+/- 6 HRS)



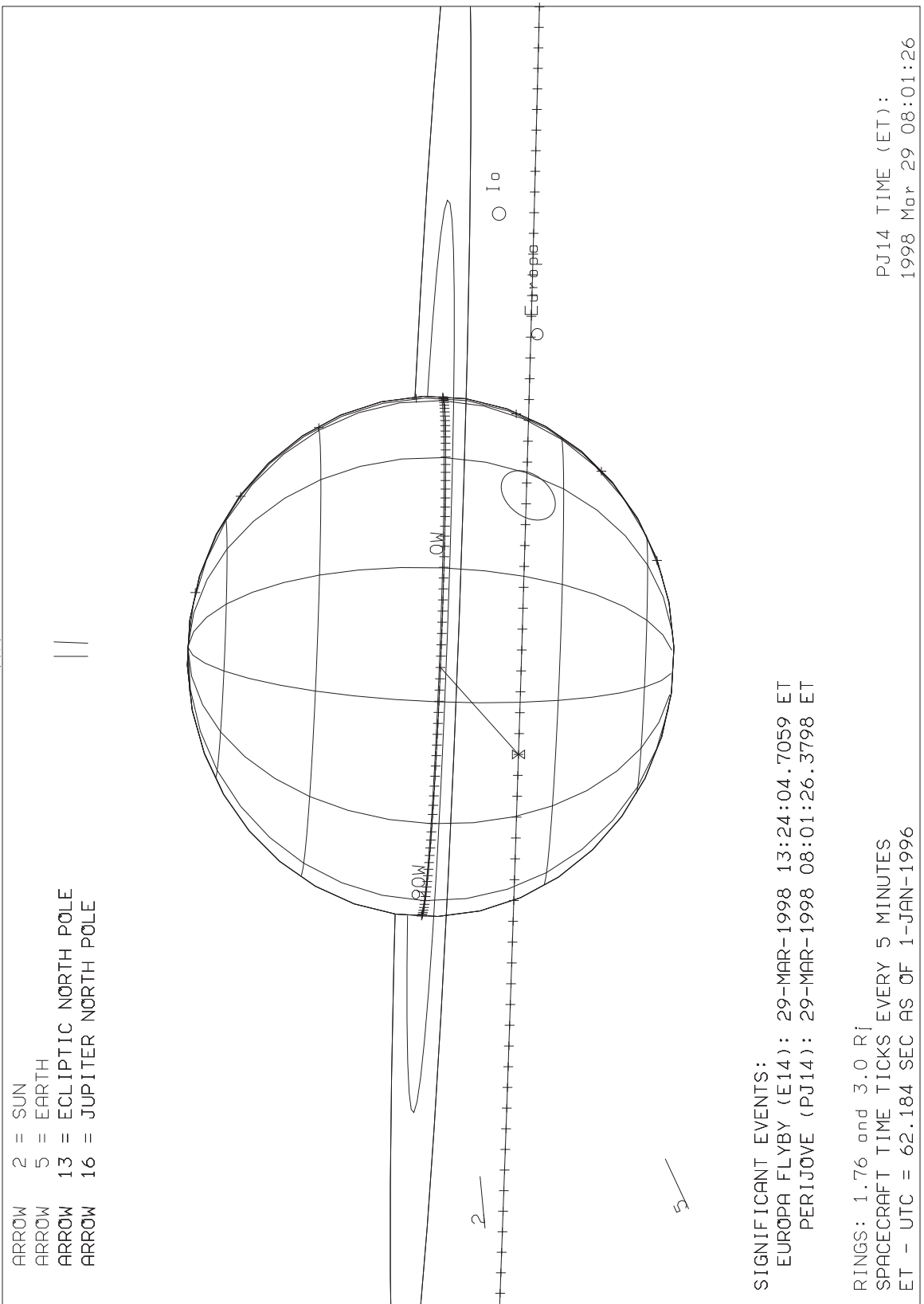
EUROPA 14: N. TRAJ POLE VIEW (+/- 1 HR)



EUROPA 14: GROUNDTRACK AT CLOSEST APPROACH



JUPITER 14: GROUNDTRACK AT CLOSEST APPROACH



Chapter 4 - NIMS Observation Summaries

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Introduction to Chapter 4

This chapter summarizes the NIMS E14 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 E14 Sequence. The information in this summary is derived from the E14 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 E14 data. It is also derived from the E14 SEFs and PBTs. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry.

Sequence:		E14A-AR		Created: 05/07/98		Begin: 98-087/13:00:00		Finish: 98-090/02:15:00			
Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	RFI
1	98	87	12:59:59.800		DMS: : READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	200	4	0	4,408,045:22:0	
2	98	87	13:00:00.000	20A3EW	37A Initial Condition	NIMS Power ON	200	4	0	4,408,045:22:3	
3	98	87	13:00:00.000	20A3EY	37C1PR Initial Condition	Optics Heater 1 OFF (primary relay)	200	4	0	4,408,045:22:3	
4	98	87	13:00:00.000	20A3EX	37HR Initial Condition	Replacement Heaters OFF	200	4	0	4,408,045:22:3	
5	98	87	13:00:00.000	20A3FF	40T2 Initial Condition	PCT Heater 2 ON	200	4	0	4,408,045:22:3	
6	98	87	13:00:00.000	20A3EZ	37C2PR Initial Condition	Optics Heater 2 OFF (primary relay)	200	4	0	4,408,045:22:3	
7	98	87	13:00:00.000	20A3FA	37F1PR Initial Condition	Radiator Flash Heater OFF (primary relay)	200	4	0	4,408,045:22:3	
8	98	87	13:00:00.000	20A3FB	37F2PR Initial Condition	Shield Flash Heater OFF (primary relay)	200	4	0	4,408,045:22:3	
9	98	87	13:00:00.000	20A3FD	40HRPR Initial Condition	RCT Heater OFF (primary relay)	200	4	0	4,408,045:22:3	
10	98	87	13:00:00.000	20A3FE	40T1P Initial Condition	PCT Heater 1 ON (primary relay)	200	4	0	4,408,045:22:3	
11	98	87	13:00:44.466	432JA6B	6RTDS2 NIMDSL,AACNCG,RT	NIMS R/T DESELECT	200	4	0	4,408,045:89:0	
12	98	87	13:00:45.133	432JA431A6A	6RCDSL DDSNCG,PLSDSL,EP	Record Deselect (DDS o	200	4	0	4,408,045:90:0	
13	98	87	13:00:45.800	432JA6D	6RTSL2 NIMNCG,AACSEL,RT	AACS SELECT	200	4	0	4,408,046:00:0	
14	98	87	13:00:45.800	432JA6C	6RTSL1	RT Select of DDS and	200	4	0	4,408,046:00:0	
15	98	87	13:00:59.800	200A6A	6HICON		200	4	0	4,408,046:21:0	
16	98	87	13:02:16.466	488AA6A	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	200	4	0	4,408,047:45:0	
17	98	87	13:03:59.800	20AC4A	7SCAN NORM,233.8,-20.9	Check S/P Position	200	4	0	4,408,049:18:0	
18	98	87	13:21:28.466	488AA6B	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,408,066:44:0	
19	98	87	13:26:01.800	165CA4A	7SCAN NORM,233.799999,	Check S/P Position	200	4	0	4,408,070:90:0	
20	98	87	13:30:03.800	165CA4B	7VECT	Inert vect update UTC	200	4	0	4,408,074:89:0	
21	98	87	13:41:59.800	41AA99A	POWER	Change to Data Taking Mode	200	4	0	4,408,086:71:0	
22	98	87	13:42:03.800	41AA3A	40T1PR	1 PCT Heater 1 OFF (primary relay)	200	4	0	4,408,086:77:0	
23	98	87	13:42:13.800	41AA3B	40T1PR	2 PCT Heater 1 OFF (primary relay)	200	4	0	4,408,087:01:0	
24	98	87	13:42:23.800	41AA3C	40T2R	1 PCT Heater 2 OFF	200	4	0	4,408,087:16:0	
25	98	87	13:42:33.800	41AA3D	40T2R	2 PCT Heater 2 OFF	200	4	0	4,408,087:31:0	
26	98	87	14:15:31.800	165CA4C	7VECT	Inert vect update UTC	200	4	0	4,408,119:86:0	
27	98	87	14:15:36.466	488AA6C	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	4,408,120:02:0	
28	98	87	14:49:15.133	488AA6D	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	4,408,153:27:0	
29	98	87	15:04:06.466	165CB4A	7SCAN NORM,231.435999,	Check S/P Position	200	4	0	4,408,167:90:0	
30	98	87	15:05:06.466	165CB4B	7VECT	Inert vect update UTC	200	4	0	4,408,168:89:0	
31	98	87	15:38:29.133	165CC4A	7SCAN NORM,230.91,-20.	Check S/P Position	200	4	0	4,408,201:90:0	
32	98	87	15:39:29.133	165CC4B	7VECT	Inert vect update UTC	200	4	0	4,408,202:89:0	
33	98	87	17:31:44.466	465KA6A	6DMST	5800 DMS Slew to TIC	200	4	0	4,408,314:00:0	
34	98	87	17:31:44.466		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	200	4	0	4,408,314:00:0	
35	98	87	17:31:44.466		DMS: : *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	200	4	0	4,408,314:00:0	
36	98	87	17:31:44.466		DMS: : *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	200	4	0	4,408,314:00:0	
37	98	87	17:31:51.133		DMS: : *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	200	4	0	4,408,314:10:0	
38	98	87	17:31:52.533		DMS: : *AT SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	200	4	0	4,408,314:12:1	
39	98	87	18:20:13.800	176DA6A	6TMREC NRC	NO RECORD Record Mode Change	200	4	0	4,408,361:87:0	
40	98	87	18:20:20.400	14NNJUPRTS01-	-----START-----		200	4	0	:	:
41	98	87	18:21:21.133	20DA5A	37PL	Program Load (halts microprocessor & unwri	260	4	0	4,408,363:06:0	
42	98	87	18:21:22.466	20DA5B	37MRL	Memory Realocate (software operates from R	260	4	0	4,408,363:08:0	
43	98	87	18:21:23.800	20DA6A	6MCPY NIMS	NIMS,1000,LLM1A,7300,77F7	260	4	0	4,408,363:10:0	
44	98	87	18:21:33.800	20DA6B	6MCPY NIMS	NIMS,1598,LLM1A,77F8,781D	260	4	0	4,408,363:25:0	
45	98	87	18:21:43.800	20DA5C	37IRT	Instrument Reset (goes into POR state)	260	4	0	4,408,363:40:0	
46	98	87	18:22:03.800	20DA5D	37MN	Memory Normal (software operates from ROM)	260	4	0	4,408,363:70:0	
47	98	87	18:22:26.466	20DA4A	37IST 1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,408,364:13:0	
48	98	87	18:23:27.133	20DA4B	37IOP 3,0	Long Map, Grating Start Position =00	2R3	4	0	4,408,365:13:0	
49	98	87	18:24:18.466	165DA4A	7SCAN NORM,277.432999,	Check S/P Position	2R3	4	0	4,408,365:90:0	
50	98	87	18:24:23.067	14NNJUPRTS01-	-----STOP-----		2R3	4	0	:	:
51	98	87	18:28:17.133	127DA	NIMSTAB GS	%%-%-% GROUP START TAB	2R3	4	0	4,408,369:84:0	
52	98	87	18:28:17.133	127DA4A	37IOP 3,0	Long Map, Grating Start Position =00	2R3	4	0	4,408,369:84:0	
53	98	87	18:28:17.800	127DA4B	37ETB 04,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	4,408,369:85:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MFI
109	98	88	03:02:59.733	165IL4B	7VECT	Inert vect update UTC	2R3	4	0	4,408,878:89:0	
110	98	88	03:03:02.400	175IL176A6A	6TMREC	806.4 KBPS IMAGE RECORD	2R3	4	0	4,408,879:02:0	
111	98	88	03:03:02.866		DMS: : *RECORD	R806, TRACK 2, REV, TIC *3142.25 +/-	2R3	4	0	4,408,879:02:7	
112	98	88	03:03:02.866		DMS: : *AT SPD	R806, TRACK 2, REV, TIC 3142.25 +/-	2R3	4	0	4,408,879:02:7	
113	98	88	03:03:09.733	175IL422A6B	6DMSC	DMS Control Tape stop	2R3	4	0	4,408,879:13:0	
114	98	88	03:03:09.733		DMS: : *RUNDOWN	R806, TRACK 2, REV, TIC *2973.27 +/-	2R3	4	0	4,408,879:13:0	
115	98	88	03:03:12.466		DMS: : *READY	RDY, TRACK 2, REV, TIC *2961.77 +/-	2R3	4	0	4,408,879:17:1	
116	98	88	03:19:52.400	488AC6A	6TMSED	Sci. Eng. and D/L Chan	2R3	4	0	4,408,895:61:0	
117	98	88	03:51:32.400	165GB4A	7SCAN	Check S/P Position	2R3	4	0	4,408,926:90:0	
118	98	88	03:56:36.400	176GB6A	6TMREC	7.68 KBPS PPR BURST TO TAPE	2R3	4	0	4,408,932:00:0	
119	98	88	03:57:27.733	117GB	BPT	***** GROUP START CSMOS	2R3	4	0	4,408,932:77:0	
120	98	88	03:57:37.066	117GB105A106A4A	CSMOS	GS	2R3	4	0	4,408,933:00:0	
121	98	88	03:59:11.733	117GB105A106A4B	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,934:51:0	
122	98	88	03:59:26.400	117GB105A106A4C	7STRP	0.00063.-0.00068	2R3	4	0	4,408,934:73:0	
123	98	88	04:01:01.066	117GB105A106A4D	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,936:33:0	
124	98	88	04:01:15.733	117GB105A106A4E	7STRP	0.00063.-0.00068	2R3	4	0	4,408,936:55:0	
125	98	88	04:02:50.400	117GB105A106A4F	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,938:15:0	
126	98	88	04:03:05.066	117GB105A106A4G	7STRP	0.00063.-0.00068	2R3	4	0	4,408,938:37:0	
127	98	88	04:04:39.733	117GB105A106A4H	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,939:88:0	
128	98	88	04:04:54.400	117GB105A106A4I	7STRP	0.00063.-0.00068	2R3	4	0	4,408,940:19:0	
129	98	88	04:06:29.066	117GB105A106A4J	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,941:70:0	
130	98	88	04:06:43.733	117GB105A106A4K	7STRP	0.00063.-0.00068	2R3	4	0	4,408,942:01:0	
131	98	88	04:08:18.400	117GB105A106A4L	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,943:52:0	
132	98	88	04:08:33.066	117GB105A106A4M	7STRP	0.00063.-0.00068	2R3	4	0	4,408,943:74:0	
133	98	88	04:10:07.733	117GB105A106A4N	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,945:34:0	
134	98	88	04:10:22.400	117GB105A106A4O	7STRP	0.00063.-0.00068	2R3	4	0	4,408,945:56:0	
135	98	88	04:10:30.400		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 2961.77 +/-	2R3	4	0	4,408,945:68:0	
136	98	88	04:10:30.400	50ZZ6XX	6DMSC	DMS Control Tape runup 7.68kps	2R3	4	0	4,408,945:68:0	
137	98	88	04:10:31.800		DMS: : *US. AT. SP	P7, TRACK 1, FWD, TIC *2961.89 +/-	2R3	4	0	4,408,945:70:1	
138	98	88	04:10:37.066		DMS: : *US. RD	P7, TRACK 1, FWD, TIC *2963.12 +/-	2R3	4	0	4,408,945:78:0	
139	98	88	04:10:38.266		DMS: : *RUNUP	R7, TRACK *2, *REV, TIC *2963.18 +/-	2R3	4	0	4,408,945:79:8	
140	98	88	04:10:39.666		DMS: : *AT SPD	R7, TRACK 2, REV, TIC *2963.06 +/-	2R3	4	0	4,408,945:81:9	
141	98	88	04:10:58.400		DMS: : *RECORD	R7, TRACK 2, REV, TIC *2958.67 +/-	2R3	4	0	4,408,946:19:0	
142	98	88	04:11:21.066		DMS: : *RUNDOWN	R7, TRACK 2, REV, TIC *2953.36 +/-	2R3	4	0	4,408,946:53:0	
143	98	88	04:11:21.066	50ZZ6RD	6DMSC	DMS Control Tape stop	2R3	4	0	4,408,946:53:0	
144	98	88	04:11:22.266		DMS: : *READY	RDY, TRACK 2, REV, TIC *2953.30 +/-	2R3	4	0	4,408,946:54:8	
145	98	88	04:11:57.066	117GB105A106A4P	7STRP	0.00063.-0.00068	2R3	4	0	4,408,947:16:0	
146	98	88	04:12:11.733	117GB105A106A4Q	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,947:38:0	
147	98	88	04:13:46.400	117GB105A106A4R	7STRP	0.00063.-0.00068	2R3	4	0	4,408,948:89:0	
148	98	88	04:14:01.066	117GB105A106A4S	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,949:20:0	
149	98	88	04:15:35.733	117GB105A106A4T	7STRP	0.00063.-0.00068	2R3	4	0	4,408,950:71:0	
150	98	88	04:15:50.400	117GB105A106A4U	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,951:02:0	
151	98	88	04:17:25.066	117GB105A106A4V	7STRP	0.00063.-0.00068	2R3	4	0	4,408,952:53:0	
152	98	88	04:17:39.733	117GB105A106A4W	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,952:75:0	
153	98	88	04:19:14.400	117GB105A106A4X	7STRP	0.00063.-0.00068	2R3	4	0	4,408,954:35:0	
154	98	88	04:19:29.066	117GB105A106A4Y	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,954:57:0	
155	98	88	04:21:03.733	117GB105A106A4Z	7STRP	0.00063.-0.00068	2R3	4	0	4,408,956:17:0	
156	98	88	04:21:18.400	117GB105A106A4AA	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,956:39:0	
157	98	88	04:22:53.066	117GB105A106A4AB	7STRP	0.00063.-0.00068	2R3	4	0	4,408,957:90:0	
158	98	88	04:23:07.733	117GB105A106A4AC	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,958:21:0	
159	98	88	04:24:42.400	117GB105A106A4AD	7STRP	0.00063.-0.00068	2R3	4	0	4,408,959:72:0	
160	98	88	04:24:54.400		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 2953.30 +/-	2R3	4	0	4,408,959:90:0	
161	98	88	04:24:54.400	50ZZ6XX	6DMSC	DMS Control Tape runup 7.68kps	2R3	4	0	4,408,959:90:0	
162	98	88	04:24:55.800		DMS: : *US. AT. SP	P7, TRACK 1, FWD, TIC *2953.42 +/-	2R3	4	0	4,408,960:01:1	
163	98	88	04:24:57.066	117GB105A106A4AE	7STRP	-0.021003.0.0.0.	2R3	4	0	4,408,960:03:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
164	98	88	04:25:01.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2954.65 +/-	2R3	4	0	4,408,960:09:0	
165	98	88	04:25:02.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *2954.71 +/-	2R3	4	0	4,408,960:10:8	
166	98	88	04:25:03.666		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *2954.59 +/-	2R3	4	0	4,408,960:12:9	
167	98	88	04:25:22.400		DMS:	: *RECORD	R7, TRACK 2, REV, TIC *2950.20 +/-	2R3	4	0	4,408,960:41:0	
168	98	88	04:25:45.066	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,408,960:75:0	
169	98	88	04:25:45.066		DMS:	: *RUNDOWN	R7, TRACK 2, REV, TIC *2944.89 +/-	2R3	4	0	4,408,960:75:0	
170	98	88	04:25:46.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC *2944.83 +/-	2R3	4	0	4,408,960:76:8	
171	98	88	04:26:31.733	117GB105A106A4AF	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,961:54:0	
172	98	88	04:26:46.400	117GB105A106A4AG	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,961:76:0	
173	98	88	04:28:21.066	117GB105A106A4AH	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,963:36:0	
174	98	88	04:28:35.733	117GB105A106A4AI	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,963:58:0	
175	98	88	04:30:10.400	117GB105A106A4AJ	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,965:18:0	
176	98	88	04:30:25.066	117GB105A106A4AK	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,965:40:0	
177	98	88	04:31:59.733	117GB105A106A4AL	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,967:00:0	
178	98	88	04:32:14.400	117GB105A106A4AM	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,967:22:0	
179	98	88	04:33:49.066	117GB105A106A4AN	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,968:73:0	
180	98	88	04:34:03.733	117GB105A106A4AO	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,969:04:0	
181	98	88	04:35:38.400	117GB105A106A4AP	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,970:55:0	
182	98	88	04:35:53.066	117GB105A106A4AQ	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,970:77:0	
183	98	88	04:37:27.733	117GB105A106A4AR	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,972:37:0	
184	98	88	04:37:42.400	117GB105A106A4AS	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,972:59:0	
185	98	88	04:39:17.066	117GB105A106A4AT	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,974:19:0	
186	98	88	04:39:19.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,408,974:22:0	
187	98	88	04:39:19.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2944.83 +/-	2R3	4	0	4,408,974:22:0	
188	98	88	04:39:20.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2944.95 +/-	2R3	4	0	4,408,974:24:1	
189	98	88	04:39:25.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2946.18 +/-	2R3	4	0	4,408,974:32:0	
190	98	88	04:39:26.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *2946.24 +/-	2R3	4	0	4,408,974:33:8	
191	98	88	04:39:28.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *2946.12 +/-	2R3	4	0	4,408,974:35:9	
192	98	88	04:39:31.733	117GB105A106A4AU	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,974:41:0	
193	98	88	04:39:47.066		DMS:	: *RECORD	R7, TRACK 2, REV, TIC *2941.73 +/-	2R3	4	0	4,408,974:64:0	
194	98	88	04:40:09.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,408,975:07:0	
195	98	88	04:40:09.733		DMS:	: *RUNDOWN	R7, TRACK 2, REV, TIC *2936.42 +/-	2R3	4	0	4,408,975:07:0	
196	98	88	04:40:10.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *2936.36 +/-	2R3	4	0	4,408,975:08:8	
197	98	88	04:41:06.400	117GB105A106A4AV	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,976:01:0	
198	98	88	04:41:21.066	117GB105A106A4AW	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,976:23:0	
199	98	88	04:42:10.400	14NNHRSPEC01-		-----START-----		2R3	4	0	:	:
200	98	88	04:42:55.733	117GB105A106A4AX	7STRP	0.00063,-0.00068	Slew = 17.01	2R3	4	0	4,408,977:74:0	
201	98	88	04:43:10.400	117GB105A106A4AY	7STRP	-0.021003,0.0,0	Slew = 0.23	2R3	4	0	4,408,978:05:0	
202	98	88	04:43:11.066	20DB5A	37PL		Program Load (halts microprocessor & unwri	2R3	4	0	4,408,978:06:0	
203	98	88	04:43:12.400	20DB5B	37MRL		Memory Realocate (software operates from R	2R3	4	0	4,408,978:08:0	
204	98	88	04:43:13.733	20DB6A	6MCOPY	NIMS	NIMS,1000,LLM1A,7300,77F7	2R3	4	0	4,408,978:10:0	
205	98	88	04:43:23.733	20DB6B	6MCOPY	NIMS	NIMS,1598,LLM1A,77F8,781D	2R3	4	0	4,408,978:25:0	
206	98	88	04:43:33.733	20DB5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,408,978:40:0	
207	98	88	04:43:53.733	20DB5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,408,978:70:0	
208	98	88	04:44:16.400	20DB4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,408,979:13:0	
209	98	88	04:44:45.066	117GB105A106A4AZ	7STRP	0.00063,-0.00068	Slew = 17.01	2R0	4	0	4,408,979:56:0	
210	98	88	04:44:59.733	117GB105A106A4BA	7STRP	-0.021003,0.0,0	Slew = 0.23	2R0	4	0	4,408,979:78:0	
211	98	88	04:45:11.733	488AC6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2R0	4	0	4,408,980:05:0	
212	98	88	04:45:17.066	20DB4B	37IOP	3,0	Long Map, Grating Start Position = 00	2R3	4	0	4,408,980:13:0	
213	98	88	04:46:13.067	14NNHRSPEC01-		-----STOP-----		2R3	4	0	:	:
214	98	88	04:46:13.067	14NNHRSPEC01-		-----START-----		2R3	4	0	:	:
215	98	88	04:46:34.400	117GB105A106B4A	7STRP	-0.004,0,0,0,0,0	Slew = 17.01	2R3	4	0	4,408,981:38:0	
216	98	88	04:46:47.066	117GB105A106B4B	7STRP	0.0,0,0,0,0,0,0,0	Slew = 0.23	2R3	4	0	4,408,981:57:0	
217	98	88	04:47:05.066	125DB	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,408,981:84:0	
218	98	88	04:47:05.066	125DB4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R3	4	0	4,408,981:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
219	98	88	04:47:47.733	117GB11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	4,408,982:57:0	
220	98	88	04:48:05.733	125DB4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	2R3	4	0	4,408,982:84:0	
221	98	88	04:48:05.733	125DB11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,408,982:84:0	
222	98	88	04:48:09.733	165DB4A	7SCAN	NORM,304.907997,	Check S/P Position	2R3	4	0	4,408,982:90:0	
223	98	88	04:48:10.400	176GB6B	6TMREC	R7,0	NO RECORD Record Mode Change	2R3	4	0	4,408,983:00:0	
224	98	88	04:48:12.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,408,983:03:0	
225	98	88	04:48:12.400		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC *2936.36 +/-	2R3	4	0	4,408,983:03:0	
226	98	88	04:48:13.800		DMS:	:*US AT SP	P7, TRACK 1, FWD, TIC *2936.48 +/-	2R3	4	0	4,408,983:05:1	
227	98	88	04:48:19.066		DMS:	:*US RD	P7, TRACK 1, FWD, TIC *2937.71 +/-	2R3	4	0	4,408,983:13:0	
228	98	88	04:48:20.266		DMS:	:*RUNUP	R7, TRACK *2, *REV, TIC *2937.77 +/-	2R3	4	0	4,408,983:14:8	
229	98	88	04:48:21.666		DMS:	:*AT SPD	R7, TRACK 2, REV, TIC *2937.65 +/-	2R3	4	0	4,408,983:16:9	
230	98	88	04:48:22.400		DMS:	:*RECORD	R7, TRACK 2, REV, TIC *2937.48 +/-	2R3	4	0	4,408,983:18:0	
231	98	88	04:48:39.066		DMS:	:*RUNDOWN	R7, TRACK 2, REV, TIC *2933.58 +/-	2R3	4	0	4,408,983:43:0	
232	98	88	04:48:39.066	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,408,983:43:0	
233	98	88	04:48:40.266		DMS:	:*READY	RDY, TRACK 2, REV, TIC *2933.52 +/-	2R3	4	0	4,408,983:44:8	
234	98	88	04:50:07.066	127DB	NIMSTAB	GS	%%%%%%%%% GROUP START TAB	2R3	4	0	4,408,984:84:0	
235	98	88	04:50:07.066	127DB4A	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,408,984:84:0	
236	98	88	04:50:07.733	127DB4B	37ETB	04,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	4,408,984:85:0	
237	98	88	04:50:15.733	127DB11A	NIMSTAB	GE	%%%%%%%%% GROUP END TAB	2R3	4	0	4,408,985:06:0	
238	98	88	04:51:58.400		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC *2933.52 +/-	2R3	4	0	4,408,986:69:0	
239	98	88	04:51:58.400	175DB422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	2R3	4	0	4,408,986:69:0	
240	98	88	04:51:59.800		DMS:	:*US AT SP	P7, TRACK 1, FWD, TIC *2933.64 +/-	2R3	4	0	4,408,986:71:1	
241	98	88	04:52:03.733	117DB	CSMOS	GS	***** GROUP START CSMOS	2R3	4	0	4,408,986:77:0	
242	98	88	04:52:05.066		DMS:	:*US RD	P7, TRACK 1, FWD, TIC *2934.87 +/-	2R3	4	0	4,408,986:79:0	
243	98	88	04:52:06.266		DMS:	:*RUNUP	R28, TRACK *2, *REV, TIC *2934.93 +/-	2R3	4	0	4,408,986:80:8	
244	98	88	04:52:09.733	175DB176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,408,986:86:0	
245	98	88	04:52:10.266		DMS:	:*AT SPD	R28, TRACK 2, REV, TIC *2933.43 +/-	2R3	4	0	4,408,986:86:8	
246	98	88	04:52:10.266		DMS:	:*RECORD	R28, TRACK 2, REV, TIC *2933.43 +/-	2R3	4	0	4,408,986:86:8	
247	98	88	04:52:11.733	165DB4B	7VECT		Inert vect update UTC	2R3	4	0	4,408,986:89:0	
248	98	88	04:52:13.066	14INHRSP01-	NIMPBK	301DA	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	:	:
249	98	88	04:52:13.066	117DB105A106A4A	7STRP	-0.014351,0.0,0,0,	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	:	:
250	98	88	04:52:13.066	14INHRSP01-	NIMPBK	301EA	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	:	:
251	98	88	04:59:30.400	488AC6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2R3	4	0	4,408,994:19:0	
252	98	88	05:00:13.733	14INHRSP01-	DESELC	300EA	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	:	:
253	98	88	05:00:13.733	14INHRSP01-	DESELC	300DA	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	:	:
254	98	88	05:00:13.733	117DB105A106A4B	7STRP	0.014301,-0.0065	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	4,408,994:84:0	
255	98	88	05:00:18.400	14INHRSP01-	NIMPBK	301EB	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	:	:
256	98	88	05:00:21.733	117DB105A106A4C	7STRP	-0.014351,0.0,0,0,	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	4,408,995:05:0	
257	98	88	05:08:22.400	117DB11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	4,409,002:89:0	
258	98	88	05:08:22.400	14INHRSP01-	DESELC	300EB	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	:	:
259	98	88	05:10:46.400		DMS:	:*RUNDOWN	R28, TRACK 2, REV, TIC *1952.45 +/-	2R3	4	0	4,409,005:32:0	
260	98	88	05:10:46.400	175DB422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,005:32:0	
261	98	88	05:10:47.600		DMS:	:*READY	RDY, TRACK 2, REV, TIC *1952.15 +/-	2R3	4	0	4,409,005:33:8	
262	98	88	05:11:29.733	14INHRSP01-		-----STOP-----		2R3	4	0	:	:
263	98	88	05:26:49.733	488AC6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2R3	4	0	4,409,021:21:0	
264	98	88	06:17:48.400	488AC6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R3	4	0	4,409,071:59:0	
265	98	88	06:38:27.733	488AD6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2R3	4	0	4,409,092:07:0	
266	98	88	07:30:31.733	488AD6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R3	4	0	4,409,143:52:0	
267	98	88	11:02:16.400	165GC4A	7SCAN	NORM,236.393999,	Check S/P Position	2R3	4	0	4,409,352:90:0	
268	98	88	11:09:21.733	176GC6A	6TMREC	BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,409,360:00:0	
269	98	88	11:10:13.066	117GC	CSMOS	GS	***** GROUP START CSMOS	2R3	4	0	4,409,360:77:0	
270	98	88	11:10:22.400	117GC105A106A4A	7STRP	-0.032011,0.0,0,0,	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	4,409,361:00:0	
271	98	88	11:11:26.400	117GC105A106A4B	7STRP	0.001,0.00092,0,	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	4,409,362:05:0	
272	98	88	11:11:39.066	117GC105A106A4C	7STRP	-0.032011,0.0,0,0,	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	4,409,362:24:0	
273	98	88	11:12:43.066	117GC105A106A4D	7STRP	0.001,0.00092,0,	IO MONITORING AT HIGH SPECTRAL R	2R3	4	0	4,409,363:29:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
274	98	88	11:12:55.733	117GC105A106A4E	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,363:48:0	
275	98	88	11:13:59.733	117GC105A106A4F	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,364:53:0	
276	98	88	11:14:12.400	117GC105A106A4G	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,364:72:0	
277	98	88	11:15:16.400	117GC105A106A4H	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,365:77:0	
278	98	88	11:15:29.066	117GC105A106A4I	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,366:05:0	
279	98	88	11:16:33.066	117GC105A106A4J	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,367:10:0	
280	98	88	11:16:45.733	117GC105A106A4K	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,367:29:0	
281	98	88	11:17:49.733	117GC105A106A4L	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,368:34:0	
282	98	88	11:18:02.400	117GC105A106A4M	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,368:53:0	
283	98	88	11:19:06.400	117GC105A106A4N	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,369:58:0	
284	98	88	11:19:19.066	117GC105A106A4O	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,369:77:0	
285	98	88	11:20:23.066	117GC105A106A4P	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,370:82:0	
286	98	88	11:20:35.733	117GC105A106A4Q	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,371:10:0	
287	98	88	11:21:39.733	117GC105A106A4R	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,372:15:0	
288	98	88	11:21:52.400	117GC105A106A4S	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,372:34:0	
289	98	88	11:21:56.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,409,372:40:0	
290	98	88	11:21:56.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1952.15 +/- 1	2R3	4	0	4,409,372:40:0	
291	98	88	11:21:57.800		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *1952.27 +/- 1	2R3	4	0	4,409,372:42:1	
292	98	88	11:22:03.066		DMS:	: *US RD	P7, TRACK 1, FWD, TIC *1953.51 +/- 1	2R3	4	0	4,409,372:50:0	
293	98	88	11:22:04.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *1953.57 +/- 1	2R3	4	0	4,409,372:51:8	
294	98	88	11:22:05.666		DMS:	: *AT SPD	R7, TRACK 2, REV, TIC *1953.45 +/- 1	2R3	4	0	4,409,372:53:9	
295	98	88	11:22:21.733		DMS:	: *RECORD	R7, TRACK 2, REV, TIC *1949.68 +/- 1	2R3	4	0	4,409,372:78:0	
296	98	88	11:22:44.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,373:21:0	
297	98	88	11:22:44.400		DMS:	: *RUNDOWN	R7, TRACK 2, REV, TIC *1944.37 +/- 1	2R3	4	0	4,409,373:21:0	
298	98	88	11:22:45.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC *1944.31 +/- 1	2R3	4	0	4,409,373:22:8	
299	98	88	11:22:56.400	117GC105A106A4T	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,373:39:0	
300	98	88	11:23:09.066	117GC105A106A4U	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,373:58:0	
301	98	88	11:24:13.066	117GC105A106A4V	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,374:63:0	
302	98	88	11:24:25.733	117GC105A106A4W	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,374:82:0	
303	98	88	11:25:29.733	117GC105A106A4X	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,375:87:0	
304	98	88	11:25:42.400	117GC105A106A4Y	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,376:15:0	
305	98	88	11:26:46.400	117GC105A106A4Z	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,377:20:0	
306	98	88	11:26:59.066	117GC105A106A4AA	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,377:39:0	
307	98	88	11:28:03.066	117GC105A106A4AB	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,378:44:0	
308	98	88	11:28:15.733	117GC105A106A4AC	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,378:63:0	
309	98	88	11:29:19.733	117GC105A106A4AD	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,379:68:0	
310	98	88	11:29:32.400	117GC105A106A4AE	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,379:87:0	
311	98	88	11:30:36.400	117GC105A106A4AF	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,381:01:0	
312	98	88	11:30:49.066	117GC105A106A4AG	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,381:20:0	
313	98	88	11:31:53.066	117GC105A106A4AH	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,382:25:0	
314	98	88	11:32:05.733	117GC105A106A4AI	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,382:44:0	
315	98	88	11:33:09.733	117GC105A106A4AJ	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,383:49:0	
316	98	88	11:33:22.400	117GC105A106A4AK	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,383:68:0	
317	98	88	11:34:26.400	117GC105A106A4AL	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,384:73:0	
318	98	88	11:34:39.066	117GC105A106A4AM	7STRP	-0.032011,0.0,0,0	Slew =0.53	2R3	4	0	4,409,385:01:0	
319	98	88	11:34:58.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1944.31 +/- 1	2R3	4	0	4,409,385:30:0	
320	98	88	11:34:58.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,409,385:30:0	
321	98	88	11:34:59.800		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *1944.43 +/- 1	2R3	4	0	4,409,385:32:1	
322	98	88	11:35:05.066		DMS:	: *US RD	P7, TRACK 1, FWD, TIC *1945.66 +/- 1	2R3	4	0	4,409,385:40:0	
323	98	88	11:35:06.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *1945.72 +/- 1	2R3	4	0	4,409,385:41:8	
324	98	88	11:35:07.666		DMS:	: *AT SPD	R7, TRACK 2, REV, TIC *1945.60 +/- 1	2R3	4	0	4,409,385:43:9	
325	98	88	11:35:23.733		DMS:	: *RECORD	R7, TRACK 2, REV, TIC *1941.84 +/- 1	2R3	4	0	4,409,385:68:0	
326	98	88	11:35:43.066	117GC105A106A4AN	7STRP	0.001,0.00092,0,0	Slew =17.01	2R3	4	0	4,409,386:06:0	
327	98	88	11:35:46.400		DMS:	: *RUNDOWN	R7, TRACK 2, REV, TIC *1936.53 +/- 1	2R3	4	0	4,409,386:11:0	
328	98	88	11:35:46.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,386:11:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
329	98	88	11:35:47.600		DMS:	:*READY	RDY, TRACK 2, REV, TIC *1936.47 +/- 1	2R3	4	0	4,409,386:12:8	
330	98	88	11:35:55.733	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,386:25:0	
331	98	88	11:36:59.733	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,387:30:0	
332	98	88	11:37:12.400	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,387:49:0	
333	98	88	11:38:16.400	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,388:54:0	
334	98	88	11:38:29.066	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,388:73:0	
335	98	88	11:39:33.066	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,389:78:0	
336	98	88	11:39:45.733	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,390:06:0	
337	98	88	11:40:49.733	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,391:11:0	
338	98	88	11:41:02.400	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,391:30:0	
339	98	88	11:42:06.400	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,392:35:0	
340	98	88	11:42:19.066	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,392:54:0	
341	98	88	11:43:23.066	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,393:59:0	
342	98	88	11:43:35.733	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,393:78:0	
343	98	88	11:44:39.733	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,394:83:0	
344	98	88	11:44:52.400	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,395:11:0	
345	98	88	11:45:56.400	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,396:16:0	
346	98	88	11:46:09.066	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,396:35:0	
347	98	88	11:47:13.066	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,397:40:0	
348	98	88	11:47:25.733	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,397:59:0	
349	98	88	11:48:00.400		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 1936.47 +/- 1	2R3	4	0	4,409,398:20:0	
350	98	88	11:48:00.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,409,398:20:0	
351	98	88	11:48:01.800		DMS:	:*US AT SP	P7, TRACK 1, FWD, TIC *1936.59 +/- 1	2R3	4	0	4,409,398:22:1	
352	98	88	11:48:07.066		DMS:	:*US RD	P7, TRACK 1, FWD, TIC *1937.82 +/- 1	2R3	4	0	4,409,398:30:0	
353	98	88	11:48:09.266		DMS:	:*RUNUP	R7, TRACK *2, *REV, TIC *1937.88 +/- 1	2R3	4	0	4,409,398:31:8	
354	98	88	11:48:09.666		DMS:	:*AT SPD	R7, TRACK 2, REV, TIC *1937.76 +/- 1	2R3	4	0	4,409,398:33:9	
355	98	88	11:48:25.733		DMS:	:*RECORD	R7, TRACK 2, REV, TIC *1934.00 +/- 1	2R3	4	0	4,409,398:58:0	
356	98	88	11:48:29.733	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,398:64:0	
357	98	88	11:48:42.400	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,398:83:0	
358	98	88	11:48:48.400		DMS:	:*RUNDOWN	R7, TRACK 2, REV, TIC *1928.68 +/- 1	2R3	4	0	4,409,399:01:0	
359	98	88	11:48:48.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,399:01:0	
360	98	88	11:48:49.600		DMS:	:*READY	RDY, TRACK 2, REV, TIC *1928.62 +/- 1	2R3	4	0	4,409,399:02:8	
361	98	88	11:49:46.400	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,399:88:0	
362	98	88	11:49:59.066	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,400:16:0	
363	98	88	11:51:03.066	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,401:21:0	
364	98	88	11:51:15.733	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,401:40:0	
365	98	88	11:52:19.733	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,402:45:0	
366	98	88	11:52:32.400	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,402:64:0	
367	98	88	11:53:36.400	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,403:69:0	
368	98	88	11:53:49.066	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,403:88:0	
369	98	88	11:54:53.066	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,403:02:0	
370	98	88	11:55:05.733	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,405:21:0	
371	98	88	11:56:09.733	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,406:26:0	
372	98	88	11:56:22.400	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,406:45:0	
373	98	88	11:57:26.400	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,407:50:0	
374	98	88	11:57:39.066	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,407:69:0	
375	98	88	11:58:43.066	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,408:74:0	
376	98	88	11:58:55.733	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,409:02:0	
377	98	88	11:59:59.067	14NNICERAF01-		-----START-----		2R3	4	0	:	
378	98	88	11:59:59.733	117GC105A106A4A0	7STRP	0.001,0.0,0.0092,0	Slew = 17.01	2R3	4	0	4,409,410:07:0	
379	98	88	12:00:12.400	117GC105A106A4A0	7STRP	-0.032011,0.0,0.0	Slew = 0.53	2R3	4	0	4,409,410:26:0	
380	98	88	12:00:59.733	20DC5A	37PL		Program Load (halts microprocessor & unwri	2R3	4	0	4,409,411:06:0	
381	98	88	12:01:01.066	20DC5B	37MRL		Memory Realocate (software operates from R	2R3	4	0	4,409,411:08:0	
382	98	88	12:01:02.400	20DC6A	6MCOPI	NIMS	NIMS,1000,LLM1A,7300,77F7	2R3	4	0	4,409,411:10:0	
383	98	88	12:01:03.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,409,411:11:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
384	98	88	12:01:03.066		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 1928.62 +/- 1	2R3	4	0	4,409,411:11:0	
385	98	88	12:01:04.466		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *1928.74 +/- 1	2R3	4	0	4,409,411:13:1	
386	98	88	12:01:09.733		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *1929.98 +/- 1	2R3	4	0	4,409,411:21:0	
387	98	88	12:01:10.933		DMS:	:*RUNUP	R7, TRACK *2, *REV, TIC *1930.04 +/- 1	2R3	4	0	4,409,411:22:8	
388	98	88	12:01:12.333		DMS:	:*AT_SPD	R7, TRACK 2, REV, TIC *1929.92 +/- 1	2R3	4	0	4,409,411:24:9	
389	98	88	12:01:12.400	20DC6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	2R3	4	0	4,409,411:25:0	
390	98	88	12:01:16.400	117GC105A106A4CB	7STRP	0.001,0.00092,0,	Slew = 17.01	2R3	4	0	4,409,411:31:0	
391	98	88	12:01:22.400	20DC5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,409,411:40:0	
392	98	88	12:01:27.733		DMS:	:*RECORD	R7, TRACK 2, REV, TIC *1926.31 +/- 1	260	4	0	4,409,411:48:0	
393	98	88	12:01:29.066	117GC105A106A4CC	7STRP	-0.032011,0.0,0,	Slew = -0.53	260	4	0	4,409,411:50:0	
394	98	88	12:01:42.400	20DC5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,409,411:70:0	
395	98	88	12:01:50.400		DMS:	:*RUNDOWN	R7, TRACK 2, REV, TIC *1921.00 +/- 1	260	4	0	4,409,411:82:0	
396	98	88	12:01:50.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	260	4	0	4,409,411:82:0	
397	98	88	12:01:51.600		DMS:	:*READY	RDY, TRACK 2, REV, TIC *1920.94 +/- 1	260	4	0	4,409,411:83:8	
398	98	88	12:02:05.066	20DC4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,409,412:13:0	
399	98	88	12:02:33.066	117GC105A106A4CD	7STRP	0.001,0.00092,0,	Slew = 17.01	2R0	4	0	4,409,412:55:0	
400	98	88	12:02:45.733	117GC105A106A4CE	7STRP	-0.032011,0.0,0,	Slew = 0.53	2R0	4	0	4,409,412:74:0	
401	98	88	12:03:05.733	20DC4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,409,413:13:0	
402	98	88	12:03:49.733	117GC105A106B4A	7STRP	0.04503,0.0,0,0,0,	Slew = 17.01	2R3	4	0	4,409,413:79:0	
403	98	88	12:04:00.400	117GC105A106B4B	7STRP	0.0,0.0,0.0,0,0,0,	Slew = -0.53	2R3	4	0	4,409,414:04:0	
404	98	88	12:04:01.734	14NICERAF01-		-----STOP-----		2R3	4	0	:	
405	98	88	12:05:03.066	117GC11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	4,409,415:07:0	
406	98	88	12:05:59.066	176GC6B	6TMREC	NRC	NO RECORD Record Mode Change	2R3	4	0	4,409,416:00:0	
407	98	88	12:06:01.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,409,416:03:0	
408	98	88	12:06:01.066		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 1920.94 +/- 1	2R3	4	0	4,409,416:03:0	
409	98	88	12:06:02.466		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *1921.06 +/- 1	2R3	4	0	4,409,416:05:1	
410	98	88	12:06:07.733		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *1922.29 +/- 1	2R3	4	0	4,409,416:13:0	
411	98	88	12:06:08.933		DMS:	:*RUNUP	R7, TRACK *2, *REV, TIC *1922.35 +/- 1	2R3	4	0	4,409,416:14:8	
412	98	88	12:06:10.333		DMS:	:*AT_SPD	R7, TRACK 2, REV, TIC *1922.23 +/- 1	2R3	4	0	4,409,416:16:9	
413	98	88	12:06:11.066		DMS:	:*RECORD	R7, TRACK 2, REV, TIC *1922.06 +/- 1	2R3	4	0	4,409,416:18:0	
414	98	88	12:06:25.066		DMS:	:*RUNDOWN	R7, TRACK 2, REV, TIC *1918.78 +/- 1	2R3	4	0	4,409,416:39:0	
415	98	88	12:06:25.066	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,416:39:0	
416	98	88	12:06:26.266		DMS:	:*READY	RDY, TRACK 2, REV, TIC *1918.72 +/- 1	2R3	4	0	4,409,416:40:8	
417	98	88	12:06:55.066	125DC	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,409,416:84:0	
418	98	88	12:06:55.066	125DC4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R3	4	0	4,409,416:84:0	
419	98	88	12:06:59.066	165DC4A	7SCAN	NORM,237.568998,	Check S/P Position	2R3	4	0	4,409,416:90:0	
420	98	88	12:07:03.734	14NICERAF01-		-----START-----		2R3	4	0	:	
421	98	88	12:07:55.733	125DC11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,409,417:84:0	
422	98	88	12:07:55.733	125DC4B	37MB	0,0,0,0,0,0,0	Selects mirror (spatial) edit table	2R3	4	0	4,409,417:84:0	
423	98	88	12:08:56.400	127DC	NIMSTAB	GS	%%%%%%%%% GROUP START TAB	2R3	4	0	4,409,418:84:0	
424	98	88	12:08:56.400	127DC4A	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,409,418:84:0	
425	98	88	12:08:57.066	127DC4B	37ETB	04,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	4,409,418:85:0	
426	98	88	12:09:05.066	127DC11A	NIMSTAB	GE	%%%%%%%%% GROUP END TAB	2R3	4	0	4,409,419:06:0	
427	98	88	12:10:47.733	175DC422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	2R3	4	0	4,409,420:69:0	
428	98	88	12:10:47.733		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC *1918.72 +/- 1	2R3	4	0	4,409,420:69:0	
429	98	88	12:10:49.133		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *1918.84 +/- 1	2R3	4	0	4,409,420:71:1	
430	98	88	12:10:53.066	117DC	CSMOS	GS	***** GROUP START CSMOS	2R3	4	0	4,409,420:77:0	
431	98	88	12:10:54.400		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *1920.07 +/- 1	2R3	4	0	4,409,420:79:0	
432	98	88	12:10:55.600		DMS:	:*RUNUP	R28, TRACK *2, *REV, TIC *1920.13 +/- 1	2R3	4	0	4,409,420:80:8	
433	98	88	12:10:59.066	175DC176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,409,420:86:0	
434	98	88	12:10:59.600		DMS:	:*RECORD	R28, TRACK 2, REV, TIC *1918.63 +/- 1	2R3	4	0	4,409,420:86:8	
435	98	88	12:10:59.600		DMS:	:*AT_SPD	R28, TRACK 2, REV, TIC 1918.63 +/- 1	2R3	4	0	4,409,420:86:8	
436	98	88	12:11:01.066	165DC4B	7VECT		Inert vect update UTC	2R3	4	0	4,409,420:89:0	
437	98	88	12:11:02.400	117DC105A106A4A	7STRP	-0.018302,0,0,0,	Slew = 0.04	2R3	4	0	4,409,421:00:0	
438	98	88	12:14:17.066	14NICERAF01-	NIMPBK	301DB	EUROPA ICE RIFT	2R3	4	0	:	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
439	98	88	12:16:19.733	14ENICERAF01-	DESEL	300DB	EUROPA ICE RIFT	2R3	4	0	:	:
440	98	88	12:18:47.066	117DC105A106A4B	7STRP	0.016501,-0.009,	Slew =12.01	2R3	4	0	4,409,428.60:0	
441	98	88	12:18:53.733	117DC105A106A4C	7STRP	-0.018302,0.0,0,	Slew =0.04	2R3	4	0	4,409,428.70:0	
442	98	88	12:26:38.400	117DC105A106A4D	7STRP	0.016501,-0.009,	Slew =12.01	2R3	4	0	4,409,436.39:0	
443	98	88	12:26:45.066	117DC105A106A4E	7STRP	-0.018302,0.0,0,	Slew =0.04	2R3	4	0	4,409,436.49:0	
444	98	88	12:34:29.733	117DC105A106A4F	7STRP	0.016501,-0.009,	Slew =12.01	2R3	4	0	4,409,444.18:0	
445	98	88	12:34:36.400	117DC105A106A4G	7STRP	-0.018302,0.0,0,	Slew =0.04	2R3	4	0	4,409,444.28:0	
446	98	88	12:42:21.066	117DC11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	4,409,451.88:0	
447	98	88	12:42:26.400	175DC422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,452.05:0	
448	98	88	12:42:26.400		DMS:	: *RUNDOWN	R28, TRACK 2, REV, TIC * 260.31 +/- 1	2R3	4	0	4,409,452.05:0	
449	98	88	12:42:27.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 260.01 +/- 1	2R3	4	0	4,409,452.06:8	
450	98	88	12:44:17.733	465KC6A	6DTRN	CMD.6DTRN,465KC6	DMS TRACK TURNAROUND	2R3	4	0	4,409,453.81:0	
451	98	88	12:44:17.733		DMS:	: *DMS-TURN	P7, TRACK 2, REV, TIC 260.01 +/- 1	2R3	4	0	4,409,453.81:0	
452	98	88	12:44:17.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 260.01 +/- 1	2R3	4	0	4,409,453.81:0	
453	98	88	12:44:19.133		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC * 260.13 +/- 1	2R3	4	0	4,409,453.83:1	
454	98	88	12:44:24.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 261.37 +/- 1	2R3	4	0	4,409,454.00:8	
455	98	88	12:44:25.600		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC * 261.43 +/- 1	2R3	4	0	4,409,454.01:8	
456	98	88	12:44:27.000		DMS:	: *AT SPD	P7, TRACK 2, REV, TIC * 261.31 +/- 1	2R3	4	0	4,409,454.03:9	
457	98	88	12:48:49.066		DMS:	: *REVERSE	P7, TRACK 2, REV, TIC * 199.87 +/- 1	2R3	4	0	4,409,458.33:0	
458	98	88	12:48:50.266		DMS:	: *RUNUP	P7, TRACK 3, FWD, TIC 199.81 +/- 1	2R3	4	0	4,409,458.34:8	
459	98	88	12:48:50.266		DMS:	: *TURNARND	P7, TRACK *3, *FWD, TIC * 199.81 +/- 1	2R3	4	0	4,409,458.34:8	
460	98	88	12:48:51.666		DMS:	: *AT SPD	P7, TRACK 3, FWD, TIC * 199.93 +/- 1	2R3	4	0	4,409,458.36:9	
461	98	88	12:49:03.666		DMS:	: *AUTOSTOP	P7, TRACK 3, FWD, TIC * 202.06 +/- 1	2R3	4	0	4,409,458.54:9	
462	98	88	12:49:04.866		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 202.12 +/- 1	2R3	4	0	4,409,458.56:7	
463	98	88	12:51:33.067	14ENICERAF01-		-----STOP-----		2R3	4	0	:	:
464	98	88	12:51:36.400	488AE6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2R3	4	0	4,409,461.11:0	
465	98	88	13:01:35.066	165IA4A	7SCAN	NORM,254.924,-31	Check S/P Position	2R3	4	0	4,409,470.90:0	
466	98	88	13:02:28.400		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 202.12 +/- 1	2R3	4	0	4,409,471.79:0	
467	98	88	13:02:28.400	465KD6A	6DMSC	P7,3	DMS Control Tape P/B 7.68kbps	2R3	4	0	4,409,471.79:0	
468	98	88	13:02:35.066		DMS:	: *RUNUP	P7, TRACK *3, FWD, TIC 202.12 +/- 1	2R3	4	0	4,409,471.89:0	
469	98	88	13:02:36.466		DMS:	: *AT SPD	P7, TRACK 3, FWD, TIC 202.24 +/- 1	2R3	4	0	4,409,472.00:1	
470	98	88	13:02:36.466		DMS:	: *P SLEW	P7, TRACK 3, FWD, TIC * 202.24 +/- 1	2R3	4	0	4,409,472.00:1	
471	98	88	13:03:37.066		DMS:	: *RUNDOWN	P7, TRACK 3, FWD, TIC * 216.45 +/- 1	2R3	4	0	4,409,473.00:0	
472	98	88	13:03:37.066	465KD6B	6DMSC	RDY,3	DMS Control Tape stop	2R3	4	0	4,409,473.00:0	
473	98	88	13:03:38.266		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 216.51 +/- 1	2R3	4	0	4,409,473.01:8	
474	98	88	13:05:27.733	175TA422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,409,474.75:0	
475	98	88	13:05:27.733		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 216.51 +/- 1	2R3	4	0	4,409,474.75:0	
476	98	88	13:05:32.400	282NA431A6A	6RCSEL	DDSNCG,PLSSEL,EP	Record Select (DDS onl)	2R3	4	0	4,409,474.82:0	
477	98	88	13:05:34.400		DMS:	: *RUNUP	R7, TRACK *3, FWD, TIC 216.51 +/- 1	2R3	4	0	4,409,474.85:0	
478	98	88	13:05:35.733	175TA176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,409,474.87:0	
479	98	88	13:05:35.800		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 216.63 +/- 1	2R3	4	0	4,409,474.87:1	
480	98	88	13:05:35.800		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC * 216.63 +/- 1	2R3	4	0	4,409,474.87:1	
481	98	88	13:05:38.400	431OA6A	6RCSEL	DDSEL,PLSNCG,EP	Record Select (DDS onl)	2R3	4	0	4,409,475.00:0	
482	98	88	13:06:32.400	488AE6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R3	4	0	4,409,475.81:0	
483	98	88	13:06:38.400	428JA6A	6RCCLR			2R3	4	0	4,409,475.90:0	
484	98	88	13:06:39.066	428JA6B	6RCSET			2R3	4	0	4,409,476.00:0	
485	98	88	13:09:39.733	165IA4B	7VECT		14 Inert vect update UTC	2R3	4	0	4,409,478.89:0	
486	98	88	13:10:35.733	175JA422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	4,409,479.82:0	
487	98	88	13:10:35.733		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC * 286.92 +/- 1	2R3	4	0	4,409,479.82:0	
488	98	88	13:10:36.933		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC * 286.98 +/- 1	2R3	4	0	4,409,479.83:8	
489	98	88	13:10:41.733	175JA176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	4,409,480.00:0	
490	98	88	13:10:42.200		DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC 352.98 +/- 1	2R3	4	0	4,409,480.00:7	
491	98	88	13:10:42.200		DMS:	: *RECORD	R806, TRACK 3, FWD, TIC * 352.98 +/- 1	2R3	4	0	4,409,480.00:7	
492	98	88	13:10:44.400		DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC * 407.12 +/- 1	2R3	4	0	4,409,480.04:0	
493	98	88	13:10:44.400	175TB422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,409,480.04:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
494	98	88	13:10:47.133		DMS:	:*RUNUP	R7, TRACK 3, FWD, TIC * 418.62 +/-	2R3	4	0	4,409,480:08:1	
495	98	88	13:10:48.400	175TB176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	2R3	4	0	4,409,480:10:0	
496	98	88	13:10:48.533		DMS:	:*RECORD	R7, TRACK 3, FWD, TIC * 418.74 +/-	2R3	4	0	4,409,480:10:2	
497	98	88	13:10:48.533		DMS:	:*AT_SPD	R7, TRACK 3, FWD, TIC * 418.74 +/-	2R3	4	0	4,409,480:10:2	
498	98	88	13:10:54.400	175IA422A6A	6DMSC	R806:3	DMS Control	2R3	4	0	4,409,480:19:0	
499	98	88	13:10:54.400		DMS:	:*RUNDOWN	R7, TRACK 3, FWD, TIC * 420.12 +/-	2R3	4	0	4,409,480:19:0	
500	98	88	13:10:55.600		DMS:	:*RUNUP	R806, TRACK 3, FWD, TIC * 420.18 +/-	2R3	4	0	4,409,480:20:8	
501	98	88	13:11:00.400	175IA176A6A	6TMREC	Ai8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	4,409,480:28:0	
502	98	88	13:11:00.866		DMS:	:*RECORD	R806, TRACK 3, FWD, TIC * 486.18 +/-	2R3	4	0	4,409,480:28:7	
503	98	88	13:11:00.866		DMS:	:*AT_SPD	R806, TRACK 3, FWD, TIC * 486.18 +/-	2R3	4	0	4,409,480:28:7	
504	98	88	13:11:07.733	175TC422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,409,480:39:0	
505	98	88	13:11:07.733		DMS:	:*RUNDOWN	R806, TRACK 3, FWD, TIC * 655.16 +/-	2R3	4	0	4,409,480:39:0	
506	98	88	13:11:10.466		DMS:	:*RUNUP	R7, TRACK 3, FWD, TIC * 666.66 +/-	2R3	4	0	4,409,480:43:1	
507	98	88	13:11:11.733	175TC176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	2R3	4	0	4,409,480:45:0	
508	98	88	13:11:11.866		DMS:	:*RECORD	R7, TRACK 3, FWD, TIC * 666.78 +/-	2R3	4	0	4,409,480:45:2	
509	98	88	13:11:11.866		DMS:	:*AT_SPD	R7, TRACK 3, FWD, TIC * 666.78 +/-	2R3	4	0	4,409,480:45:2	
510	98	88	13:13:08.400	165IB4A	7SCAN	NORM;292.924,-39	Check S/P Position	2R3	4	0	4,409,482:38:0	
511	98	88	13:16:49.733	118IB	SMOS	GS		2R3	4	0	4,409,486:06:0	
512	98	88	13:17:07.066		DMS:	:*RUNDOWN	R7, TRACK 3, FWD, TIC * 750.03 +/-	2R3	4	0	4,409,486:32:0	
513	98	88	13:17:07.066	175IB422A6A	6DMSC	R806:3	DMS Control	2R3	4	0	4,409,486:32:0	
514	98	88	13:17:08.266		DMS:	:*RUNUP	R806, TRACK 3, FWD, TIC * 750.09 +/-	2R3	4	0	4,409,486:33:8	
515	98	88	13:17:10.400	165IB4B	7VECT		Inert vect update UTC	2R3	4	0	4,409,486:37:0	
516	98	88	13:17:13.066	175IB176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,409,486:41:0	
517	98	88	13:17:13.533		DMS:	:*AT_SPD	R806, TRACK 3, FWD, TIC * 816.09 +/-	2R3	4	0	4,409,486:41:7	
518	98	88	13:17:13.533		DMS:	:*RECORD	R806, TRACK 3, FWD, TIC * 816.09 +/-	2R3	4	0	4,409,486:41:7	
519	98	88	13:17:13.733	118IB110A111A4A	7STRP	0.00732,-0.0027,	Slew =-3.71	2R3	4	0	4,409,486:42:0	
520	98	88	13:17:33.733	428JF6A	6RCCLR			2R3	4	0	4,409,486:72:0	
521	98	88	13:17:34.400	428JF6B	6RCSET			2R3	4	0	4,409,486:73:0	
522	98	88	13:17:48.400	118IB11A	SMOS	GE		2R3	4	0	4,409,487:03:0	
523	98	88	13:17:50.400	118IC	SMOS	GS		2R3	4	0	4,409,487:06:0	
524	98	88	13:17:51.066	165IC4A	7SCAN	NORM;300.876999,	Check S/P Position	2R3	4	0	4,409,487:07:0	
525	98	88	13:17:55.066	175TD422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,409,487:13:0	
526	98	88	13:17:55.066		DMS:	:*RUNDOWN	R806, TRACK 3, FWD, TIC * 1838.20 +/-	2R3	4	0	4,409,487:13:0	
527	98	88	13:17:57.800		DMS:	:*RUNUP	R7, TRACK 3, FWD, TIC * 1849.70 +/-	2R3	4	0	4,409,487:17:1	
528	98	88	13:17:59.066	175TD176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	2R3	4	0	4,409,487:19:0	
529	98	88	13:17:59.200		DMS:	:*AT_SPD	R7, TRACK 3, FWD, TIC * 1849.82 +/-	2R3	4	0	4,409,487:19:2	
530	98	88	13:17:59.200		DMS:	:*RECORD	R7, TRACK 3, FWD, TIC * 1849.82 +/-	2R3	4	0	4,409,487:19:2	
531	98	88	13:18:15.733	428JG6A	6RCCLR			2R3	4	0	4,409,487:44:0	
532	98	88	13:18:16.400	428JG6B	6RCSET			2R3	4	0	4,409,487:45:0	
533	98	88	13:18:33.733	175IC422A6A	6DMSC	R806:3	DMS Control	2R3	4	0	4,409,487:71:0	
534	98	88	13:18:33.733		DMS:	:*RUNDOWN	R7, TRACK 3, FWD, TIC * 1857.92 +/-	2R3	4	0	4,409,487:71:0	
535	98	88	13:18:34.933		DMS:	:*RUNUP	R806, TRACK 3, FWD, TIC * 1857.98 +/-	2R3	4	0	4,409,487:72:8	
536	98	88	13:18:37.066	165IC4B	7VECT		Inert vect update UTC	2R3	4	0	4,409,487:76:0	
537	98	88	13:18:39.733	175IC176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,409,487:80:0	
538	98	88	13:18:40.200		DMS:	:*RECORD	R806, TRACK 3, FWD, TIC * 1923.98 +/-	2R3	4	0	4,409,487:80:7	
539	98	88	13:18:40.200		DMS:	:*AT_SPD	R806, TRACK 3, FWD, TIC * 1923.98 +/-	2R3	4	0	4,409,487:80:7	
540	98	88	13:18:40.400	118IC110A111A4A	7STRP	-0.0023,0.00725,	Slew = -4.31	2R3	4	0	4,409,487:81:0	
541	98	88	13:19:04.400	428JH6A	6RCCLR			2R3	4	0	4,409,488:26:0	
542	98	88	13:19:05.066	428JH6B	6RCSET			2R3	4	0	4,409,488:27:0	
543	98	88	13:19:23.733	118IC11A	SMOS	GE		2R3	4	0	4,409,488:55:0	
544	98	88	13:19:28.400	165ID4A	7SCAN	NORM;338.537998,	Check S/P Position	2R3	4	0	4,409,488:65:0	
545	98	88	13:19:30.400	175TE422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,409,488:65:0	
546	98	88	13:19:30.400		DMS:	:*RUNDOWN	R806, TRACK 3, FWD, TIC * 3159.37 +/-	2R3	4	0	4,409,488:65:0	
547	98	88	13:19:33.133		DMS:	:*RUNUP	R7, TRACK 3, FWD, TIC * 3170.87 +/-	2R3	4	0	4,409,488:69:1	
548	98	88	13:19:34.400	175TE176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	2R3	4	0	4,409,488:71:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
549	98	88	13:19:34.533		DMS:	:*AT_SPD	R7, TRACK 3, FWD, TIC 3170.99 +/- 1	2R3	4	0	4,409,488:71:2	
550	98	88	13:19:34.533		DMS:	:*RECORD	R7, TRACK 3, FWD, TIC *3170.99 +/- 1	2R3	4	0	4,409,488:71:2	
551	98	88	13:20:41.733	428JI6A	6RCCLR		14	2R3	4	0	4,409,489:81:0	
552	98	88	13:20:42.400	428JI6B	6RCSET			2R3	4	0	4,409,489:82:0	
553	98	88	13:21:49.733	175ID422A6A	6DMSC	R806.3	DMS Control	2R3	4	0	4,409,491:01:0	
554	98	88	13:21:49.733		DMS:	:*RUNDOWN	R7, TRACK 3, FWD, TIC *3202.67 +/- 1	2R3	4	0	4,409,491:01:0	
555	98	88	13:21:50.933		DMS:	:*RUNUP	R806, TRACK 3, FWD, TIC *3202.73 +/- 1	2R3	4	0	4,409,491:02:8	
556	98	88	13:21:52.400	165ID4B	7VECT		Inert vect update UTC	2R3	4	0	4,409,491:05:0	
557	98	88	13:21:55.733	175ID176A6A	6TMREC	A18	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	4,409,491:10:0	
558	98	88	13:21:56.200		DMS:	:*AT_SPD	R806, TRACK 3, FWD, TIC 3268.73 +/- 2	2R3	4	0	4,409,491:10:7	
559	98	88	13:21:56.200		DMS:	:*RECORD	R806, TRACK 3, FWD, TIC *3268.73 +/- 1	2R3	4	0	4,409,491:10:7	
560	98	88	13:22:03.066	428JL6A	6RCCLR			2R3	4	0	4,409,491:21:0	
561	98	88	13:22:03.733	428JL6B	6RCSET		11	2R3	4	0	4,409,491:22:0	
562	98	88	13:22:12.400	175TF422A6A	6DMSC	R7.3	DMS Control	2R3	4	0	4,409,491:35:0	
563	98	88	13:22:12.400		DMS:	:*RUNDOWN	R806, TRACK 3, FWD, TIC *3667.41 +/- 2	2R3	4	0	4,409,491:35:0	
564	98	88	13:22:15.133		DMS:	:*RUNUP	R7, TRACK 3, FWD, TIC *3678.91 +/- 2	2R3	4	0	4,409,491:39:1	
565	98	88	13:22:16.400	175TF176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,409,491:41:0	
566	98	88	13:22:16.533		DMS:	:*AT_SPD	R7, TRACK 3, FWD, TIC 3679.03 +/- 2	2R3	4	0	4,409,491:41:2	
567	98	88	13:22:16.533		DMS:	:*RECORD	R7, TRACK 3, FWD, TIC *3679.03 +/- 2	2R3	4	0	4,409,491:41:2	
568	98	88	13:22:17.066	165IE4A	7SCAN		Check SIP Position	2R3	4	0	4,409,491:42:0	
569	98	88	13:24:31.066	428JM6A	6RCCLR		NORM:23.406,-5.2	2R3	4	0	4,409,493:61:0	
570	98	88	13:24:31.733	428JM6B	6RCSET			2R3	4	0	4,409,493:62:0	
571	98	88	13:25:37.066	20DD5A	37PL		Program Load (halts microprocessor & unwri	2R3	4	0	4,409,494:69:0	
572	98	88	13:25:44.400	20DD5B	37MRL		Memory Realocate (software operates from R	2R3	4	0	4,409,494:80:0	
573	98	88	13:25:45.733	20DD6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	2R3	4	0	4,409,494:82:0	
574	98	88	13:25:55.733	20DD6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	2R3	4	0	4,409,495:06:0	
575	98	88	13:25:55.733	14NNSUCOMP01-		-----START-----		2R3	4	0	:	
576	98	88	13:26:05.733	20DD5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,409,495:21:0	
577	98	88	13:26:07.066	20DD5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,409,495:23:0	
578	98	88	13:26:42.400	165IE4B	7VECT		Inert vect update UTC	260	4	0	4,409,495:76:0	
579	98	88	13:26:45.066	20DD4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,409,495:80:0	
580	98	88	13:26:46.400	175JE422A6A	6DMSC	R806.3	DMS Control	2R0	4	0	4,409,495:82:0	
581	98	88	13:26:46.400		DMS:	:*RUNDOWN	R7, TRACK 3, FWD, TIC *3742.28 +/- 2	2R0	4	0	4,409,495:82:0	
582	98	88	13:26:47.600		DMS:	:*RUNUP	R806, TRACK 3, FWD, TIC *3742.34 +/- 2	2R0	4	0	4,409,495:83:8	
583	98	88	13:26:52.400	175JE176A6A	6TMREC	A18	806.4 KBPS SSI RECORD Record Mode Change	2R0	4	0	4,409,496:00:0	
584	98	88	13:26:52.866		DMS:	:*AT_SPD	R806, TRACK 3, FWD, TIC 3808.34 +/- 2	2R0	4	0	4,409,496:00:7	
585	98	88	13:26:52.866		DMS:	:*RECORD	R806, TRACK 3, FWD, TIC *3808.34 +/- 2	2R0	4	0	4,409,496:00:7	
586	98	88	13:26:55.066	175TG422A6A	6DMSC	R7.3	DMS Control	2R0	4	0	4,409,496:04:0	
587	98	88	13:26:55.066		DMS:	:*RUNDOWN	R806, TRACK 3, FWD, TIC *3862.48 +/- 2	2R0	4	0	4,409,496:04:0	
588	98	88	13:26:57.800		DMS:	:*RUNUP	R7, TRACK 3, FWD, TIC *3873.98 +/- 2	2R0	4	0	4,409,496:08:1	
589	98	88	13:26:59.066	175TG176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R0	4	0	4,409,496:10:0	
590	98	88	13:26:59.200		DMS:	:*AT_SPD	R7, TRACK 3, FWD, TIC 3874.10 +/- 2	2R0	4	0	4,409,496:10:2	
591	98	88	13:26:59.200		DMS:	:*RECORD	R7, TRACK 3, FWD, TIC *3874.10 +/- 2	2R0	4	0	4,409,496:10:2	
592	98	88	13:27:05.066	175IE422A6A	6DMSC	R806.3	DMS Control	2R0	4	0	4,409,496:19:0	
593	98	88	13:27:05.066		DMS:	:*RUNDOWN	R7, TRACK 3, FWD, TIC *3875.47 +/- 2	2R0	4	0	4,409,496:19:0	
594	98	88	13:27:06.266		DMS:	:*RUNUP	R806, TRACK 3, FWD, TIC *3875.53 +/- 2	2R0	4	0	4,409,496:20:8	
595	98	88	13:27:11.066	175IE176A6A	6TMREC	A18	806.4 KBPS SSI RECORD Record Mode Change	2R0	4	0	4,409,496:28:0	
596	98	88	13:27:11.533		DMS:	:*AT_SPD	R806, TRACK 3, FWD, TIC 3941.53 +/- 3	2R0	4	0	4,409,496:28:7	
597	98	88	13:27:11.533		DMS:	:*RECORD	R806, TRACK 3, FWD, TIC *3941.53 +/- 2	2R0	4	0	4,409,496:28:7	
598	98	88	13:27:18.400	175TH422A6A	6DMSC	R7.3	DMS Control	2R0	4	0	4,409,496:39:0	
599	98	88	13:27:18.400		DMS:	:*RUNDOWN	R806, TRACK 3, FWD, TIC *4110.52 +/- 3	2R0	4	0	4,409,496:39:0	
600	98	88	13:27:21.133		DMS:	:*RUNUP	R7, TRACK 3, FWD, TIC *4122.02 +/- 3	2R0	4	0	4,409,496:43:1	
601	98	88	13:27:22.400	175TH176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R0	4	0	4,409,496:45:0	
602	98	88	13:27:22.533		DMS:	:*RECORD	R7, TRACK 3, FWD, TIC *4122.14 +/- 3	2R0	4	0	4,409,496:45:2	
603	98	88	13:27:22.533		DMS:	:*AT_SPD	R7, TRACK 3, FWD, TIC 4122.14 +/- 3	2R0	4	0	4,409,496:45:2	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
604	98	88	13:27:23.066	165IF4A	7SCAN	NORM,24.001,9.66	Check S/P Position	2R0	4	0	4,409,496:46:0	
605	98	88	13:27:45.733	20DD4B	37IOP	3.0	Long Map, Grating Start Position =00	2R3	4	0	4,409,496:80:0	
606	98	88	13:28:49.066	125DD4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R3	4	0	4,409,497:84:0	
607	98	88	13:28:49.066	125DD	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,409,497:84:0	
608	98	88	13:28:57.733	14NNSUCOMP01-	-----STOP-----			2R3	4	0	:	
609	98	88	13:28:57.733	117IF	CSMOS	GS	***** GROUP START CSMOS	2R3	4	0	4,409,498:06:0	
610	98	88	13:29:15.733	175JF422A6A	6DMSC	R806.3	DMS Control	2R3	4	0	4,409,498:33:0	
611	98	88	13:29:15.733		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *4148.67 +/- 3	2R3	4	0	4,409,498:33:0	
612	98	88	13:29:16.400	165IF4B	7VECT		Inert vect update UTC	2R3	4	0	4,409,498:34:0	
613	98	88	13:29:16.933		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *4148.73 +/- 3	2R3	4	0	4,409,498:34:8	
614	98	88	13:29:19.733	117IF105A106A4A	7STRP	0.028007,0,0,0,0	Slew = -3.27	2R3	4	0	4,409,498:39:0	
615	98	88	13:29:21.733	175JF176A6A	6TMREC	A18	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	4,409,498:42:0	
616	98	88	13:29:22.200		DMS:	: *RECORD	R806, TRACK 3, FWD, TIC *4214.73 +/- 3	2R3	4	0	4,409,498:42:7	
617	98	88	13:29:22.200		DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC 4214.73 +/- 3	2R3	4	0	4,409,498:42:7	
618	98	88	13:29:31.066	175TI422A6A	6DMSC	R7.3	DMS Control	2R3	4	0	4,409,498:56:0	
619	98	88	13:29:31.066		DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC *4432.93 +/- 3	2R3	4	0	4,409,498:56:0	
620	98	88	13:29:33.066	117IF105A106A4B	7STRP	-0.027807,0.00773	Slew = 12.01	2R3	4	0	4,409,498:59:0	
621	98	88	13:29:33.800		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *4444.43 +/- 3	2R3	4	0	4,409,498:60:1	
622	98	88	13:29:35.066	175TI176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,409,498:62:0	
623	98	88	13:29:35.200		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 4444.55 +/- 3	2R3	4	0	4,409,498:62:2	
624	98	88	13:29:35.200		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *4444.55 +/- 3	2R3	4	0	4,409,498:62:2	
625	98	88	13:29:39.066	175IF422A6A	6DMSC	R806.3	DMS Control	2R3	4	0	4,409,498:68:0	
626	98	88	13:29:39.066		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *4445.46 +/- 3	2R3	4	0	4,409,498:68:0	
627	98	88	13:29:40.266		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *4445.52 +/- 3	2R3	4	0	4,409,498:69:8	
628	98	88	13:29:43.066	117IF105A106A4C	7STRP	0.028007,0,0,0,0	Slew = -3.27	2R3	4	0	4,409,498:74:0	
629	98	88	13:29:45.066	175IF176A6A	6TMREC	A18	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	4,409,498:77:0	
630	98	88	13:29:45.533		DMS:	: *RECORD	R806, TRACK 3, FWD, TIC *4511.52 +/- 3	2R3	4	0	4,409,498:77:7	
631	98	88	13:29:45.533		DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC 4511.52 +/- 3	2R3	4	0	4,409,498:77:7	
632	98	88	13:29:49.733	428JR6A	6RCCLR			2R3	4	0	4,409,498:84:0	
633	98	88	13:29:49.733	125DD4B	37MB	0,0,0,0,0	Selects mirror (spatial) edit table	2R3	4	0	4,409,498:84:0	
634	98	88	13:29:49.733	125DD11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,409,498:84:0	
635	98	88	13:29:50.400	428JR6B	6RCSET			2R3	4	0	4,409,498:85:0	
636	98	88	13:29:54.400	175TJ422A6A	6DMSC	R7.3	DMS Control	2R3	4	0	4,409,499:00:0	
637	98	88	13:29:54.400		DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC *4729.72 +/- 3	2R3	4	0	4,409,499:00:0	
638	98	88	13:29:56.400	117IF11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	4,409,499:03:0	
639	98	88	13:29:57.133		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *4741.22 +/- 4	2R3	4	0	4,409,499:04:1	
640	98	88	13:29:58.400	14NNSUCOMP01-	-----START-----			2R3	4	0	:	
641	98	88	13:29:58.400	175TJ176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,409,499:06:0	
642	98	88	13:29:58.533		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *4741.34 +/- 4	2R3	4	0	4,409,499:06:2	
643	98	88	13:29:58.533		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 4741.34 +/- 4	2R3	4	0	4,409,499:06:2	
644	98	88	13:30:23.733	428JW6A	6RCCLR			2R3	4	0	4,409,499:44:0	
645	98	88	13:30:24.400	428JW6B	6RCSET			2R3	4	0	4,409,499:45:0	
646	98	88	13:30:50.400	127DD4A	37IOP	3.0	Long Map, Grating Start Position =00	2R3	4	0	4,409,499:84:0	
647	98	88	13:30:50.400	127DD	NIMSTAB	GS	%%/%/% GROUP START TAB	2R3	4	0	4,409,499:84:0	
648	98	88	13:30:51.066	127DD4B	37ETB	04,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	4,409,499:85:0	
649	98	88	13:30:54.400	165DD4A	7SCAN	NORM,28.542,-8.2	Check S/P Position	2R3	4	0	4,409,499:90:0	
650	98	88	13:30:59.066	127DD11A	NIMSTAB	GE	%%/%/% GROUP END TAB	2R3	4	0	4,409,500:06:0	
651	98	88	13:31:46.400	117DD	CSMOS	GS	***** GROUP START CSMOS	2R3	4	0	4,409,500:77:0	
652	98	88	13:31:47.066		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *4766.78 +/- 4	2R3	4	0	4,409,500:78:0	
653	98	88	13:31:47.066	175DD422A6A	6DMSC	R28.3	DMS Control	2R3	4	0	4,409,500:78:0	
654	98	88	13:31:48.266		DMS:	: *RUNUP	R28, TRACK 3, FWD, TIC *4766.84 +/- 4	2R3	4	0	4,409,500:79:8	
655	98	88	13:31:52.266		DMS:	: *AT SPD	R28, TRACK 3, FWD, TIC 4768.34 +/- 4	2R3	4	0	4,409,500:85:8	
656	98	88	13:31:52.266		DMS:	: *RECORD	R28, TRACK 3, FWD, TIC *4768.34 +/- 4	2R3	4	0	4,409,500:85:8	
657	98	88	13:31:52.400	175DD176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,409,500:86:0	
658	98	88	13:31:54.400	165DD4B	7VECT		Inert vect update UTC	2R3	4	0	4,409,500:89:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
659	98	88	13:31:55.733	117DD105A106A4A	7STRP	0.046032,0.0,0.0	Slew =,0.04	2R3	4	0	4,409,501:00:0	
660	98	88	13:31:55.733	14ENSUCOMP01-	NIMPBK	301DC	EUROPA SURFACE COMPOSITION	2R3	4	0	:	:
661	98	88	13:39:35.733	14ENSUCOMP01-	DESEL	300DC	EUROPA SURFACE COMPOSITION	2R3	4	0	:	:
662	98	88	13:39:35.733	14ENSUCOMP01-	NIMPBK	301FC	EUROPA SURFACE COMPOSITION	2R3	4	0	:	:
663	98	88	13:43:02.400	428JX6A	6RCCLR			2R3	4	0	4,409,511:90:0	
664	98	88	13:43:03.066	428JX6B	6RCSET			2R3	4	0	4,409,512:00:0	
665	98	88	13:47:23.066	14ENSUCOMP01-	DESEL	300FC	EUROPA SURFACE COMPOSITION	2R3	4	0	:	:
666	98	88	13:51:09.400	117DD11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	:	:
667	98	88	13:51:12.400	14ENSUCOMP01-		-----STOP-----		2R3	4	0	:	:
668	98	88	13:51:27.066	175TK422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,409,520:00:0	
669	98	88	13:51:27.066		DMS:	: *RUNDOWN	R28, TRACK 3, FWD, TIC *5800.88 +/- 4	2R3	4	0	4,409,520:28:0	
670	98	88	13:51:28.266		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *5801.18 +/- 4	2R3	4	0	4,409,520:29:8	
671	98	88	13:51:29.666		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 5801.30 +/- 4	2R3	4	0	4,409,520:31:9	
672	98	88	13:51:29.666		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *5801.30 +/- 4	2R3	4	0	4,409,520:31:9	
673	98	88	13:51:29.733	175TK176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,409,520:32:0	
674	98	88	13:57:12.400	428JZ6A	6RCCLR			2R3	4	0	4,409,526:00:0	
675	98	88	14:01:13.066	432MA431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	4,409,529:88:0	
676	98	88	14:01:13.733	432MA6A	6RTSL1		R/T Select of DDS and	2R3	4	0	4,409,529:89:0	
677	98	88	14:01:17.066		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *5938.97 +/- 4	2R3	4	0	4,409,530:03:0	
678	98	88	14:01:17.066	432OA431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	4,409,530:03:0	
679	98	88	14:01:17.066	175TK422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,530:03:0	
680	98	88	14:01:17.733	432OA6A	6RTSL1		R/T Select of DDS and	2R3	4	0	4,409,530:04:0	
681	98	88	14:01:18.266		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *5939.03 +/- 4	2R3	4	0	4,409,530:04:8	
682	98	88	14:01:19.066	14NNSUCOMP02-		-----START-----		2R3	4	0	:	:
683	98	88	14:01:21.066	282NB431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R3	4	0	4,409,530:09:0	
684	98	88	14:02:01.066	20DE5A	37PL		Program Load (halts microprocessor & unwri	2R3	4	0	4,409,530:69:0	
685	98	88	14:02:08.400	20DE5B	37MRL		Memory Realocate (software operates from R	2R3	4	0	4,409,530:80:0	
686	98	88	14:02:09.733	282NB432A431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R3	4	0	4,409,530:82:0	
687	98	88	14:02:09.733	20DE6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	2R3	4	0	4,409,530:82:0	
688	98	88	14:02:10.400		6RTSL1		R/T Select of DDS and	2R3	4	0	4,409,530:83:0	
689	98	88	14:02:19.733	20DE6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	2R3	4	0	4,409,531:06:0	
690	98	88	14:02:29.733	20DE5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,409,531:21:0	
691	98	88	14:02:31.066	20DE5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,409,531:23:0	
692	98	88	14:03:07.066	165IG4A	7SCAN	NORM,43.716,20.0	Check S/P Position	260	4	0	4,409,531:77:0	
693	98	88	14:03:09.066	20DE4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R3	4	0	4,409,531:80:0	
694	98	88	14:04:09.733	20DE4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,409,532:80:0	
695	98	88	14:05:17.733		DMS:	: *READY	RDY, TRACK *4, *REV, TIC 5939.03 +/- 4	2R3	4	0	4,409,534:00:0	
696	98	88	14:05:17.733	465KE6A	6DMSC	RDY,4	DMS Control Tape stop	2R3	4	0	4,409,534:00:0	
697	98	88	14:05:21.733	14NNSUCOMP02-		-----STOP-----		2R3	4	0	:	:
698	98	88	14:06:13.733	125DE4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R3	4	0	4,409,534:84:0	
700	98	88	14:06:13.733	125DE	NIMSNIT	GS	##### GROUP START INIT	2R3	4	0	4,409,534:84:0	
701	98	88	14:06:22.400	118IG	SMOS	GS		2R3	4	0	4,409,535:06:0	
702	98	88	14:06:59.066	175IG422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4Kb	2R3	4	0	4,409,535:61:0	
703	98	88	14:06:59.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5939.03 +/- 4	2R3	4	0	4,409,535:61:0	
704	98	88	14:07:00.466		DMS:	: *US-AT SP	P7, TRACK 1, FWD, TIC *5939.15 +/- 4	2R3	4	0	4,409,535:63:1	
705	98	88	14:07:05.733		DMS:	: *US RD	P7, TRACK 1, FWD, TIC *5940.38 +/- 4	2R3	4	0	4,409,535:71:0	
706	98	88	14:07:06.933		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *5940.44 +/- 4	2R3	4	0	4,409,535:72:8	
707	98	88	14:07:09.066	165IG4B	7VECT		Inert vect update UTC	2R3	4	0	4,409,535:76:0	
708	98	88	14:07:11.733	175IG176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,409,535:80:0	
709	98	88	14:07:12.200		DMS:	: *RECORD	R806, TRACK 4, REV, TIC *5874.44 +/- 4	2R3	4	0	4,409,535:80:7	
710	98	88	14:07:12.200		DMS:	: *AT SPD	R806, TRACK 4, REV, TIC 5874.44 +/- 4	2R3	4	0	4,409,535:80:7	
711	98	88	14:07:12.400	118IG110A11A4A	7STRP	0.00764,0.0,26.0	Slew =,3.91	2R3	4	0	4,409,535:81:0	
712	98	88	14:07:14.400	125DE11A	NIMSNIT	GE	##### GROUP END INIT	2R3	4	0	4,409,535:84:0	
713	98	88	14:07:14.400	125DE4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	2R3	4	0	4,409,535:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
714	98	88	14:07:29.733	118G110A111A4B	7STRP	-0.014281,0.0076	Slew =0.5.5	2R3	4	0	4,409,536:16.0	
715	98	88	14:07:38.400	118G110A111A4C	7STRP	0.00764,0.0,0.26,0	Slew = -3.91	2R3	4	0	4,409,536:29.0	
716	98	88	14:07:55.733	118G110A111A4D	7STRP	-0.014281,0.0076	Slew =0.5.5	2R3	4	0	4,409,536:55.0	
717	98	88	14:08:04.400	118G110A111A4E	7STRP	0.00764,0.0,0.26,0	Slew = -3.91	2R3	4	0	4,409,536:68.0	
718	98	88	14:08:27.733	118G111A	SMOS	GE		2R3	4	0	4,409,537:03.0	
719	98	88	14:08:27.733	488AE6C	6TMSED	FILL,AL3	Sci. Eng. and D/L Chan	2R3	4	0	4,409,537:12.0	
720	98	88	14:08:28.400	175IG422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,537:13.0	
721	98	88	14:08:28.400		DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *3999.21 +/- 4	2R3	4	0	4,409,537:13.0	
722	98	88	14:08:31.133		DMS:	: *READY	RDY, TRACK 4, REV, TIC *3987.71 +/- 4	2R3	4	0	4,409,537:17.1	
723	98	88	14:09:15.733	127DE	NIMSTAB	GS	%%%% GROUP START TAB	2R3	4	0	4,409,537:84.0	
724	98	88	14:09:15.733	127DE4A	37IOP	3.0	Long Map, Grating Start Position =00	2R3	4	0	4,409,537:84.0	
725	98	88	14:09:16.400	127DE4B	37ETB	04,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	4,409,537:85.0	
726	98	88	14:09:19.733	165DE4A	7SCAN	NORM,48.419,16.5	Check S/P Position	2R3	4	0	4,409,537:90.0	
727	98	88	14:09:24.400	127DE11A	NIMSTAB	GE	%%%% GROUP END TAB	2R3	4	0	4,409,538:06.0	
728	98	88	14:10:06.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3987.71 +/- 4	2R3	4	0	4,409,538:69.0	
729	98	88	14:10:06.400	175DE422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	2R3	4	0	4,409,538:69.0	
730	98	88	14:10:07.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3987.83 +/- 4	2R3	4	0	4,409,538:71.1	
731	98	88	14:10:11.733	117DE	CSMOS	GS	**** GROUP START CSMOS	2R3	4	0	4,409,538:77.0	
732	98	88	14:10:13.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3989.06 +/- 4	2R3	4	0	4,409,538:79.0	
733	98	88	14:10:14.266		DMS:	: *RUNUP	R28, TRACK *4, *REV, TIC *3989.12 +/- 4	2R3	4	0	4,409,538:80.8	
734	98	88	14:10:17.733	175DE176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,409,538:86.0	
735	98	88	14:10:18.266		DMS:	: *AT SPD	R28, TRACK 4, REV, TIC 3987.62 +/- 4	2R3	4	0	4,409,538:86.8	
736	98	88	14:10:18.266		DMS:	: *RECORD	R28, TRACK 4, REV, TIC *3987.62 +/- 4	2R3	4	0	4,409,538:86.8	
737	98	88	14:10:19.733	165DE4B	7VECT		Inert vect update UTC	2R3	4	0	4,409,538:89.0	
738	98	88	14:10:21.066	117DE105A106A4A	7STRP	0.019903,0.0,0.0	Slew = -0.03	2R3	4	0	4,409,539:00.0	
739	98	88	14:20:31.733	14NNSUCOMP03-		-----START-----		2R3	4	0	:	
740	98	88	14:20:31.733	14ENSUCOMP02-		-----STOP-----		2R3	4	0	:	
741	98	88	14:21:13.733	20DF5A	37PL		Program Load (halts microprocessor & unwri	2R3	4	0	4,409,549:69.0	
742	98	88	14:21:18.400	175DE422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,549:76.0	
743	98	88	14:21:18.400		DMS:	: *RUNDOWN	R28, TRACK 4, REV, TIC *3407.43 +/- 4	2R3	4	0	4,409,549:76.0	
744	98	88	14:21:19.600		DMS:	: *READY	RDY, TRACK 4, REV, TIC *3407.13 +/- 4	2R3	4	0	4,409,549:77.8	
745	98	88	14:21:21.066	20DF5B	37MRL		Memory Realocate (software operates from R	2R3	4	0	4,409,549:80.0	
746	98	88	14:21:22.400	20DF6A	6MCOPY	NIMS	NIMS,1000,LLM1A,7300,77F7	2R3	4	0	4,409,549:82.0	
747	98	88	14:21:28.400	117DE11A	CSMOS	GE	**** GROUP END CSMOS	2R3	4	0	4,409,550:00.0	
748	98	88	14:21:32.400	20DF6B	6MCOPY	NIMS	NIMS,1598,LLM1A,77F8,781D	2R3	4	0	4,409,550:06.0	
749	98	88	14:21:34.400	165IH4A	7SCAN	NORM,49.925,17.6	Check S/P Position	2R3	4	0	4,409,550:09.0	
750	98	88	14:21:42.400	20DF5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,409,550:21.0	
751	98	88	14:21:43.733	20DF5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,409,550:23.0	
752	98	88	14:22:21.733	20DF4A	37IST	1.2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,409,550:80.0	
753	98	88	14:22:33.066	118IH	SMOS	GS		2R0	4	0	4,409,551:06.0	
754	98	88	14:23:01.066	175IH422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R0	4	0	4,409,551:48.0	
755	98	88	14:23:01.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3407.13 +/- 4	2R0	4	0	4,409,551:48.0	
756	98	88	14:23:02.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3407.25 +/- 4	2R0	4	0	4,409,551:50.1	
757	98	88	14:23:07.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3408.48 +/- 4	2R0	4	0	4,409,551:58.0	
758	98	88	14:23:08.933		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *3408.54 +/- 4	2R0	4	0	4,409,551:59.8	
759	98	88	14:23:11.066	165IH4B	7VECT		Inert vect update UTC	2R0	4	0	4,409,551:63.0	
760	98	88	14:23:13.733	175IH176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R0	4	0	4,409,551:67.0	
761	98	88	14:23:14.200		DMS:	: *RECORD	R806, TRACK 4, REV, TIC *3342.54 +/- 4	2R0	4	0	4,409,551:67.7	
762	98	88	14:23:14.200		DMS:	: *AT SPD	R806, TRACK 4, REV, TIC 3342.54 +/- 4	2R0	4	0	4,409,551:67.7	
763	98	88	14:23:14.400	118IH110A111A4A	7STRP	0.00764,0.0,0.26,0	Slew = -3.91	2R0	4	0	4,409,551:68.0	
764	98	88	14:23:22.400	20DF4B	37IOP	3.0	Long Map, Grating Start Position =00	2R3	4	0	4,409,551:80.0	
765	98	88	14:23:31.733	118IH110A111A4B	7STRP	-0.013281,0.0076	Slew = -3.81	2R3	4	0	4,409,552:03.0	
766	98	88	14:23:40.400	118IH110A111A4C	7STRP	0.00764,0.0,0.26,0	Slew = -3.91	2R3	4	0	4,409,552:16.0	
767	98	88	14:23:57.733	118IH110A111B4A	7STRP	-0.00564,0.00764	Slew = -3.81	2R3	4	0	4,409,552:42.0	
768	98	88	14:24:06.400	118IH110A111B4B	7STRP	0.00764,0.0,0.26,0	Slew = -3.91	2R3	4	0	4,409,552:55.0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
769	98	88	14:24:15.066	118H110A111C4A	7STRP	-0.00764,0.00764	Slew =,3.81	2R3	4	0	4,409,552:68.0	
770	98	88	14:24:23.733	118H110A111C4B	7STRP	0.00764,0.0,26.0	Slew =,3.91	2R3	4	0	4,409,552:81.0	
771	98	88	14:24:32.400	118H11A	SMOS	GE		2R3	4	0	4,409,553:03.0	
772	98	88	14:24:34.400	14NNSUCOMP03-		-----STOP-----		2R3	4	0	:	
773	98	88	14:24:34.400	14ENSUCOMP03-	DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *1368.87 +/- 4	2R3	4	0	4,409,553:06.0	
774	98	88	14:24:34.400	14ENSUCOMP03-		-----START-----		2R3	4	0	:	
775	98	88	14:24:34.400	175IH422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,409,553:06.0	
776	98	88	14:24:37.133		DMS:	: *READY	RDY, TRACK 4, REV, TIC *1357.37 +/- 5	2R3	4	0	4,409,553:10.1	
777	98	88	14:24:37.733	165DF4A	7SCAN	NORM,48.839,19.8	Check S/P Position	2R3	4	0	4,409,553:11.0	
778	98	88	14:25:26.400	125DF4A	37IST	0.2,0,OFF,0,1.0	Gain State 2	2R3	4	0	4,409,553:84.0	
779	98	88	14:25:26.400	125DF	NIMSNIT	GS	##### GROUP START INIT	2R3	4	0	4,409,553:84.0	
780	98	88	14:26:27.066	125DF4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	2R3	4	0	4,409,554:84.0	
781	98	88	14:26:27.066	125DF11A	NIMSNIT	GE	##### GROUP END INIT	2R3	4	0	4,409,554:84.0	
782	98	88	14:27:27.733	127DF4A	37IOP	4.0	Long Spectrometer, Grating Start Position	2R4	4	0	4,409,555:84.0	
783	98	88	14:27:27.733	127DF	NIMSTAB	GS	%%%%%%%% GROUP START TAB	2R4	4	0	4,409,555:84.0	
784	98	88	14:27:28.400	127DF4B	37ETB	04,C4,35,FF,FF	Loads wavelength edit table	2R4	4	0	4,409,555:85.0	
785	98	88	14:27:36.400	127DF11A	NIMSTAB	GE	%%%%%%%% GROUP END TAB	2R4	4	0	4,409,556:06.0	
786	98	88	14:28:18.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1357.37 +/- 5	2R4	4	0	4,409,556:69.0	
787	98	88	14:28:18.400	175DF422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	2R4	4	0	4,409,556:69.0	
788	98	88	14:28:19.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1357.49 +/- 5	2R4	4	0	4,409,556:71.1	
789	98	88	14:28:23.733	117DF	CSMOS	GS	***** GROUP START CSMOS	2R4	4	0	4,409,556:77.0	
790	98	88	14:28:25.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1358.72 +/- 5	2R4	4	0	4,409,556:79.0	
791	98	88	14:28:26.266		DMS:	: *RUNUP	R28, TRACK *4, *REV, TIC *1358.78 +/- 5	2R4	4	0	4,409,556:80.8	
792	98	88	14:28:29.733	175DF176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R4	4	0	4,409,556:86.0	
793	98	88	14:28:30.266		DMS:	: *AT_SPD	R28, TRACK 4, REV, TIC 1357.28 +/- 5	2R4	4	0	4,409,556:86.8	
794	98	88	14:28:30.266		DMS:	: *RECORD	R28, TRACK 4, REV, TIC *1357.28 +/- 5	2R4	4	0	4,409,556:86.8	
795	98	88	14:28:31.733	165DF4B	7VECT		Inert vect update UTC	2R4	4	0	4,409,556:89.0	
796	98	88	14:28:33.066	117DF105A106A4A	7STRP	-0.028908,0.0,0.0,	Slew =,0.03	2R4	4	0	4,409,557:00.0	
797	98	88	14:34:00.400	488AE6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R4	4	0	4,409,562:36.0	
798	98	88	14:40:36.400	14ENSUCOMP03-	NIMPBK	30IDE	EUROPA SURFACE COMPOSITION	2R4	4	0	:	
799	98	88	14:43:38.400	14ENSUCOMP03-	DESEL	300DE	EUROPA SURFACE COMPOSITION	2R4	4	0	:	
800	98	88	14:44:40.400	117DF11A	CSMOS	GE	***** GROUP END CSMOS	2R4	4	0	:	
801	98	88	14:44:43.066	165GD4A	7SCAN	NORM,49.927,22.1	Check S/P Position	2R4	4	0	4,409,572:86.0	
802	98	88	14:47:17.066	488AE6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R4	4	0	4,409,575:48.0	
803	98	88	14:47:33.066	175DF422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,575:72.0	
804	98	88	14:47:33.066		DMS:	: *RUNDOWN	R28, TRACK 4, REV, TIC * 352.87 +/- 5	2R4	4	0	4,409,575:72.0	
805	98	88	14:47:34.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 352.57 +/- 5	2R4	4	0	4,409,575:73.8	
806	98	88	14:47:49.733	14ENSUCOMP03-		-----STOP-----		2R4	4	0	:	
807	98	88	14:50:47.733	176GD6A	6TMREC	BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R4	4	0	4,409,579:00.0	
808	98	88	14:51:39.066	117GD	CSMOS	GS	***** GROUP START CSMOS	2R4	4	0	4,409,579:77.0	
809	98	88	14:51:48.400	117GD105A106A4A	7STRP	0.027807,0.0,0.0	Slew =,0.98	2R4	4	0	4,409,580:00.0	
810	98	88	14:52:19.733	117GD105A106A4B	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,580:47.0	
811	98	88	14:52:34.400	117GD105A106A4C	7STRP	0.027807,0.0,0.0	Slew =,0.98	2R4	4	0	4,409,580:69.0	
812	98	88	14:53:05.733	117GD105A106A4D	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,581:25.0	
813	98	88	14:53:20.400	117GD105A106A4E	7STRP	0.027807,0.0,0.0	Slew =,0.98	2R4	4	0	4,409,581:47.0	
814	98	88	14:53:51.733	117GD105A106A4F	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,582:03.0	
815	98	88	14:54:06.400	117GD105A106A4G	7STRP	0.027807,0.0,0.0	Slew =,0.98	2R4	4	0	4,409,582:25.0	
816	98	88	14:54:37.733	117GD105A106A4H	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,582:72.0	
817	98	88	14:54:52.400	117GD105A106A4I	7STRP	0.027807,0.0,0.0	Slew =,0.98	2R4	4	0	4,409,583:03.0	
818	98	88	14:55:23.733	117GD105A106A4J	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,583:50.0	
819	98	88	14:55:38.400	117GD105A106A4K	7STRP	0.027807,0.0,0.0	Slew =,0.98	2R4	4	0	4,409,583:72.0	
820	98	88	14:56:09.733	117GD105A106A4L	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,584:28.0	
821	98	88	14:56:24.400	117GD105A106A4M	7STRP	0.027807,0.0,0.0	Slew =,0.98	2R4	4	0	4,409,584:50.0	
822	98	88	14:56:55.733	117GD105A106A4N	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,585:06.0	
823	98	88	14:57:10.400	117GD105A106A4O	7STRP	0.027807,0.0,0.0	Slew =,0.98	2R4	4	0	4,409,585:28.0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
824	98	88	14:57:41.733	117GD105A106A4P	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,585:75.0	
825	98	88	14:57:56.400	117GD105A106A4Q	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,586:06.0	
826	98	88	14:58:27.733	117GD105A106A4R	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,586:53.0	
827	98	88	14:58:42.400	117GD105A106A4S	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,586:75.0	
828	98	88	14:59:13.733	117GD105A106A4T	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,587:31.0	
829	98	88	14:59:28.400	117GD105A106A4U	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,587:53.0	
830	98	88	14:59:59.733	117GD105A106A4V	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,588:09.0	
831	98	88	15:00:14.400	117GD105A106A4W	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,588:31.0	
832	98	88	15:00:45.733	117GD105A106A4X	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,588:78.0	
833	98	88	15:01:00.400	117GD105A106A4Y	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,589:09.0	
834	98	88	15:01:31.733	117GD105A106A4Z	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,589:56.0	
835	98	88	15:01:46.400	117GD105A106A4A	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,589:78.0	
836	98	88	15:02:17.733	117GD105A106A4AB	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,590:34.0	
837	98	88	15:02:32.400	117GD105A106A4AC	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,590:56.0	
838	98	88	15:03:03.733	117GD105A106A4AD	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,591:12.0	
839	98	88	15:03:18.400	117GD105A106A4AE	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,591:34.0	
840	98	88	15:03:22.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,591:40.0	
841	98	88	15:03:22.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 352.57 +/- 5	2R4	4	0	4,409,591:40.0	
842	98	88	15:03:23.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 352.69 +/- 5	2R4	4	0	4,409,591:42.1	
843	98	88	15:03:29.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 353.92 +/- 5	2R4	4	0	4,409,591:50.0	
844	98	88	15:03:30.266		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC * 353.98 +/- 5	2R4	4	0	4,409,591:51.8	
845	98	88	15:03:31.666		DMS:	: *AT SPD	R7, TRACK 4, REV, TIC * 353.86 +/- 5	2R4	4	0	4,409,591:53.9	
846	98	88	15:03:47.733		DMS:	: *RECORD	R7, TRACK 4, REV, TIC * 350.10 +/- 5	2R4	4	0	4,409,591:78.0	
847	98	88	15:03:49.733	117GD105A106A4AF	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,591:81.0	
848	98	88	15:04:04.400	117GD105A106A4AG	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,592:12.0	
849	98	88	15:04:10.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,592:21.0	
850	98	88	15:04:10.400		DMS:	: *RUNDOWN	R7, TRACK 4, REV, TIC * 344.79 +/- 5	2R4	4	0	4,409,592:21.0	
851	98	88	15:04:11.600		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 344.73 +/- 5	2R4	4	0	4,409,592:22.8	
852	98	88	15:04:35.733	117GD105A106A4AH	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,592:59.0	
853	98	88	15:04:50.400	117GD105A106A4AI	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,592:81.0	
854	98	88	15:05:21.733	117GD105A106A4AJ	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,593:37.0	
855	98	88	15:05:36.400	117GD105A106A4AK	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,593:59.0	
856	98	88	15:06:07.733	117GD105A106A4AL	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,594:15.0	
857	98	88	15:06:22.400	117GD105A106A4AM	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,594:37.0	
858	98	88	15:06:53.733	117GD105A106A4AN	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,594:84.0	
859	98	88	15:07:08.400	117GD105A106A4AO	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,595:15.0	
860	98	88	15:07:39.733	117GD105A106A4AP	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,595:62.0	
861	98	88	15:07:54.400	117GD105A106A4AQ	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,595:84.0	
862	98	88	15:08:25.733	117GD105A106A4AR	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,596:40.0	
863	98	88	15:08:40.400	117GD105A106A4AS	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,596:62.0	
864	98	88	15:09:11.733	117GD105A106A4AT	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,597:18.0	
865	98	88	15:09:26.400	117GD105A106A4AU	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,597:40.0	
866	98	88	15:09:57.733	117GD105A106A4AV	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,597:87.0	
867	98	88	15:10:12.400	117GD105A106A4AW	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,598:18.0	
868	98	88	15:10:43.733	117GD105A106A4AX	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,598:65.0	
869	98	88	15:10:58.400	117GD105A106A4AY	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,598:87.0	
870	98	88	15:11:29.733	117GD105A106A4AZ	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,599:43.0	
871	98	88	15:11:44.400	117GD105A106A4BA	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,599:65.0	
872	98	88	15:12:15.733	117GD105A106A4BB	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,600:21.0	
873	98	88	15:12:30.400	117GD105A106A4BC	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,600:43.0	
874	98	88	15:13:01.733	117GD105A106A4BD	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,600:90.0	
875	98	88	15:13:16.400	117GD105A106A4BE	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,601:21.0	
876	98	88	15:13:47.733	117GD105A106A4BF	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,601:68.0	
877	98	88	15:14:02.400	117GD105A106A4BG	7STRP	0.027807,0.0,0.0	Slew =0.98	2R4	4	0	4,409,601:90.0	
878	98	88	15:14:33.733	117GD105A106A4BH	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,602:46.0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
879	98	88	15:14:48.400	117GD105A106A4BI	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,602:68:0	
880	98	88	15:15:19.733	117GD105A106A4BJ	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,603:24:0	
881	98	88	15:15:34.400	117GD105A106A4BK	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,603:46:0	
882	98	88	15:16:05.733	117GD105A106A4BL	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,604:02:0	
883	98	88	15:16:20.400	117GD105A106A4BM	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,604:24:0	
884	98	88	15:16:24.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 344.73 +/- 5	2R4	4	0	4,409,604:30:0	
885	98	88	15:16:24.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,604:30:0	
886	98	88	15:16:25.800		DMS:	: *US AT_SP	P7, TRACK 1, FWD, TIC * 344.85 +/- 5	2R4	4	0	4,409,604:32:1	
887	98	88	15:16:31.066		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 346.08 +/- 5	2R4	4	0	4,409,604:40:0	
888	98	88	15:16:32.266		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC * 346.14 +/- 5	2R4	4	0	4,409,604:41:8	
889	98	88	15:16:33.666		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC * 346.02 +/- 5	2R4	4	0	4,409,604:43:9	
890	98	88	15:16:49.733		DMS:	: *RECORD	R7, TRACK 4, REV, TIC * 342.26 +/- 5	2R4	4	0	4,409,604:68:0	
891	98	88	15:16:51.733	117GD105A106A4BN	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,604:71:0	
892	98	88	15:17:06.400	117GD105A106A4BO	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,605:02:0	
893	98	88	15:17:12.400		DMS:	: *RUNDOWN	R7, TRACK 4, REV, TIC * 336.94 +/- 5	2R4	4	0	4,409,605:11:0	
894	98	88	15:17:12.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,605:11:0	
895	98	88	15:17:13.600		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 336.88 +/- 5	2R4	4	0	4,409,605:12:8	
896	98	88	15:17:37.733	117GD105A106A4BP	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,605:49:0	
897	98	88	15:17:52.400	117GD105A106A4BQ	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,605:71:0	
898	98	88	15:18:23.733	117GD105A106A4BR	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,606:27:0	
899	98	88	15:18:38.400	117GD105A106A4BS	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,606:49:0	
900	98	88	15:19:09.733	117GD105A106A4BT	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,607:05:0	
901	98	88	15:19:24.400	117GD105A106A4BU	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,607:27:0	
902	98	88	15:19:55.733	117GD105A106A4BV	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,607:74:0	
903	98	88	15:20:10.400	117GD105A106A4BW	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,608:05:0	
904	98	88	15:20:41.733	117GD105A106A4BX	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,608:52:0	
905	98	88	15:20:56.400	117GD105A106A4BY	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,608:74:0	
906	98	88	15:21:27.733	117GD105A106A4BZ	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,609:30:0	
907	98	88	15:21:42.400	117GD105A106A4CA	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,609:52:0	
908	98	88	15:22:13.733	117GD105A106A4CB	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,610:08:0	
909	98	88	15:22:28.400	117GD105A106A4CC	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,610:30:0	
910	98	88	15:22:59.733	117GD105A106A4CD	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,610:77:0	
911	98	88	15:23:14.400	117GD105A106A4CE	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,611:08:0	
912	98	88	15:23:45.733	117GD105A106A4CF	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,611:55:0	
913	98	88	15:24:00.400	117GD105A106A4CG	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,611:77:0	
914	98	88	15:24:31.733	117GD105A106A4CH	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,612:33:0	
915	98	88	15:24:46.400	117GD105A106A4CI	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,612:55:0	
916	98	88	15:25:17.733	117GD105A106A4CJ	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,613:11:0	
917	98	88	15:25:32.400	117GD105A106A4CK	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,613:33:0	
918	98	88	15:26:03.733	117GD105A106A4CL	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,613:80:0	
919	98	88	15:26:18.400	117GD105A106A4CM	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,614:11:0	
920	98	88	15:26:49.733	117GD105A106A4CN	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,614:58:0	
921	98	88	15:27:04.400	117GD105A106A4CO	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,614:80:0	
922	98	88	15:27:35.733	117GD105A106A4CP	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,615:36:0	
923	98	88	15:27:50.400	117GD105A106A4CQ	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,615:58:0	
924	98	88	15:28:21.733	117GD105A106A4CR	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,616:14:0	
925	98	88	15:28:36.400	117GD105A106A4CS	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,616:36:0	
926	98	88	15:29:07.733	117GD105A106A4CT	7STRP	-0.00039,0.00105	Slew = 17.01	2R4	4	0	4,409,616:83:0	
927	98	88	15:29:22.400	117GD105A106A4CU	7STRP	0.027807,0.00105	Slew = 0.98	2R4	4	0	4,409,617:14:0	
928	98	88	15:29:26.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 336.88 +/- 5	2R4	4	0	4,409,617:20:0	
929	98	88	15:29:26.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,617:20:0	
930	98	88	15:29:27.800		DMS:	: *US AT_SP	P7, TRACK 1, FWD, TIC * 337.00 +/- 5	2R4	4	0	4,409,617:22:1	
931	98	88	15:29:33.066		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 338.24 +/- 5	2R4	4	0	4,409,617:30:0	
932	98	88	15:29:34.266		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC * 338.30 +/- 5	2R4	4	0	4,409,617:31:8	
933	98	88	15:29:35.666		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC * 338.18 +/- 5	2R4	4	0	4,409,617:33:9	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
934	98	88	15:29:51.733		DMS:	:*RECORD	R7, TRACK 4, REV, TIC * 334.41 +/- 5	2R4	4	0	4,409,617:58:0	
935	98	88	15:29:53.733	117GD105A106A4CV	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,617:61:0	
936	98	88	15:30:08.400	117GD105A106A4CW	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,617:83:0	
937	98	88	15:30:14.400		DMS:	:*RUNDOWN	R7, TRACK 4, REV, TIC * 329.10 +/- 5	2R4	4	0	4,409,618:01:0	
938	98	88	15:30:14.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,618:01:0	
939	98	88	15:30:15.600		DMS:	:*READY	RDY, TRACK 4, REV, TIC * 329.04 +/- 5	2R4	4	0	4,409,618:02:8	
940	98	88	15:30:39.733	117GD105A106A4CX	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,618:39:0	
941	98	88	15:30:54.400	117GD105A106A4CY	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,618:61:0	
942	98	88	15:31:25.733	117GD105A106A4CZ	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,619:17:0	
943	98	88	15:31:40.400	117GD105A106A4DA	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,619:39:0	
944	98	88	15:32:11.733	117GD105A106A4DB	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,619:86:0	
945	98	88	15:32:26.400	117GD105A106A4DC	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,620:17:0	
946	98	88	15:32:57.733	117GD105A106A4DD	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,620:64:0	
947	98	88	15:33:12.400	117GD105A106A4DE	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,620:86:0	
948	98	88	15:33:43.733	117GD105A106A4DF	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,621:42:0	
949	98	88	15:33:58.400	117GD105A106A4DG	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,621:64:0	
950	98	88	15:34:29.733	117GD105A106A4DH	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,622:20:0	
951	98	88	15:34:44.400	117GD105A106A4DI	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,622:42:0	
952	98	88	15:35:15.733	117GD105A106A4DJ	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,622:89:0	
953	98	88	15:35:30.400	117GD105A106A4DK	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,623:20:0	
954	98	88	15:36:01.733	117GD105A106A4DL	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,623:67:0	
955	98	88	15:36:16.400	117GD105A106A4DM	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,623:89:0	
956	98	88	15:36:47.733	117GD105A106A4DN	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,624:45:0	
957	98	88	15:37:02.400	117GD105A106A4DO	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,624:67:0	
958	98	88	15:37:33.733	117GD105A106A4DP	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,625:23:0	
959	98	88	15:37:48.400	117GD105A106A4DQ	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,625:45:0	
960	98	88	15:38:19.733	117GD105A106A4DR	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,626:01:0	
961	98	88	15:38:34.400	117GD105A106A4DS	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,626:23:0	
962	98	88	15:39:05.733	117GD105A106A4DT	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,626:70:0	
963	98	88	15:39:20.400	117GD105A106A4DU	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,627:01:0	
964	98	88	15:39:51.733	117GD105A106A4DV	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,627:48:0	
965	98	88	15:40:06.400	117GD105A106A4DW	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,627:70:0	
966	98	88	15:40:37.733	117GD105A106A4DX	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,628:26:0	
967	98	88	15:40:52.400	117GD105A106A4DY	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,628:48:0	
968	98	88	15:41:23.733	117GD105A106A4DZ	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,629:04:0	
969	98	88	15:41:38.400	117GD105A106A4EA	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,629:26:0	
970	98	88	15:42:09.733	117GD105A106A4EB	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,629:73:0	
971	98	88	15:42:24.400	117GD105A106A4EC	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,630:04:0	
972	98	88	15:42:29.066		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 329.04 +/- 5	2R4	4	0	4,409,630:11:0	
973	98	88	15:42:30.466	50ZZ6XX	6DMSC	RDY,0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,630:11:0	
974	98	88	15:42:35.733		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC * 329.16 +/- 5	2R4	4	0	4,409,630:13:1	
975	98	88	15:42:35.733		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC * 330.39 +/- 5	2R4	4	0	4,409,630:21:0	
976	98	88	15:42:36.933		DMS:	:*RUNUP	R7, TRACK *4, *REV, TIC * 330.45 +/- 5	2R4	4	0	4,409,630:22:8	
977	98	88	15:42:38.333		DMS:	:*AT_SPD	R7, TRACK 4, REV, TIC * 330.33 +/- 5	2R4	4	0	4,409,630:24:9	
978	98	88	15:42:53.733		DMS:	:*RECORD	R7, TRACK 4, REV, TIC * 326.72 +/- 5	2R4	4	0	4,409,630:48:0	
979	98	88	15:42:55.733	117GD105A106A4ED	7STRP	-0.00039,0.00105	Slew =17.01	2R4	4	0	4,409,630:51:0	
980	98	88	15:43:10.400	117GD105A106A4EE	7STRP	0.027807,0.0,0.0	Slew =-0.98	2R4	4	0	4,409,630:73:0	
981	98	88	15:43:16.400		DMS:	:*RUNDOWN	R7, TRACK 4, REV, TIC * 321.41 +/- 5	2R4	4	0	4,409,630:82:0	
982	98	88	15:43:16.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,630:82:0	
983	98	88	15:43:17.600		DMS:	:*READY	RDY, TRACK 4, REV, TIC * 321.35 +/- 5	2R4	4	0	4,409,630:83:8	
984	98	88	15:43:41.733	117GD105A106B4A	7STRP	-0.015001,0.0,0.0,	Slew =17.01	2R4	4	0	4,409,631:29:0	
985	98	88	15:43:52.400	117GD105A106B4B	7STRP	0.0,0.0,0.0,0.0,0.0,	Slew =-0.98	2R4	4	0	4,409,631:45:0	
986	98	88	15:44:55.066	117GD11A	CSMOS	GE	***** GROUP END CSMOS	2R4	4	0	4,409,632:48:0	
987	98	88	15:46:23.733	165GE4A	7SCAN	NORM,51.082,21.6	Check S/P Position	2R4	4	0	4,409,633:90:0	
988	98	88	15:46:24.400	176GD6B	6TMREC	NRC	NO RECORD Record Mode Change	2R4	4	0	4,409,634:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
989	98	88	15:46:26.400		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 321.35 +/- 5	2R4	4	0	4,409,634:030	
990	98	88	15:46:26.400	50ZZ6XX	6DMSC	R7.0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,634:030	
991	98	88	15:46:27.800		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC * 321.47 +/- 5	2R4	4	0	4,409,634:051	
992	98	88	15:46:33.066		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC * 322.71 +/- 5	2R4	4	0	4,409,634:130	
993	98	88	15:46:34.266		DMS:	:*RUNUP	R7, TRACK *4, *REV, TIC * 322.77 +/- 5	2R4	4	0	4,409,634:148	
994	98	88	15:46:35.666		DMS:	:*AT_SPD	R7, TRACK 4, REV, TIC * 322.65 +/- 5	2R4	4	0	4,409,634:169	
995	98	88	15:46:36.400		DMS:	:*RECORD	R7, TRACK 4, REV, TIC * 322.47 +/- 5	2R4	4	0	4,409,634:180	
996	98	88	15:46:49.066	50ZZ6RE	6DMSC	RDY.0	DMS Control Tape stop	2R4	4	0	4,409,634:370	
997	98	88	15:46:49.066		DMS:	:*RUNDOWN	R7, TRACK 4, REV, TIC * 319.51 +/- 5	2R4	4	0	4,409,634:370	
998	98	88	15:46:50.266		DMS:	:*READY	RDY, TRACK 4, REV, TIC * 319.45 +/- 5	2R4	4	0	4,409,634:388	
999	98	88	15:52:28.400	176GE6A	6TMREC	BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R4	4	0	4,409,640:000	
1000	98	88	15:53:19.733	117GE	CSMOS	GS	***** GROUP START CSMOS	2R4	4	0	4,409,640:770	
1001	98	88	15:53:29.066	117GE105A106A4A	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,641:000	
1002	98	88	15:54:22.400	117GE105A106A4B	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,641:800	
1003	98	88	15:54:35.733	117GE105A106A4C	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,642:090	
1004	98	88	15:55:29.066	117GE105A106A4D	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,642:890	
1005	98	88	15:55:42.400	117GE105A106A4E	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,643:180	
1006	98	88	15:56:35.733	117GE105A106A4F	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,644:070	
1007	98	88	15:56:49.066	117GE105A106A4G	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,644:270	
1008	98	88	15:57:42.400	117GE105A106A4H	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,645:160	
1009	98	88	15:57:55.733	117GE105A106A4I	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,645:360	
1010	98	88	15:58:49.066	117GE105A106A4J	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,646:250	
1011	98	88	15:59:02.400	117GE105A106A4K	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,646:450	
1012	98	88	15:59:55.733	117GE105A106A4L	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,647:340	
1013	98	88	16:00:09.066	117GE105A106A4M	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,647:540	
1014	98	88	16:01:02.400	117GE105A106A4N	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,648:430	
1015	98	88	16:01:15.733	117GE105A106A4O	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,648:630	
1016	98	88	16:02:09.066	117GE105A106A4P	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,649:520	
1017	98	88	16:02:22.400	117GE105A106A4Q	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,649:720	
1018	98	88	16:03:15.733	117GE105A106A4R	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,650:610	
1019	98	88	16:03:29.066	117GE105A106A4S	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,650:810	
1020	98	88	16:04:22.400	117GE105A106A4T	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,651:700	
1021	98	88	16:04:35.733	117GE105A106A4U	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,651:900	
1022	98	88	16:05:03.066		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 319.45 +/- 5	2R4	4	0	4,409,652:400	
1023	98	88	16:05:03.066	50ZZ6XX	6DMSC	R7.0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,652:400	
1024	98	88	16:05:04.466		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC * 319.57 +/- 5	2R4	4	0	4,409,652:421	
1025	98	88	16:05:09.733		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC * 320.80 +/- 5	2R4	4	0	4,409,652:500	
1026	98	88	16:05:10.933		DMS:	:*RUNUP	R7, TRACK *4, *REV, TIC * 320.86 +/- 5	2R4	4	0	4,409,652:518	
1027	98	88	16:05:12.333		DMS:	:*AT_SPD	R7, TRACK 4, REV, TIC * 320.74 +/- 5	2R4	4	0	4,409,652:539	
1028	98	88	16:05:28.400		DMS:	:*RECORD	R7, TRACK 4, REV, TIC * 316.97 +/- 5	2R4	4	0	4,409,652:790	
1029	98	88	16:05:29.066	117GE105A106A4V	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,652:790	
1030	98	88	16:05:42.400	117GE105A106A4W	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,653:080	
1031	98	88	16:05:51.066	50ZZ6RD	6DMSC	RDY.0	DMS Control Tape stop	2R4	4	0	4,409,653:210	
1032	98	88	16:05:51.066		DMS:	:*RUNDOWN	R7, TRACK 4, REV, TIC * 311.66 +/- 5	2R4	4	0	4,409,653:210	
1033	98	88	16:05:52.266		DMS:	:*READY	RDY, TRACK 4, REV, TIC * 311.60 +/- 5	2R4	4	0	4,409,653:228	
1034	98	88	16:06:35.733	117GE105A106A4X	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,653:880	
1035	98	88	16:06:49.066	117GE105A106A4Y	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,654:170	
1036	98	88	16:07:42.400	117GE105A106A4Z	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,655:060	
1037	98	88	16:07:55.733	117GE105A106A4A	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,655:260	
1038	98	88	16:08:49.066	117GE105A106A4AB	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,656:150	
1039	98	88	16:09:02.400	117GE105A106A4AC	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,656:350	
1040	98	88	16:09:55.733	117GE105A106A4AD	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,657:240	
1041	98	88	16:10:09.066	117GE105A106A4AE	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,657:440	
1042	98	88	16:11:02.400	117GE105A106A4AF	7STRP	-0.00015,0.00093	Slew =17.01	2R4	4	0	4,409,658:330	
1043	98	88	16:11:15.733	117GE105A106A4AG	7STRP	0.025506,0.0,0.0	Slew =-0.51	2R4	4	0	4,409,658:530	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
1044	98	88	16:12:09.066	117GE105A106A4AH	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,659;42.0	
1045	98	88	16:12:22.400	117GE105A106A4AI	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,659;62.0	
1046	98	88	16:13:15.733	117GE105A106A4AJ	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,660;51.0	
1047	98	88	16:13:29.066	117GE105A106A4AK	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,660;71.0	
1048	98	88	16:14:22.400	117GE105A106A4AL	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,661;60.0	
1049	98	88	16:14:35.733	117GE105A106A4AM	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,661;80.0	
1050	98	88	16:15:29.066	117GE105A106A4AN	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,662;69.0	
1051	98	88	16:15:42.400	117GE105A106A4AO	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,662;89.0	
1052	98	88	16:16:35.733	117GE105A106A4AP	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,663;78.0	
1053	98	88	16:16:49.066	117GE105A106A4AQ	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,664;07.0	
1054	98	88	16:17:42.400	117GE105A106A4AR	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,664;87.0	
1055	98	88	16:17:55.733	117GE105A106A4AS	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,665;16.0	
1056	98	88	16:18:05.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 311.60 +/- 5	2R4	4	0	4,409,665;30.0	
1057	98	88	16:18:05.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,665;30.0	
1058	98	88	16:18:06.466		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC * 311.72 +/- 5	2R4	4	0	4,409,665;32.1	
1059	98	88	16:18:11.733		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 312.96 +/- 5	2R4	4	0	4,409,665;40.0	
1060	98	88	16:18:12.933		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC * 313.02 +/- 5	2R4	4	0	4,409,665;41.8	
1061	98	88	16:18:14.333		DMS:	: *AT SPD	R7, TRACK 4, REV, TIC * 312.90 +/- 5	2R4	4	0	4,409,665;43.9	
1062	98	88	16:18:30.400		DMS:	: *RECORD	R7, TRACK 4, REV, TIC * 309.13 +/- 5	2R4	4	0	4,409,665;68.0	
1063	98	88	16:18:49.066	117GE105A106A4AT	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,666;05.0	
1064	98	88	16:18:53.066	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,666;11.0	
1065	98	88	16:18:53.066		DMS:	: *RUNDOWN	R7, TRACK 4, REV, TIC * 303.82 +/- 5	2R4	4	0	4,409,666;11.0	
1066	98	88	16:18:54.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 303.76 +/- 5	2R4	4	0	4,409,666;12.8	
1067	98	88	16:19:02.400	117GE105A106A4AU	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,666;25.0	
1068	98	88	16:19:55.733	117GE105A106A4AV	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,667;14.0	
1069	98	88	16:20:09.066	117GE105A106A4AW	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,667;34.0	
1070	98	88	16:21:02.400	117GE105A106A4AX	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,668;23.0	
1071	98	88	16:21:15.733	117GE105A106A4AY	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,668;43.0	
1072	98	88	16:22:09.066	117GE105A106A4AZ	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,669;32.0	
1073	98	88	16:22:22.400	117GE105A106A4BA	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,669;52.0	
1074	98	88	16:23:15.733	117GE105A106A4BB	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,670;41.0	
1075	98	88	16:23:29.066	117GE105A106A4BC	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,670;61.0	
1076	98	88	16:24:22.400	117GE105A106A4BD	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,671;50.0	
1077	98	88	16:24:35.733	117GE105A106A4BE	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,671;70.0	
1078	98	88	16:25:29.066	117GE105A106A4BF	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,672;59.0	
1079	98	88	16:25:42.400	117GE105A106A4BG	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,672;79.0	
1080	98	88	16:26:35.733	117GE105A106A4BH	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,673;68.0	
1081	98	88	16:26:49.066	117GE105A106A4BI	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,673;88.0	
1082	98	88	16:27:42.400	117GE105A106A4BJ	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,674;77.0	
1083	98	88	16:27:55.733	117GE105A106A4BK	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,675;06.0	
1084	98	88	16:28:49.066	117GE105A106A4BL	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,675;86.0	
1085	98	88	16:29:02.400	117GE105A106A4BM	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,676;15.0	
1086	98	88	16:29:55.733	117GE105A106A4BN	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,677;04.0	
1087	98	88	16:30:09.066	117GE105A106A4BO	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,677;24.0	
1088	98	88	16:31:02.400	117GE105A106A4BP	7STRP	-0.00015;0.00093	Slew =17.01	2R4	4	0	4,409,678;13.0	
1089	98	88	16:31:07.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 303.76 +/- 5	2R4	4	0	4,409,678;20.0	
1090	98	88	16:31:07.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,678;20.0	
1091	98	88	16:31:08.466		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC * 303.88 +/- 5	2R4	4	0	4,409,678;22.1	
1092	98	88	16:31:13.733		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 305.11 +/- 5	2R4	4	0	4,409,678;30.0	
1093	98	88	16:31:14.933		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC * 305.17 +/- 5	2R4	4	0	4,409,678;31.8	
1094	98	88	16:31:15.733	117GE105A106A4BQ	7STRP	0.025506;0.0;0.0	Slew =0.51	2R4	4	0	4,409,678;33.0	
1095	98	88	16:31:16.333		DMS:	: *AT SPD	R7, TRACK 4, REV, TIC * 305.05 +/- 5	2R4	4	0	4,409,678;33.9	
1096	98	88	16:31:32.400		DMS:	: *RECORD	R7, TRACK 4, REV, TIC * 301.29 +/- 5	2R4	4	0	4,409,678;58.0	
1097	98	88	16:31:55.066	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,679;01.0	
1098	98	88	16:31:55.066		DMS:	: *RUNDOWN	R7, TRACK 4, REV, TIC * 295.97 +/- 5	2R4	4	0	4,409,679;01.0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
1099	98	88	16:31:56.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 295.91 +/- 5	2R4	4	0	4,409,679:02:8	
1100	98	88	16:32:09.066	117GE105A106A4BR	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,679:22:0	
1101	98	88	16:32:22.400	117GE105A106A4BS	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,679:42:0	
1102	98	88	16:33:15.733	117GE105A106A4BT	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,680:31:0	
1103	98	88	16:33:29.066	117GE105A106A4BU	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,680:51:0	
1104	98	88	16:34:22.400	117GE105A106A4BV	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,681:40:0	
1105	98	88	16:34:35.733	117GE105A106A4BW	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,681:60:0	
1106	98	88	16:35:29.066	117GE105A106A4BX	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,682:49:0	
1107	98	88	16:35:42.400	117GE105A106A4BY	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,682:69:0	
1108	98	88	16:36:35.733	117GE105A106A4BZ	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,683:58:0	
1109	98	88	16:36:49.066	117GE105A106A4CA	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,683:78:0	
1110	98	88	16:37:42.400	117GE105A106A4CB	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,684:67:0	
1111	98	88	16:37:55.733	117GE105A106A4CC	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,684:87:0	
1112	98	88	16:38:49.066	117GE105A106A4CD	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,685:76:0	
1113	98	88	16:39:02.400	117GE105A106A4CE	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,686:05:0	
1114	98	88	16:39:55.733	117GE105A106A4CF	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,686:85:0	
1115	98	88	16:40:09.066	117GE105A106A4CG	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,687:14:0	
1116	98	88	16:41:02.400	117GE105A106A4CH	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,688:03:0	
1117	98	88	16:41:15.733	117GE105A106A4CI	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,688:23:0	
1118	98	88	16:42:09.066	117GE105A106A4CJ	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,689:12:0	
1119	98	88	16:42:22.400	117GE105A106A4CK	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,689:32:0	
1120	98	88	16:43:15.733	117GE105A106A4CL	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,690:21:0	
1121	98	88	16:43:29.066	117GE105A106A4CM	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,690:41:0	
1122	98	88	16:44:09.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,691:11:0	
1123	98	88	16:44:09.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 295.91 +/- 5	2R4	4	0	4,409,691:11:0	
1124	98	88	16:44:11.133		DMS:	: *US-AT SP	P7, TRACK 1, FWD, TIC * 296.03 +/- 5	2R4	4	0	4,409,691:13:1	
1125	98	88	16:44:16.400		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 297.27 +/- 5	2R4	4	0	4,409,691:21:0	
1126	98	88	16:44:17.600		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC * 297.33 +/- 5	2R4	4	0	4,409,691:22:8	
1127	98	88	16:44:19.000		DMS:	: *AT SPD	R7, TRACK 4, REV, TIC * 297.21 +/- 5	2R4	4	0	4,409,691:24:9	
1128	98	88	16:44:22.400	117GE105A106A4CN	7STRP	-0.00015,0.00093	Slew = 17.01	2R4	4	0	4,409,691:30:0	
1129	98	88	16:44:34.400		DMS:	: *RECORD	R7, TRACK 4, REV, TIC * 293.60 +/- 5	2R4	4	0	4,409,691:48:0	
1130	98	88	16:44:35.733	117GE105A106A4CO	7STRP	0.025506,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,691:50:0	
1131	98	88	16:44:57.066		DMS:	: *RUNDOWN	R7, TRACK 4, REV, TIC * 288.29 +/- 5	2R4	4	0	4,409,691:82:0	
1132	98	88	16:44:57.066	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,691:82:0	
1133	98	88	16:44:58.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 288.23 +/- 5	2R4	4	0	4,409,691:83:8	
1134	98	88	16:45:29.066	117GE105A106B4A	7STRP	0.035014,0.0,0.0	Slew = 17.01	2R4	4	0	4,409,692:39:0	
1135	98	88	16:45:34.400	117GE105A106B4B	7STRP	0.0,0.0,0.0,0.0	Slew = 0.51	2R4	4	0	4,409,692:47:0	
1136	98	88	16:46:35.066	117GE11A	CSMOS	GE	***** GROUP END CSMOS	2R4	4	0	4,409,693:47:0	
1137	98	88	16:47:04.400	176GE6B	6TMREC	NRC	NO RECORD Record Mode Change	2R4	4	0	4,409,694:00:0	
1138	98	88	16:47:06.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 288.23 +/- 5	2R4	4	0	4,409,694:03:0	
1139	98	88	16:47:06.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R4	4	0	4,409,694:03:0	
1140	98	88	16:47:07.800		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC * 288.35 +/- 5	2R4	4	0	4,409,694:05:1	
1141	98	88	16:47:13.066		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 289.58 +/- 5	2R4	4	0	4,409,694:13:0	
1142	98	88	16:47:14.266		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC * 289.64 +/- 5	2R4	4	0	4,409,694:14:8	
1143	98	88	16:47:15.666		DMS:	: *AT SPD	R7, TRACK 4, REV, TIC * 289.52 +/- 5	2R4	4	0	4,409,694:16:9	
1144	98	88	16:47:16.400		DMS:	: *RECORD	R7, TRACK 4, REV, TIC * 289.35 +/- 5	2R4	4	0	4,409,694:18:0	
1145	98	88	16:47:28.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,694:36:0	
1146	98	88	16:47:28.400		DMS:	: *RUNDOWN	R7, TRACK 4, REV, TIC * 286.54 +/- 5	2R4	4	0	4,409,694:36:0	
1147	98	88	16:47:29.600		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 286.48 +/- 5	2R4	4	0	4,409,694:37:8	
1148	98	88	16:49:59.733	465KF6A	6DTRN	CMD:6DTRN,465KF6	DMS TRACK TURNAROUND	2R4	4	0	4,409,696:81:0	
1149	98	88	16:49:59.733		DMS:	: *US-RUNUP	P7, TRACK 4, REV, TIC 286.48 +/- 5	2R4	4	0	4,409,696:81:0	
1150	98	88	16:49:59.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 286.48 +/- 5	2R4	4	0	4,409,696:81:0	
1151	98	88	16:50:01.133		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC * 286.60 +/- 5	2R4	4	0	4,409,696:83:1	
1152	98	88	16:50:06.400		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 287.83 +/- 5	2R4	4	0	4,409,697:00:0	
1153	98	88	16:50:07.600		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 287.89 +/- 5	2R4	4	0	4,409,697:01:8	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
1154	98	88	16:50:09.000		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 287.77 +/- 5	2R4	4	0	4,409,897:03:9	
1155	98	88	16:56:24.000		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/- 5	2R4	4	0	4,409,703:20:4	
1156	98	88	16:56:25.200		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/- 5	2R4	4	0	4,409,703:22:2	
1157	98	88	16:56:25.200		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/- 5	2R4	4	0	4,409,703:22:2	
1158	98	88	16:56:26.600		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2R4	4	0	4,409,703:24:3	
1159	98	88	16:56:38.600		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2R4	4	0	4,409,703:42:3	
1160	98	88	16:56:39.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2R4	4	0	4,409,703:44:1	
1161	98	88	19:20:37.733		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2R4	4	0	4,409,845:79:0	
1162	98	88	19:20:37.733	465KG6A	6DMSC	P7,1	DMS Control Tape P/B 7.68kbps	2R4	4	0	4,409,845:79:0	
1163	98	88	19:20:44.400		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	2R4	4	0	4,409,845:89:0	
1164	98	88	19:20:45.800		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC 202.24 +/-	2R4	4	0	4,409,846:00:1	
1165	98	88	19:20:45.800		DMS:	: *P_SLEW	P7, TRACK 1, FWD, TIC * 202.24 +/-	2R4	4	0	4,409,846:00:1	
1166	98	88	19:20:59.733	165II4A	7SCAN	NORM:51.572,20.2	Check S/P Position	2R4	4	0	4,409,846:21:0	
1167	98	88	19:21:46.400	465KG6B	6DMSC	RDY,1	DMS Control Tape stop	2R4	4	0	4,409,847:00:0	
1168	98	88	19:21:46.400		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC * 216.45 +/-	2R4	4	0	4,409,847:00:0	
1169	98	88	19:21:47.600		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 216.51 +/-	2R4	4	0	4,409,847:01:8	
1170	98	88	19:22:51.066	118II	SMOS	GS		2R4	4	0	4,409,848:06:0	
1171	98	88	19:23:11.733	175JI422A6A	6DMSC	R806,1	DMS Control	2R4	4	0	4,409,848:37:0	
1172	98	88	19:23:11.733		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 216.51 +/-	2R4	4	0	4,409,848:37:0	
1173	98	88	19:23:18.400		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 216.51 +/-	2R4	4	0	4,409,848:47:0	
1174	98	88	19:23:20.400	165II4B	7VECT		Inert vect update UTC	2R4	4	0	4,409,848:50:0	
1175	98	88	19:23:23.066	175JI176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R4	4	0	4,409,848:54:0	
1176	98	88	19:23:23.666		DMS:	: *AT_SPD	R806, TRACK 1, FWD, TIC 282.51 +/-	2R4	4	0	4,409,848:54:9	
1177	98	88	19:23:23.666		DMS:	: *RECORD	R806, TRACK 1, FWD, TIC 282.51 +/-	2R4	4	0	4,409,848:54:9	
1178	98	88	19:23:23.733	118II10A111A4A	7STRP	0.0,-0.00764,26,	Slew = 0.4,4	2R4	4	0	4,409,848:55:0	
1179	98	88	19:23:41.066	118II10A111B4A	7STRP	-0.00764,0.01392	Slew = 0.4,4	2R4	4	0	4,409,848:81:0	
1180	98	88	19:23:49.733	118II10A111B4B	7STRP	0.0,-0.00764,26,	Slew = 3.91	2R4	4	0	4,409,849:03:0	
1181	98	88	19:23:58.400	118II10A111A4B	7STRP	0.00764,0.009,0,	Slew = 0.4,4	2R4	4	0	4,409,849:16:0	
1182	98	88	19:24:07.066	118II10A111A4C	7STRP	0.0,-0.00764,26,	Slew = 3.91	2R4	4	0	4,409,849:29:0	
1183	98	88	19:24:24.400	118II10A111B4C	7STRP	-0.00764,0.01392	Slew = 0.4,4	2R4	4	0	4,409,849:55:0	
1184	98	88	19:24:33.066	118II10A111B4D	7STRP	0.0,-0.00764,26,	Slew = 3.91	2R4	4	0	4,409,849:68:0	
1185	98	88	19:24:41.733	118II10A111A4D	7STRP	0.00764,0.009,0,	Slew = 0.4,4	2R4	4	0	4,409,849:81:0	
1186	98	88	19:24:50.400	118II10A111A4E	7STRP	0.0,-0.00764,26,	Slew = 3.91	2R4	4	0	4,409,850:03:0	
1187	98	88	19:25:07.733	118II10A111B4E	7STRP	-0.00764,0.01392	Slew = 0.4,4	2R4	4	0	4,409,850:29:0	
1188	98	88	19:25:16.400	118II10A111B4F	7STRP	0.0,-0.00764,26,	Slew = 3.91	2R4	4	0	4,409,850:42:0	
1189	98	88	19:25:25.066	118II11A	SMOS	GE		2R4	4	0	4,409,850:55:0	
1190	98	88	19:25:31.733	175JI422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,850:65:0	
1191	98	88	19:25:31.733		DMS:	: *RUNDOWN	R806, TRACK 1, FWD, TIC *3434.15 +/-	2R4	4	0	4,409,850:65:0	
1192	98	88	19:25:34.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3445.65 +/-	2R4	4	0	4,409,850:69:1	
1193	98	88	19:25:41.066	118JI	SMOS	GS		2R4	4	0	4,409,850:79:0	
1194	98	88	19:25:47.733		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3445.65 +/-	2R4	4	0	4,409,850:89:0	
1195	98	88	19:25:47.733	175II422A6A	6DMSC	R806,1	DMS Control	2R4	4	0	4,409,850:89:0	
1196	98	88	19:25:51.066	118JI10A111A4A	7STRP	0.0,0.00764,26,0	Slew = 3.91	2R4	4	0	4,409,851:03:0	
1197	98	88	19:25:54.400		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 3445.65 +/-	2R4	4	0	4,409,851:08:0	
1198	98	88	19:25:59.066	175II176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R4	4	0	4,409,851:15:0	
1199	98	88	19:25:59.666		DMS:	: *RECORD	R806, TRACK 1, FWD, TIC *3511.65 +/-	2R4	4	0	4,409,851:15:9	
1200	98	88	19:25:59.666		DMS:	: *AT_SPD	R806, TRACK 1, FWD, TIC 3511.65 +/-	2R4	4	0	4,409,851:15:9	
1201	98	88	19:25:59.733	118JI10A111A4B	7STRP	0.00764,-0.00628	Slew = 3.91	2R4	4	0	4,409,851:16:0	
1202	98	88	19:26:08.400	118JI10A111A4C	7STRP	0.0,0.00764,26,0	Slew = 3.91	2R4	4	0	4,409,851:29:0	
1203	98	88	19:26:17.066	118JI11A	SMOS	GE		2R4	4	0	4,409,851:42:0	
1204	98	88	19:26:23.733	175II422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,409,851:52:0	
1205	98	88	19:26:23.733		DMS:	: *RUNDOWN	R806, TRACK 1, FWD, TIC *4103.91 +/-	2R4	4	0	4,409,851:52:0	
1206	98	88	19:26:26.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4115.41 +/-	2R4	4	0	4,409,851:56:1	
1207	98	88	19:40:31.066	488AF6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R4	4	0	4,409,865:49:0	
1208	98	88	20:19:10.400	488AF6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R4	4	0	4,409,903:70:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
1209	98	88	22:44:07.733	20MC6A	6CKSUM	MAG:4040,46F0		2R4	4	0	4,410,047:12.0	
1210	98	88	22:45:04.400	480MB6A	6MROH	12,2282,0,A2	read from LLM1A12,2282,0,A2	2R4	4	0	4,410,048:06.0	
1211	98	88	22:45:04.400	480MB6	6MROH		12 read from LLM1A12,2282,0,A2	2R4	4	0	4,410,048:06.0	
1212	98	88	23:58:39.733	165J4A	7SCAN	NORM,348.296997,	Check S/P Position	2R4	4	0	4,410,120:77.0	
1213	98	89	00:08:37.066	175JU422A6A	6DMSC	R806,1	DMS Control	2R4	4	0	4,410,130:63.0	
1214	98	89	00:08:37.066		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 4115.41 +/-	2R4	4	0	4,410,130:63.0	
1215	98	89	00:08:43.733		DMS:	:*RUNUP	R806, TRACK 1, FWD, TIC 4115.41 +/-	2R4	4	0	4,410,130:73.0	
1216	98	89	00:08:45.733	165J4B	7VECT		Inert vect update UTC	2R4	4	0	4,410,130:76.0	
1217	98	89	00:08:48.400	175JU176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R4	4	0	4,410,130:80.0	
1218	98	89	00:08:49.000		DMS:	:*AT_SPD	R806, TRACK 1, FWD, TIC 4181.41 +/- 1	2R4	4	0	4,410,130:80.9	
1219	98	89	00:08:49.000		DMS:	:*RECORD	R806, TRACK 1, FWD, TIC *4181.41 +/-	2R4	4	0	4,410,130:80.9	
1220	98	89	00:08:55.733		DMS:	:*RUNDOWN	R806, TRACK 1, FWD, TIC *4347.12 +/- 1	2R4	4	0	4,410,131:00.0	
1221	98	89	00:08:55.733	175JU422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,410,131:00.0	
1222	98	89	00:08:58.466		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *4358.62 +/- 1	2R4	4	0	4,410,131:04.1	
1223	98	89	00:09:17.066		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 4358.62 +/- 1	2R4	4	0	4,410,131:32.0	
1224	98	89	00:09:17.066	175JU422A6A	6DMSC	R115,1	DMS Control	2R4	4	0	4,410,131:32.0	
1225	98	89	00:09:23.733		DMS:	:*RUNUP	R115, TRACK 1, FWD, TIC 4358.62 +/- 1	2R4	4	0	4,410,131:42.0	
1226	98	89	00:09:27.066	175JU176A6A	6TMREC	HIS	115.2 KBPS SSI + NIMS RECORD Record Mode	2R4	4	0	4,410,131:47.0	
1227	98	89	00:09:27.733		DMS:	:*RECORD	R115, TRACK 1, FWD, TIC *4364.92 +/- 1	2R4	4	0	4,410,131:48.0	
1228	98	89	00:09:27.733		DMS:	:*AT_SPD	R115, TRACK 1, FWD, TIC 4364.92 +/- 1	2R4	4	0	4,410,131:48.0	
1229	98	89	00:09:56.400		DMS:	:*RUNDOWN	R115, TRACK 1, FWD, TIC *4465.70 +/- 1	2R4	4	0	4,410,132:00.0	
1230	98	89	00:09:56.400	175JU422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,410,132:00.0	
1231	98	89	00:09:57.600		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *4466.70 +/- 1	2R4	4	0	4,410,132:01.8	
1232	98	89	01:59:59.733	481UB4A	7VECT	BB1	Inert vect update UTC	2R4	4	0	4,410,240:77.0	
1233	98	89	02:22:30.400	165IM4A	7SCAN	NORM:38.089,16.6	Check S/P Position	2R4	4	0	4,410,263:10.0	
1234	98	89	02:26:25.066	165IM4B	7VECT		Inert vect update UTC	2R4	4	0	4,410,266:89.0	
1235	98	89	02:26:30.400	118IM	SMOS	GS		2R4	4	0	4,410,267:06.0	
1236	98	89	02:26:59.733	175IM422A6A	6DMSC	R806,1	DMS Control	2R4	4	0	4,410,267:50.0	
1237	98	89	02:26:59.733		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 4466.70 +/- 1	2R4	4	0	4,410,267:50.0	
1238	98	89	02:27:03.066	118IM110A11A4A	7STRP	0.0036,0.0,20.0,	Slew =,1.61	2R4	4	0	4,410,267:55.0	
1239	98	89	02:27:06.400		DMS:	:*RUNUP	R806, TRACK 1, FWD, TIC 4466.70 +/- 1	2R4	4	0	4,410,267:60.0	
1240	98	89	02:27:09.733	118IM11A	SMOS	GE		2R4	4	0	4,410,267:65.0	
1241	98	89	02:27:11.066	175IM176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R4	4	0	4,410,267:67.0	
1242	98	89	02:27:11.666		DMS:	:*AT_SPD	R806, TRACK 1, FWD, TIC 4532.70 +/- 1	2R4	4	0	4,410,267:67.9	
1243	98	89	02:27:11.666		DMS:	:*RECORD	R806, TRACK 1, FWD, TIC *4532.70 +/- 1	2R4	4	0	4,410,267:67.9	
1244	98	89	02:27:15.066	175IM422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,410,267:73.0	
1245	98	89	02:27:15.066		DMS:	:*RUNDOWN	R806, TRACK 1, FWD, TIC *4616.37 +/- 1	2R4	4	0	4,410,267:73.0	
1246	98	89	02:27:17.800		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *4627.87 +/- 1	2R4	4	0	4,410,267:77.1	
1247	98	89	02:27:27.733	118JM	SMOS	GS		2R4	4	0	4,410,268:01.0	
1248	98	89	02:27:34.400	175IN422A6A	6DMSC	R806,1	DMS Control	2R4	4	0	4,410,268:11.0	
1249	98	89	02:27:34.400		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 4627.87 +/- 1	2R4	4	0	4,410,268:11.0	
1250	98	89	02:27:37.733	118JM110A11A4A	7STRP	-0.0036,0.0,20.0,	Slew =,1.61	2R4	4	0	4,410,268:16.0	
1251	98	89	02:27:41.066		DMS:	:*RUNUP	R806, TRACK 1, FWD, TIC 4627.87 +/- 1	2R4	4	0	4,410,268:21.0	
1252	98	89	02:27:44.400	118JM11A	SMOS	GE		2R4	4	0	4,410,268:26.0	
1253	98	89	02:27:45.733	175IN176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R4	4	0	4,410,268:28.0	
1254	98	89	02:27:46.333		DMS:	:*AT_SPD	R806, TRACK 1, FWD, TIC 4693.87 +/- 2	2R4	4	0	4,410,268:28.9	
1255	98	89	02:27:46.333		DMS:	:*RECORD	R806, TRACK 1, FWD, TIC *4693.87 +/- 1	2R4	4	0	4,410,268:28.9	
1256	98	89	02:27:49.733	175IN422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R4	4	0	4,410,268:34.0	
1257	98	89	02:27:49.733		DMS:	:*RUNDOWN	R806, TRACK 1, FWD, TIC *4777.54 +/- 2	2R4	4	0	4,410,268:34.0	
1258	98	89	02:27:52.466		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *4789.04 +/- 2	2R4	4	0	4,410,268:38.1	
1259	98	89	03:34:48.400	488AG6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R4	4	0	4,410,334:56.0	
1260	98	89	04:10:39.066	14NNEUR15H01-		-----START-----		2R4	4	0	:	:
1261	98	89	04:11:21.000	20DI5A	37PL		Program Load (halts microprocessor & unwri	2R4	4	0	4,410,370:69.0	
1262	98	89	04:11:28.333	20DI5B	37MRL		Memory Realocate (software operates from R	2R4	4	0	4,410,370:80.0	
1263	98	89	04:11:39.666	20DI6A	6MCOPY	NIMS	NIMS,1000,LLM1A,7300,77F7	2R4	4	0	4,410,371:06.0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
1264	98	89	04:11:59.666	20DI6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	2R4	4	0	4,410,371:36:0	
1265	98	89	04:12:17.666	20DI5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,410,371:63:0	
1266	98	89	04:12:23.000	20DI5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,410,371:71:0	
1267	98	89	04:12:29.000	20DI4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,410,371:80:0	
1268	98	89	04:13:29.666	20DI4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,410,372:80:0	
1269	98	89	04:14:33.000	125DI	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,410,373:84:0	
1270	98	89	04:14:33.000	125DI4A	37IST	0,2,0,OFF,0,1,2	Gain State 3	3R3	4	0	4,410,373:84:0	
1271	98	89	04:14:41.733	14NEUR15H01-		-----STOP-----		3R3	4	0	:	:
1272	98	89	04:14:41.733	14NEUR15H01-		-----START-----		3R3	4	0	:	:
1273	98	89	04:15:33.666	125DI11A	NIMSINIT	GE	##### GROUP END INIT	3R3	4	0	4,410,374:84:0	
1274	98	89	04:15:33.666	125DI4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	3R3	4	0	4,410,374:84:0	
1275	98	89	04:16:34.333	127DI	NIMSTAB	GS	##### GROUP START TAB	3R3	4	0	4,410,375:84:0	
1276	98	89	04:16:35.000	127DI4A	37ETB	07,C7,31,BD,C8,0	Loads wavelength edit table	3R3	4	0	4,410,375:85:0	
1277	98	89	04:16:43.000	127DI11A	NIMSTAB	GE	##### GROUP END TAB	3R3	4	0	4,410,376:06:0	
1278	98	89	04:20:41.000	165DI4A	7SCAN	NORM:50.138,20.4	Check S/P Position	3R3	4	0	4,410,379:90:0	
1279	98	89	04:24:33.000	175DI422A6A	6DMSC	R7,1	DMS Control Tape runup 7.68kbp	3R3	4	0	4,410,383:74:0	
1280	98	89	04:24:33.000		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC *4789.04 +/- 2	3R3	4	0	4,410,383:74:0	
1281	98	89	04:24:35.000	117DI	CSMOS	GS	##### GROUP START CSMOS	3R3	4	0	4,410,383:77:0	
1282	98	89	04:24:39.666		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 4789.04 +/- 2	3R3	4	0	4,410,383:84:0	
1283	98	89	04:24:41.000	175DI176A6A	6TMREC	LPU	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	3R3	4	0	4,410,383:86:0	
1284	98	89	04:24:41.066		DMS:	:*AT_SPD	R7, TRACK 1, FWD, TIC 4789.16 +/- 2	3R3	4	0	4,410,383:86:1	
1285	98	89	04:24:41.066		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *4789.16 +/- 2	3R3	4	0	4,410,383:86:1	
1286	98	89	04:24:43.000	165DI4B	7VECT		Inert vect update UTC	3R3	4	0	4,410,383:89:0	
1287	98	89	04:24:44.333	14NEUR15H01-	NIMPBK	301DF	14NEUR15H01	3R3	4	0	:	:
1288	98	89	04:24:44.333	117DI105A106A4A	7STRP	-0.0057,0,0,0,0,	Slew =-0.02	3R3	4	0	4,410,384:00:0	
1289	98	89	04:29:29.666	14NEUR15H01-	DESEL	300DF	14NEUR15H01	3R3	4	0	:	:
1290	98	89	04:29:31.666	117DI105A106A4B	7STRP	0.00569,0,0,0,0,	Slew =12.01	3R3	4	0	4,410,388:67:0	
1291	98	89	04:29:31.666		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *4857.27 +/- 2	3R3	4	0	4,410,388:67:0	
1292	98	89	04:29:31.666	175DI422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	4,410,388:67:0	
1293	98	89	04:29:31.666	175DI6A	6TMREC	NRC	NO RECORD Record Mode Change	3R3	4	0	4,410,388:67:0	
1294	98	89	04:29:32.866		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *4857.33 +/- 2	3R3	4	0	4,410,388:68:8	
1295	98	89	04:30:43.666	125E111A	NIMSINIT	GE	##### GROUP END INIT	3R3	4	0	4,410,389:84:0	
1296	98	89	04:30:43.666	125E14A	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R3	4	0	4,410,389:84:0	
1297	98	89	04:30:43.666	127EI	NIMSTAB	GS	##### GROUP START TAB	4R3	4	0	4,410,389:84:0	
1298	98	89	04:30:43.666	125EI	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,410,389:84:0	
1299	98	89	04:30:44.333	127E14A	37ETB	04,C4,35,FF,FF	Loads wavelength edit table	4R3	4	0	4,410,389:85:0	
1300	98	89	04:30:52.333	127E111A	NIMSTAB	GE	##### GROUP END TAB	4R3	4	0	4,410,390:06:0	
1301	98	89	04:31:00.333	175E1422A6A	6DMSC	R28,1	DMS Control	4R3	4	0	4,410,390:18:0	
1302	98	89	04:31:00.333		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 4857.33 +/- 2	4R3	4	0	4,410,390:18:0	
1303	98	89	04:31:07.000		DMS:	:*RUNUP	R28, TRACK 1, FWD, TIC 4857.33 +/- 2	4R3	4	0	4,410,390:28:0	
1304	98	89	04:31:10.333	175E1176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	4R3	4	0	4,410,390:33:0	
1305	98	89	04:31:11.000	14NEUR15H01-	NIMPBK	301EF	14NEUR15H01	4R3	4	0	:	:
1306	98	89	04:31:11.000		DMS:	:*AT_SPD	R28, TRACK 1, FWD, TIC 4858.83 +/- 2	4R3	4	0	4,410,390:34:0	
1307	98	89	04:31:11.000		DMS:	:*RECORD	R28, TRACK 1, FWD, TIC *4858.83 +/- 2	4R3	4	0	4,410,390:34:0	
1308	98	89	04:31:41.000	117DI105A106A4C	7STRP	-0.0057,0,0,0,0,	Slew =-0.02	4R3	4	0	4,410,390:79:0	
1309	98	89	04:35:54.333	14NEUR15H01-	DESEL	300EF	14NEUR15H01	4R3	4	0	:	:
1310	98	89	04:35:55.000		DMS:	:*RUNDOWN	R28, TRACK 1, FWD, TIC *5108.44 +/- 2	4R3	4	0	4,410,395:05:0	
1311	98	89	04:35:55.000	175E1422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	4,410,395:05:0	
1312	98	89	04:35:56.200		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *5108.74 +/- 2	4R3	4	0	4,410,395:06:8	
1313	98	89	04:36:28.333	117DI11A	CSMOS	GE	##### GROUP END CSMOS	4R3	4	0	4,410,395:55:0	
1314	98	89	04:41:59.733	14NEUR15H01-		-----STOP-----		4R3	4	0	:	:
1315	98	89	04:49:28.333	488AG6B	6TMSED	NORM,AL2	Sci. Eng. and D/L Chan	4R3	4	0	4,410,408:42:0	
1316	98	89	05:57:44.333	488AG6C	6TMSED	NORM,AL3	Sci. Eng. and D/L Chan	4R3	4	0	4,410,475:89:0	
1317	98	89	06:33:26.333	488AG6D	6TMSED	FILL,AL3	Sci. Eng. and D/L Chan	4R3	4	0	4,410,511:26:0	
1318	98	89	07:10:37.733	14NEUR17H01-		-----START-----		4R3	4	0	:	:

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MFI
1319	98	89	07:11:19.666	20DJ5A	37PL	Program Load (halts microprocessor & unwri	4R3	4	0	4,410,548:69:0	
1320	98	89	07:11:27.000	20DJ5B	37MRL	Memory Realocate (software operates from R	4R3	4	0	4,410,548:80:0	
1321	98	89	07:11:38.333	20DJ6A	6MCOPY	NIMS	4R3	4	0	4,410,549:06:0	
1322	98	89	07:11:48.333	20DJ6B	6MCOPY	NIMS	4R3	4	0	4,410,549:21:0	
1323	98	89	07:12:05.000	20DJ5C	37IRT	NIMS,1598,LLM1A,77F8,781D	260	4	0	4,410,549:46:0	
1324	98	89	07:12:11.666	20DJ5D	37MTN	Instrument Reset (goes into POR state)	260	4	0	4,410,549:56:0	
1325	98	89	07:12:27.666	20DJ4A	37IST	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,410,549:80:0	
1326	98	89	07:13:28.333	20DJ4B	37IOP	Long Map, Grating Start Position =00	2R3	4	0	4,410,550:80:0	
1327	98	89	07:14:40.400	14NEUR17H01-	-----STOP-----		2R3	4	0	:	:
1328	98	89	07:15:32.333	125DJ	NIMSINIT	##### GROUP START INIT	2R3	4	0	4,410,552:84:0	
1329	98	89	07:15:32.333	125DJ4A	37IST	Gain State 3	3R3	4	0	4,410,552:84:0	
1330	98	89	07:15:41.066	14NEUR17H01-	-----START-----		3R3	4	0	:	:
1331	98	89	07:16:33.000	125DJ11A	NIMSINIT	##### GROUP END INIT	3R3	4	0	4,410,553:84:0	
1332	98	89	07:16:33.000	125DJ4B	37MB	Selects mirror (spatial) edit table	3R3	4	0	4,410,553:84:0	
1333	98	89	07:18:34.333	127DJ	NIMSTAB	%%%% GROUP START TAB	3R3	4	0	4,410,555:84:0	
1334	98	89	07:18:35.000	127DJ4A	37ETB	Loads wavelength edit table	3R3	4	0	4,410,555:85:0	
1335	98	89	07:18:43.000	127DJ11A	NIMSTAB	%%%% GROUP END TAB	3R3	4	0	4,410,556:06:0	
1336	98	89	07:20:39.666	165DJ4A	7SCAN	Check S/P Position	3R3	4	0	4,410,557:90:0	
1337	98	89	07:24:31.666	175DJ422A6A	6DMSC	DMS Control Tape runup 7.68kbp	3R3	4	0	4,410,561:74:0	
1338	98	89	07:24:31.666	DMS:	*E4-DELAY	RDY, TRACK 1, FWD, TIC 5108.74 +/- 2	3R3	4	0	4,410,561:74:0	
1339	98	89	07:24:33.666	117DJ	CSMOS	***** GROUP START CSMOS	3R3	4	0	4,410,561:77:0	
1340	98	89	07:24:38.333	DMS:	:SRUNUP	R7, TRACK 1, FWD, TIC 5108.74 +/- 2	3R3	4	0	4,410,561:84:0	
1341	98	89	07:24:39.666	175DJ176A6A	6TMREC	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	3R3	4	0	4,410,561:86:0	
1342	98	89	07:24:39.733	DMS:	:*AT_SPD	R7, TRACK 1, FWD, TIC 5108.86 +/- 2	3R3	4	0	4,410,561:86:1	
1343	98	89	07:24:39.733	DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *5108.86 +/- 2	3R3	4	0	4,410,561:86:1	
1344	98	89	07:24:41.666	165DJ4B	7VECT	Inert vect update UTC	3R3	4	0	4,410,561:89:0	
1345	98	89	07:24:43.000	117DJ105A106A4A	7STRP	Slew =.02	3R3	4	0	4,410,562:00:0	
1346	98	89	07:25:30.333	488AG6E	6TMSED	Sci, Eng, and D/L Chan	3R3	4	0	4,410,562:71:0	
1347	98	89	07:28:45.666	117DJ105A106A4B	7STRP	Slew =12.01	3R3	4	0	4,410,566:00:0	
1348	98	89	07:28:55.000	175DJ6A	6TMREC	NO RECORD Record Mode Change	3R3	4	0	4,410,566:14:0	
1349	98	89	07:28:55.000	175DJ422A6B	6DMSC	DMS Control Tape stop	3R3	4	0	4,410,566:14:0	
1350	98	89	07:28:55.000	DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *5168.69 +/- 2	3R3	4	0	4,410,566:14:0	
1351	98	89	07:28:56.200	DMS:	:*READY	RDY, TRACK 1, FWD, TIC *5168.75 +/- 2	3R3	4	0	4,410,566:15:8	
1352	98	89	07:29:41.666	125EJ4A	37IST	Gain State 4	4R3	4	0	4,410,566:84:0	
1353	98	89	07:29:41.666	127EJ	NIMSTAB	%%%% GROUP START TAB	4R3	4	0	4,410,566:84:0	
1354	98	89	07:29:41.666	125EJ11A	NIMSINIT	##### GROUP END INIT	4R3	4	0	4,410,566:84:0	
1355	98	89	07:29:41.666	125EJ	NIMSINIT	##### GROUP START INIT	4R3	4	0	4,410,566:84:0	
1356	98	89	07:29:42.333	127EJ4A	37ETB	Loads wavelength edit table	4R3	4	0	4,410,566:85:0	
1357	98	89	07:29:50.333	127EJ11A	NIMSTAB	%%%% GROUP END TAB	4R3	4	0	4,410,567:06:0	
1358	98	89	07:30:55.000	117DJ105A106A4C	7STRP	Slew =.02	4R3	4	0	4,410,568:12:0	
1359	98	89	07:31:01.000	175EJ422A6A	6DMSC	DMS Control Tape runup 7.68kbp	4R3	4	0	4,410,568:21:0	
1360	98	89	07:31:01.000	DMS:	*E4-DELAY	RDY, TRACK 1, FWD, TIC 5168.75 +/- 2	4R3	4	0	4,410,568:21:0	
1361	98	89	07:31:07.666	DMS:	:SRUNUP	R7, TRACK 1, FWD, TIC 5168.75 +/- 2	4R3	4	0	4,410,568:31:0	
1362	98	89	07:31:09.000	175EJ176A6A	6TMREC	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	4R3	4	0	4,410,568:33:0	
1363	98	89	07:31:09.066	DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *5168.87 +/- 2	4R3	4	0	4,410,568:33:1	
1364	98	89	07:31:09.066	DMS:	:*AT_SPD	R7, TRACK 1, FWD, TIC 5168.87 +/- 2	4R3	4	0	4,410,568:33:1	
1365	98	89	07:31:09.666	14NEUR17H01-	NIMPBK	14NEUR17H01	4R3	4	0	:	:
1366	98	89	07:34:57.666	117DJ11A	CSMOS	***** GROUP END CSMOS	4R3	4	0	4,410,572:12:0	
1367	98	89	07:35:10.333	14NEUR17H01-	DESEL	14NEUR17H01	4R3	4	0	:	:
1368	98	89	07:35:12.333	DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *5225.88 +/- 2	4R3	4	0	4,410,572:34:0	
1369	98	89	07:35:12.333	175EJ422A6B	6DMSC	DMS Control Tape stop	4R3	4	0	4,410,572:34:0	
1370	98	89	07:35:12.333	175EJ6A	6TMREC	NO RECORD Record Mode Change	4R3	4	0	4,410,572:34:0	
1371	98	89	07:35:13.533	DMS:	:*READY	RDY, TRACK 1, FWD, TIC *5225.94 +/- 2	4R3	4	0	4,410,572:35:8	
1372	98	89	07:41:58.400	14NEUR17H01-	-----STOP-----		4R3	4	0	:	:
1373	98	89	08:12:08.333	488AH6A	6TMSED	Sci, Eng, and D/L Chan	4R3	4	0	4,410,608:82:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
1374	98	89	09:10:57.066	14NNEUR20H01-		-----START-----		4R3	4	0	:	:
1375	98	89	09:11:39.000	20DK5A	37PL		Program Load (halts microprocessor & unwri	4R3	4	0	4,410,667:69:0	
1376	98	89	09:11:46.333	20DK5B	37MRL		Memory Relocate (software operates from R	4R3	4	0	4,410,667:80:0	
1377	98	89	09:11:57.666	20DK6A	6MCOPY	NIMS	NIMS,1000,LLM1A,7300,77F7	4R3	4	0	4,410,668:06:0	
1378	98	89	09:12:07.666	20DK6B	6MCOPY	NIMS	NIMS,1598,LLM1A,77F8,781D	4R3	4	0	4,410,668:21:0	
1379	98	89	09:12:24.333	20DK5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,410,668:46:0	
1380	98	89	09:12:37.666	20DK5D	37MNI		Memory Normal (software operates from ROM)	260	4	0	4,410,668:66:0	
1381	98	89	09:12:47.000	20DK4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,410,668:80:0	
1382	98	89	09:13:47.666	20DK4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,410,669:80:0	
1383	98	89	09:14:59.733	14NNEUR20H01-		-----START-----		2R3	4	0	:	:
1384	98	89	09:14:59.733	14NNEUR20H01-		-----STOP-----		2R3	4	0	:	:
1385	98	89	09:15:51.666	125DK4A	37IST	0,2,0,OFF,0,1,2	Gain State 3	3R3	4	0	4,410,671:84:0	
1386	98	89	09:15:51.666	125DK	NIMSINIT	GS	##### GROUP START INIT	3R3	4	0	4,410,671:84:0	
1387	98	89	09:16:52.333	125DK4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	3R3	4	0	4,410,672:84:0	
1388	98	89	09:16:52.333	125DK11A	NIMSINIT	GE	##### GROUP END INIT	3R3	4	0	4,410,672:84:0	
1389	98	89	09:19:54.333	127DK	NIMSTAB	GS	%%-%-%-% GROUP START TAB	3R3	4	0	4,410,675:84:0	
1390	98	89	09:19:55.000	127DK4A	37ETB	07,C7,31,BD,C8,0	Loads wavelength edit table	3R3	4	0	4,410,675:85:0	
1391	98	89	09:20:03.000	127DK11A	NIMSTAB	GE	%%-%-%-% GROUP END TAB	3R3	4	0	4,410,676:06:0	
1392	98	89	09:20:59.000	165DK4A	7SCAN	NORM,52.65,21.08	Check S/P Position	3R3	4	0	4,410,676:90:0	
1393	98	89	09:24:51.000	175DK42A6A	6DMSC	R7,1	DMS Control Tape runup 7.68kbp	3R3	4	0	4,410,680:74:0	
1394	98	89	09:24:51.000	117DK	DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 5225.94 +/- 2	3R3	4	0	4,410,680:74:0	
1395	98	89	09:24:53.000	117DK	CSMOS	GS	**** GROUP START CSMOS	3R3	4	0	4,410,680:77:0	
1396	98	89	09:24:57.666		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 5225.94 +/- 2	3R3	4	0	4,410,680:84:0	
1397	98	89	09:24:59.000	175DK176A6A	6TMREC	LPU	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	3R3	4	0	4,410,680:86:0	
1398	98	89	09:24:59.066		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC 5226.06 +/- 2	3R3	4	0	4,410,680:86:1	
1399	98	89	09:24:59.066		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC 5226.06 +/- 2	3R3	4	0	4,410,680:86:1	
1400	98	89	09:25:01.000	165DK4B	7VECT		Inert vect update UTC	3R3	4	0	4,410,680:89:0	
1401	98	89	09:25:02.333	117DK105A106A4A	7STRP	-0.004,0.0,0.0,0.0	Slew =0.02	3R3	4	0	4,410,681:00:0	
1402	98	89	09:28:25.000	175DK422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	4,410,684:31:0	
1403	98	89	09:28:25.000		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC 5274.33 +/- 2	3R3	4	0	4,410,684:31:0	
1404	98	89	09:28:25.000	175DK6A	6TMREC	NRC	NO RECORD Record Mode Change	3R3	4	0	4,410,684:31:0	
1405	98	89	09:28:25.666	117DK105A106A4B	7STRP	0.004,0.0,0.0,0.0	Slew =12.01	3R3	4	0	4,410,684:32:0	
1406	98	89	09:28:26.200		DMS:	:*READY	RDY, TRACK 1, FWD, TIC 5274.39 +/- 2	3R3	4	0	4,410,684:32:8	
1407	98	89	09:30:01.000	125EK	NIMSINIT	GS	##### GROUP START INIT	3R3	4	0	4,410,685:84:0	
1408	98	89	09:30:01.000	127EK	NIMSTAB	GS	%%-%-%-% GROUP START TAB	3R3	4	0	4,410,685:84:0	
1409	98	89	09:30:01.000	125EK11A	NIMSINIT	GE	##### GROUP END INIT	3R3	4	0	4,410,685:84:0	
1410	98	89	09:30:01.000	125EK4A	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R3	4	0	4,410,685:84:0	
1411	98	89	09:30:01.666	127EK4A	37ETB	07,C7,30,05,FF,0	Loads wavelength edit table	4R3	4	0	4,410,685:85:0	
1412	98	89	09:30:09.666	127EK11A	NIMSTAB	GE	%%-%-%-% GROUP END TAB	4R3	4	0	4,410,686:06:0	
1413	98	89	09:30:19.666	175EK422A6A	6DMSC	R7,1	RDY, TRACK 1, FWD, TIC 5274.39 +/- 2	4R3	4	0	4,410,686:21:0	
1414	98	89	09:30:19.666		DMS:	:*E4-DELAY	DMS Control Tape runup 7.68kbp	4R3	4	0	4,410,686:21:0	
1415	98	89	09:30:26.333		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 5274.39 +/- 2	4R3	4	0	4,410,686:31:0	
1416	98	89	09:30:27.666	175EK176A6A	6TMREC	LPU	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	4R3	4	0	4,410,686:33:0	
1417	98	89	09:30:27.733		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC 5274.51 +/- 2	4R3	4	0	4,410,686:33:1	
1418	98	89	09:30:27.733		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC 5274.51 +/- 2	4R3	4	0	4,410,686:33:1	
1419	98	89	09:30:35.000	14NNEUR20H01-	NIMPBK	301EH	14NEUR20H01	4R3	4	0	:	:
1420	98	89	09:30:35.000	117DK105A106A4C	7STRP	-0.004,0.0,0.0,0.0	Slew =0.02	4R3	4	0	4,410,686:44:0	
1421	98	89	09:33:51.666	14NNEUR20H01-	DESEL	300EH	14NEUR20H01	4R3	4	0	:	:
1422	98	89	09:33:53.666	175EK422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	4,410,689:69:0	
1423	98	89	09:33:53.666	175EK6A	6TMREC	NRC	NO RECORD Record Mode Change	4R3	4	0	4,410,689:69:0	
1424	98	89	09:33:53.666		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC 5322.77 +/- 2	4R3	4	0	4,410,689:69:0	
1425	98	89	09:33:54.866		DMS:	:*READY	RDY, TRACK 1, FWD, TIC 5322.83 +/- 2	4R3	4	0	4,410,689:70:8	
1426	98	89	09:33:58.333	117DK11A	CSMOS	GE	**** GROUP END CSMOS	4R3	4	0	4,410,689:76:0	
1427	98	89	09:42:17.733	14NNEUR20H01-		-----STOP-----		4R3	4	0	:	:
1428	98	89	10:28:43.666	165AA4A	7SCAN	NORM,76.790999,2	Check S/P Position	4R3	4	0	4,410,743:90:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MFI
1429	98	89	10:32:45.666	165AA4B	7VECT	Inert vect update UTC	4R3	4	0	4,410,747:89:0	
1430	98	89	11:49:44.333	488AH6B	6TMSED NORM,AL3	Sci, Eng, and D/L Chan	4R3	4	0	4,410,824:10:0	
1431	98	89	12:00:43.666	431ZL6A	6RCDSL DDSNCG,PLSNCG,EP	Record Deselect (DDS o	4R3	4	0	4,410,834:89:0	
1432	98	89	12:04:51.666	20ZM6A	6EUVON		4R3	4	0	4,410,839:06:0	
1433	98	89	12:05:48.333	431ZM6A	6RCSL	Record Select (DDS onl	4R3	4	0	4,410,840:00:0	
1434	98	89	12:15:55.000	192GA4A	7CONE 17,4,0,0	Check S/P Position	4R3	4	0	4,410,850:00:0	
1435	98	89	12:22:59.666	176GA6A	6TMREC BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	4R3	4	0	4,410,857:00:0	
1436	98	89	12:25:14.333	176GA6B	6TMREC NRC	NO RECORD Record Mode Change	4R3	4	0	4,410,859:20:0	
1437	98	89	12:25:16.333	50ZZ6XX	6DMSC R7,0	DMS Control Tape runup 7.68kps	4R3	4	0	4,410,859:23:0	
1438	98	89	12:25:16.333	DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5322.83 +/- 2	4R3	4	0	4,410,859:23:0	
1439	98	89	12:25:23.000	DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 5322.83 +/- 2	4R3	4	0	4,410,859:33:0	
1440	98	89	12:25:24.000	DMS:	: *AT SPD	R7, TRACK 1, FWD, TIC 5322.95 +/- 2	4R3	4	0	4,410,859:35:1	
1441	98	89	12:25:26.333	DMS:	: *RECORD	R7, TRACK 1, FWD, TIC 5323.41 +/- 2	4R3	4	0	4,410,859:38:0	
1442	98	89	12:25:37.666	DMS:	: *RUNDOWN	R7, TRACK 1, FWD, TIC 5326.06 +/- 2	4R3	4	0	4,410,859:55:0	
1443	98	89	12:25:37.666	50ZZ6RE	6DMSC RDY,0	DMS Control Tape stop	4R3	4	0	4,410,859:55:0	
1444	98	89	12:25:38.866	DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5326.12 +/- 2	4R3	4	0	4,410,859:56:8	
1445	98	89	12:26:01.666	192GA4B	7CONE 17,4,90,0	Check S/P Position	4R3	4	0	4,410,860:00:0	
1446	98	89	13:06:32.333	488AH6C	6TMSED NORM,AL4	Sci, Eng, and D/L Chan	4R3	4	0	4,410,900:06:0	
1447	98	89	13:36:05.666	20FE5A	37PL	Program Load (halts microprocessor & unwri	4R3	4	0	4,410,929:27:0	
1448	98	89	13:36:07.000	20FE5B	37MRL	Memory Realocate (software operates from R	4R3	4	0	4,410,929:29:0	
1449	98	89	13:36:17.000	20FE6A	6MCOPI NIMS	NIMS,1000,LLM1A,7300,77F7	4R3	4	0	4,410,929:44:0	
1450	98	89	13:36:29.000	20FE6B	6MCOPI NIMS	NIMS,1598,LLM1A,77F8,781D	4R3	4	0	4,410,929:62:0	
1451	98	89	13:36:45.666	20FE5C	37IRT	Instrument Reset (goes into POR state)	260	4	0	4,410,929:87:0	
1452	98	89	13:37:06.333	20FE5D	37MNI	Memory Normal (software operates from ROM)	260	4	0	4,410,930:27:0	
1453	98	89	13:38:07.000	20FE4A	7SAFE	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,410,931:27:0	
1454	98	89	13:38:09.666	444FB443A4A	37IOP	S/P TO 153 deg cone	2R0	4	0	4,410,931:31:0	
1455	98	89	13:39:07.666	20FE4B	3.0	Long Map, Grating Start Position =00	2R3	4	0	4,410,932:27:0	
1456	98	89	13:42:09.666	444FB443A4B	7MODE SPNL	AACS ALL-SPIN LOW	2R3	4	0	4,410,935:27:0	
1457	98	89	13:51:09.666	444FB443A4C	7CLK 17,45,0,0	Check S/P Position	2R3	4	0	4,410,944:18:0	
1458	98	89	13:53:55.000	125FB4A	37IST 1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	263	4	0	4,410,946:84:0	
1459	98	89	13:53:55.000	125FB	NIMSINIT GS	##### GROUP START INIT	263	4	0	4,410,946:84:0	
1460	98	89	13:54:55.666	125FB4B	37IST 1,2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (Ref)Gain State	4R3	4	0	4,410,947:84:0	
1461	98	89	13:55:56.333	125FB4C	37MB 1B,1B,0,0,0,0	Selects mirror (spatial) edit table	4R3	4	0	4,410,948:84:0	
1462	98	89	13:55:56.333	125FB11A	NIMSINIT GE	##### GROUP END INIT	4R3	4	0	4,410,948:84:0	
1463	98	89	13:58:58.333	127FB	NIMSTAB GS	%%%%% GROUP START TAB	4R3	4	0	4,410,951:84:0	
1464	98	89	13:58:58.333	127FB4A	37IOP 3,0	Long Map, Grating Start Position =00	4R3	4	0	4,410,951:84:0	
1465	98	89	13:58:59.000	127FB4B	37ETB 0A,CA,19,FF,C0,1	Loads wavelength edit table	4R3	4	0	4,410,951:85:0	
1466	98	89	13:59:21.000	127FB11A	NIMSTAB GE	%%%%% GROUP END TAB	4R3	4	0	4,410,952:27:0	
1467	98	89	13:59:23.000	432FB6A	6RTSL2 NIMSEL,AACNCG,RT	NIMS R/T SELECT	4R3	4	0	4,410,952:30:0	
1468	98	89	14:01:23.000	432FC6A	6RTDS2 NIMDSL,AACNCG,RT	NIMS R/T DESELECT	4R3	4	0	4,410,954:28:0	
1469	98	89	14:02:05.000	192FC4A	7CONE 17,0,84,88	Check S/P Position	4R3	4	0	4,410,955:00:0	
1470	98	89	14:02:05.666	192FC4B	7CLK 17,0,244,07	Check S/P Position	4R3	4	0	4,410,955:01:0	
1471	98	89	14:05:27.000	432FD6A	6RTSL2 NIMSEL,AACNCG,RT	NIMS R/T SELECT	4R3	4	0	4,410,958:30:0	
1472	98	89	14:15:32.333	432FE6A	6RTDS2 NIMDSL,AACNCG,RT	NIMS R/T DESELECT	4R3	4	0	4,410,968:28:0	
1473	98	89	14:16:09.666	127FE4A	37IOP 0,0	Safe, Grating Start Position =00	4R0	4	0	4,410,968:84:0	
1474	98	89	14:16:09.666	127FE	NIMSTAB GS	%%%%% GROUP START TAB	4R0	4	0	4,410,968:84:0	
1475	98	89	14:16:10.333	127FE4B	37ETB 04,C4,02,00,00	Loads wavelength edit table	4R0	4	0	4,410,968:85:0	
1476	98	89	14:16:32.333	20FX4A	7SAFE UNSTOW	S/P TO 153 deg cone	4R0	4	0	4,410,969:27:0	
1477	98	89	14:16:32.333	127FE11A	NIMSTAB GE	%%%%% GROUP END TAB	4R0	4	0	4,410,969:27:0	
1478	98	89	14:18:11.000	125FE4A	37IST 1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	4,410,970:84:0	
1479	98	89	14:18:11.000	125FE	NIMSINIT GS	##### GROUP START INIT	460	4	0	4,410,970:84:0	
1480	98	89	14:19:11.666	125FE4B	37IST 1,1,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	4,410,971:84:0	
1481	98	89	14:20:12.333	125FE4C	37MB 0,0,0,0,0,0	Selects mirror (spatial) edit table	400	4	0	4,410,972:84:0	
1482	98	89	14:20:12.333	125FE11A	NIMSINIT GE	##### GROUP END INIT	400	4	0	4,410,972:84:0	
1483	98	89	14:20:31.000	488AI6A	6TMSED FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,410,973:21:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
1484	98	89	14:21:38.333	444FF443A4A	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,410,974:31:0	
1485	98	89	14:25:38.333	444FF443A4B	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,410,978:27:0	
1486	98	89	14:39:51.666	20FH4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,410,992:33:0	
1487	98	89	14:40:41.666	20FH4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,410,993:17:0	
1488	98	89	14:42:59.666	4320D431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	400	4	0	4,410,995:42:0	
1489	98	89	14:43:00.333	4320D6A	6RTSL1		R/T Select of DDS and	400	4	0	4,410,995:43:0	
1490	98	89	14:54:10.333	488A16B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,411,006:47:0	
1491	98	89	16:29:27.666	20DG5A	37PL		Program Load (halts microprocessor & unwri	400	4	0	4,411,100:69:0	
1492	98	89	16:29:35.000	20DG5B	37MRL		Memory Realocate (software operates from R	400	4	0	4,411,100:80:0	
1493	98	89	16:29:36.333	20DG6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	400	4	0	4,411,100:82:0	
1494	98	89	16:29:46.333	20DG6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	400	4	0	4,411,101:06:0	
1495	98	89	16:29:56.333	20DG5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,411,101:21:0	
1496	98	89	16:29:57.666	20DG5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,411,101:23:0	
1497	98	89	16:30:35.666	20DG4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,411,101:80:0	
1498	98	89	16:31:36.333	20DG4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,411,102:80:0	
1499	98	89	16:31:43.000	165DG4A	7SCAN	NORM,84,761,25,0	Check S/P Position	2R3	4	0	4,411,102:90:0	
1500	98	89	16:32:39.666	125DG	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,411,103:84:0	
1501	98	89	16:32:39.666	125DG4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R3	4	0	4,411,103:84:0	
1502	98	89	16:33:40.333	125DG11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,411,104:84:0	
1503	98	89	16:33:40.333	125DG4B	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	2R3	4	0	4,411,104:84:0	
1504	98	89	16:34:41.000	127DG	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,411,105:84:0	
1505	98	89	16:34:41.000	127DG4A	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,411,105:84:0	
1506	98	89	16:34:41.666	127DG4B	37ETB	04,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	4,411,105:85:0	
1507	98	89	16:34:49.666	127DG11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,411,106:06:0	
1508	98	89	16:35:05.666	432DG6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	2R3	4	0	4,411,106:30:0	
1509	98	89	16:35:37.000	117DG	CSMOS	GS	***** GROUP START CSMOS	2R3	4	0	4,411,106:77:0	
1510	98	89	16:35:41.666	33E4A	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R3	4	0	4,411,106:84:0	
1511	98	89	16:35:45.000	165DG4B	7VECT		Inert vect update UTC	4R3	4	0	4,411,106:89:0	
1512	98	89	16:35:46.333	117DG105A106A4A	7STRP	-0,072125,0,0,0,0,	Slew =,0,06	4R3	4	0	4,411,107:00:0	
1513	98	89	16:46:49.000	33F4A	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R3	4	0	4,411,117:84:0	
1514	98	89	16:55:17.666	432DY6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	2R3	4	0	4,411,126:28:0	
1515	98	89	16:55:59.666	117DG11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	4,411,127:00:0	
1516	98	89	17:06:05.666	165BA4A	7SCAN	NORM,70,176999,2	Check S/P Position	2R3	4	0	4,411,136:90:0	
1517	98	89	17:49:39.066	14NNJUPRTS02-		-----START-----		2R3	4	0	:	:
1518	98	89	17:53:41.733	14NNJUPRTS02-		-----STOP-----		2R3	4	0	:	:
1519	98	89	17:54:42.400	14JNJUPRTS02*		-----START-----		2R3	4	0	:	:
1520	98	89	18:20:59.733	14JNJUPRTS02*		-----STOP-----		2R3	4	0	:	:
1521	98	89	18:22:16.333	488A16C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R3	4	0	4,411,212:30:0	
1522	98	89	19:49:40.333	488A16D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R3	4	0	4,411,298:70:0	
1523	98	89	20:16:30.333	488A16E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R3	4	0	4,411,325:28:0	
1524	98	89	22:08:24.333	488A16A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R3	4	0	4,411,435:89:0	
1525	98	89	22:25:28.333	488A16B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R3	4	0	4,411,452:78:0	
1526	98	90	00:23:53.666	431YL6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	4,411,569:89:0	
1527	98	90	00:27:03.666	20YC6A	6HICON			2R3	4	0	4,411,573:10:0	
1528	98	90	00:27:57.666	431YM6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS onl	2R3	4	0	4,411,574:00:0	
1529	98	90	00:35:00.333	20OB6A	6HICON			2R3	4	0	4,411,580:88:0	
1530	98	90	00:41:00.333	4320B6A	6RTSL1		R/T Select of DDS and	2R3	4	0	4,411,586:82:0	
1531	98	90	00:57:16.333	165DH4A	7SCAN	NORM,333,568996,	Check S/P Position	2R3	4	0	4,411,602:90:0	
1532	98	90	00:57:21.000	14NNGLOBAL01-		-----START-----		2R3	4	0	:	:
1533	98	90	00:58:21.666	20DH5A	37PL		Program Load (halts microprocessor & unwri	2R3	4	0	4,411,604:06:0	
1534	98	90	00:58:23.000	20DH5B	37MRL		Memory Realocate (software operates from R	2R3	4	0	4,411,604:08:0	
1535	98	90	00:58:24.333	20DH6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	2R3	4	0	4,411,604:10:0	
1536	98	90	00:58:34.333	20DH6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	2R3	4	0	4,411,604:25:0	
1537	98	90	00:58:44.333	20DH5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	4,411,604:40:0	
1538	98	90	00:59:04.333	20DH5D	37MN		Memory Normal (software operates from ROM)	260	4	0	4,411,604:70:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
1539	98	90	00:59:27.000	20DH4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,411,605:13:0	
1540	98	90	01:00:27.666	20DH4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	4,411,606:13:0	
1541	98	90	01:01:23.667	14NNGLOBAL01-		-----STOP-----		2R3	4	0	:	
1542	98	90	01:03:16.333	125DH	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,411,608:84:0	
1543	98	90	01:03:16.333	125DH4A	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R3	4	0	4,411,608:84:0	
1544	98	90	01:04:17.000	125DH11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,411,609:84:0	
1545	98	90	01:04:17.000	125DH4B	37MB	0,0,0,0,0,0,0	Selects mirror (spatial) edit table	4R3	4	0	4,411,609:84:0	
1546	98	90	01:06:18.333	127DH4A	37IOP	3,0	Long Map, Grating Start Position =00	4R3	4	0	4,411,611:84:0	
1547	98	90	01:06:18.333	127DH	NIMSTAB	GS	%%%% GROUP START TAB	4R3	4	0	4,411,611:84:0	
1548	98	90	01:06:19.000	127DH4B	37ETB	07,C7,2,0,F0,3,B	Loads wavelength edit table	4R3	4	0	4,411,611:85:0	
1549	98	90	01:06:27.000	127DH11A	NIMSTAB	GE	%%%% GROUP END TAB	4R3	4	0	4,411,612:06:0	
1550	98	90	01:06:27.000	14CNGLOBAL01*		-----START-----		4R3	4	0	:	
1551	98	90	01:07:12.333		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 5326.12 +/- 2	4R3	4	0	4,411,612:74:0	
1552	98	90	01:07:12.333	175DH422A6A	6DMSC	R7,1	DMS Control Tape runup 7.68kbp	4R3	4	0	4,411,612:74:0	
1553	98	90	01:07:14.333	117DH	CSMOS	GS	**** GROUP START CSMOS	4R3	4	0	4,411,612:77:0	
1554	98	90	01:07:19.000		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 5326.12 +/- 2	4R3	4	0	4,411,612:84:0	
1555	98	90	01:07:20.333	175DH176A6A	6TMREC	LPU	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	4R3	4	0	4,411,612:86:0	
1556	98	90	01:07:20.400		DMS:	:*AT_SPD	R7, TRACK 1, FWD, TIC 5326.24 +/- 2	4R3	4	0	4,411,612:86:1	
1557	98	90	01:07:20.400		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC 5326.24 +/- 2	4R3	4	0	4,411,612:86:1	
1558	98	90	01:07:22.333	165DH4B	7VECT		Inert vect update UTC	4R3	4	0	4,411,612:89:0	
1559	98	90	01:07:23.666	14CNGLOBAL01-	NIMPBK	301EJ	CALLISTO GLOBAL MAP	4R3	4	0	:	
1560	98	90	01:07:23.666	117DH105A106A4A	7STRP	-0.022004,0,0,0,0,	Slew =0.03	4R3	4	0	4,411,613:00:0	
1561	98	90	01:10:43.000	14CNGLOBAL01-	NIMPBK	301DI	CALLISTO GLOBAL MAP	4R3	4	0	:	
1562	98	90	01:16:17.000	14CNGLOBAL01-	DESEL	300DI	CALLISTO GLOBAL MAP	4R3	4	0	:	
1563	98	90	01:19:40.333	117DH105A106A4B	7STRP	-0.022004,0,0,0,0,0	Slew =12.01	4R3	4	0	4,411,625:13:0	
1564	98	90	01:19:53.666	117DH105A106A4C	7STRP	-0.022004,0,0,0,0,	Slew =0.03	4R3	4	0	4,411,625:33:0	
1565	98	90	01:21:51.666	14CNGLOBAL01-	DESEL	300EJ	CALLISTO GLOBAL MAP	4R3	4	0	:	
1566	98	90	01:21:59.000	14CNGLOBAL01-	NIMPBK	301FJ	CALLISTO GLOBAL MAP	4R3	4	0	:	
1567	98	90	01:30:14.333	14CNGLOBAL01-	DESEL	300FJ	CALLISTO GLOBAL MAP	4R3	4	0	:	
1568	98	90	01:30:14.333	14CNGLOBAL01-	NIMPBK	301EJ	CALLISTO GLOBAL MAP	4R3	4	0	:	
1569	98	90	01:32:10.333	117DH105A106A4D	7STRP	0.022004,0,0,0,0,0	Slew =12.01	4R3	4	0	4,411,637:46:0	
1570	98	90	01:32:23.666	117DH105A106A4E	7STRP	-0.022004,0,0,0,0,	Slew =0.03	4R3	4	0	4,411,637:66:0	
1571	98	90	01:35:42.000	14CNGLOBAL01-	NIMPBK	301EI	CALLISTO GLOBAL MAP	4R3	4	0	:	
1572	98	90	01:41:16.000	14CNGLOBAL01-	DESEL	300EI	CALLISTO GLOBAL MAP	4R3	4	0	:	
1573	98	90	01:44:32.333	14CNGLOBAL01-	DESEL	300EZ	CALLISTO GLOBAL MAP	4R3	4	0	:	
1574	98	90	01:44:40.333		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *5851.23 +/- 2	4R3	4	0	4,411,649:79:0	
1575	98	90	01:44:40.333	175DH6A	6TMREC	NRC	NO RECORD Record Mode Change	4R3	4	0	4,411,649:79:0	
1576	98	90	01:44:40.333	175DH422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	4,411,649:79:0	
1577	98	90	01:44:40.333	117DH11A	CSMOS	GE	**** GROUP END CSMOS	4R3	4	0	4,411,649:79:0	
1578	98	90	01:44:41.533		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *5851.29 +/- 2	4R3	4	0	4,411,649:80:8	
1579	98	90	01:44:52.334	14CNGLOBAL01*		-----STOP-----		4R3	4	0	:	
1580	98	90	01:50:45.666		DMS:	:*DMS-TURN	P7, TRACK 1, FWD, TIC 5851.29 +/- 2	4R3	4	0	4,411,655:81:0	
1581	98	90	01:50:45.666		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 5851.29 +/- 2	4R3	4	0	4,411,655:81:0	
1582	98	90	01:50:45.666	465KH6A	6DTRN	CMD,6DTRN,465KH6	DMS TRACK TURNAROUND	4R3	4	0	4,411,655:81:0	
1583	98	90	01:50:52.333		DMS:	:*RUNUP	P7, TRACK 1, FWD, TIC 5851.29 +/- 2	4R3	4	0	4,411,656:00:0	
1584	98	90	01:50:53.733		DMS:	:*AT_SPD	P7, TRACK 1, FWD, TIC *5851.41 +/- 2	4R3	4	0	4,411,656:02:1	
1585	98	90	01:52:49.000	127DL4A	37IOP	0,0	Safe, Grating Start Position =00	4R0	4	0	4,411,657:84:0	
1586	98	90	01:52:49.000	127DL	NIMSTAB	GS	%%%% GROUP START TAB	4R0	4	0	4,411,657:84:0	
1587	98	90	01:52:49.666	127DL4B	37ETB	04,C4,2,0,0,0	Loads wavelength edit table	4R0	4	0	4,411,657:85:0	
1588	98	90	01:52:57.666	127DL11A	NIMSTAB	GE	%%%% GROUP END TAB	4R0	4	0	4,411,658:06:0	
1589	98	90	01:52:57.667	14NCHPOFOF01-		-----START-----		4R0	4	0	:	
1590	98	90	01:55:51.000	125DL4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	4,411,660:84:0	
1591	98	90	01:55:51.000	125DL	NIMSINIT	GS	##### GROUP START INIT	460	4	0	4,411,660:84:0	
1592	98	90	01:56:51.666	125DL4B	37IST	1,1,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	4,411,661:84:0	
1593	98	90	01:57:52.333	125DL4C	37MB	0,0,0,0,0,0,0	Selects mirror (spatial) edit table	400	4	0	4,411,662:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MFI
1594	98	90	01:57:52.333	125DL11A	NIMSINIT GE	##### GROUP END INIT	400	4	0	4,411,662:84:0	
1595	98	90	01:59:01.667	14NNCHOPOF01-	-----STOP-----		400	4	0	:	
1596	98	90	02:00:05.666	20KA4A	7SAFE UNSTOW	S/P TO 153 deg cone	400	4	0	4,411,665:11:0	
1597	98	90	02:03:25.533		DMS: : *REVERSE	P7, TRACK 1, FWD, TIC *6027.63 +/- 2	400	4	0	4,411,668:37:8	
1598	98	90	02:03:26.733		DMS: : *RUNUP	P7, TRACK 2, REV, TIC 6027.69 +/- 2	400	4	0	4,411,668:39:6	
1599	98	90	02:03:26.733		DMS: : *TURNARND	P7, TRACK *2, *REV, TIC *6027.69 +/- 2	400	4	0	4,411,668:39:6	
1600	98	90	02:03:28.133		DMS: : *AT SPD	P7, TRACK 2, REV, TIC *6027.57 +/-	400	4	0	4,411,668:41:7	
1601	98	90	02:03:40.133		DMS: : *AUTOSTOP	P7, TRACK 2, REV, TIC *6025.44 +/-	400	4	0	4,411,668:59:7	
1602	98	90	02:03:41.333		DMS: : *READY	RDY, TRACK 2, REV, TIC *6025.38 +/-	400	4	0	4,411,668:61:5	
1603	98	90	02:10:03.666	432JB6B	6RTDS2 NIMNCG, AACDSL, RT	AACS DESELECT	400	4	0	4,411,674:89:0	
1604	98	90	02:15:00.000	20A3EY	Final Condition	Optics Heater 1 OFF (primary relay)	400	4	0	4,411,679:78:5	
1605	98	90	02:15:00.000	20A3FA	37C1PR Final Condition	Radiator Flash Heater OFF (primary relay)	400	4	0	4,411,679:78:5	
1606	98	90	02:15:00.000	20A3FB	37F2PR Final Condition	Shield Flash Heater OFF (primary relay)	400	4	0	4,411,679:78:5	
1607	98	90	02:15:00.000	20A3FD	40HRPR Final Condition	RCT Heater OFF (primary relay)	400	4	0	4,411,679:78:5	
1608	98	90	02:15:00.000	20A3FE	40T1PR Final Condition	PCT Heater 1 OFF (primary relay)	400	4	0	4,411,679:78:5	
1609	98	90	02:15:00.000	20A3FF	40T2R Final Condition	PCT Heater 2 OFF	400	4	0	4,411,679:78:5	
1610	98	90	02:15:00.000	20A3EX	37HR Final Condition	Replacement Heaters OFF	400	4	0	4,411,679:78:5	
1611	98	90	02:15:00.000	20A3EW	37A Final Condition	NIMS Power ON	400	4	0	4,411,679:78:5	
1612	98	90	02:15:00.000	20A3EZ	37C2PR Final Condition	Optics Heater 2 OFF (primary relay)	400	4	0	4,411,679:78:5	
1613	98	90	02:15:00.333		DMS: : READY	RDY, TRACK 2, REV, TIC 6025:38 +/-	400	4	0	4,411,679:79:0	

Sequence:		E14B-AR		Created: 07/01/98		Begin: 98-090/02:15:00		Finish: 98-150/21:00:00				
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1	98	90	02:15:00.000	20A3FE	40T1PR	Initial Condition	PCT Heater 1 OFF (primary relay)	400	4	0	4,411,679:78:5	
2	98	90	02:15:00.000	20A3EW	37A	Initial Condition	NIMS Power ON	400	4	0	4,411,679:78:5	
3	98	90	02:15:00.000	20A3EX	37HR	Initial Condition	Replacement Heaters OFF	400	4	0	4,411,679:78:5	
4	98	90	02:15:00.000	20A3EY	37C1PR	Initial Condition	Optics Heater 1 OFF (primary relay)	400	4	0	4,411,679:78:5	
5	98	90	02:15:00.000	20A3EZ	37C2PR	Initial Condition	Optics Heater 2 OFF (primary relay)	400	4	0	4,411,679:78:5	
6	98	90	02:15:00.000	20A3FF	40T2R	Initial Condition	PCT Heater 2 OFF	400	4	0	4,411,679:78:5	
7	98	90	02:15:00.000	20A3FD	40HRPR	Initial Condition	RCT Heater OFF (primary relay)	400	4	0	4,411,679:78:5	
8	98	90	02:15:00.000	20A3FA	37F1PR	Initial Condition	Radiator Flash Heater OFF (primary relay)	400	4	0	4,411,679:78:5	
9	98	90	02:15:00.000	20A3FB	37F2PR	Initial Condition	Shield Flash Heater OFF (primary relay)	400	4	0	4,411,679:78:5	
10	98	90	02:15:00.333		DMS:	: READY	RDY, TRACK 2, REV, TIC 6025.38 +/-	400	4	0	4,411,679:79:0	
11	98	90	02:15:52.333	488AA6A	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,411,680:66:0	
12	98	90	02:16:07.666	432NA6B	6RTDS2	NIMDSL, AACDSL, RT	NIMS R/T DESELECTAACS DESELECT	400	4	0	4,411,680:89:0	
13	98	90	02:18:00.333	444UB443A4A	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,411,682:76:0	
14	98	90	02:25:07.000	41AB99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	400	4	0	4,411,689:79:0	
15	98	90	02:27:01.000	41AB3G	40T1P		1 PCT Heater 1 ON (primary relay)	400	4	0	4,411,691:68:0	
16	98	90	02:27:11.000	41AB3H	40T1P		2 PCT Heater 1 ON (primary relay)	400	4	0	4,411,691:83:0	
17	98	90	02:27:21.000	41AB3I	40T2		1 PCT Heater 2 ON	400	4	0	4,411,692:07:0	
18	98	90	02:27:31.000	41AB3J	40T2		2 PCT Heater 2 ON	400	4	0	4,411,692:22:0	
19	98	90	02:30:04.333	20WA4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,411,694:70:0	
20	98	90	02:30:54.333	20WA4B	7SLEW	DIS, POS, 0.0	Stator movement	400	4	0	4,411,695:54:0	
21	98	90	02:32:19.666	176SA6A	6TMREC	IPB	INITIATE PLAYBACK (PB CONTROL) Record Mod	400	4	0	4,411,697:00:0	
22	98	90	03:00:00.333	481UC4A	7VECT	BB1	Inert vect update UTC	400	4	0	4,411,724:34:0	
23	98	90	03:49:44.333	488AA6B	6TMSD	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,411,773:51:0	
24	98	90	04:40:46.333	488AA6C	6TMSD	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,411,824:03:0	
25	98	90	05:27:50.333	488AA6D	6TMSD	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,411,870:53:0	
26	98	90	06:02:00.333	488AA6E	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,411,904:34:0	
27	98	90	06:30:30.333	488AB6A	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,411,932:51:0	
28	98	90	07:04:09.666	488AB6B	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,411,965:77:0	
29	98	90	09:12:38.333	488AB6C	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,412,092:83:0	
30	98	90	09:20:24.333	488AB6D	6TMSD	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,412,100:54:0	
31	98	90	12:31:51.600	488AC6A	6TMSD	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,412,289:86:0	
32	98	90	12:51:36.266	488AC6B	6TMSD	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,412,309:43:0	
33	98	90	13:47:04.266	488AC6C	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,412,364:30:0	
34	98	90	14:10:30.266	488AC6D	6TMSD	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,412,387:46:0	
35	98	90	14:44:09.600	488AC6E	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,412,420:72:0	
36	98	90	15:05:00.266	488AD6A	6TMSD	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,412,441:37:0	
37	98	90	15:08:38.266	176NA6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,412,445:00:0	
38	98	90	15:12:12.266	20NV6BA	6MROH	7.6CE0,1,A10	read from AACSA7,6CE0,1,A10	400	4	0	4,412,448:48:0	
39	98	90	15:18:56.266	20NV6F	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	400	4	0	4,412,455:17:0	
40	98	90	15:32:30.266	20NV6K	6MROH	7.6F96,2,A10	read from AACSA7,6F96,2,A10	400	4	0	4,412,468:55:0	
41	98	90	15:46:38.266	20NV4I	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,412,482:53:0	
42	98	90	16:01:38.266	20NV4K	7SLEW	INIT, POS, 17.45	Stator movement	400	4	0	4,412,497:38:0	
43	98	90	16:13:38.266	20NV4L	7SLEW	DIS, POS, 0.0	Stator movement	400	4	0	4,412,509:26:0	
44	98	90	16:20:38.266	20NV4M	7SLEW	INIT, NEG, 17.45	Stator movement	400	4	0	4,412,516:19:0	
45	98	90	16:32:38.266	20NV4N	7SLEW	DIS, POS, 0.0	Stator movement	400	4	0	4,412,528:07:0	
46	98	90	16:39:38.266	20NV4O	7SLEW	INIT, POS, 4.36	Stator movement	400	4	0	4,412,535:00:0	
47	98	90	16:51:38.266	20NV4P	7SLEW	DIS, POS, 0.0	Stator movement	400	4	0	4,412,546:79:0	
48	98	90	16:58:38.266	20NV4Q	7SLEW	INIT, NEG, 4.36	Stator movement	400	4	0	4,412,553:72:0	
49	98	90	17:10:38.266	20NV4R	7SLEW	DIS, POS, 0.0	Stator movement	400	4	0	4,412,565:60:0	
50	98	90	17:17:38.266	20NV4S	7CONE	17.45,0.0	Check S/P Position	400	4	0	4,412,572:53:0	
51	98	90	17:23:38.266	20NV4T	7CONE	17.45,180.0	Check S/P Position	400	4	0	4,412,578:47:0	
52	98	90	17:29:38.266	20NV4U	7CONE	4.36,0.0	Check S/P Position	400	4	0	4,412,584:41:0	
53	98	90	17:44:38.266	20NV4V	7CONE	4.36,153.0	Check S/P Position	400	4	0	4,412,599:26:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	98	90	18:21:42.266	20NV4AG	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,412,635:86:0	
55	98	90	18:25:42.266	20NV4AH	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,412,639:82:0	
56	98	90	18:34:22.266	20NV6U	6MROH	7,6F96,2,A10	read from AACS7,6F96,2,A10	400	4	0	4,412,648:43:0	
57	98	90	18:39:22.266	20NV4AM	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,412,653:38:0	
58	98	90	18:40:58.266	176NB6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,412,655:00:0	
59	98	90	18:48:30.266	20NV6BB	6MROH	7,6CF8,0,A10	read from AACS7,6CF8,0,A10	400	4	0	4,412,662:41:0	
60	98	90	18:50:00.266	20NV6Y	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	400	4	0	4,412,663:85:0	
61	98	90	19:00:00.266	488AD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,412,673:75:0	
62	98	90	19:58:49.600	431MA6A	6RCSEL	DDSEL,PLSNCG,EP	Record Select (DDS onl	400	4	0	4,412,732:00:0	
63	98	90	21:00:08.266	488AD6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,412,792:58:0	
64	98	90	21:53:28.266	488AE6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,412,845:35:0	
65	98	90	22:04:33.600	488AE6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,412,856:32:0	
66	98	90	22:21:12.266	488AE6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,412,872:74:0	
67	98	91	00:00:00.266	481UB4A	7VECT		Inert vect update UTC	400	4	0	4,412,970:48:0	
68	98	91	00:00:00.933	481UD4A	7VECT	BB1	Inert vect update UTC	400	4	0	4,412,970:49:0	
69	98	91	10:00:00.266	481UE4A	7VECT	BB1	Inert vect update UTC	400	4	0	4,413,563:85:0	
70	98	91	12:32:52.266	488AF6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,413,715:11:0	
71	98	91	12:51:36.266	488AF6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,413,733:59:0	
72	98	91	15:58:00.266	176VX6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,413,918:00:0	
73	98	91	16:03:04.266	20NX4B	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,413,923:01:0	
74	98	91	16:07:04.266	20NX4C	7STAT	17,45,0,0,90,0	Stator inertial point	400	4	0	4,413,926:88:0	
75	98	91	16:22:48.266	488AF6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,413,942:48:0	
76	98	91	18:13:44.200	488AF6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,414,052:22:0	
77	98	91	20:42:40.200	20SL4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,414,199:49:0	
78	98	91	20:43:30.200	20SL4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,414,200:33:0	
79	98	91	20:45:03.533	176NY6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,414,201:82:0	
80	98	91	21:44:56.200	488AG6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,414,261:11:0	
81	98	91	22:03:00.866	488AG6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,414,279:00:0	
82	98	91	22:08:24.200	488AG6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,414,284:30:0	
83	98	92	05:11:54.200	488AH6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,414,703:16:0	
84	98	92	05:36:24.200	488AH6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,414,727:37:0	
85	98	92	06:36:23.533	488AH6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,414,788:65:0	
86	98	92	07:03:52.200	488AH6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,414,813:83:0	
87	98	92	07:13:12.200	488AH6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,414,823:13:0	
88	98	92	12:30:16.200	488AI6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,415,136:66:0	
89	98	92	12:47:20.200	488AI6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,415,153:55:0	
90	98	92	13:32:08.200	488AI6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,415,197:83:0	
91	98	92	13:55:27.533	488AI6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,415,220:89:0	
92	98	92	14:34:06.200	488AI6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,415,259:18:0	
93	98	92	16:23:00.200	488AJ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,415,366:82:0	
94	98	92	16:27:08.866	176SB6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,415,371:00:0	
95	98	92	16:39:00.200	20AB4C	7STAT	17,45,262,9358,4	Stator inertial point	400	4	0	4,415,382:66:0	
96	98	92	17:00:00.200	474AA416A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,415,403:45:0	
97	98	92	17:02:00.200	474AA416A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,415,405:43:0	
98	98	92	17:02:20.200	20AB4D	7STAT	17,45,262,9358,4	Stator inertial point	400	4	0	4,415,405:73:0	
99	98	92	17:06:14.200	474AA416A4E	7BURN	262,935799,48,56	ALERT -- Thruster fire	400	4	0	4,415,409:60:0	
100	98	92	17:22:22.200	20AB4F	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,415,425:56:0	
101	98	92	17:29:48.200	20AB4P	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,415,432:88:0	
102	98	92	18:34:46.200	20AE4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,415,497:20:0	
103	98	92	18:35:36.200	20AE4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,415,498:04:0	
104	98	92	18:36:34.200	176AB6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,415,499:00:0	
105	98	92	18:42:16.200	20AD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,415,504:58:0	
106	98	92	21:00:08.200	488AJ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,415,640:90:0	
107	98	92	21:00:09.533	20AD6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,415,641:01:0	
108	98	92	21:44:54.866	488AJ6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,415,685:25:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	98	92	21:44:56.200	20AD6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,415,685:27:0	
110	98	92	21:49:12.200	488AJ6D	6TMSED	FILL,AH2	Sci, Eng, and D/L Chan	400	4	0	4,415,689:47:0	
111	98	92	21:49:13.533	20AD6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,415,689:49:0	
112	98	92	22:26:54.866	488AK6A	6TMSED	NORM,AH2	Sci, Eng, and D/L Chan	400	4	0	4,415,726:74:0	
113	98	92	22:26:56.200	20AD6E	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,415,726:76:0	
114	98	92	22:31:52.200	488AK6B	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,415,731:65:0	
115	98	92	22:31:53.533	20AD6F	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,415,731:67:0	
116	98	93	03:45:28.133	488AK6C	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,416,041:79:0	
117	98	93	03:45:29.466	20AD6G	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,416,041:81:0	
118	98	93	04:53:44.133	488AL6A	6TMSED	NORM,AH2	Sci, Eng, and D/L Chan	400	4	0	4,416,109:35:0	
119	98	93	04:53:45.466	20AD6H	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,416,109:37:0	
120	98	93	05:30:00.133	488AL6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,416,145:23:0	
121	98	93	05:32:08.133	488AL6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,416,147:33:0	
122	98	93	05:32:46.800	176SC6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,416,148:00:0	
123	98	93	06:38:21.466	488AL6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,416,212:78:0	
124	98	93	07:03:52.133	488AL6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,416,238:08:0	
125	98	93	07:13:10.800	488AM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,416,247:27:0	
126	98	93	12:30:16.133	488AM6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,416,560:82:0	
127	98	93	13:53:28.133	488AN6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,416,643:17:0	
128	98	93	14:15:55.466	488AN6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,416,665:36:0	
129	98	93	14:29:44.133	488AN6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,416,679:05:0	
130	98	93	15:06:00.133	488AN6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,416,714:84:0	
131	98	94	12:21:58.733	488AO6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,417,976:80:0	
132	98	94	12:28:08.066	488AO6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,417,982:88:0	
133	98	94	12:43:04.066	488AO6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,417,997:67:0	
134	98	94	15:27:20.066	488AO6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,418,160:18:0	
135	98	94	18:50:00.066	488AP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,418,360:58:0	
136	98	94	21:38:32.066	488AP6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,418,527:29:0	
137	98	94	21:56:45.400	488AP6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,418,545:31:0	
138	98	94	21:59:52.066	488AP6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,418,548:38:0	
139	98	96	04:57:02.666	488AQ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,420,385:17:0	
140	98	96	05:21:28.000	488AQ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,420,409:31:0	
141	98	96	06:23:14.666	488AQ6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,420,470:40:0	
142	98	96	06:48:56.000	488AQ6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,420,495:77:0	
143	98	96	06:58:06.000	488AQ6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,420,504:83:0	
144	98	96	12:07:42.666	488AR6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,420,811:11:0	
145	98	96	12:15:20.000	488AR6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,420,818:60:0	
146	98	97	12:12:06.600	488AS6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,422,239:59:0	
147	98	97	12:17:27.933	488AS6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,422,244:86:0	
148	98	97	12:36:39.933	488AS6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,422,263:85:0	
149	98	97	16:01:27.933	488AS6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,422,466:44:0	
150	98	97	17:54:31.933	488AS6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,422,578:28:0	
151	98	97	21:25:43.933	488AT6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,422,787:17:0	
152	98	97	21:46:35.266	488AT6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,422,807:74:0	
153	98	97	21:49:11.933	488AT6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,422,810:36:0	
154	98	98	12:07:09.866	488AU6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,423,658:85:0	
155	98	98	12:21:43.866	488AU6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,423,673:31:0	
156	98	98	13:23:35.866	488AU6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,423,734:48:0	
157	98	98	13:40:12.533	488AU6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,423,750:87:0	
158	98	98	14:13:51.200	488AU6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,423,784:21:0	
159	98	98	20:30:15.866	488AV6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,424,156:46:0	
160	98	98	21:29:59.866	488AV6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,424,215:53:0	
161	98	98	21:39:52.533	488AV6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,424,225:32:0	
162	98	100	04:47:15.133	488AW6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,426,072:19:0	
163	98	100	05:17:11.800	488AW6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,426,101:75:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	98	100	06:13:01.800	488AW6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,426,157:04:0	
165	98	100	06:50:05.800	488AW6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,426,193:64:0	
166	98	100	07:12:23.800	488AW6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,426,215:69:0	
167	98	100	11:30:31.800	488AX6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,426,471:05:0	
168	98	100	11:45:27.800	488AX6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,426,485:75:0	
169	98	100	12:13:11.800	488AX6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,426,513:23:0	
170	98	100	12:32:23.800	488AX6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,426,532:22:0	
171	98	100	13:30:05.133	488AX6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,426,589:27:0	
172	98	100	13:57:05.133	176TF6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,426,616:00:0	
173	98	100	14:03:44.466	488AY6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,426,622:53:0	
174	98	100	14:03:45.800	20J6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,426,622:55:0	
175	98	100	14:05:59.800	20U4C	7STAT	17,45,167,81,6,2	Stator inertial point	400	4	0	4,426,624:74:0	
176	98	100	14:25:01.800	490UA412A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,426,643:58:0	
177	98	100	14:29:59.800	490UA412A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,426,648:50:0	
178	98	100	14:30:19.800	20U4D	7STAT	17,45,167,81,6,2	Stator inertial point	400	4	0	4,426,648:80:0	
179	98	100	14:34:09.800	490UA412A4E	7VECT		Inert vect update UTC	400	4	0	4,426,652:61:0	
180	98	100	14:34:13.800	490UA412A4F	7TURN	2,RTH	ALERT Thruster	400	4	0	4,426,652:67:0	
181	98	100	14:38:01.800	490UA412A406A4A	7STAR	1,3000,95,710999	Star catalog update	400	4	0	4,426,656:45:0	
182	98	100	14:38:03.800	490UA412A406A4B	7STAR	2,464,80,782,28	Star catalog update	400	4	0	4,426,656:48:0	
183	98	100	14:38:05.800	490UA412A406A4C	7STAR	3,159,27,238,89	Star catalog update	400	4	0	4,426,656:51:0	
184	98	100	14:38:07.800	490UA412A406A4D	7STAR	41,338,218,95	Star catalog update	400	4	0	4,426,656:54:0	
185	98	100	14:38:09.800	490UA412A406A4E	7STAR	5,0,0,0,0,0,0	Star catalog update	400	4	0	4,426,656:57:0	
186	98	100	14:38:11.800	490UA412A406A4F	7STAR	6,0,0,0,0,0,0	Star catalog update	400	4	0	4,426,656:60:0	
187	98	100	14:48:05.800	20U4F	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,426,666:41:0	
188	98	100	14:56:09.800	490UA412A4G	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,426,674:39:0	
189	98	100	16:16:00.466	20J6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,426,753:36:0	
190	98	100	16:17:37.800	176ST6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,426,755:00:0	
191	98	100	16:21:59.800	20U4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,426,759:29:0	
192	98	100	16:22:59.800	20U4D	7MODE	SPNL	AACS ALL-SPIN LOW	400	4	0	4,426,760:28:0	
193	98	100	16:24:59.800	20U4E	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,426,762:26:0	
194	98	100	16:30:29.800	20U4G	7VENT	0,611,1,333,8	ALERT -- Thruster fire	400	4	0	4,426,767:66:0	
195	98	100	16:30:30.466	20U4H	7VENT	0,611,10,989,8	ALERT -- Thruster fire	400	4	0	4,426,767:67:0	
196	98	100	16:30:50.466	20U4I	7VENT	0,611,1,333,6	ALERT -- Thruster fire	400	4	0	4,426,768:06:0	
197	98	100	16:30:51.133	20U4J	7VENT	0,611,10,989,6	ALERT -- Thruster fire	400	4	0	4,426,768:07:0	
198	98	100	16:31:11.133	20U4K	7VENT	0,611,1,333,4	ALERT -- Thruster fire	400	4	0	4,426,768:37:0	
199	98	100	16:31:11.800	20U4L	7VENT	0,611,0,666,5	ALERT -- Thruster fire	400	4	0	4,426,768:38:0	
200	98	100	16:31:21.800	20U4M	7VENT	0,611,1,333,4	ALERT -- Thruster fire	400	4	0	4,426,768:53:0	
201	98	100	16:31:22.466	20U4N	7VENT	0,611,0,666,5	ALERT -- Thruster fire	400	4	0	4,426,768:54:0	
202	98	100	16:31:32.466	20U4O	7VENT	1,211,1,333,10	ALERT -- Thruster fire	400	4	0	4,426,768:69:0	
203	98	100	16:31:33.133	20U4P	7VENT	1,211,0,666,12	ALERT -- Thruster fire	400	4	0	4,426,768:70:0	
204	98	100	16:33:19.800	20U4Q	7VENT	0,611,1,333,7	ALERT -- Thruster fire	400	4	0	4,426,770:48:0	
205	98	100	16:33:20.466	20U4R	7VENT	0,611,10,989,7	ALERT -- Thruster fire	400	4	0	4,426,770:49:0	
206	98	100	16:33:40.466	20U4U	7VENT	0,611,1,333,1	ALERT -- Thruster fire	400	4	0	4,426,770:79:0	
207	98	100	16:33:41.133	20U4V	7VENT	0,611,10,989,1	ALERT -- Thruster fire	400	4	0	4,426,770:80:0	
208	98	100	16:34:01.133	20U4AC	7VENT	0,611,1,333,2	ALERT -- Thruster fire	400	4	0	4,426,771:19:0	
209	98	100	16:34:01.800	20U4AD	7VENT	0,611,0,666,3	ALERT -- Thruster fire	400	4	0	4,426,771:20:0	
210	98	100	16:34:11.800	20U4AE	7VENT	0,611,1,333,2	ALERT -- Thruster fire	400	4	0	4,426,771:35:0	
211	98	100	16:34:12.466	20U4AF	7VENT	0,611,0,666,3	ALERT -- Thruster fire	400	4	0	4,426,771:36:0	
212	98	100	16:34:22.466	20U4AW	7VENT	1,211,1,333,9	ALERT -- Thruster fire	400	4	0	4,426,771:51:0	
213	98	100	16:34:23.133	20U4AX	7VENT	1,211,0,666,11	ALERT -- Thruster fire	400	4	0	4,426,771:52:0	
214	98	100	16:35:19.800	20U4Z	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,426,772:46:0	
215	98	100	17:00:03.800	20U4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,426,796:88:0	
216	98	100	17:00:53.800	20U4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,426,797:72:0	
217	98	100	17:02:07.133	176SU6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,426,799:00:0	
218	98	100	17:03:19.800	488AY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,426,800:18:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	98	100	17:35:19.800	488AY6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,426,831.77:0	
220	98	100	17:37:05.133	488AY6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,426,833.53:0	
221	98	100	17:43:51.800	488AY6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,426,840.26:0	
222	98	101	04:42:19.066	488AZ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,427,491.46:0	
223	98	101	04:47:19.733	488AZ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,427,496.42:0	
224	98	101	05:23:35.733	488AZ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,427,532.30:0	
225	98	101	11:39:03.733	488BA6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,427,903.61:0	
226	98	101	12:02:31.733	488BA6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,427,926.80:0	
227	98	101	12:21:43.733	488BA6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,427,945.79:0	
228	98	101	15:33:43.733	488BA6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,428,135.69:0	
229	98	101	18:05:11.733	488BB6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,428,285.51:0	
230	98	101	21:15:03.733	488BB6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,428,473.31:0	
231	98	101	21:37:16.400	488BB6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,428,495.28:0	
232	98	101	21:40:39.733	488BB6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,428,498.60:0	
233	98	102	11:47:23.000	488BC6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,429,336.07:0	
234	98	102	11:51:51.666	488BC6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,429,340.46:0	
235	98	102	12:17:27.666	488BC6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,429,365.75:0	
236	98	102	15:08:07.666	488BC6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,429,534.56:0	
237	98	102	18:24:23.666	488BD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,429,728.66:0	
238	98	102	21:15:03.666	488BD6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,429,897.47:0	
239	98	102	21:34:11.666	488BD6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,429,916.40:0	
240	98	102	21:40:39.666	488BD6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,429,922.76:0	
241	98	103	04:32:25.666	488BE6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,430,330.07:0	
242	98	103	04:53:43.666	488BE6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,430,351.13:0	
243	98	103	05:57:51.666	488BE6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,430,414.52:0	
244	98	103	06:23:19.666	488BE6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,430,439.69:0	
245	98	103	06:32:40.333	488BE6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,430,449.00:0	
246	98	103	12:15:19.600	488BF6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,430,787.81:0	
247	98	103	13:29:59.600	488BF6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,430,861.67:0	
248	98	103	13:50:09.600	488BF6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,430,881.62:0	
249	98	103	14:08:23.600	488BF6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,430,899.65:0	
250	98	103	17:47:07.600	488BF6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,431,116.04:0	
251	98	103	18:43:35.600	488BG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,431,171.81:0	
252	98	103	20:44:54.933	488BG6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,431,291.80:0	
253	98	103	20:49:27.600	488BG6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,431,296.34:0	
254	98	104	11:42:30.933	488BH6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,432,179.56:0	
255	98	104	11:47:35.600	488BH6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,432,184.58:0	
256	98	104	12:08:55.600	488BH6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,432,205.67:0	
257	98	104	14:42:31.600	488BH6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,432,357.59:0	
258	98	104	17:37:27.533	488BH6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,432,530.60:0	
259	98	104	18:52:07.533	488BI6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	4,432,604.46:0	
260	98	104	20:49:27.533	488BI6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,432,720.50:0	
261	98	104	21:40:39.533	488BI6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,432,771.17:0	
262	98	104	23:35:22.866	488BI6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,432,884.59:0	
263	98	104	23:40:07.533	488BI6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,432,889.31:0	
264	98	105	11:42:34.866	488BJ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,433,603.78:0	
265	98	105	11:53:59.533	488BJ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,433,615.13:0	
266	98	105	12:43:03.533	488BJ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,433,663.61:0	
267	98	105	13:14:46.200	488BJ6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,433,695.03:0	
268	98	105	13:48:25.533	488BJ6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,433,728.29:0	
269	98	105	17:33:11.533	488BK6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,433,950.56:0	
270	98	105	21:34:15.533	488BK6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,434,189.03:0	
271	98	105	22:47:31.533	488BK6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,434,261.45:0	
272	98	105	23:16:37.533	488BK6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,434,290.25:0	
273	98	106	03:04:55.466	488BL6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,434,516.06:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	98	106	04:06:11.466	488BL6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,434,576:60:0	
275	98	106	04:11:03.466	488BL6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,434,581:43:0	
276	98	106	04:47:19.466	488BL6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,434,617:31:0	
277	98	106	17:37:20.133	488BM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,435,378:81:0	
278	98	106	18:37:11.466	488BM6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,435,438:08:0	
279	98	107	03:00:39.466	488BN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,435,936:02:0	
280	98	107	04:04:39.466	488BN6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,435,999:29:0	
281	98	107	04:38:47.466	488BN6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,436,033:07:0	
282	98	107	05:48:37.466	488BN6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,436,102:13:0	
283	98	107	05:53:27.466	488BN6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,436,106:84:0	
284	98	107	06:23:18.133	488BO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,436,136:40:0	
285	98	107	11:28:44.066	488BO6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,436,438:47:0	
286	98	107	17:32:24.733	488P6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,436,798:18:0	
287	98	107	18:32:55.400	488P6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,436,858:04:0	
288	98	108	02:56:23.400	488BQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,437,355:89:0	
289	98	108	04:04:39.400	488BQ6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,437,423:45:0	
290	98	108	04:23:51.400	488BQ6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,437,442:44:0	
291	98	108	04:47:19.400	488BQ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,437,465:63:0	
292	98	108	14:38:15.333	488BR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,438,050:12:0	
293	98	108	17:28:55.333	488BR6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,438,218:84:0	
294	98	108	18:47:51.333	488BR6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	4,438,296:90:0	
295	98	108	20:30:15.333	488BR6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,438,398:24:0	
296	98	108	21:29:59.333	488S6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,438,457:31:0	
297	98	109	02:49:59.333	488S6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,438,773:75:0	
298	98	109	03:55:42.000	488BT6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,438,838:74:0	
299	98	109	04:00:23.333	488BT6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,438,843:41:0	
300	98	109	04:36:39.333	488T6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,438,879:29:0	
301	98	109	17:32:54.000	488BU6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,439,647:03:0	
302	98	109	17:37:27.333	488BU6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,439,651:49:0	
303	98	109	18:13:43.333	488BU6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,439,687:37:0	
304	98	109	18:44:27.333	488BU6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,439,717:73:0	
305	98	109	18:18:06.666	488BU6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,439,751:08:0	
306	98	110	03:00:39.266	488BV6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,440,208:50:0	
307	98	110	03:49:43.266	488BV6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,440,257:07:0	
308	98	110	03:51:15.933	488BV6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,440,258:55:0	
309	98	110	04:04:39.266	488BV6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,440,271:77:0	
310	98	110	04:40:55.266	488BV6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,440,307:65:0	
311	98	110	17:22:38.600	488BW6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,441,061:06:0	
312	98	110	18:28:39.266	488BW6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,441,126:32:0	
313	98	110	20:46:30.600	488BW6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,441,262:63:0	
314	98	110	20:51:35.266	488BW6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,441,267:65:0	
315	98	111	17:23:03.866	488BX6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,442,485:60:0	
316	98	111	17:28:55.200	488BX6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,442,491:41:0	
317	98	111	18:09:27.200	488X6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,442,531:49:0	
318	98	111	18:39:18.533	488X6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,442,561:06:0	
319	98	111	19:12:57.200	488X6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,442,594:31:0	
320	98	112	02:56:23.200	488BY6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,443,052:62:0	
321	98	112	03:40:47.866	488BY6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,443,096:55:0	
322	98	112	03:45:27.200	488BY6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,443,101:19:0	
323	98	112	04:21:43.200	488BY6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,443,137:07:0	
324	98	112	17:17:48.466	488Z6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,443,904:58:0	
325	98	112	18:24:23.133	488Z6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,443,970:44:0	
326	98	112	22:46:34.466	488Z6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,444,229:72:0	
327	98	112	22:51:03.133	488Z6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,444,234:20:0	
328	98	113	17:12:53.133	488CA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,445,323:86:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	98	113	18:32:55.066	488CA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,445,403:09:0	
330	98	113	18:42:59.733	20K6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,445,413:06:0	
331	98	113	18:47:59.066	176TG6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,445,418:00:0	
332	98	113	18:55:59.733	20UU4C	7STAT	17.45,170.31,5.8	Stator inertial point	400	4	0	4,445,425:84:0	
333	98	113	19:15:01.733	490UB412A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,445,444:68:0	
334	98	113	19:19:59.733	490UB412A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,445,449:60:0	
335	98	113	19:20:19.733	20UU4D	7STAT	17.45,170.31,5.8	Stator inertial point	400	4	0	4,445,449:90:0	
336	98	113	19:24:09.733	490UB412A4E	7VECT		Inert vect update UTC	400	4	0	4,445,453:71:0	
337	98	113	19:24:13.733	490UB412A4F	7TURN	2,RTH	ALERT Thruster	400	4	0	4,445,453:77:0	
338	98	113	19:28:01.733	490UB412A406A4A	7STAR	11,338,218.95	Star catalog update	400	4	0	4,445,457:55:0	
339	98	113	19:28:03.733	490UB412A406A4B	7STAR	2,111,99.056999,	Star catalog update	400	4	0	4,445,457:58:0	
340	98	113	19:28:05.733	490UB412A406A4C	7STAR	3,295,88.964,44.	Star catalog update	400	4	0	4,445,457:61:0	
341	98	113	19:28:07.733	490UB412A406A4D	7STAR	4,191,248.601,-1	Star catalog update	400	4	0	4,445,457:64:0	
342	98	113	19:28:09.733	490UB412A406A4E	7STAR	5,0,0,0,0,0	Star catalog update	400	4	0	4,445,457:67:0	
343	98	113	19:28:11.733	490UB412A406A4F	7STAR	6,0,0,0,0,0	Star catalog update	400	4	0	4,445,457:70:0	
344	98	113	19:38:05.733	20UU4F	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,445,467:51:0	
345	98	113	19:46:09.733	490UB412A4G	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,445,475:49:0	
346	98	113	21:06:03.733	20UG4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,445,554:51:0	
347	98	113	21:06:53.733	20UG4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,445,555:35:0	
348	98	113	21:06:59.733	20K6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,445,555:44:0	
349	98	113	21:08:24.400	176TI6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,445,556:80:0	
350	98	114	02:20:07.066	488CB6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,445,865:15:0	
351	98	114	03:41:11.066	488CB6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,445,945:31:0	
352	98	114	04:19:35.066	488CB6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,445,983:29:0	
353	98	114	05:22:00.400	488CB6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,446,045:05:0	
354	98	114	05:49:11.066	488CB6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,446,071:85:0	
355	98	114	05:57:09.733	488CC6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,446,079:75:0	
356	98	114	10:13:13.066	488CC6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,446,333:06:0	
357	98	114	10:20:07.066	488CC6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,446,339:81:0	
358	98	114	11:08:17.733	488CC6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,446,387:49:0	
359	98	114	11:13:27.066	488CC6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,446,392:58:0	
360	98	114	11:39:03.066	488CD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,446,417:87:0	
361	98	114	11:49:04.400	488CD6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,446,427:79:0	
362	98	114	12:22:43.733	488CD6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,446,461:14:0	
363	98	114	15:52:55.066	488CD6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,446,669:03:0	
364	98	114	16:24:55.066	488CD6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,446,700:62:0	
365	98	114	20:40:55.066	488CE6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,446,953:79:0	
366	98	114	21:00:04.400	488CE6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,446,972:74:0	
367	98	114	21:06:31.066	488CE6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,446,979:17:0	
368	98	114	21:23:19.733	488CE6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,446,995:74:0	
369	98	114	21:27:51.066	488CE6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,447,000:26:0	
370	98	115	02:20:07.000	488CF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,447,289:31:0	
371	98	115	03:36:55.000	488CF6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,447,365:27:0	
372	98	115	03:53:59.000	488CF6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,447,382:16:0	
373	98	115	04:28:07.000	488CF6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,447,415:85:0	
374	98	115	11:04:55.000	488CG6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,447,808:34:0	
375	98	115	11:34:47.000	488CG6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,447,837:83:0	
376	98	115	15:08:07.000	488CG6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,448,048:82:0	
377	98	115	17:03:19.000	488CG6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,448,162:76:0	
378	98	115	21:10:47.000	488CH6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,448,407:53:0	
379	98	116	02:20:07.000	488CH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,448,713:47:0	
380	98	116	03:36:55.000	488CI6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,448,789:43:0	
381	98	116	04:08:55.000	488CI6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,448,821:11:0	
382	98	116	05:16:49.666	488CI6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,448,888:26:0	
383	98	116	05:42:47.000	488CI6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,448,913:87:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	98	116	05:51:44.333	488CI6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,448,922.74:0	
385	98	116	11:36:54.933	488CJ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,449,264:18:0	
386	98	116	12:55:50.933	488CJ6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,449,342:24:0	
387	98	116	13:16:11.600	488CJ6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,449,362:35:0	
388	98	117	03:48:32.933	488CK6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,450,225:14:0	
389	98	117	03:53:58.933	488CK6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,450,230:48:0	
390	98	117	04:19:34.933	488CK6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,450,255:77:0	
391	98	117	08:40:36.266	176SN6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,450,514:00:0	
392	98	117	08:46:40.266	465SA6A	6DMST		5000 DMS Slew to TIC	400	4	0	4,450,520:00:0	
393	98	117	08:46:40.266		DMS:	: *SLEW-TIC	P7, TRACK 2, REV, TIC 6025.38 +/-	400	4	0	4,450,520:00:0	
394	98	117	08:46:40.266		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 6025.38 +/-	400	4	0	4,450,520:00:0	
395	98	117	08:46:40.266		DMS:	: *TURNARND	P7, TRACK 2, REV, TIC 6025.38 +/-	400	4	0	4,450,520:00:0	
396	98	117	08:46:41.666		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *6025.50 +/-	400	4	0	4,450,520:02:1	
397	98	117	08:46:46.933		DMS:	: *US RD	P7, TRACK 1, FWD, TIC *6026.73 +/-	400	4	0	4,450,520:10:0	
398	98	117	08:46:48.133		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC *6026.79 +/-	400	4	0	4,450,520:11:8	
399	98	117	08:46:49.533		DMS:	: *AT SPD	P7, TRACK 2, REV, TIC *6026.67 +/-	400	4	0	4,450,520:13:9	
400	98	117	09:59:40.400		DMS:	: *RUNDOWN	P7, TRACK 2, REV, TIC *5002.06 +/-	400	4	0	4,450,592:18:2	
401	98	117	09:59:41.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5002.00 +/-	400	4	0	4,450,592:20:0	
402	98	117	10:54:34.933	488CL6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,450,646:46:0	
403	98	117	14:40:21.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5002.00 +/-	400	4	0	4,450,869:73:0	
404	98	117	14:40:21.533	465SB6A	6DMSC	P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	4,450,869:73:0	
405	98	117	14:40:22.933		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *5002.12 +/-	400	4	0	4,450,869:75:1	
406	98	117	14:40:28.200		DMS:	: *US RD	P7, TRACK 1, FWD, TIC *5003.35 +/-	400	4	0	4,450,869:83:0	
407	98	117	14:40:29.400		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *5003.41 +/-	400	4	0	4,450,869:84:8	
408	98	117	14:40:33.266		DMS:	: *AT SPD	P100, TRACK 4, REV, TIC 4997.91 +/-	400	4	0	4,450,869:90:6	
409	98	117	14:40:33.266		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4997.91 +/-	400	4	0	4,450,869:90:6	
410	98	117	15:06:13.533	465SB6B	6DMSC	RDY.4	DMS Control Tape stop	400	4	0	4,450,895:35:0	
411	98	117	15:06:13.533		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 259.79 +/-	400	4	0	4,450,895:35:0	
412	98	117	15:06:14.733		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 258.99 +/-	400	4	0	4,450,895:36:8	
413	98	117	17:03:15.533	488CM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,451,011:12:0	
414	98	117	17:04:01.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 258.99 +/-	400	4	0	4,451,011:81:0	
415	98	117	17:04:01.533		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 258.99 +/-	400	4	0	4,451,011:81:0	
416	98	117	17:04:01.533	465SC6A	6DTRN	CMD,6DTRN,465SC6	DMS TRACK TURNAROUND	400	4	0	4,451,011:81:0	
417	98	117	17:04:02.933		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC * 259.11 +/-	400	4	0	4,451,011:83:1	
418	98	117	17:04:08.200		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 260.34 +/-	400	4	0	4,451,012:00:0	
419	98	117	17:04:09.400		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 260.40 +/-	400	4	0	4,451,012:01:8	
420	98	117	17:04:10.800		DMS:	: *AT SPD	P7, TRACK 4, REV, TIC * 260.28 +/-	400	4	0	4,451,012:03:9	
421	98	117	17:08:28.533		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	400	4	0	4,451,016:26:5	
422	98	117	17:08:29.733		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	4,451,016:28:3	
423	98	117	17:08:29.733		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	400	4	0	4,451,016:28:3	
424	98	117	17:08:31.133		DMS:	: *AT SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	400	4	0	4,451,016:30:4	
425	98	117	17:08:43.133		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	400	4	0	4,451,016:48:4	
426	98	117	17:08:44.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	400	4	0	4,451,016:50:2	
427	98	117	17:14:04.200		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,451,021:75:0	
428	98	117	17:14:04.200	465SD6A	6DMSC	P100.1	DMS Control Tape P/B 100.8kbps	400	4	0	4,451,021:75:0	
429	98	117	17:14:10.866		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	4,451,021:85:0	
430	98	117	17:14:14.733		DMS:	: *AT SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	400	4	0	4,451,021:90:8	
431	98	117	17:14:14.733		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	400	4	0	4,451,021:90:8	
432	98	117	17:45:58.200		DMS:	: *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	400	4	0	4,451,053:34:0	
433	98	117	17:45:59.400	465SD6B	6DMSC	RDY.1	DMS Control Tape stop	400	4	0	4,451,053:35:8	
434	98	117	17:45:59.400		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	400	4	0	4,451,053:35:8	
435	98	117	18:01:34.200	465SE6A	6DMSC	P100.2	DMS Control Tape P/B 100.8kbps	400	4	0	4,451,068:73:0	
436	98	117	18:01:34.200		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	400	4	0	4,451,068:73:0	
437	98	117	18:01:35.600		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	400	4	0	4,451,068:75:1	
438	98	117	18:01:40.866		DMS:	: *US RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	400	4	0	4,451,068:83:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	98	117	18:01:42.066		DMS:	:*RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	400	4	0	4,451,068:84:8	
440	98	117	18:01:45.933		DMS:	:*AT SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	400	4	0	4,451,068:90:6	
441	98	117	18:01:45.933		DMS:	:*P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	400	4	0	4,451,068:90:6	
442	98	117	18:13:42.866	488CM6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,451,080:74:0	
443	98	117	18:33:42.200	465SF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	400	4	0	4,451,100:53:0	
444	98	117	18:33:42.200		DMS:	:*RUNDOWN	P100, TRACK 2, REV, TIC *164.96 +/-	400	4	0	4,451,100:53:0	
445	98	117	18:33:43.400		DMS:	:*RUNUP	P100, TRACK *3, *FWD, TIC *164.16 +/-	400	4	0	4,451,100:54:8	
446	98	117	18:33:47.266		DMS:	:*AT SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	400	4	0	4,451,100:60:6	
447	98	117	18:33:47.266		DMS:	:*P_SLEW	P100, TRACK 3, FWD, TIC 169.66 +/-	400	4	0	4,451,100:60:6	
448	98	117	19:05:42.866	465SF6B	6DMSC	RDY,3	DMS Control Tape stop	400	4	0	4,451,132:22:0	
449	98	117	19:05:42.866		DMS:	:*RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	400	4	0	4,451,132:22:0	
450	98	117	19:05:44.066		DMS:	:*READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	400	4	0	4,451,132:23:8	
451	98	117	19:20:26.200		DMS:	:*US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	400	4	0	4,451,146:73:0	
452	98	117	19:20:26.200	465SG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	400	4	0	4,451,146:73:0	
453	98	117	19:20:27.600		DMS:	:*US_AT SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	400	4	0	4,451,146:75:1	
454	98	117	19:20:32.866		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	400	4	0	4,451,146:83:0	
455	98	117	19:20:34.066		DMS:	:*RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	400	4	0	4,451,146:84:8	
456	98	117	19:20:37.933		DMS:	:*P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	400	4	0	4,451,146:90:6	
457	98	117	19:20:37.933		DMS:	:*AT SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	400	4	0	4,451,146:90:6	
458	98	117	19:52:33.533		DMS:	:*RUNDOWN	P100, TRACK 4, REV, TIC *166.38 +/-	400	4	0	4,451,178:52:0	
459	98	117	19:52:33.533	465SH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	400	4	0	4,451,178:52:0	
460	98	117	19:52:34.733		DMS:	:*RUNUP	P100, TRACK *3, *FWD, TIC *165.58 +/-	400	4	0	4,451,178:53:8	
461	98	117	19:52:38.600		DMS:	:*AT SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	400	4	0	4,451,178:59:6	
462	98	117	19:52:38.600		DMS:	:*P_SLEW	P100, TRACK 3, FWD, TIC *171.08 +/-	400	4	0	4,451,178:59:6	
463	98	117	19:53:39.533		DMS:	:*RUNDOWN	P100, TRACK 3, FWD, TIC *358.52 +/-	400	4	0	4,451,179:60:0	
464	98	117	19:53:39.533	465SH6B	6DMSC	RDY,3	DMS Control Tape stop	400	4	0	4,451,179:60:0	
465	98	117	19:53:40.733		DMS:	:*READY	RDY, TRACK 3, FWD, TIC *359.32 +/-	400	4	0	4,451,179:61:8	
466	98	117	20:08:09.533		DMS:	:*READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	400	4	0	4,451,194:00:0	
467	98	117	20:08:09.533	465S16A	6DMSC	RDY,4	DMS Control Tape stop	400	4	0	4,451,194:00:0	
468	98	117	20:09:03.533		DMS:	:*DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	400	4	0	4,451,194:81:0	
469	98	117	20:09:03.533		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	400	4	0	4,451,194:81:0	
470	98	117	20:09:03.533	465SJ6A	6DTRN	CMD 6DTRN,465SJ6	DMS TRACK TURNAROUND	400	4	0	4,451,194:81:0	
471	98	117	20:09:04.933		DMS:	:*US_AT SP	P7, TRACK 1, FWD, TIC *359.44 +/-	400	4	0	4,451,194:83:1	
472	98	117	20:09:10.200		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *360.67 +/-	400	4	0	4,451,195:00:0	
473	98	117	20:09:11.400		DMS:	:*RUNUP	P7, TRACK *4, *REV, TIC *360.73 +/-	400	4	0	4,451,195:01:8	
474	98	117	20:09:12.800		DMS:	:*AT SPD	P7, TRACK 4, REV, TIC *360.61 +/-	400	4	0	4,451,195:03:9	
475	98	117	20:20:38.600		DMS:	:*REVERSE	P7, TRACK 4, REV, TIC *199.87 +/-	400	4	0	4,451,206:31:6	
476	98	117	20:20:39.800		DMS:	:*RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	4,451,206:33:4	
477	98	117	20:20:39.800		DMS:	:*TURNARND	P7, TRACK *1, *FWD, TIC *199.81 +/-	400	4	0	4,451,206:33:4	
478	98	117	20:20:41.200		DMS:	:*AT SPD	P7, TRACK 1, FWD, TIC *199.93 +/-	400	4	0	4,451,206:35:5	
479	98	117	20:20:53.200		DMS:	:*AUTOSTOP	P7, TRACK 1, FWD, TIC *202.06 +/-	400	4	0	4,451,206:53:5	
480	98	117	20:20:54.400		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *202.12 +/-	400	4	0	4,451,206:55:3	
481	98	117	20:39:04.200	20UE4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,451,224:52:0	
482	98	117	20:39:54.200	20UE4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,451,225:36:0	
483	98	117	20:41:31.533	176SO6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,451,227:00:0	
484	98	117	20:46:42.866	488CM6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,451,232:12:0	
485	98	117	20:51:34.866	488CM6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,451,236:86:0	
486	98	118	10:58:40.200	488CN6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,452,074:66:0	
487	98	118	11:13:26.866	488CN6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,452,089:31:0	
488	98	118	12:04:38.866	488CN6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,452,139:89:0	
489	98	118	12:33:41.533	488CN6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,452,168:64:0	
490	98	118	13:07:20.200	488CN6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,452,201:89:0	
491	98	118	16:54:46.866	488CO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,452,426:84:0	
492	98	118	21:02:14.866	488CO6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,452,671:61:0	
493	98	118	22:11:25.466	488CO6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,452,740:08:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	98	118	22:40:22.800	488CO6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,452,768:66:0	
495	98	119	10:53:46.133	488CP6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,453,494:05:0	
496	98	119	10:58:30.800	488CP6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,453,498:68:0	
497	98	119	11:19:50.800	488CP6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,453,519:77:0	
498	98	119	15:40:06.800	488CP6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,453,777:23:0	
499	98	119	16:05:42.800	488CP6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,453,802:52:0	
500	98	119	16:54:46.800	488CQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,453,851:09:0	
501	98	119	20:55:50.800	488CQ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,454,089:47:0	
502	98	120	02:00:54.800	488CR6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,454,391:21:0	
503	98	120	03:26:14.800	488CR6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,454,475:57:0	
504	98	120	03:53:58.800	488CR6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,454,503:05:0	
505	98	120	05:01:26.733	488CR6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,454,569:71:0	
506	98	120	05:27:50.733	488CR6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,454,595:81:0	
507	98	120	05:36:26.733	488CS6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,454,604:36:0	
508	98	120	11:21:58.733	488CS6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,454,946:12:0	
509	98	120	12:47:18.733	488CT6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,455,030:48:0	
510	98	120	13:04:22.733	488CT6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,455,047:37:0	
511	98	120	14:23:29.400	488CT6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,455,125:59:0	
512	98	120	15:07:08.733	488CT6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,455,168:75:0	
513	98	120	16:25:30.066	20BD6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,455,246:29:0	
514	98	120	16:29:13.400	176BA6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,455,250:00:0	
515	98	120	16:39:00.066	20BB4C	7STAT	17,45,265,1056,3	Stator inertial point	400	4	0	4,455,259:61:0	
516	98	120	17:00:00.066	474BA416A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,455,280:40:0	
517	98	120	17:02:00.066	474BA416A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,455,282:38:0	
518	98	120	17:02:20.066	20BB4D	7STAT	17,45,265,1056,3	Stator inertial point	400	4	0	4,455,282:68:0	
519	98	120	17:06:14.066	474BA416A4E	7BURN	,265,105598,39,7	ALERT -- Thruster fire	400	4	0	4,455,286:55:0	
520	98	120	17:12:04.066	20BB4F	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,455,292:34:0	
521	98	120	17:17:56.066	20BB4G	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,455,298:16:0	
522	98	120	17:33:38.066	20BB4J	7STAT	17,45,265,1056,3	Stator inertial point	400	4	0	4,455,313:64:0	
523	98	120	17:42:56.066	20BB4K	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,455,322:82:0	
524	98	120	17:47:12.066	474BA416A4G	7BURN	,265,105598,39,7	ALERT -- Thruster fire	400	4	0	4,455,327:11:0	
525	98	120	17:55:24.066	20BB4M	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,455,335:21:0	
526	98	120	18:00:16.066	20BB4N	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,455,340:04:0	
527	98	120	18:24:22.733	488CT6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,455,363:81:0	
528	98	120	18:24:24.066	20BD6B	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,455,363:83:0	
529	98	120	18:46:48.066	20BE4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,455,386:06:0	
530	98	120	18:47:38.066	20BE4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,455,386:81:0	
531	98	120	18:48:45.400	176BB6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,455,388:00:0	
532	98	120	18:54:18.066	20BD6H	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,455,393:44:0	
533	98	120	22:01:13.400	488CU6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,455,578:32:0	
534	98	120	22:30:19.400	488CU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,455,607:12:0	
535	98	121	01:56:38.733	488CU6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,455,811:17:0	
536	98	121	03:21:58.733	488CU6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,455,895:53:0	
537	98	121	03:53:58.733	488CU6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,455,927:21:0	
538	98	121	04:56:20.733	488CV6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,455,988:83:0	
539	98	121	05:23:34.733	488CV6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,456,015:77:0	
540	98	121	05:31:30.733	488CV6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,456,023:63:0	
541	98	121	10:41:26.733	488CV6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,456,330:20:0	
542	98	121	11:13:26.733	488CW6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,456,361:79:0	
543	98	121	12:18:24.000	488CW6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,456,426:10:0	
544	98	121	12:52:03.333	488CW6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,456,459:36:0	
545	98	121	15:57:42.000	176TH6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,456,643:00:0	
546	98	121	16:02:00.000	20UR4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,456,647:23:0	
547	98	121	16:03:00.000	20UR4D	7MODE	SPNL	AACS ALL-SPIN LOW	400	4	0	4,456,648:22:0	
548	98	121	16:05:00.000	20UR4E	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,456,650:20:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	98	121	16:10:30.000	20UR4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	400	4	0	4,456,655:60:0	
550	98	121	16:10:30.666	20UR4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	400	4	0	4,456,655:61:0	
551	98	121	16:10:50.666	20UR4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	400	4	0	4,456,656:00:0	
552	98	121	16:10:51.333	20UR4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	400	4	0	4,456,656:01:0	
553	98	121	16:11:11.333	20UR4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	4,456,656:31:0	
554	98	121	16:11:22.000	20UR4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,456,656:32:0	
555	98	121	16:11:22.000	20UR4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	4,456,656:47:0	
556	98	121	16:11:22.666	20UR4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,456,656:48:0	
557	98	121	16:11:32.666	20UR4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	400	4	0	4,456,656:63:0	
558	98	121	16:11:33.333	20UR4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	400	4	0	4,456,656:64:0	
559	98	121	16:13:20.000	20UR4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	400	4	0	4,456,658:42:0	
560	98	121	16:13:20.666	20UR4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	400	4	0	4,456,658:43:0	
561	98	121	16:13:40.666	20UR4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	400	4	0	4,456,658:73:0	
562	98	121	16:13:41.333	20UR4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	400	4	0	4,456,658:74:0	
563	98	121	16:14:01.333	20UR4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,456,659:13:0	
564	98	121	16:14:02.000	20UR4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,456,659:14:0	
565	98	121	16:14:12.000	20UR4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,456,659:29:0	
566	98	121	16:14:12.666	20UR4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,456,659:30:0	
567	98	121	16:14:22.666	20UR4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	400	4	0	4,456,659:45:0	
568	98	121	16:14:23.333	20UR4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	400	4	0	4,456,659:46:0	
569	98	121	16:15:20.000	20UR4Z	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,456,660:40:0	
570	98	121	16:40:04.000	20UK4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,456,684:82:0	
571	98	121	16:40:54.000	20UK4B	7SLEW	DIS_POS,0.0	Stator movement	400	4	0	4,456,685:66:0	
572	98	121	16:42:11.333	176SW6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,456,687:00:0	
573	98	121	18:09:26.666	488CX6A	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	4,456,773:27:0	
574	98	122	01:56:38.666	488CY6A	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,457,235:33:0	
575	98	122	03:15:34.666	488CY6B	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,457,313:39:0	
576	98	122	03:17:52.666	488CY6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,457,315:64:0	
577	98	122	03:26:14.666	488CY6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,457,323:89:0	
578	98	122	04:02:30.666	488CY6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,457,359:77:0	
579	98	122	10:44:04.000	488CZ6A	6TMSED	NORMAL2	Sci, Eng, and D/L Chan	400	4	0	4,457,756:90:0	
580	98	122	10:49:58.666	488CZ6B	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,457,762:76:0	
581	98	122	11:09:10.666	488CZ6C	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,457,781:75:0	
582	98	122	16:35:05.333	488CZ6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,458,104:14:0	
583	98	122	16:48:45.333	488DA6A	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,458,117:61:0	
584	98	122	18:05:10.666	488DA6B	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	4,458,193:23:0	
585	98	123	01:52:22.600	488DB6A	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,458,655:29:0	
586	98	123	03:12:48.600	488DB6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,458,734:79:0	
587	98	123	03:17:42.600	488DB6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,458,739:65:0	
588	98	123	03:53:58.600	488DB6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,458,775:53:0	
589	98	123	16:49:11.933	488DC6A	6TMSED	NORMAL2	Sci, Eng, and D/L Chan	400	4	0	4,459,542:26:0	
590	98	123	16:54:46.600	488DC6B	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,459,547:73:0	
591	98	123	17:39:34.600	488DC6C	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,459,592:10:0	
592	98	123	18:03:09.933	488DC6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,459,615:40:0	
593	98	123	18:36:49.266	488DC6E	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,459,648:66:0	
594	98	124	02:11:34.533	488DD6A	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,460,098:44:0	
595	98	124	03:07:02.533	488DD6B	6TMSED	NORMAL2	Sci, Eng, and D/L Chan	400	4	0	4,460,153:31:0	
596	98	124	03:39:02.533	488DD6C	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,460,184:90:0	
597	98	124	04:31:02.533	488DD6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,460,236:38:0	
598	98	124	05:12:54.533	488DD6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,460,277:75:0	
599	98	124	05:21:07.866	488DE6A	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,460,285:87:0	
600	98	124	11:17:42.533	488DE6B	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,460,638:56:0	
601	98	124	12:36:38.533	488DF6A	6TMSED	NORMAL2	Sci, Eng, and D/L Chan	400	4	0	4,460,716:62:0	
602	98	124	12:51:58.533	488DF6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,460,731:77:0	
603	98	124	13:08:38.533	488DF6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,460,748:30:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	98	124	16:43:57.200	488DF6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,460,961:25:0	
605	98	124	17:58:46.533	488DF6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,461,035:25:0	
606	98	124	20:46:56.533	488DG6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,461,201:54:0	
607	98	124	20:51:34.533	488DG6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,461,206:16:0	
608	98	125	03:14:21.200	488DH6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,461,584:68:0	
609	98	125	03:34:46.533	488DH6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,461,604:86:0	
610	98	125	04:40:55.200	488DH6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,461,670:33:0	
611	98	125	05:06:30.533	488DH6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,461,695:61:0	
612	98	125	05:15:45.866	488DH6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,461,704:75:0	
613	98	125	07:03:01.200	20NY6AA	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,461,810:82:0	
614	98	125	07:06:09.200	176GC6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,461,814:00:0	
615	98	125	07:10:11.866	20NY6BA	6MROH	7.6FC8,0,A10	read from AACSA7,6FC8,0,A10	400	4	0	4,461,818:00:0	
616	98	125	07:16:55.866	20NY6F	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	400	4	0	4,461,824:60:0	
617	98	125	07:30:29.866	20NY6K	6MROH	7.6F96,2,A10	read from AACSA7,6F96,2,A10	400	4	0	4,461,838:07:0	
618	98	125	07:44:37.866	20NY4I	7MODE	INIT	AACS INERTIAL MODE	400	4	0	4,461,852:05:0	
619	98	125	07:59:37.866	20NY4K	7SLEW	INIT,POS,17.45	Stator movement	400	4	0	4,461,866:81:0	
620	98	125	08:11:37.866	20NY4L	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,461,878:69:0	
621	98	125	08:18:37.866	20NY4M	7SLEW	INIT,NEG,17.45	Stator movement	400	4	0	4,461,885:62:0	
622	98	125	08:30:37.866	20NY4N	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,461,897:50:0	
623	98	125	08:37:37.866	20NY4O	7SLEW	INIT,POS,4.36	Stator movement	400	4	0	4,461,904:43:0	
624	98	125	08:49:37.866	20NY4P	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,461,916:31:0	
625	98	125	08:56:37.866	20NY4Q	7SLEW	INIT,NEG,4.36	Stator movement	400	4	0	4,461,923:24:0	
626	98	125	09:08:37.800	20NY4R	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,461,935:12:0	
627	98	125	09:15:37.800	20NY4S	7CONE	17.45,0.0	Check S/P Position	400	4	0	4,461,942:05:0	
628	98	125	09:21:37.800	20NY4T	7CONE	17.45,180.0	Check S/P Position	400	4	0	4,461,947:90:0	
629	98	125	09:27:37.800	20NY4U	7CONE	4.36,0.0	Check S/P Position	400	4	0	4,461,953:84:0	
630	98	125	09:42:37.800	20NY4V	7CONE	4.36,153.0	Check S/P Position	400	4	0	4,461,968:69:0	
631	98	125	10:19:41.800	20NY4AG	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,462,005:38:0	
632	98	125	10:23:41.800	20NY4AH	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,462,009:34:0	
633	98	125	10:32:21.800	20NY6U	6MROH	7.6F96,2,A10	read from AACSA7,6F96,2,A10	400	4	0	4,462,017:86:0	
634	98	125	10:37:21.800	20NY4AM	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,462,022:81:0	
635	98	125	10:39:29.800	176GD6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,462,025:00:0	
636	98	125	10:46:29.800	20NY6BB	6MROH	7.6FC8,0,A10	read from AACSA7,6CF8,0,A10	400	4	0	4,462,031:84:0	
637	98	125	10:47:59.800	20NY6Y	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	400	4	0	4,462,033:37:0	
638	98	125	11:52:59.800	20NY6AB	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,462,097:63:0	
639	98	125	12:27:58.466	488DI6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,462,132:26:0	
640	98	125	13:01:37.133	488DI6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,462,165:51:0	
641	98	125	16:25:24.466	488DI6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,462,367:10:0	
642	98	125	16:39:04.466	488DI6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,462,380:57:0	
643	98	125	17:54:30.466	488DI6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,462,455:21:0	
644	98	125	21:57:14.466	488DJ6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,462,695:27:0	
645	98	125	22:01:58.466	488DJ6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,462,699:89:0	
646	98	126	10:34:29.800	488DK6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,463,444:21:0	
647	98	126	10:45:42.466	488DK6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,463,455:29:0	
648	98	126	11:34:46.466	488DK6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,463,503:77:0	
649	98	126	12:02:52.466	488DK6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,463,531:58:0	
650	98	126	12:36:31.133	488DK6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,463,564:83:0	
651	98	126	16:20:30.400	488DL6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,463,786:40:0	
652	98	126	16:34:10.400	488DL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,463,799:87:0	
653	98	126	17:54:30.400	488DL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,463,879:37:0	
654	98	126	17:55:36.400	488DL6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,463,880:45:0	
655	98	126	18:24:42.400	488DL6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,463,909:25:0	
656	98	127	01:37:26.400	488DM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,464,337:23:0	
657	98	127	02:57:57.066	488DM6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,464,416:80:0	
658	98	127	03:02:46.400	488DM6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,464,421:59:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	98	127	03:39:02.400	488DM6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,464,457:47:0	
660	98	127	14:30:45.066	14NNRCTRLT01-		-----START-----		400	4	0	:	
661	98	127	16:34:17.733	488DN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,465,224:23:0	
662	98	127	17:54:30.400	488DN6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,465,303:53:0	
663	98	128	01:33:10.333	488DO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,465,757:19:0	
664	98	128	02:56:22.333	488DO6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,465,839:45:0	
665	98	128	03:30:30.333	488DO6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,465,873:23:0	
666	98	128	03:46:29.732	14NNRCTRLT01-		-----STOP-----		400	4	0	:	
667	98	128	04:30:36.333	488DO6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,465,932:63:0	
668	98	128	04:57:58.333	488DO6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,465,959:69:0	
669	98	128	05:00:00.000	14NNRCTRLT01-		-----START-----		400	4	0	:	
670	98	128	05:05:48.333	488DP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,465,967:46:0	
671	98	128	09:15:29.000	488DP6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,466,214:40:0	
672	98	128	09:22:30.333	488DP6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,466,221:35:0	
673	98	128	10:30:42.333	488DP6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,466,288:76:0	
674	98	128	10:46:59.666	488DP6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,466,304:86:0	
675	98	128	10:49:58.333	488DQ6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,466,307:81:0	
676	98	128	11:21:18.333	488DQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,466,338:80:0	
677	98	128	12:50:10.000	14NNRCTRLT01-		-----STOP-----		400	4	0	:	
678	98	128	16:15:44.333	488DQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,466,630:07:0	
679	98	128	16:29:24.333	488DQ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,466,643:54:0	
680	98	128	17:54:30.333	488DR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,466,727:69:0	
681	98	129	01:26:46.333	488DS6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,467,175:05:0	
682	98	129	02:52:06.333	488DS6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,467,259:41:0	
683	98	129	02:55:27.666	488DS6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,467,262:70:0	
684	98	129	03:02:46.333	488DS6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,467,270:00:0	
685	98	129	03:39:02.333	488DS6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,467,305:79:0	
686	98	129	10:24:49.600	488DT6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,467,707:18:0	
687	98	129	10:30:46.266	488DT6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,467,713:07:0	
688	98	129	10:45:42.266	488DT6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,467,727:77:0	
689	98	129	16:15:50.266	488DT6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,468,054:32:0	
690	98	129	16:29:30.266	488DU6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,468,067:79:0	
691	98	129	17:54:30.266	488DU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,468,151:85:0	
692	98	130	01:22:30.266	488DV6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,468,595:01:0	
693	98	130	02:47:50.266	488DV6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,468,679:37:0	
694	98	130	02:51:02.933	488DV6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,468,682:53:0	
695	98	130	02:58:30.266	488DV6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,468,689:87:0	
696	98	130	03:34:46.266	488DV6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,468,725:75:0	
697	98	130	10:19:56.933	488DW6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,469,126:50:0	
698	98	130	10:24:22.266	488DW6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,469,130:84:0	
699	98	130	10:45:42.266	488DW6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,469,152:02:0	
700	98	130	16:10:57.533	488DW6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,469,473:64:0	
701	98	130	16:24:37.533	488DX6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,469,487:20:0	
702	98	130	17:50:14.200	488DX6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,469,571:81:0	
703	98	131	01:18:14.200	488DY6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,470,014:88:0	
704	98	131	02:47:50.200	488DY6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,470,103:53:0	
705	98	131	03:19:50.200	488DY6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,470,135:21:0	
706	98	131	04:25:15.533	488DY6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,470,199:85:0	
707	98	131	04:51:34.200	488DY6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,470,225:87:0	
708	98	131	05:00:14.200	488DZ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,470,234:48:0	
709	98	131	09:56:38.200	488DZ6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,470,527:61:0	
710	98	131	10:26:30.200	488DZ6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,470,557:19:0	
711	98	131	10:41:26.200	488DZ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,470,571:89:0	
712	98	131	11:37:18.200	488EA6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,470,627:21:0	
713	98	131	12:10:57.533	488EA6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,470,660:47:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	98	131	14:01:05.533	488EA6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,470,769:40:0	
715	98	131	16:24:44.200	488EA6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,470,911:46:0	
716	98	131	17:50:14.200	488EB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,470,996:06:0	
717	98	131	20:48:45.466	488EB6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,471,172:57:0	
718	98	131	20:53:42.133	488EB6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,471,177:47:0	
719	98	132	07:59:38.133	41XE99A	POWER		Change to Calib/Decon Mode	400	4	0	4,471,836:06:0	
720	98	132	07:59:38.133	41XE31	40T1PR		1 PCT Heater 1 OFF (primary relay)	400	4	0	4,471,836:12:0	
721	98	132	07:59:48.133	41XE3J	40T1PR		2 PCT Heater 1 OFF (primary relay)	400	4	0	4,471,836:27:0	
722	98	132	07:59:58.133	41XE3K	40T2R		1 PCT Heater 2 OFF	400	4	0	4,471,836:42:0	
723	98	132	08:00:08.133	41XE3L	40T2R		2 PCT Heater 2 OFF	400	4	0	4,471,836:57:0	
724	98	132	08:10:37.466	176XU6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,471,847:00:0	
725	98	132	08:13:43.466	20XE4A	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,471,850:06:0	
726	98	132	08:17:50.133	20DA4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,471,854:12:0	
727	98	132	08:18:40.133	20DA4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	4,471,854:87:0	
728	98	132	08:20:44.133	176XV6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,471,857:00:0	
729	98	132	08:21:44.800	185XE10A3A	40HRP		1 RCT Heater ON (primary relay)	400	4	0	4,471,858:00:0	
730	98	132	08:21:50.133	185XE10B3A	40HRP		2 RCT Heater ON (primary relay)	400	4	0	4,471,858:08:0	
731	98	132	16:19:52.133	488EC6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,472,330:79:0	
732	98	132	17:45:58.133	488EC6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,472,416:02:0	
733	98	132	20:16:31.466	125XE	NIMSINIT	GS	##### GROUP START INIT	400	4	0	4,472,564:84:0	
734	98	132	20:16:31.466	125XE4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	4,472,564:84:0	
735	98	132	20:17:32.133	125XE4B	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	4R0	4	0	4,472,565:84:0	
736	98	132	20:18:32.800	125XE4C	37IST	0,2,0,OFF,0,1,3	Gain State 1	1R0	4	0	4,472,566:84:0	
737	98	132	20:19:33.466	125XE4D	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	1R0	4	0	4,472,567:84:0	
738	98	132	20:19:33.466	125XE11A	NIMSINIT	GE	##### GROUP END INIT	1R0	4	0	4,472,567:84:0	
739	98	132	20:21:34.800	127XE	NIMSTAB	GS	%%%%% GROUP START TAB	1R0	4	0	4,472,569:84:0	
740	98	132	20:21:34.800	127XE4A	37IOP	3.0	Long Map, Grating Start Position =00	1R3	4	0	4,472,569:84:0	
741	98	132	20:21:35.466	127XE4B	37ETB	0A,CA,18,03,FF,1	Loads wavelength edit table	1R3	4	0	4,472,569:85:0	
742	98	132	20:21:43.466	127XE11A	NIMSTAB	GE	%%%%% GROUP END TAB	1R3	4	0	4,472,570:06:0	
743	98	132	20:25:42.133	176XE6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1R3	4	0	4,472,574:00:0	
744	98	132	20:31:46.133	192XE4A	7CONE	17.0,119.7	Check S/P Position	1R3	4	0	4,472,580:00:0	
745	98	132	20:34:07.466	432XE6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	1R3	4	0	4,472,582:30:0	
746	98	132	20:35:06.800	432XF6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	1R3	4	0	4,472,583:28:0	
747	98	132	20:37:50.133	192XE4B	7CONE	17.0,0.0	Check S/P Position	1R3	4	0	4,472,586:00:0	
748	98	132	20:40:11.466	432XU6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	1R3	4	0	4,472,588:30:0	
749	98	132	20:42:11.466	432XV6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	1R3	4	0	4,472,590:28:0	
750	98	132	20:43:54.133	192XE4C	7CONE	17.0,119.7	Check S/P Position	1R3	4	0	4,472,592:00:0	
751	98	132	20:45:55.466	185XE10C3A	40HRPR		1 RCT Heater OFF (primary relay)	1R3	4	0	4,472,594:00:0	
752	98	132	20:46:00.800	185XE10D3A	40HRPR		2 RCT Heater OFF (primary relay)	1R3	4	0	4,472,594:08:0	
753	98	132	20:46:15.466	432XW6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	1R3	4	0	4,472,594:30:0	
754	98	132	20:47:14.800	432XY6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	1R3	4	0	4,472,595:28:0	
755	98	132	20:48:52.800	125DC11A	NIMSINIT	GE	##### GROUP END INIT	1R3	4	0	4,472,596:84:0	
756	98	132	20:48:52.800	125DC4A	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R3	4	0	4,472,596:84:0	
757	98	132	20:48:52.800	125DC	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,472,596:84:0	
758	98	132	20:49:53.466	127DC4A	37IOP	3.0	Long Map, Grating Start Position =00	4R3	4	0	4,472,597:84:0	
759	98	132	20:49:53.466	127DC	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	4,472,597:84:0	
760	98	132	20:49:54.133	127DC4B	37ETB	07,C7,31,80,00,0	Loads wavelength edit table	4R3	4	0	4,472,597:85:0	
761	98	132	20:49:58.133	192XE4D	7CONE	17.0,153.0	Check S/P Position	4R3	4	0	4,472,598:00:0	
762	98	132	20:50:02.133	127DC11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	4,472,598:06:0	
763	98	132	20:50:18.133	432DC6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	4R3	4	0	4,472,598:30:0	
764	98	132	20:50:54.133	125DD4A	37IST	0,2,1,OFF,1,0,1	OPCAL	4R3	4	0	4,472,598:84:0	
765	98	132	20:50:54.133	125DD	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,472,598:84:0	
766	98	132	20:50:54.133	125DD11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,472,598:84:0	
767	98	132	20:52:55.466	125DE	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	4,472,600:84:0	
768	98	132	20:52:55.466	125DE11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	4,472,600:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	98	132	20:52:55.466	125DE4A	37IST	0,2,1,OFF,1,0,1	OPCAL	4R3	4	0	4,472,600:84:0	
770	98	132	20:53:18.800	432DE6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	4R3	4	0	4,472,601:28:0	
771	98	132	20:56:58.133	127XF	NIMSTAB	GS	%%-%-% GROUP START TAB	4R3	4	0	4,472,604:84:0	
772	98	132	20:56:58.133	127XF4A	37IOP	0,0	Safe, Grating Start Position =00	4R0	4	0	4,472,604:84:0	
773	98	132	20:56:58.800	127XF4B	37ETB	04,C4,02,00,00	Loads wavelength edit table	4R0	4	0	4,472,604:85:0	
774	98	132	20:57:06.800	127XF11A	NIMSTAB	GE	%%-%-% GROUP END TAB	4R0	4	0	4,472,605:06:0	
775	98	132	21:00:00.133	125XF	NIMSNIT	GS	##### GROUP START INIT	4R0	4	0	4,472,607:84:0	
776	98	132	21:00:00.133	125XF4A	37MB	0,0,0,0,0,0,0	Selects mirror (spatial) edit table	4R0	4	0	4,472,607:84:0	
777	98	132	21:01:00.800	125XF4B	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	4,472,608:84:0	
778	98	132	21:02:01.466	125XF11A	NIMSNIT	GE	##### GROUP END INIT	460	4	0	4,472,609:84:0	
779	98	132	21:02:01.466	125XF4C	37IST	1,1,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	4,472,609:84:0	
780	98	132	21:08:14.133	41XU99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	400	4	0	4,472,616:06:0	
781	98	132	21:10:08.133	41XU3G	40T1P		1 PCT Heater 1 ON (primary relay)	400	4	0	4,472,617:86:0	
782	98	132	21:10:18.133	41XU3H	40T1P		2 PCT Heater 1 ON (primary relay)	400	4	0	4,472,618:10:0	
783	98	132	21:10:28.133	41XU3I	40T2		1 PCT Heater 2 ON	400	4	0	4,472,618:25:0	
784	98	132	21:10:38.133	41XU3J	40T2		2 PCT Heater 2 ON	400	4	0	4,472,618:40:0	
785	98	132	21:18:24.800	20DB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	4,472,626:12:0	
786	98	132	21:19:14.800	20DB4B	7SLEW	DIS_POS,0,0	Stator movement	400	4	0	4,472,626:87:0	
787	98	132	21:21:18.800	176XF6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,472,629:00:0	
788	98	132	21:48:29.466	488EC6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,472,655:80:0	
789	98	132	21:53:26.133	488EC6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,472,660:70:0	
790	98	133	10:05:18.066	488ED6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,473,384:54:0	
791	98	133	10:26:30.066	488ED6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,473,405:51:0	
792	98	133	11:19:50.066	488ED6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,473,458:28:0	
793	98	133	11:37:03.400	488ED6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,473,475:31:0	
794	98	133	12:10:42.733	488ED6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,473,508:57:0	
795	98	133	16:01:01.400	488EE6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,473,736:37:0	
796	98	133	16:07:50.066	488EE6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,473,743:13:0	
797	98	133	16:16:19.400	488EE6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,473,751:49:0	
798	98	133	16:24:54.066	488EE6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,473,760:02:0	
799	98	133	17:32:02.066	488EE6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,473,826:38:0	
800	98	133	17:56:38.066	488EF6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,473,850:68:0	
801	98	133	18:02:46.733	488EF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,473,856:75:0	
802	98	134	01:07:34.066	488EG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,474,276:86:0	
803	98	134	02:32:37.400	488EG6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,474,361:06:0	
804	98	134	02:37:10.066	488EG6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,474,365:51:0	
805	98	134	03:13:26.066	488EG6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,474,401:39:0	
806	98	134	16:11:26.666	488EH6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,475,170:81:0	
807	98	134	16:20:38.000	488EH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,475,179:89:0	
808	98	134	17:41:42.000	488EH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,475,260:14:0	
809	98	134	19:48:55.333	488EH6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,475,385:89:0	
810	98	134	19:53:58.000	488EH6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,475,390:88:0	
811	98	135	02:45:30.666	488EI6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,475,797:90:0	
812	98	135	03:04:54.000	488EI6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,475,817:15:0	
813	98	135	04:04:46.666	488EI6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,475,876:35:0	
814	98	135	04:40:54.000	488EI6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,475,912:10:0	
815	98	135	04:41:43.333	488EI6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,475,912:84:0	
816	98	135	09:58:46.000	488EJ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,476,226:44:0	
817	98	135	10:30:46.000	488EJ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,476,258:12:0	
818	98	135	11:26:49.333	488EJ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,476,313:52:0	
819	98	135	12:00:28.666	488EJ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,476,346:78:0	
820	98	135	13:46:34.000	488EJ6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,476,451:71:0	
821	98	135	16:10:14.666	488EK6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,476,593:80:0	
822	98	135	17:04:59.933	488EK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,476,648:03:0	
823	98	135	17:07:59.933	176NC6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,476,651:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	98	135	17:12:11.933	20NW6BA	6MROH	7,6FC8,0,A10	read from AACSA7,6FC8,0,A10	400	4	0	4,476,655:14:0	
825	98	135	17:18:55.933	20NW6F	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	400	4	0	4,476,661:74:0	
826	98	135	17:32:29.933	20NW6K	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	400	4	0	4,476,675:21:0	
827	98	135	17:35:17.933	488EK6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,476,678:00:0	
828	98	135	17:46:37.933	20NW4I	7MODE	INIT	AACS INERTIAL MODE	400	4	0	4,476,689:19:0	
829	98	135	18:01:37.933	20NW4K	7SLEW	INIT,POS,17,45	Stator movement	400	4	0	4,476,704:04:0	
830	98	135	18:13:37.933	20NW4L	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,476,715:83:0	
831	98	135	18:20:37.933	20NW4M	7SLEW	INIT,NEG,17,45	Stator movement	400	4	0	4,476,722:76:0	
832	98	135	18:32:37.933	20NW4N	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,476,734:64:0	
833	98	135	18:39:37.933	20NW4O	7SLEW	INIT,POS,4,36	Stator movement	400	4	0	4,476,741:57:0	
834	98	135	18:51:37.933	20NW4P	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,476,753:45:0	
835	98	135	18:58:37.933	20NW4Q	7SLEW	INIT,NEG,4,36	Stator movement	400	4	0	4,476,760:38:0	
836	98	135	19:10:37.933	20NW4R	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,476,772:26:0	
837	98	135	19:17:37.933	20NW4S	7CONE	17,45,0,0	Check S/P Position	400	4	0	4,476,779:19:0	
838	98	135	19:23:37.933	20NW4T	7CONE	17,45,180,0	Check S/P Position	400	4	0	4,476,785:13:0	
839	98	135	19:29:37.933	20NW4U	7CONE	4,36,0,0	Check S/P Position	400	4	0	4,476,791:07:0	
840	98	135	19:44:37.933	20NW4V	7CONE	4,36,153,0	Check S/P Position	400	4	0	4,476,805:83:0	
841	98	135	20:21:41.933	20NW4AG	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,476,842:52:0	
842	98	135	20:25:41.933	20NW4AH	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,476,846:48:0	
843	98	135	20:34:21.933	20NW4U	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	400	4	0	4,476,855:09:0	
844	98	135	20:39:21.933	20NW4AM	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,476,860:04:0	
845	98	135	20:41:20.600	176ND6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,476,862:00:0	
846	98	135	20:48:29.933	20NW6BB	6MROH	7,6FC8,0,A10	read from AACSA7,6FC8,0,A10	400	4	0	4,476,869:07:0	
847	98	135	20:49:59.933	20NW6Y	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	400	4	0	4,476,870:51:0	
848	98	135	20:59:59.933	488EK6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,476,880:41:0	
849	98	136	01:03:17.933	488EL6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,477,121:07:0	
850	98	136	02:26:29.933	488EL6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,477,203:33:0	
851	98	136	02:52:05.933	488EL6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,477,228:62:0	
852	98	136	03:21:57.933	488EL6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,477,258:20:0	
853	98	136	09:52:21.933	488EM6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,477,644:30:0	
854	98	136	10:56:29.933	488EM6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,477,678:08:0	
855	98	136	15:46:19.933	488EM6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,477,994:37:0	
856	98	136	15:52:53.933	488EN6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,478,000:82:0	
857	98	136	16:01:41.266	488EN6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,478,009:54:0	
858	98	136	16:12:05.933	488EN6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,478,019:81:0	
859	98	136	17:31:01.933	488EN6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,478,097:87:0	
860	98	137	00:59:01.866	488EO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,478,541:03:0	
861	98	137	02:23:52.533	488EO6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,478,624:86:0	
862	98	137	02:28:37.866	488EO6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,478,629:59:0	
863	98	137	03:04:53.866	488EO6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,478,665:47:0	
864	98	137	16:01:49.866	488EP6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,479,433:83:0	
865	98	137	16:12:05.866	488EP6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,479,444:06:0	
866	98	137	17:26:45.866	488EP6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,479,517:83:0	
867	98	138	00:59:01.866	488EQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,479,965:19:0	
868	98	138	02:24:21.866	488EQ6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,480,049:55:0	
869	98	138	02:56:21.866	488EQ6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,480,081:23:0	
870	98	138	03:54:23.200	488EQ6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,480,138:58:0	
871	98	138	04:21:41.866	488EQ6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,480,165:59:0	
872	98	138	04:29:34.533	488ER6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,480,173:40:0	
873	98	138	10:24:21.800	488ER6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,480,524:30:0	
874	98	138	11:47:33.800	488ES6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,480,606:56:0	
875	98	138	12:08:38.466	488ES6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,480,627:42:0	
876	98	138	12:25:57.800	488ES6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,480,644:54:0	
877	98	138	16:00:37.133	488ES6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,480,856:81:0	
878	98	138	17:20:21.800	488ES6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,480,935:69:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
879	98	138	20:48:55.133	488E16A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,481,142:02:0	
880	98	138	20:53:41.800	488E16B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,481,146:68:0	
881	98	139	02:31:01.133	488E16C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,481,480:33:0	
882	98	139	02:52:05.800	488E16A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,481,501:19:0	
883	98	139	03:49:15.800	488E16B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,481,557:68:0	
884	98	139	04:21:33.133	488E16C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,481,589:62:0	
885	98	139	04:25:26.466	488E16D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,481,593:48:0	
886	98	139	09:43:49.800	488E16A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,481,908:38:0	
887	98	139	10:11:33.800	488E16B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,481,935:77:0	
888	98	139	11:11:18.466	488E16C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,481,994:85:0	
889	98	139	11:44:57.133	488E16D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,482,028:19:0	
890	98	139	14:06:13.800	488E16E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,482,167:85:0	
891	98	139	15:33:41.733	488E16A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,482,254:40:0	
892	98	139	15:41:47.733	488E16B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,482,262:41:0	
893	98	139	15:48:37.733	488E16C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,482,269:19:0	
894	98	139	15:57:05.733	488E16D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,482,277:53:0	
895	98	139	16:05:41.733	488E16E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,482,286:08:0	
896	98	139	17:16:05.733	488E16A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,482,355:65:0	
897	98	140	00:59:01.733	488E16A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,482,813:51:0	
898	98	140	02:13:25.066	488E16B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,482,887:12:0	
899	98	140	02:17:57.733	488E16C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,482,891:57:0	
900	98	140	02:54:13.733	488E16D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,482,927:45:0	
901	98	140	09:46:11.733	488E16A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	4,483,334:85:0	
902	98	140	09:52:21.733	488E16B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,483,341:03:0	
903	98	140	10:11:33.733	488E16C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,483,360:02:0	
904	98	140	11:52:59.733	20L6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,483,460:31:0	
905	98	140	11:57:42.400	1765X6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,483,465:00:0	
906	98	140	12:05:59.733	20UV4C	7STAT	17,45,175.44,4,4	Stator inertial point	400	4	0	4,483,473:18:0	
907	98	140	12:25:01.733	490UC412A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,483,492:02:0	
908	98	140	12:29:59.733	490UC412A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,483,496:85:0	
909	98	140	12:30:19.733	20UV4D	7STAT	17,45,175.44,4,4	Stator inertial point	400	4	0	4,483,497:24:0	
910	98	140	12:34:09.733	490UC412A4E	7VECT		Inert vect update UTC	400	4	0	4,483,501:05:0	
911	98	140	12:34:13.733	490UC412A4F	7TURN	2,RTH	ALERT Thruster	400	4	0	4,483,501:11:0	
912	98	140	12:38:01.733	490UC412A406A4A	7STAR	16,217,100.73	Star catalog update	400	4	0	4,483,504:80:0	
913	98	140	12:38:03.733	490UC412A406A4B	7STAR	2,295,88,964,44,	Star catalog update	400	4	0	4,483,504:83:0	
914	98	140	12:38:05.733	490UC412A406A4C	7STAR	3,178,256,88	Star catalog update	400	4	0	4,483,504:86:0	
915	98	140	12:38:07.733	490UC412A406A4D	7STAR	4,111,99,056999,	Star catalog update	400	4	0	4,483,504:89:0	
916	98	140	12:38:09.733	490UC412A406A4E	7STAR	5,0,0,0,0,0	Star catalog update	400	4	0	4,483,505:01:0	
917	98	140	12:38:11.733	490UC412A406A4F	7STAR	6,0,0,0,0,0	Star catalog update	400	4	0	4,483,505:04:0	
918	98	140	12:48:05.733	20UV4F	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,483,514:76:0	
919	98	140	12:56:09.733	490UC412A4G	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,483,522:74:0	
920	98	140	13:40:37.733	488E16D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,483,566:72:0	
921	98	140	13:40:39.066	20L6B	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,483,566:74:0	
922	98	140	14:15:59.733	20L6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,483,601:70:0	
923	98	140	14:17:14.400	1765Q6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,483,603:00:0	
924	98	140	14:21:59.733	20US4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,483,607:64:0	
925	98	140	14:22:59.733	20US4D	7MODE	SPNL	AACS ALL-SPIN LOW	400	4	0	4,483,608:63:0	
926	98	140	14:24:59.733	20US4E	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,483,610:61:0	
927	98	140	14:30:29.733	20US4G	7VENT	0,611,1,333,8	ALERT -- Thruster fire	400	4	0	4,483,616:10:0	
928	98	140	14:30:30.400	20US4H	7VENT	0,611,10,989,8	ALERT -- Thruster fire	400	4	0	4,483,616:11:0	
929	98	140	14:30:50.400	20US4I	7VENT	0,611,1,333,6	ALERT -- Thruster fire	400	4	0	4,483,616:41:0	
930	98	140	14:30:51.066	20US4J	7VENT	0,611,10,989,6	ALERT -- Thruster fire	400	4	0	4,483,616:42:0	
931	98	140	14:31:11.066	20US4K	7VENT	0,611,1,333,4	ALERT -- Thruster fire	400	4	0	4,483,616:72:0	
932	98	140	14:31:11.733	20US4L	7VENT	0,611,0,666,5	ALERT -- Thruster fire	400	4	0	4,483,616:73:0	
933	98	140	14:31:21.733	20US4M	7VENT	0,611,1,333,4	ALERT -- Thruster fire	400	4	0	4,483,616:88:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
934	98	140	14:31:22.400	20US4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	4,483,616:89:0	
935	98	140	14:31:32.400	20US4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	400	4	0	4,483,617:13:0	
936	98	140	14:31:33.066	20US4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	400	4	0	4,483,617:14:0	
937	98	140	14:33:19.733	20US4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	400	4	0	4,483,618:83:0	
938	98	140	14:33:20.400	20US4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	400	4	0	4,483,618:84:0	
939	98	140	14:33:40.400	20US4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	400	4	0	4,483,619:23:0	
940	98	140	14:33:41.066	20US4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	400	4	0	4,483,619:24:0	
941	98	140	14:34:01.066	20US4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,483,619:54:0	
942	98	140	14:34:01.733	20US4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,483,619:55:0	
943	98	140	14:34:11.733	20US4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	4,483,619:70:0	
944	98	140	14:34:12.400	20US4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	4,483,619:71:0	
945	98	140	14:34:22.400	20US4AW	7VENT	1.211,1.333,9	ALERT -- Thruster fire	400	4	0	4,483,619:86:0	
946	98	140	14:34:23.066	20US4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	400	4	0	4,483,619:87:0	
947	98	140	14:35:19.733	20US4Z	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,483,620:81:0	
948	98	140	15:00:03.733	20UL4A	7SAFE	DIS,POS,0,0	S/P NO MOVEMENT	400	4	0	4,483,645:32:0	
949	98	140	15:00:53.733	20UL4B	7SLEW		Stator movement	400	4	0	4,483,646:16:0	
950	98	140	15:02:44.400	176SY6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	4,483,648:00:0	
951	98	140	15:39:35.733	488EZ6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,483,684:41:0	
952	98	140	15:44:21.733	488FA6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,483,689:15:0	
953	98	140	15:52:13.733	488FA6B	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,483,696:86:0	
954	98	140	16:01:25.733	488FA6C	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,483,706:04:0	
955	98	140	17:01:09.733	488FA6D	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	4,483,765:11:0	
956	98	140	19:36:53.733	488FA6E	6TMSED	NORMAL6	Sci, Eng, and D/L Chan	400	4	0	4,483,919:13:0	
957	98	140	21:11:51.066	488FB6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,484,013:05:0	
958	98	140	21:23:33.666	488FB6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,484,024:58:0	
959	98	141	15:52:21.666	488FC6A	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,485,121:23:0	
960	98	141	16:16:21.666	488FC6B	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,485,144:90:0	
961	98	141	17:05:59.000	488FC6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,485,194:06:0	
962	98	141	17:39:38.333	488FC6D	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,485,227:32:0	
963	98	142	01:43:49.666	488FD6A	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,485,706:20:0	
964	98	142	02:07:49.000	488FD6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,485,729:86:0	
965	98	142	02:13:41.666	488FD6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	4,485,735:69:0	
966	98	142	02:49:57.666	488FD6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,485,771:57:0	
967	98	142	09:32:27.600	488FE6A	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,486,169:64:0	
968	98	142	09:45:57.600	488FE6B	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,486,183:05:0	
969	98	142	11:17:41.600	488FE6C	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	4,486,273:71:0	
970	98	142	15:35:08.266	488FF6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,486,528:36:0	
971	98	142	15:40:05.600	488FF6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,486,533:27:0	
972	98	142	15:46:09.600	488FF6C	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,486,539:27:0	
973	98	142	16:27:01.600	488FF6D	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	4,486,579:65:0	
974	98	142	18:22:13.600	488FG6E	6TMSED	NORMAL6	Sci, Eng, and D/L Chan	400	4	0	4,486,693:59:0	
975	98	142	23:33:41.600	488FG6A	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	4,487,001:63:0	
976	98	143	01:28:53.600	488FG6B	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,487,115:57:0	
977	98	143	02:11:33.600	488FG6C	6TMSED	NORMAL2	Sci, Eng, and D/L Chan	400	4	0	4,487,157:75:0	
978	98	143	02:26:29.600	488FG6D	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,487,172:54:0	
979	98	143	02:56:21.600	488FG6E	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,487,202:12:0	
980	98	143	03:45:46.933	488FH6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,487,251:01:0	
981	98	143	04:19:26.266	488FH6B	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,487,284:27:0	
982	98	143	09:24:37.600	488FH6C	6TMSED	NORMAL3	Sci, Eng, and D/L Chan	400	4	0	4,487,586:12:0	
983	98	143	09:48:05.600	488FI6A	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	4,487,609:31:0	
984	98	143	11:01:36.266	488FI6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,487,682:04:0	
985	98	143	11:07:01.600	488FI6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,487,687:37:0	
986	98	143	11:32:37.533	488FI6D	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	4,487,712:66:0	
987	98	143	15:35:14.200	488FI6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,487,952:61:0	
988	98	143	15:40:05.533	488FJ6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,487,957:43:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
989	98	143	15:46:18.200	488FJ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,487,963:56:0	
990	98	143	16:16:21.533	488FJ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,487,993:31:0	
991	98	143	18:03:01.533	488FJ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,488,098:76:0	
992	98	143	23:44:21.533	488FK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,488,436:38:0	
993	98	144	01:28:53.533	488FK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,488,539:73:0	
994	98	144	02:07:04.866	488FK6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,488,577:52:0	
995	98	144	02:09:25.533	488FK6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	4,488,579:81:0	
996	98	144	02:24:21.533	488FK6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,488,594:60:0	
997	98	144	15:41:26.200	488FL6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,489,382:89:0	
998	98	144	16:12:05.533	488FL6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,489,413:27:0	
999	98	144	17:48:05.533	488FL6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,489,508:22:0	
1000	98	144	23:55:01.466	488FM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,489,871:13:0	
1001	98	145	01:28:53.466	488FM6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,489,963:89:0	
1002	98	145	02:05:09.466	488FM6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,489,999:77:0	
1003	98	145	02:41:25.466	488FM6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,490,035:65:0	
1004	98	145	03:35:30.133	488FM6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,490,089:18:0	
1005	98	145	04:09:09.466	488FN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,490,122:44:0	
1006	98	145	09:13:57.466	488FN6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,490,423:85:0	
1007	98	145	09:37:25.466	488FN6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,490,447:13:0	
1008	98	145	10:47:49.466	488FO6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,490,516:70:0	
1009	98	145	10:53:13.466	488FO6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,490,522:10:0	
1010	98	145	11:22:19.466	488FO6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,490,550:81:0	
1011	98	145	11:59:50.133	432MC431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	400	4	0	4,490,587:90:0	
1012	98	145	11:59:50.800	432MC6A	6RTSL1		R/T Select of DDS and	400	4	0	4,490,588:00:0	
1013	98	145	15:25:12.133	488FO6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,490,791:09:0	
1014	98	145	15:29:25.466	488FO6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,490,795:25:0	
1015	98	145	15:36:35.466	488FP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,490,802:33:0	
1016	98	145	16:01:25.466	488FP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,490,826:84:0	
1017	98	145	17:33:09.466	488FP6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,490,917:59:0	
1018	98	145	20:51:00.133	488FP6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,491,113:29:0	
1019	98	145	20:53:41.466	488FP6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,491,115:89:0	
1020	98	146	15:36:44.733	488FP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,492,226:63:0	
1021	98	146	15:57:09.400	488FQ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,492,246:80:0	
1022	98	146	17:22:29.400	488FQ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,492,331:25:0	
1023	98	146	20:41:42.733	488FQ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	4,492,528:28:0	
1024	98	146	20:45:09.400	488FQ6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,492,531:65:0	
1025	98	147	00:00:00.066	481UF4A	7VECT		Inert vect update UTC	400	4	0	4,492,724:38:0	
1026	98	147	09:13:11.333	488FR6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,493,271:48:0	
1027	98	147	09:22:29.333	488FR6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,493,280:66:0	
1028	98	147	10:28:37.333	488FR6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,493,346:12:0	
1029	98	147	15:27:17.333	488FS6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	4,493,641:47:0	
1030	98	147	19:34:45.333	488FS6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	4,493,886:24:0	
1031	98	148	00:09:57.333	488FT6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,494,158:40:0	
1032	98	148	01:24:37.333	488FT6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,494,232:26:0	
1033	98	148	01:54:29.333	488FT6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,494,261:75:0	
1034	98	148	02:22:13.333	488FT6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,494,289:23:0	
1035	98	148	03:25:03.333	488FT6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,494,351:36:0	
1036	98	148	03:58:42.666	488FU6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,494,384:62:0	
1037	98	148	10:22:13.333	488FV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,494,763:89:0	
1038	98	148	10:47:46.666	488FV6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,494,789:23:0	
1039	98	148	11:16:52.666	488FV6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	4,494,818:03:0	
1040	98	148	15:20:35.333	488FV6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	4,495,059:06:0	
1041	98	148	15:25:09.266	488FV6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	4,495,063:53:0	
1042	98	148	15:33:23.266	488FW6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	4,495,071:66:0	
1043	98	148	15:42:13.266	488FW6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,495,080:42:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1044	98	148	16:39:57.933	488FW6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	4,495,137:52:0	
1045	98	148	17:13:37.266	488FW6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	4,495,170:78:0	
1046	98	148	18:52:59.933	488FW6E	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	4,495,269:13:0	
1047	98	148	18:57:54.600	176SF6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	4,495,274:00:0	
1048	98	148	19:02:45.266	488FX6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	4,495,278:72:0	
1049	98	148	19:08:59.933	20CB4C	7STAT	17,45,267,7753,2	Stator inertial point	400	4	0	4,495,284:88:0	
1050	98	148	19:29:59.933	474CA416A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,495,305:67:0	
1051	98	148	19:31:59.933	474CA416A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	4,495,307:65:0	
1052	98	148	19:32:19.933	20CB4D	7STAT	17,45,267,7753,2	Stator inertial point	400	4	0	4,495,308:04:0	
1053	98	148	19:36:13.933	474CA416A4E	7BURN	267,775299,27,56	ALERT -- Thruster fire	400	4	0	4,495,311:82:0	
1054	98	148	19:46:15.266	20CB4F	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	4,495,321:74:0	
1055	98	148	19:52:07.266	20CB4G	7MODE	CRU	AACS CRUISE MODE	400	4	0	4,495,327:56:0	
1056	98	148	20:16:53.266	20CB4J	7STAT	17,45,267,7753,2	Stator inertial point	400	4	0	4,495,352:10:0	
1057	98	148	20:19:53.266	20CB4K	7MODE	INT	AACS INERTIAL MODE	400	4	0	4,495,355:07:0	
1058	98	150	06:12:01.200	20ZS6A	6CKSUM	MAG,4040,46F0		400	4	0	4,497,364:80:0	
1059	98	150	06:12:41.200	20ZS6B	6MROH			400	4	0	4,497,365:49:0	
1060	98	150	06:12:41.200	20ZS6B	6MROH	12,2282,0,A10	12 read from LLM1A12,2282,0,A1 read from LLM1A12,2282,0,A1	400	4	0	4,497,365:49:0	
1061	98	150	06:19:59.866	20ZU3Q	37HR		1 Replacement Heaters OFF	400	4	0	4,497,372:70:0	
1062	98	150	06:20:01.866	20ZU3S	37HR		2 Replacement Heaters OFF	400	4	0	4,497,372:73:0	
1063	98	150	06:20:27.866	20ZU3R	37A		1 NIMS Power ON	260	4	0	4,497,373:21:0	
1064	98	150	06:20:29.866	20ZU3T	37A		2 NIMS Power ON	260	4	0	4,497,373:24:0	
1065	98	150	06:22:29.200	20ZU4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	4,497,375:21:0	
1066	98	150	06:52:59.866	41V99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	2R0	4	0	4,497,405:37:0	
1067	98	150	06:54:53.866	41V3G	40T1P		1 PCT Heater 1 ON (primary relay)	2R0	4	0	4,497,407:26:0	
1068	98	150	06:55:03.866	41V3H	40T1P		2 PCT Heater 1 ON (primary relay)	2R0	4	0	4,497,407:41:0	
1069	98	150	06:55:13.866	41V3J	40T2		1 PCT Heater 2 ON	2R0	4	0	4,497,407:56:0	
1070	98	150	06:55:23.866	41V3J	40T2		2 PCT Heater 2 ON	2R0	4	0	4,497,407:71:0	
1071	98	150	07:02:41.200	432MX431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	2R0	4	0	4,497,414:90:0	
1072	98	150	07:02:41.866	432MX6A	6RTSL1		R/T Select of DDS and	2R0	4	0	4,497,415:00:0	
1073	98	150	07:07:45.200	465WD6A	6DMST		DMS Slew to TIC	2R0	4	0	4,497,420:00:0	
1074	98	150	07:07:45.200		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	2R0	4	0	4,497,420:00:0	
1075	98	150	07:07:45.200		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	2R0	4	0	4,497,420:00:0	
1076	98	150	07:07:45.200		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2R0	4	0	4,497,420:00:0	
1077	98	150	07:07:51.866		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	2R0	4	0	4,497,420:10:0	
1078	98	150	07:07:53.266		DMS:	: *AT SPD	P7, TRACK 1, FWD, TIC *202.24 +/-	2R0	4	0	4,497,420:12:1	
1079	98	150	07:11:07.333		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *247.94 +/-	2R0	4	0	4,497,423:30:2	
1080	98	150	07:11:08.533		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *248.00 +/-	2R0	4	0	4,497,423:32:0	
1081	98	150	11:07:23.200		DMS:	: READY	RDY, TRACK 4, *REV, TIC 248.00 +/-	2R0	4	0	4,497,657:00:0	
1082	98	150	11:07:23.200	465WE6A	6DMSC	RDY,4	DMS Control Tape stop	2R0	4	0	4,497,657:00:0	
1083	98	150	11:08:17.200		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 248.00 +/-	2R0	4	0	4,497,657:81:0	
1084	98	150	11:08:17.200		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 248.00 +/-	2R0	4	0	4,497,657:81:0	
1085	98	150	11:08:17.200	465WF6A	6DTRN	CMD,6DTRN,465WF6	DMS TRACK TURNAROUND	2R0	4	0	4,497,657:81:0	
1086	98	150	11:08:18.600		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *248.12 +/-	2R0	4	0	4,497,657:83:1	
1087	98	150	11:08:23.866		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *249.35 +/-	2R0	4	0	4,497,658:00:0	
1088	98	150	11:08:25.066		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC *249.41 +/-	2R0	4	0	4,497,658:01:8	
1089	98	150	11:08:26.466		DMS:	: *AT SPD	P7, TRACK 4, REV, TIC *249.29 +/-	2R0	4	0	4,497,658:03:9	
1090	98	150	11:11:57.266		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC *199.87 +/-	2R0	4	0	4,497,661:47:1	
1091	98	150	11:11:58.466		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC *199.81 +/-	2R0	4	0	4,497,661:48:9	
1092	98	150	11:11:58.466		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2R0	4	0	4,497,661:48:9	
1093	98	150	11:11:59.866		DMS:	: *AT SPD	P7, TRACK 1, FWD, TIC *199.93 +/-	2R0	4	0	4,497,661:51:0	
1094	98	150	11:12:11.866		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC *202.06 +/-	2R0	4	0	4,497,661:69:0	
1095	98	150	11:12:13.066		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *202.12 +/-	2R0	4	0	4,497,661:70:8	
1096	98	150	20:59:59.866		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2R0	4	0	4,498,243:09:0	
1097	98	150	21:00:00.000	20A3FF	40T2	Final Condition	PCT Heater 2 ON	2R0	4	0	4,498,243:09:2	
1098	98	150	21:00:00.000	20A3FE	40T1P	Final Condition	PCT Heater 1 ON (primary relay)	2R0	4	0	4,498,243:09:2	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1099	98	150	21:00:00.000	20A3FD	40HRPR	Final Condition	RCT Heater OFF (primary relay)	2R0	4	0	4,498,243:09:2	
1100	98	150	21:00:00.000	20A3FB	37F2PR	Final Condition	Shield Flash Heater OFF (primary relay)	2R0	4	0	4,498,243:09:2	
1101	98	150	21:00:00.000	20A3FA	37F1PR	Final Condition	Radiator Flash Heater OFF (primary relay)	2R0	4	0	4,498,243:09:2	
1102	98	150	21:00:00.000	20A3EZ	37C2PR	Final Condition	Optics Heater 2 OFF (primary relay)	2R0	4	0	4,498,243:09:2	
1103	98	150	21:00:00.000	20A3EY	37C1PR	Final Condition	Optics Heater 1 OFF (primary relay)	2R0	4	0	4,498,243:09:2	
1104	98	150	21:00:00.000	20A3EX	37HR	Final Condition	Replacement Heaters OFF	2R0	4	0	4,498,243:09:2	
1105	98	150	21:00:00.000	20A3EW	37A	Final Condition	NIMS Power ON	2R0	4	0	4,498,243:09:2	

14INHRSPEC01

OAPEL: 14INHRSPEC01 ALIAS: 14INHRSPEC01
 EXT: A PSID: DB
 SCLK1: 04408987:00:0 SCLK2: 04408994:83:0
 SCET1: 98-088/04:52:13.066 SCET2: 98-088/05:00:13.733
 TARGET: IO PARTITION: 1

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

MB_DOWN: 00000 MB_UP: 00000
 COMP_FLAG: 1
 EST_COMP: 2.0 EST_COMPV: 0.3
 RATE_CON1: 00000 RATE_CON2: 65525
 NWAVETOT: 324 TLMFMT: MPW

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

WETGID: 0326324001 03 26 324 001
 WTGRP_SIZ: 26

EDIT TABLE

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

14INHRSPEC01

```

OAPEL: 14INHRSPEC01      ALIAS: 14INHRSPEC01
EXT: B                    PSID: DB
SCLK1: 04408987:00:0     SCLK2: 04408994:83:0
SCET1: 98-088/04:52:13.066 SCET2: 98-088/05:00:13.733
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 36            TLMFMT: MPW
  
```

```

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

```

WETGID: 0326036001      03 26 036 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	0B000	0,1011,0000,0000,0000
1	00000	0,0000,0000,0000,0000
2	0B000	0,1011,0000,0000,0000
3	00000	0,0000,0000,0000,0000
4	0B000	0,1011,0000,0000,0000
5	00000	0,0000,0000,0000,0000
6	0B000	0,1011,0000,0000,0000
7	00000	0,0000,0000,0000,0000
8	0B000	0,1011,0000,0000,0000
9	00000	0,0000,0000,0000,0000
10	0B000	0,1011,0000,0000,0000
11	00000	0,0000,0000,0000,0000
12	0B000	0,1011,0000,0000,0000
13	00000	0,0000,0000,0000,0000
14	0B000	0,1011,0000,0000,0000
15	00000	0,0000,0000,0000,0000
16	0B000	0,1011,0000,0000,0000
17	00000	0,0000,0000,0000,0000
18	0B000	0,1011,0000,0000,0000
19	00000	0,0000,0000,0000,0000
20	0B000	0,1011,0000,0000,0000
21	00000	0,0000,0000,0000,0000
22	0B000	0,1011,0000,0000,0000
23	00000	0,0000,0000,0000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

14INHRSPEC01

```

OAPEL: 14INHRSPEC01      ALIAS: 14INHRSPEC01
EXT: D                    PSID: DB
SCLK1: 04408987:00:0     SCLK2: 04408994:83:0
SCET1: 98-088/04:52:13.066 SCET2: 98-088/05:00:13.733
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0           EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 360           TLMFMT: MPW
  
```

```

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

```

WETGID: 0326360001      03 26 360 001
WTGRP_SIZ: 26
  
```

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	1BDFF	1,1011,1101,1111,1111
13	1BDFF	1,1011,1101,1111,1111
14	1BDFF	1,1011,1101,1111,1111
15	1BDFF	1,1011,1101,1111,1111
16	1BDFF	1,1011,1101,1111,1111
17	1BDFF	1,1011,1101,1111,1111
18	1BDFF	1,1011,1101,1111,1111
19	1BDFF	1,1011,1101,1111,1111
20	1BDFF	1,1011,1101,1111,1111
21	1BDFF	1,1011,1101,1111,1111
22	1BDFF	1,1011,1101,1111,1111
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

14INHRSPEC01

```

OAPEL: 14INHRSPEC01      ALIAS: 14INHRSPEC01
EXT: C                    PSID: DB
SCLK1: 04408995:00:0     SCLK2: 04409002:88:0
SCET1: 98-088/05:00:18.400 SCET2: 98-088/05:08:22.400
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 360           TLMFMT: MPW
  
```

```

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

```

WETGID: 0326360001      03 26 360 001
WTGRP_SIZ: 26
  
```

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	1BDFF	1,1011,1101,1111,1111
13	1BDFF	1,1011,1101,1111,1111
14	1BDFF	1,1011,1101,1111,1111
15	1BDFF	1,1011,1101,1111,1111
16	1BDFF	1,1011,1101,1111,1111
17	1BDFF	1,1011,1101,1111,1111
18	1BDFF	1,1011,1101,1111,1111
19	1BDFF	1,1011,1101,1111,1111
20	1BDFF	1,1011,1101,1111,1111
21	1BDFF	1,1011,1101,1111,1111
22	1BDFF	1,1011,1101,1111,1111
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

14ENICERAF01

```

OAPEL: 14ENICERAF01      ALIAS: 14ENICERAF01
EXT: A                    PSID: DC
SCLK1: 04409424:18:0     SCLK2: 04409426:20:0
SCET1: 98-088/12:14:17.066 SCET2: 98-088/12:16:19.733
TARGET: EUROPA           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: 360           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: 0326360001      03 26 360 001
WTGRP_SIZ: 26
  
```

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	1BDFF	1,1011,1101,1111,1111
13	1BDFF	1,1011,1101,1111,1111
14	1BDFF	1,1011,1101,1111,1111
15	1BDFF	1,1011,1101,1111,1111
16	1BDFF	1,1011,1101,1111,1111
17	1BDFF	1,1011,1101,1111,1111
18	1BDFF	1,1011,1101,1111,1111
19	1BDFF	1,1011,1101,1111,1111
20	1BDFF	1,1011,1101,1111,1111
21	1BDFF	1,1011,1101,1111,1111
22	1BDFF	1,1011,1101,1111,1111
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

14ENSUCOMP01

```

OAPEL: 14ENSUCOMP01      ALIAS: 14ENSUCOMP01
EXT: A                    PSID: DD
SCLK1: 04409501:00:0     SCLK2: 04409516:26:0
SCET1: 98-088/13:31:55.733 SCET2: 98-088/13:47:23.066
TARGET: EUROPA           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: 360          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: 0326360001      03 26 360 001
WTGRP_SIZ: 26
  
```

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	1BDFF	1,1011,1101,1111,1111
13	1BDFF	1,1011,1101,1111,1111
14	1BDFF	1,1011,1101,1111,1111
15	1BDFF	1,1011,1101,1111,1111
16	1BDFF	1,1011,1101,1111,1111
17	1BDFF	1,1011,1101,1111,1111
18	1BDFF	1,1011,1101,1111,1111
19	1BDFF	1,1011,1101,1111,1111
20	1BDFF	1,1011,1101,1111,1111
21	1BDFF	1,1011,1101,1111,1111
22	1BDFF	1,1011,1101,1111,1111
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

14ENSUCOMP03

```

OAPEL: 14ENSUCOMP03      ALIAS: 14ENSUCOMP03
EXT: A                    PSID: DF
SCLK1: 04409568:84:0     SCLK2: 04409571:84:0
SCET1: 98-088/14:40:36.400 SCET2: 98-088/14:43:38.400
TARGET: EUROPA           PARTITION: 1
  
```

```

MODE: 4                   GAIN: 2
CHOP: 1                   GRAT_OFF: 4
PTAB_A: 1 0 0 0 124      PTAB_B: 1 0 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: 360           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: 0426360001      04 26 360 001
WTGRP_SIZ: 26
  
```

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	1BDFF	1,1011,1101,1111,1111
13	1BDFF	1,1011,1101,1111,1111
14	1BDFF	1,1011,1101,1111,1111
15	1BDFF	1,1011,1101,1111,1111
16	1BDFF	1,1011,1101,1111,1111
17	1BDFF	1,1011,1101,1111,1111
18	1BDFF	1,1011,1101,1111,1111
19	1BDFF	1,1011,1101,1111,1111
20	1BDFF	1,1011,1101,1111,1111
21	1BDFF	1,1011,1101,1111,1111
22	1BDFF	1,1011,1101,1111,1111
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

14NNPCTRLT01

```

OAPEL: 14NNPCTRLT01      ALIAS: LSNNPCTRLT01
EXT: R                    PSID: FB
SCLK1: 04410953:00:0     SCLK2: 04410954:12:0
SCET1: 1998-089/14:00:03.666  SCET2: 1998-089/14:01:12.333
TARGET: CAL              PARTITION: 1
  
```

```

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

```

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

```

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

```

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

EDIT TABLE

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

14NNPCTRLT01

```

OAPEL: 14NNPCTRLT01      ALIAS: LSNNPCTRLT01
EXT: S                    PSID: FB
SCLK1: 04410959:00:0     SCLK2: 04410968:12:0
SCET1: 1998-089/14:06:07.666 SCET2: 1998-089/14:15:21.666
TARGET: CAL              PARTITION: 1
  
```

```

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

```

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

```

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

```

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

EDIT TABLE

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

14JNJUPRTS02

```

OAPEL: 14JNJUPRTS02      ALIAS: 14JNJUPRTS02
EXT: R                    PSID: DG
SCLK1: 04411107:00:0     SCLK2: 04411117:90:0
SCET1: 1998-089/16:35:46.333 SCET2: 1998-089/16:46:53.000
TARGET: JUPITER          PARTITION: 1
  
```

```

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

```

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

14JNJUPRTS02

OAPEL: 14JNJUPRTS02 ALIAS: 14JNJUPRTS02
 EXT: S PSID: DG
 SCLK1: 04411118:00:0 SCLK2: 04411126:12:0
 SCET1: 1998-089/16:46:53.666 SCET2: 1998-089/16:55:07.000
 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
 NWAJETOT: 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

14CNGLOBAL01

```

OAPEL: 14CNGLOBAL01      ALIAS: 14CNGLOBAL01
EXT: A                    PSID: DH
SCLK1: 04411613:00:0     SCLK2: 04411627:27:0
SCET1: 98-090/01:07:23.666 SCET2: 98-090/01:21:51.666
TARGET: CALLISTO        PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0           EST_COMPV: 0.3
RATE_CON1: 00000       RATE_CON2: 65525
NWAVETOT: 15           TLMFMT: LPU
  
```

```

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: 0326015001      03 26 015 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

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

14NNRCTRLT01

```

OAPEL: 14NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: S                    PSID: XU
SCLK1: 04472589:00:0     SCLK2: 04472590:12:0
SCET1: 1998-132/20:40:52.133  SCET2: 1998-132/20:42:00.800
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

14NNRCTRLT01

```

OAPEL: 14NNRCTRLT01      ALIAS: LSNRCTRRTA01
EXT: T                    PSID: XU
SCLK1: 04472595:00:0     SCLK2: 04472595:12:0
SCET1: 1998-132/20:46:46.133 SCET2: 1998-132/20:47:04.133
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

14NNOPCAL_01

```

OAPEL: 14NNOPCAL_01      ALIAS: LSNNOPCAL_01
EXT: R                    PSID: DC
SCLK1: 04472599:00:0     SCLK2: 04472601:12:0
SCET1: 1998-132/20:50:58.800 SCET2: 1998-132/20:53:08.133
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 E14 OBSTAB

This is a time-ordered ASCII TABLE (listing) of GALILEO NIMS observation parameters for use by downlink data processing of the NIMS E14 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      |repeat count,mirror op,autobias...SEF: functions of MODE (from 37IOP) as modified by
PTAB_B(6) 12 89 - 100  |...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)
                                         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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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.

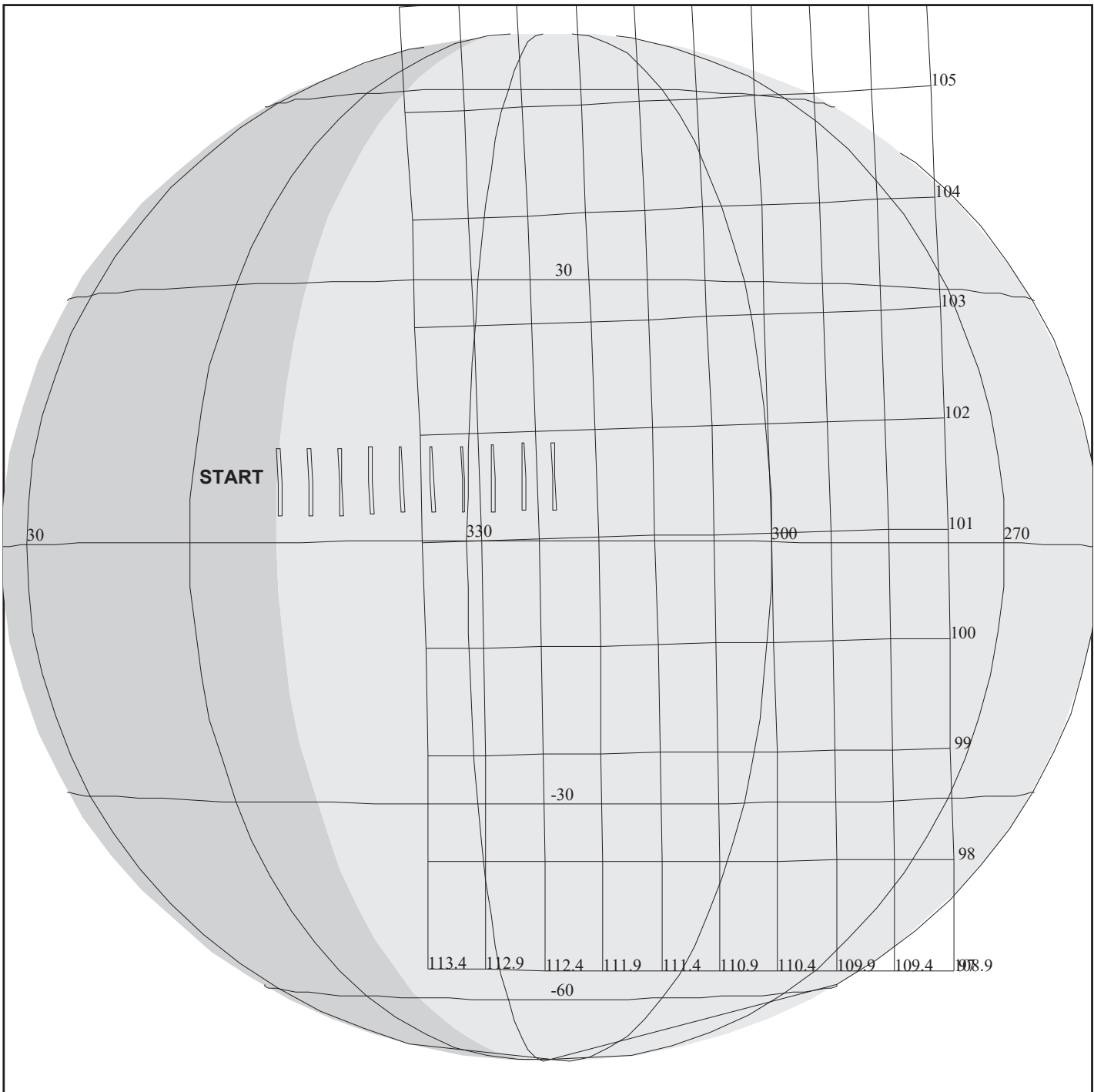
The Pointer plots have the spatial extent of the actual data returned outlined with a thick line. When no data were returned for a particular observation, its Pointer plot has a single slash across the plot with the text "NO DATA RETURNED" printed in the upper left corner of the plot.

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: 14NNJUPRTS01-	
		START TIME: 98-087/18:20:20.400	
Activity ID: Orbit 14 Target N Inst N OAPEL JUPRTS SeqNo 01 -			
Title	NIMS Software Reload	Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date 03/28/98 Week 13
Start	JEE-CDS 00000810:00:0	98-087/18:20:20.400	JEE-000/13:39:00.000
End	JEE-CDS 00000806:00:0	98-087/18:24:23.067	JEE-000/13:34:57.333
Duration	00000004:00:0	000/00:04:02.667	000/00:04:02.667
Top Label	14NNJUPRTS01-		
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 real-time software reload			
Each NIMS GEM observation will have an instrument reload before the start of each observation. Each reload has its own OAPEL form, but only this first form is included in the NIMSGUIDE.			
The NIMS E14 reload OAPELS are:			
14NNJUPRTS01, 14NNHRSPEC01, 14NNICERAF01, 14ENSUCOMP01,			
14NNSUCOMP02, 14NNSUCOMP03, 14ENEUR15H01, 14ENEUR17H01.			
14ENEUR20H01, 14NNPCTRLT01, 14JNJUPRTS02, 14CNGLOBAL01			
Design Detail			
Use a standard set of commands to halt the instrument, load the software and reinitialize the instrument.			
37PL - Halt NIMS Processor			
37MRL - Memory Reallocate			
6MCPY - Copy flight software from CDS to NIMS 1000			
6MCPY - Copy flight software from CDS to NIMS 1598			
37IRT - Instrument Reset			
37MN - Memory Normal			
37IST - Chopper Reference.			
Galileo Activity Plan Form		03/09/98 14:16:19 rev 6/95	



14JNJUPRTS01

165DA:TT= 0 TMC= 1 C= 27.00 XC= 0.00 BS= 0/3397 TC= 1(7 331)
 A=1820 pD= 1820 SR=17.450 RA50=277.43 DEC50=-24.08 cone=114.60 clock=101.59
 117DA:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/3397
 1:#s= 1 Cs= -36.00 XCs= 0.00 Cr= 10.70 XCr= -12.00 sD= 1820 rD= 40

TARGET G3.1 lisac: 3/12/1998 13:59:49

FILE:P.14JNJUPRTS01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

START:JEE 98-088/07:59:20.400 -CDS 796:00:0

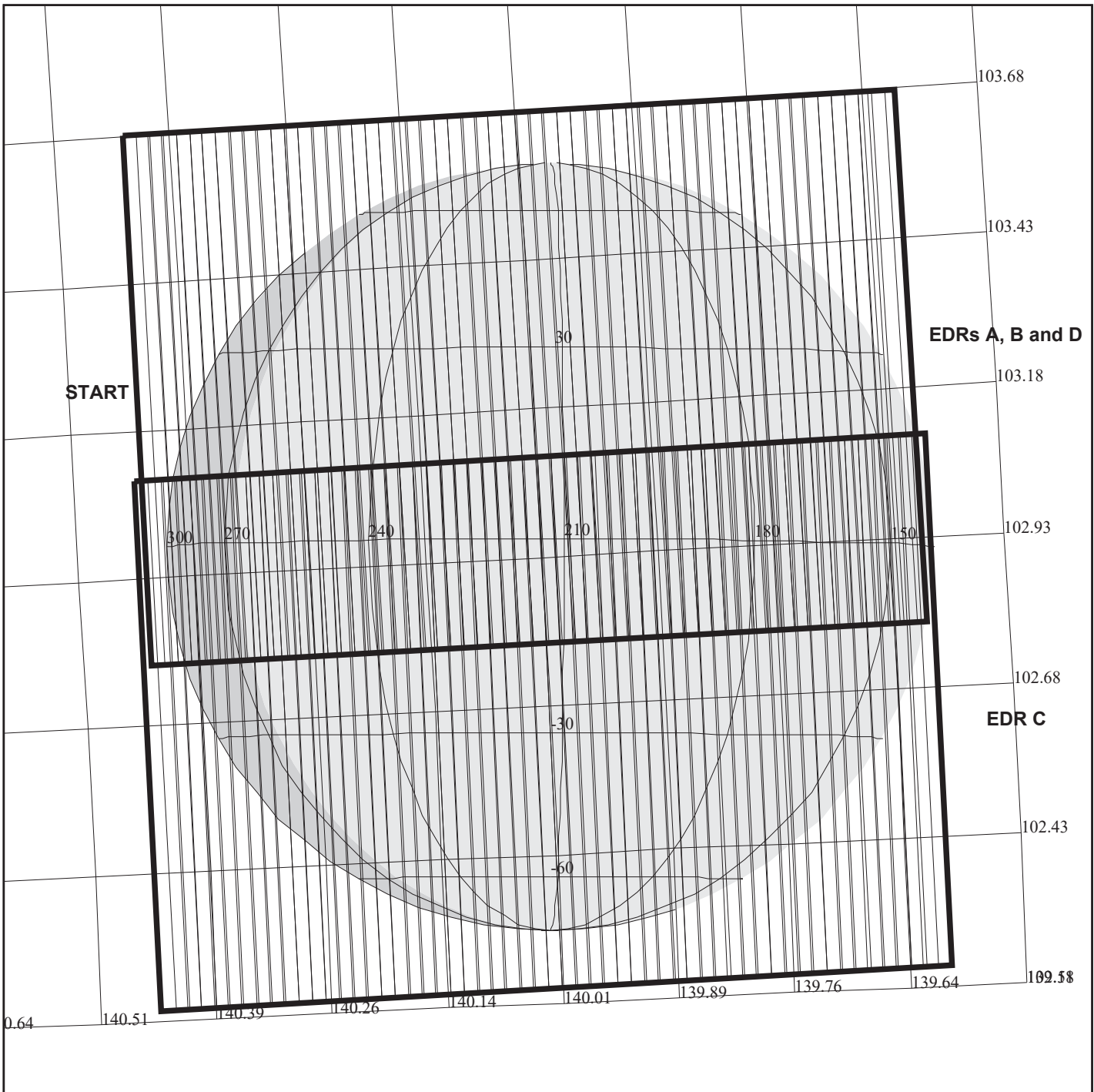
OBSERVATION:14JNJUPRTS01

THINNING:NIM 7

BODY PLOT TIME:TARGET-TIME D= 1820 S= 1.000

DESCRIP:Jupiter_Realtime_Observation

Jupiter Realtime Observation		ACTIVITY ID:	14JNJUPRTS01*		
		START TIME:	98-087/18:28:25.734		
Activity ID: Orbit 14 Target J Inst N OAPEL JUPRTS SeqNo 01 *					
Title	Jupiter Realtime Observation		Instrument	NIMS	
Requestor	NIMS-AWG/R.		Team	NIMS Working Group	AWG
Time System	CDS	Load ID	Calendar Date	03/28/98	Week 13
Start	JEE-CDS	00000802:00:0	98-087/18:28:25.734	JEE-000/13:30:54.666	
End	JEE-CDS	00000786:00:0	98-087/18:44:36.400	JEE-000/13:14:44.000	
Duration		00000016:00:0	000/00:16:10.666	000/00:16:10.666	
Top Label	14JNJUPRTS01*				
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					
Search for Jupiter atmospheric composition and thermal variations over time. Look at 6.5 degrees North latitude.					
FREE_RTS= 0.16 Mbits					
Data Returned					
Design Detail					
Long map, gain state 2. One scan 10 RIMS long at 6.5 degrees North latitude. No overlap in FOV.					
SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT					
Long Map (LM), Gain 2, Grating Start 0, R/T, E14JLM408					
Galileo Activity Plan Form			03/09/98	14:16:19	rev 6/95



14INHRSPEC01

165DB:TT= 0 TMC=1 C= 7.50 XC= 3.20 BS= 0/4599 TC= 3
 A= 728 pD= 2906 SR=17.450 RA50=304.91 DEC50=-19.55 cone=140.43 clock=103.23
 117DB:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/4599
 1:#s= 2 Cs= -14.35 XCs= 0.00 Cr= 14.30 XCr= -6.50 sD= 1442 rD= 24

DESIGN G3.2 lisac: 3/18/1998 15:16:34

FILE:P.14INHRSPEC01

TARGET BODY : IO

MINI:m.14INHRSPEC01

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

THINNING:NIM 1

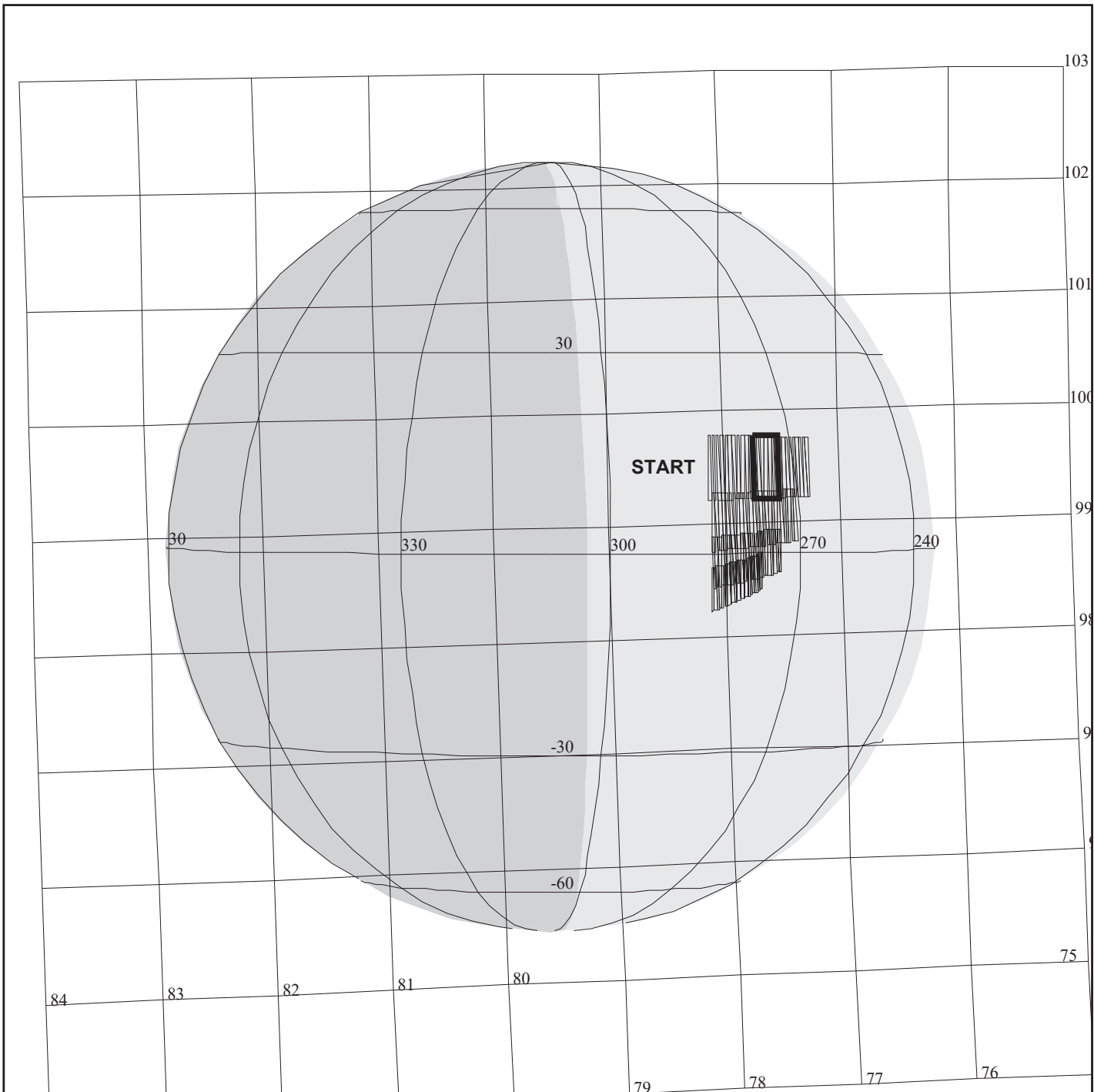
START:IEE 98-088/04:48:14.400 +CDS 04:00:0

BODY PLOT TIME:TARGET-TIME D= 2906 S= 0.700

OBSERVATION:14INHRSPEC01

DESCRIP:14INHRSPEC01

Io Monitoring at High Spectral Resolutio		ACTIVITY ID:	14INHRSPEC01-		
		START TIME:	98-088/04:46:13.067		
Activity ID: Orbit 14 Target I Inst N OAPEL HRSPEC SeqNo 01 -					
Title	Io Monitoring at High Spectral ResolutioInstrument				NIMS
Requestor	NIMS-SWG/R.	Team	NIMS Working Group	SWG	
Time System	CDS	Load ID	Calendar Date	03/29/98	Week 13
Start	IEE-CDS	00000002:00:0	98-088/04:46:13.067	IEE-000/00:02:01.333	
End	IEE+CDS	00000023:00:0	98-088/05:11:29.733	IEE+000/00:23:15.333	
Duration		00000025:00:0	000/00:25:16.666	000/00:25:16.666	
Top Label	14INHRSPEC01-				
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					
Highest Resolution observation of Io during the GEM E-orbits. Best view of South Pole prior to I25. Coordinated with SSI.					
TICS=952, FMT=MPW, BTG=6.566 MBTG					
Data Returned					
Design Detail					
Global Mosaic in Long Map, 408 wavelengths, record mode is MPW. NIMS resolution is approximately 125 km/pixel. Central longitude is approximately 200 degrees West. Coverage is from 110 West to 290 West.					
The entire disk is covered in two swaths:					
EDR A, North Swath, 324 wavelengths					
EDR B, North Swath, 36 wavelengths					
EDR D, North Swath, 360 wavelengths (EDRs merged)					
EDR C, South Swath, 360 wavelengths					
SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT					
E14ILM036, E14ILM324					
Long Map (LM), Gain 2, Grating Start 0, MPW, E14ILM442, E14ILM360					
Galileo Activity Plan Form			03/09/98	14:16:19	rev 6/95



14ENICERAF01

165DC:TT= 0 TMC= 1 C= -15.00 XC= 2.00 BS= 0/3587 TC= 1(10 300)
 A= 728 pD= 5642 SR=17.450 RA50=237.57 DEC50=-22.47 cone= 78.13 clock= 99.50
 117DC:#SB= 1 OR= 0.040 RR=12.000 BM=F RC= 1 BS= 0/3587
 1:#s= 4 Cs= -18.30 XCs= 0.00 Cr= 16.50 XCr= -9.00 sD= 1394 rD= 20

DESIGN G3.2 lisac: 3/18/1998 15:18:13

FILE:P.14ENICERAF01

TARGET BODY : EUROPA

MINI:m.14ENICERAF01

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

START:EEE 98-088/13:20:52.400 -CDS 69:00:0

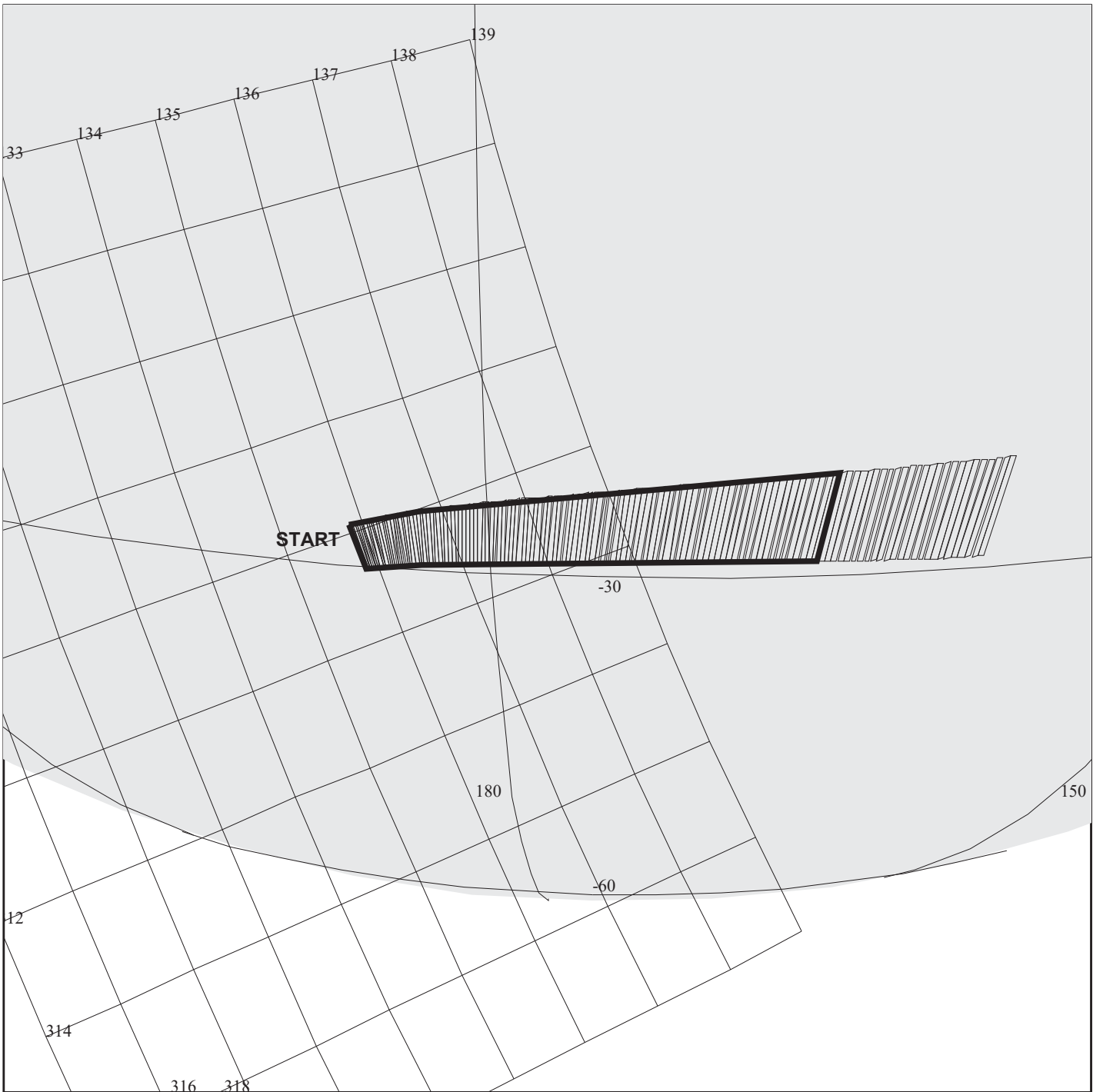
OBSERVATION:14ENICERAF01

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 5642 S= 0.700

DESCRIP:Europa_Ice_Rift

Europa Ice Rift		ACTIVITY ID: 14ENICERAF01-	
		START TIME: 98-088/12:07:03.734	
Activity ID: Orbit 14 Target E Inst N OAPEL ICERAF SeqNo 01 -			
Title	Europa Ice Rift	Instrument	
Requestor	NIMS-SWG/A. OCAMPO	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 03/29/98 Week 13
Start	EEE-CDS 00000073:00:0	98-088/12:07:03.734	EEE-000/01:13:48.666
End	EEE-CDS 00000029:00:0	98-088/12:51:33.067	EEE-000/00:29:19.333
Duration	00000044:00:0	000/00:44:29.333	000/00:44:29.333
Top Label	14ENICERAF01-		
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 regional mosaic covering West longitude 265-285 degrees (prominent intersecting dark linea).			
TICS = 1638, FMT = MPW, BTG = 0.912 Mbits, PPR_RA = 0.309			
Data Returned			
Design Detail			
NIMS mode = LM. Record Mode = MPW. Gain State = 2. Grating Position = 0			
Mosaic of 4 overlapping swaths, starting at 12.5 degrees North latitude and ending at -2.5 degrees South latitude.			
Only central 2 Rims of upper swath returned. Centered on 12 deg Latitude, 275 W Longitude			
SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT			
Long Map (LM), Gain 2, Grating Start 0, MPW, E14ELM442, E14ELM360			
Galileo Activity Plan Form		03/09/98 14:16:19	rev 6/95



14ENSUCOMP01

165DD:TT= 0 TMC=1 C= 0.00 XC= 0.00 BS= 0/8147 TC= 1(-29 185)
 A= 182 pD= 3458 SR=17.450 RA50= 28.54 DEC50= -8.23 cone=135.86 clock=308.27
 117DD:#SB= 1 OR= 0.040 RR=12.000 BM=F RC= 1 BS= 0/8147
 1:#s= 1 Cs= 46.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 3458 rD= 180

DESIGN G3.2 lisac: 3/18/1998 15:14:11

FILE:P.14ENSUCOMP01

TARGET BODY : EUROPA

MINI:m.14ENSUCOMP01

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

START:EEE 98-088/13:20:52.400 +CDS 11:00:0

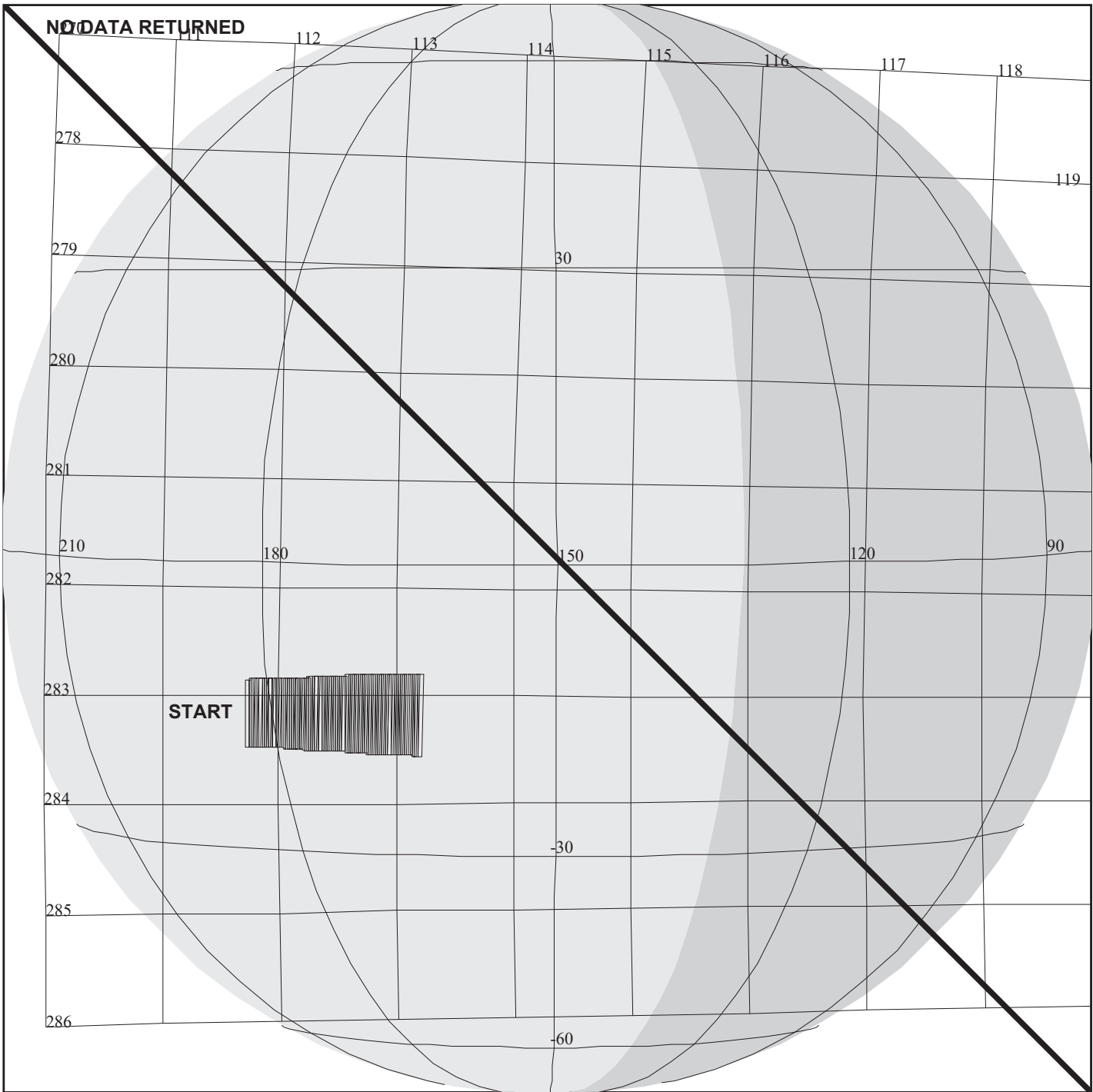
OBSERVATION:14ENSUCOMP01

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 3458 S= 2.500

DESCRIP:Europa_Surface_Composition

Europa Surface Composition		ACTIVITY ID:	14ENSUCOMP01-		
		START TIME:	98-088/13:29:58.400		
Activity ID: Orbit 14 Target E Inst N OAPEL SUCOMP SeqNo 01 -					
Title	Europa Surface Composition		Instrument		NIMS
Requestor	NIMS-SWG/A. OCAMPO		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	03/29/98	Week 13
Start	EEE+CDS	00000009:00:0	98-088/13:29:58.400	EEE+000/00:09:06.000	
End	EEE+CDS	00000030:00:0	98-088/13:51:12.400	EEE+000/00:30:20.000	
Duration		00000021:00:0	000/00:21:14.000	000/00:21:14.000	
Top Label	14ENSUCOMP01-				
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 at latitude = -29 degrees and West longitude = 185-170 degrees. The targets are dark spots and a pull-apart wedge-shaped area.					
Data Returned					
Design Detail					
NIMS mode = LM					
Record mode FMT = MPW					
Gain State = 2.					
Grating Position = 0 = 1004					
TICS = 1004					
MBTG = 4.159					
PPR_RA= 0.189					
A single west-east single swath at -29 degrees latitude.					
First 15 of 19 Rims returned.					
SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT					
Long Map (LM), Gain 2, Grating Start 0, MPW, E14ELM442, E14ELM360					
Galileo Activity Plan Form			03/09/98	14:16:19	rev 6/95



14ENSUCOMP02

165DE:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/5063 TC= 1(-15 183)
 A= 182 pD= 2002 SR=17.450 RA50= 48.42 DEC50= 16.55 cone=111.73 clock=283.16
 117DE:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/5063
 1:#s= 1 Cs= 19.90 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 2002 rD= 2

DESIGN G3.2 lisac: 3/18/1998 15:15:18

FILE:P.14ENSUCOMP02

TARGET BODY : EUROPA

MINI:m.14ENSUCOMP02

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

START:EEE 98-088/13:20:52.400 +CDS 49:00:0

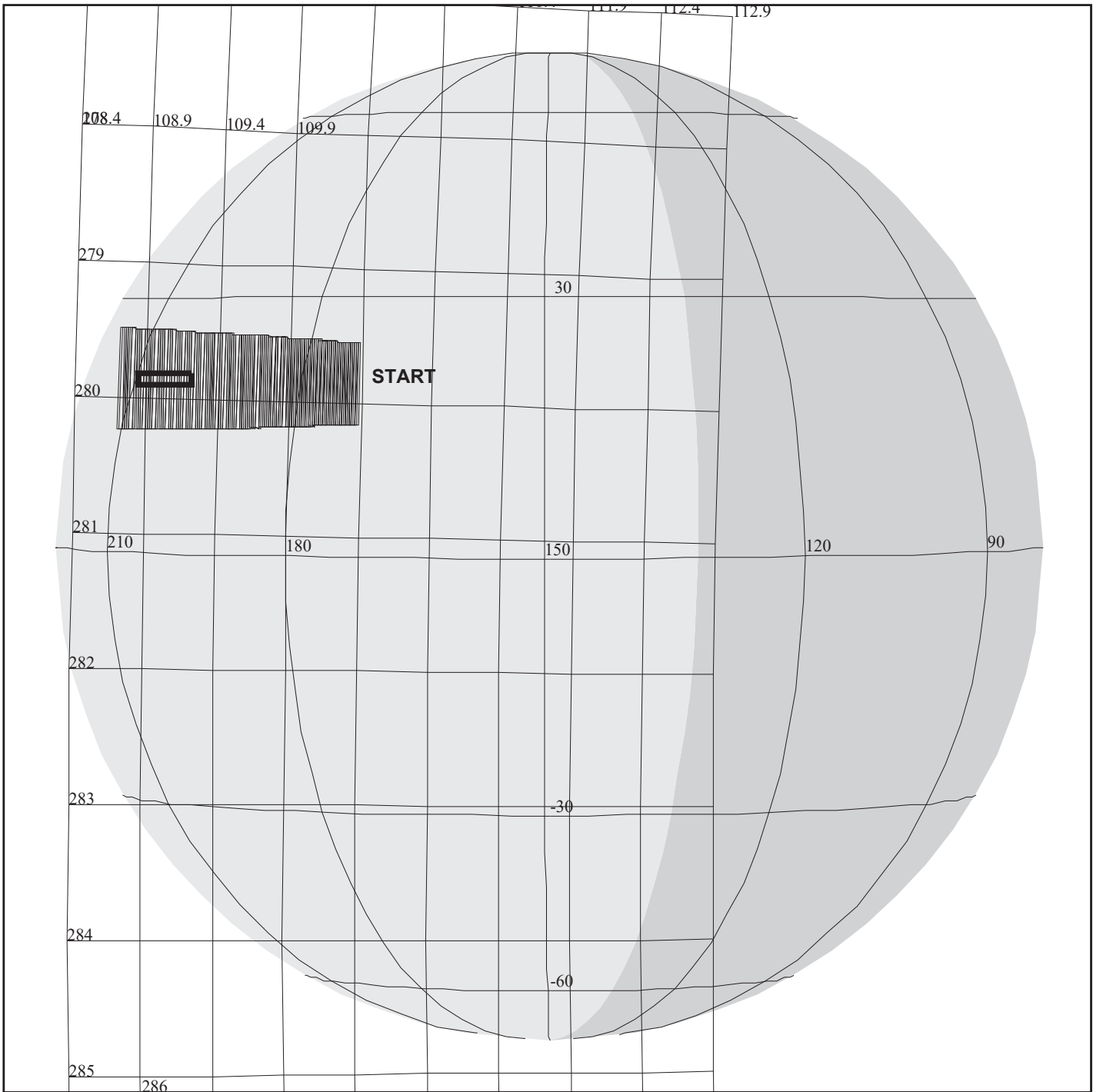
OBSERVATION:14ENSUCOMP02

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 2002 S= 1.000

DESCRIP:Europa_Surface_Composition

Europa Surface Composition		ACTIVITY ID:	14ENSUCOMP02-		
		START TIME:	98-088/14:05:21.733		
Activity ID: Orbit 14 Target E Inst N OAPEL SUCOMP SeqNo 02 -					
Title	Europa Surface Composition		Instrument		NIMS
Requestor	NIMS-SWG/A. OCAMPO		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	03/29/98	Week 13
Start	EEE+CDS	00000044:00:0	98-088/14:05:21.733	EEE+000/00:44:29.333	
End	EEE+CDS	00000059:00:0	98-088/14:20:31.733	EEE+000/00:59:39.333	
Duration		00000015:00:0	000/00:15:10.000	000/00:15:10.000	
Top Label	14ENSUCOMP02-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes
Observation Objective					
Europa surface composition observation covering latitude = -15 degrees and West longitude = 183 degrees on an area bright plains, wedges and dark material.					
No Data Returned					
Design Detail					
NIMS mode = LM. Record mode FMT = MPW Gain State = 2. Grating Position = 0 TICS = 583 MBTG = 2.112 PPR_RA= 0.110					
A single west-east single swath at -15 degrees latitude.					
No data returned. Observation very similar to 12ENICEBRG01.					
SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT					
Long Map (LM), Gain 2, Grating Start 0, MPW, E14ELM442					
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165DF:TT= 0 TMC= 1 C= 28.90 XC= 0.00 BS= 0/8339 TC= 1(20 214)
 A= 704 pD= 2902 SR=17.450 RA50= 48.84 DEC50= 19.88 cone=110.41 clock=279.86
 117DF:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/8339
 1:#s= 1 Cs= -28.90 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 2902 rD= 2

14ENSUCOMP03

DESIGN G3.2 lisac: 3/18/1998 15:16: 0

FILE:P.14ENSUCOMP03

TARGET BODY : EUROPA

MINI:m.14ENSUCOMP03

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

START:EEE 98-088/13:20:52.400 +CDS 67:00:0

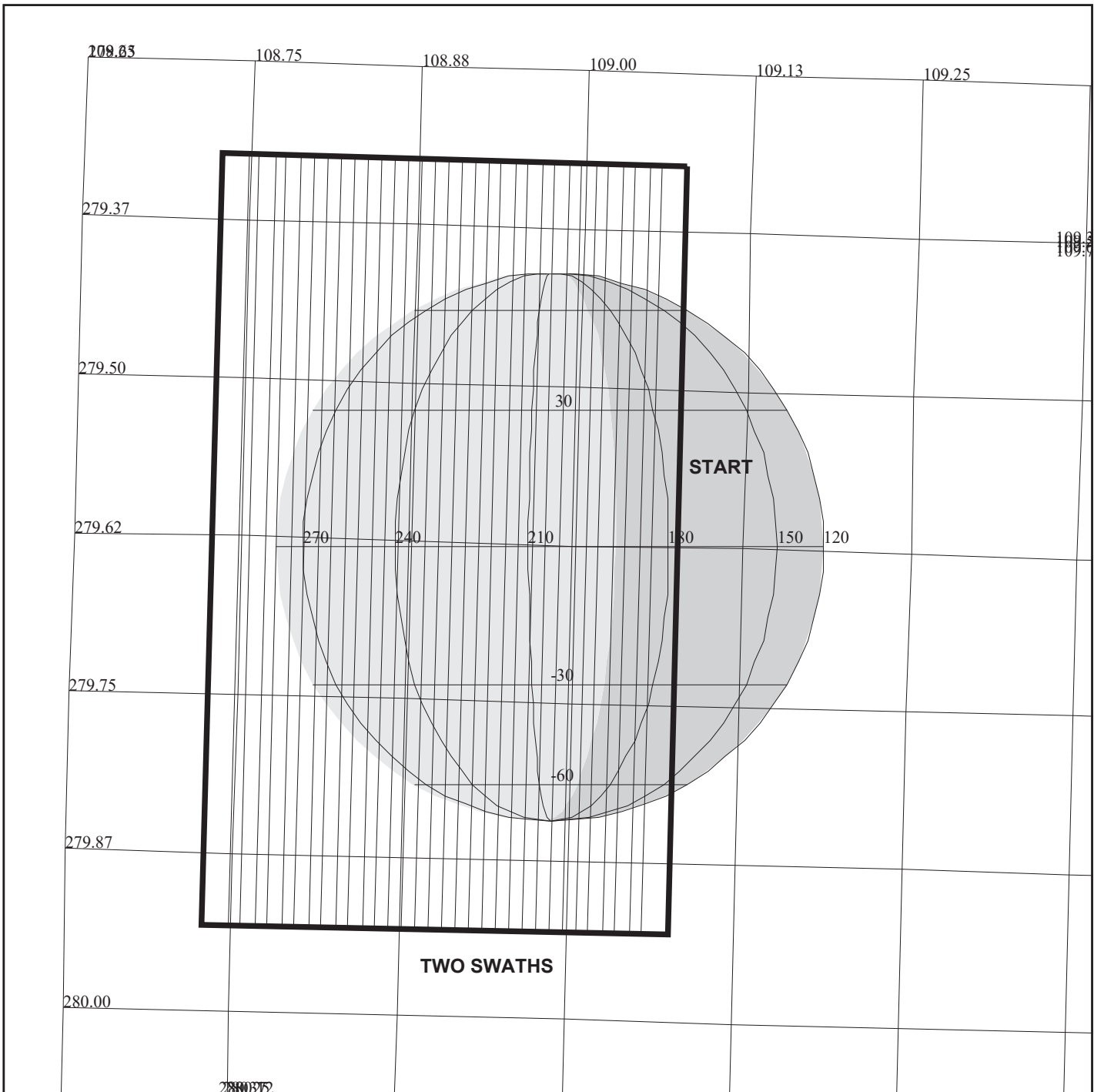
OBSERVATION:14ENSUCOMP03

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 2902 S= 0.900

DESCRIP:Europa_Surface_Composition

Europa Surface Composition		ACTIVITY ID:	14ENSUCOMP03-		
		START TIME:	98-088/14:24:34.400		
Activity ID: Orbit 14 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	03/29/98	Week 13
Start	EEE+CDS	00000063:00:0	98-088/14:24:34.400	EEE+000/01:03:42.000	
End	EEE+CDS	00000086:00:0	98-088/14:47:49.733	EEE+000/01:26:57.333	
Duration		00000023:00:0	000/00:23:15.333	000/00:23:15.333	
Top Label	14ENSUCOMP03-				
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					
<p>Europa surface composition observation covering latitude = +20 degrees and West longitude = 214 degrees on intersecting triple band terrain. This observation employs long spectrometer mode, where the 20 x-cone pixels are collaped onto a single pixel from each mirror scan to trade spatial coverage for better signal-to-noise.</p>					
Data Returned					
Design Detail					
<p>NIMS mode = LM. Record mode FMT = MPW Gain State = 2. Grating Position = 0 Ticks = 1004 MBTG = 1.459 PPR_RA= 0.189</p> <p>A single-pixel west-east swath at +20 degrees latitude.</p> <p>Only 3 of 16 Rims returned.</p> <p>SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT</p> <p>Long Spectrometer (LS), Gain 2, Grating Start 0, MPW, E14ELM442, E14ELM360</p>					
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14ENEUR15H01

165DI:TT= 0 TMC= 1 C= 1.50 XC= 0.00 BS= 0/8853 TC= 3
 A= 728 pD= 2178 SR=17.450 RA50= 50.14 DEC50= 20.47 cone=109.07 clock=279.62
 117DI:#SB= 1 OR= 0.020 RR=12.000 BM=F RC= 1 BS= 0/8853
 1:#s= 2 Cs= -5.70 XCs= 0.00 Cr= 5.69 XCr= 0.00 sD= 862 rD= 388

DESIGN G3.2 lisac: 3/18/1998 15:12:58

FILE:P.14ENEUR15H01

TARGET BODY : EUROPA

MINI:m.14ENEUR15H01

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

THINNING:NIM 2

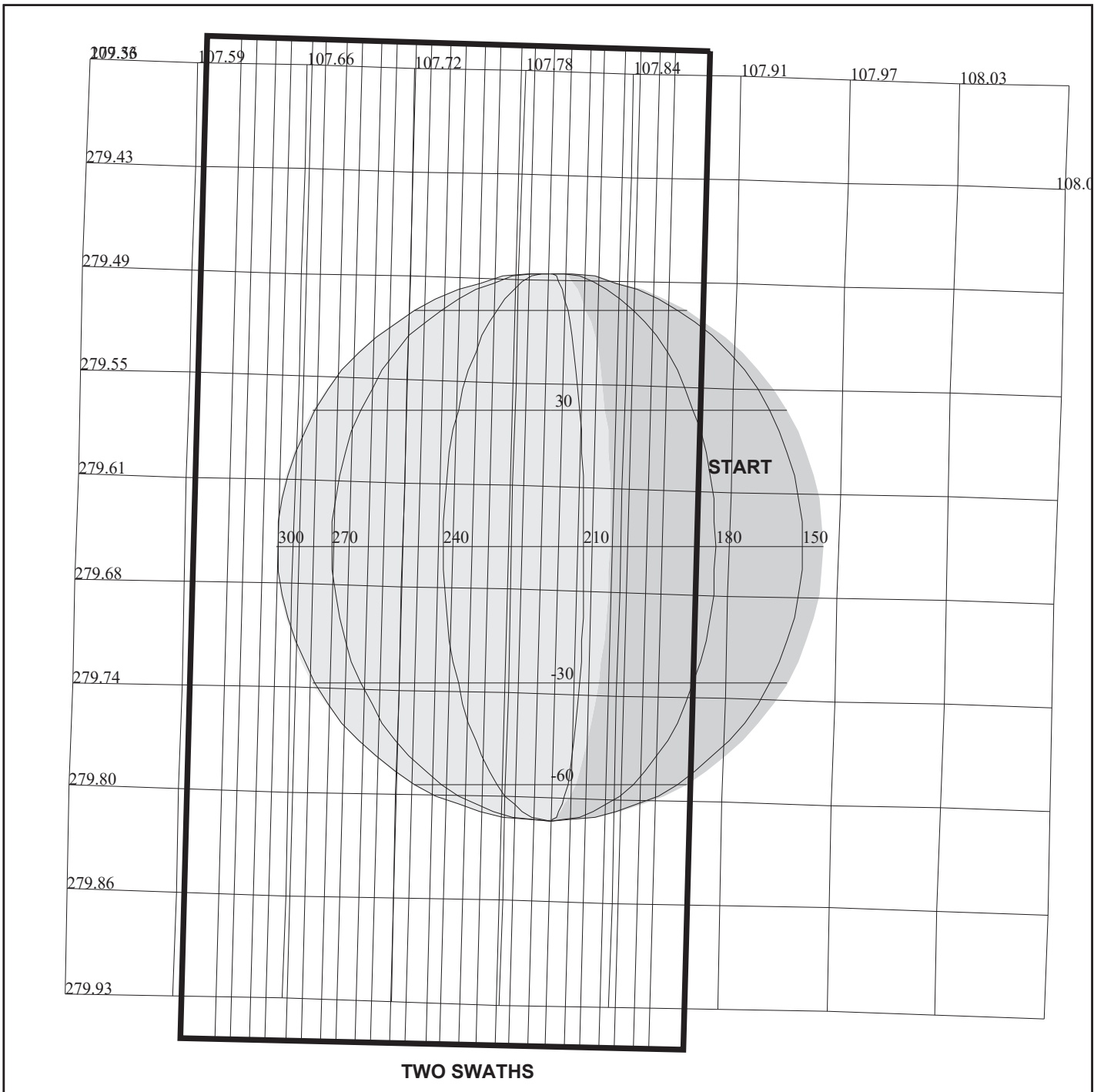
START:EEE 98-088/13:20:52.400 +CDS 894:00:0

BODY PLOT TIME:TARGET-TIME D= 2178 S= 0.500

OBSERVATION:14ENEUR15H01

DESCRIP:EUROPA_+15_HOURS

14ENEUR15H01	ACTIVITY ID:	14ENEUR15H01-			
	START TIME:	98-089/04:14:41.733			
Activity ID: Orbit 14 Target E Inst N OAPEL EUR15H SeqNo 01 -					
Title	14ENEUR15H01		Instrument	NIMS	
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS Working Group	SWG	
Time System	CDS	Load ID	Calendar Date	03/30/98	Week 13
Start	EEE+CDS 00000884:00:0	98-089/04:14:41.733	EEE+000/14:53:49.333		
End	EEE+CDS 00000911:00:0	98-089/04:41:59.733	EEE+000/15:21:07.333		
Duration	00000027:00:0	000/00:27:18.000	000/00:27:18.000		
Top Label	14ENEUR15H01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	ALL	DMS	No
Observation Objective					
<p>To observe Europa at plus 15 hours from Europa closest approach. The first scan is in gain state 3 and the second scan is in gain state 4. This is the first of a set of three distant Europa observations.</p>					
Data Returned					
Design Detail					
<p>4 RIMS of targeting Number of scans = 2 NIMS mode = LM Gains State = 3 (first scan) , 4 (second scan). Record Mode = LPU (first scan) and MPW (second scan)</p> <p>Two identical swaths across the illuminated portion of Europa's disk. The first swath in gain state 3, concentrating on short wavelengths. the second swath in gain state 4, concentrating on long wavelengths.</p> <p>SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT</p> <p>Long Map (LM), Gain 3, Grating Start 0, LPU, E14ELM240V, E14ELM168V Long Map (LM), Gain 4, Grating Start 0, MPW, E14ELM442, E14ELM240T</p>					
Galileo Activity Plan Form			03/09/98	14:16:20	rev 6/95



TWO SWATHS

165DJ:TT= 0 TMC= 1 C= 1.30 XC= 0.00 BS= 0/1249 TC= 3
 A= 728 pD= 1850 SR=17.450 RA50= 51.37 DEC50= 20.78 cone=107.88 clock=279.65
 117DJ:#SB= 1 OR= 0.020 RR=12.000 BM=F RC= 1 BS= 0/1249
 1:#s= 2 Cs= -4.80 XCs= 0.00 Cr= 4.80 XCr= 0.00 sD= 728 rD= 388

14ENEUR17H01

DESIGN G3.2 lisac: 3/18/1998 15:13:22

FILE:P.14ENEUR17H01

TARGET BODY : EUROPA

MINI:m.14ENEUR17H01

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

THINNING:NIM 2

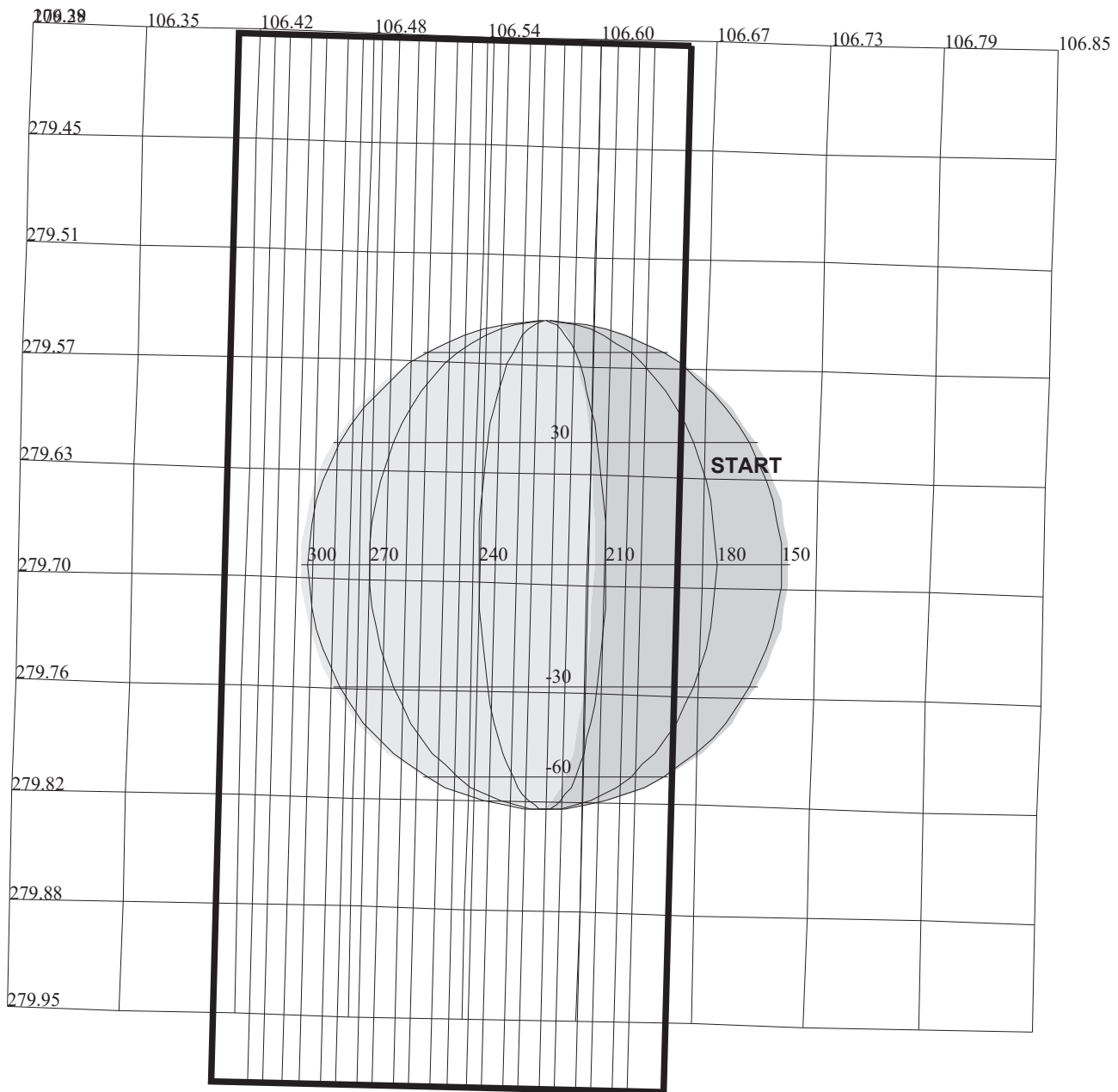
START:EEE 98-088/13:20:52.400 +CDS 1072:00:0

BODY PLOT TIME:TARGET-TIME D= 1850 S= 0.500

OBSERVATION:14ENEUR17H01

DESCRIP:EUROPA_+17_HOURS

14ENEUR17H01	ACTIVITY ID:	14ENEUR17H01-	START TIME:	98-089/07:15:41.066
Activity ID: Orbit 14 Target E Inst N OAPEL EUR17H SeqNo 01 -				
Title	14ENEUR17H01	Instrument	NIMS	
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	03/30/98 Week 13
Start	EEE+CDS 00001063:00:0	98-089/07:15:41.066	EEE+000/17:54:48.666	
End	EEE+CDS 00001089:00:0	98-089/07:41:58.400	EEE+000/18:21:06.000	
Duration	00000026:00:0	000/00:26:17.334	000/00:26:17.334	
Top Label	14ENEUR17H01-			
Bottom Label				
Plot Key	NIMS	Type	SCI	
CDS Bytes	0	Report Options	BOTH	Scan Platform No
CDS Source	OAP	Spin State	ALL	DMS No
Observation Objective				
<p>To observe Europa at plus 17 hours from Europa closest approach. The first scan is in gain state 3 and the second scan is in gain state 4. This is the second of a set of three distant Europa observations.</p>				
Data Returned				
Design Detail				
<p>4 RIMS of targeting Number of scans = 2 NIMS mode = LM Gains State = 3 (first scan) , 4 (second scan). Record Mode = LPU</p> <p>Two identical swaths across the illuminated portion of Europa's disk. The first swath in gain state 3, concentrating on short wavelengths. the second swath in gain state 4, concentrating on long wavelengths.</p> <p>Only the second gain state 4 swath returned.</p> <p>SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT</p> <p>Long Map (LM), Gain 3, Grating Start 0, LPU, E14ELM240V Long Map (LM), Gain 4, Grating Start 0, LPU, E14ELM240T, E14ELM240T</p>				
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TWO SWATHS

14ENEUR20H01

165DK:TT= 0 TMC= 1 C= 1.10 XC= 0.00 BS= 0/2907 TC= 3
 A= 728 pD= 1632 SR=17.450 RA50= 52.65 DEC50= 21.08 cone=106.64 clock=279.68
 117DK:#SB= 1 OR= 0.020 RR=12.000 BM=F RC= 1 BS= 0/2907
 1:#s= 2 Cs= -4.00 XCs= 0.00 Cr= 4.00 XCr= 0.00 sD= 610 rD= 388

DESIGN G3.2 lisac: 3/18/1998 15:13:49

FILE:P.14ENEUR20H01

TARGET BODY : EUROPA

MINI:m.14ENEUR20H01

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

THINNING:NIM 2

START:EEE 98-088/13:20:52.400 +CDS 1191:00:0

BODY PLOT TIME:TARGET-TIME D= 1632 S= 0.400

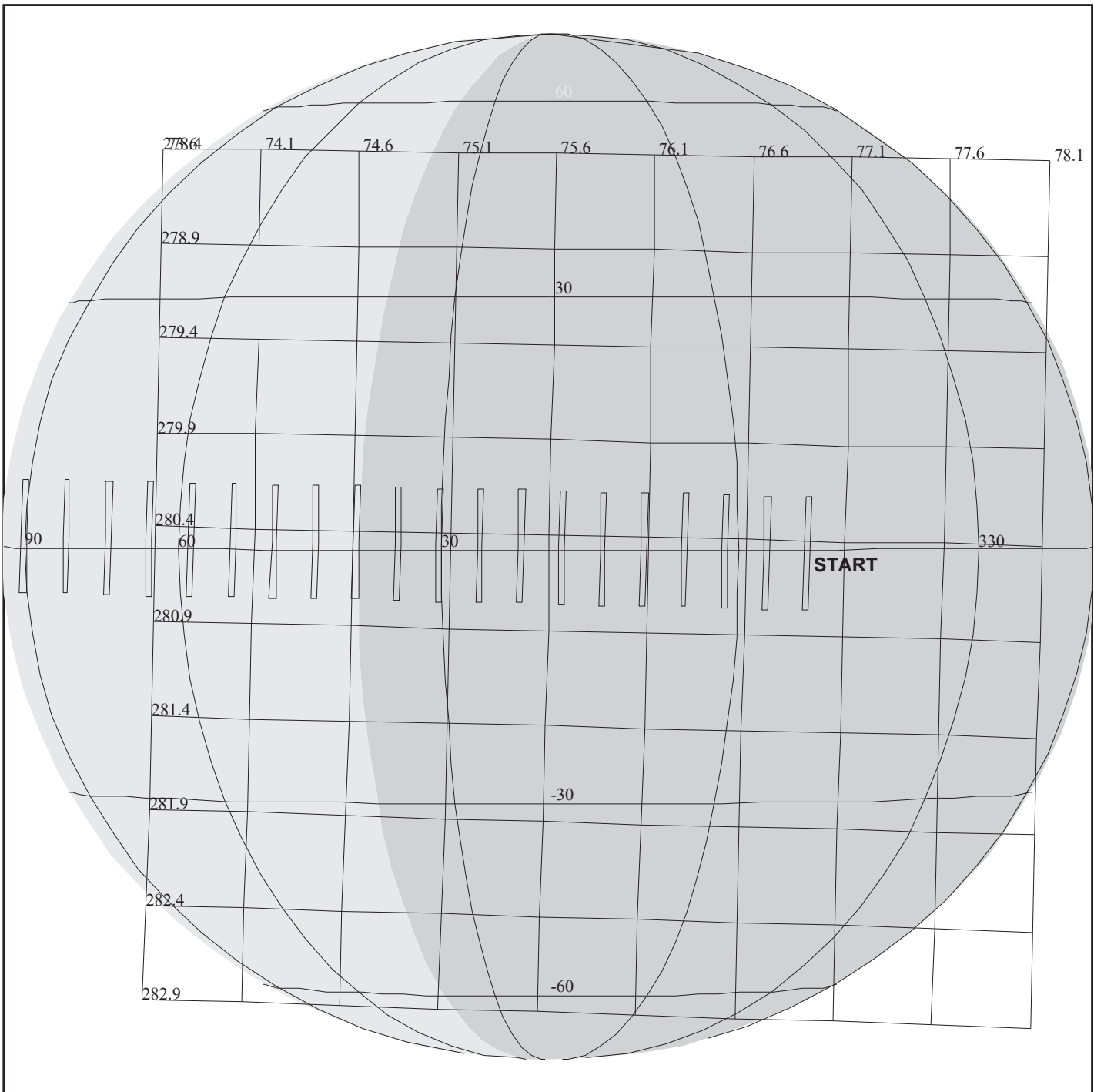
OBSERVATION:14ENEUR20H01

DESCRIP:EUROPA_+20_HOURS

14ENEUR20H01	ACTIVITY ID:	14ENEUR20H01-			
	START TIME:	98-089/09:14:59.733			
Activity ID: Orbit 14 Target E Inst N OAPEL EUR20H SeqNo 01 -					
Title	14ENEUR20H01		Instrument	NIMS	
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS Working Group	SWG	
Time System	CDS	Load ID	Calendar Date	03/30/98	Week 13
Start	EEE+CDS 00001181:00:0	98-089/09:14:59.733	EEE+000/19:54:07.333		
End	EEE+CDS 00001208:00:0	98-089/09:42:17.733	EEE+000/20:21:25.333		
Duration	00000027:00:0	000/00:27:18.000	000/00:27:18.000		
Top Label	14ENEUR20H01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	ALL	DMS	No
Observation Objective					
<p>To observe Europa at plus 20 hours from Europa closest approach. The first scan is in gain state 3 and the second scan is in gain state 4. This is the third of a set of three distant Europa observations.</p>					
Data Returned					
Design Detail					
<p>4 RIMS of targeting Number of scans = 2 NIMS mode = LM Gains State = 3 (first scan) , 4 (second scan). Record Mode = LPU</p> <p>Two identical swaths across the illuminated portion of Europa's disk. The first swath in gain state 3, concentrating on short wavelengths. the second swath in gain state 4, concentrating on long wavelengths.</p> <p>Only the second gain state 4 swath returned.</p> <p>SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT</p> <p>Long Map (LM), Gain 3, Grating Start 0, LPU, E14ELM240V Long Map (LM), Gain 4, Grating Start 0, LPU, E14ELM240T, E14ELM240T</p>					
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NIMS Real-Time PCT Calibration		ACTIVITY ID: 14NNPCTRLT01-	
		START TIME: 98-089/13:36:05.399	
Activity ID: Orbit 14 Target N Inst N OAPEL PCTRLT SeqNo 01 -			
Title	NIMS Real-Time PCT Calibration		Instrument
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 03/30/98 Week 13
Start	PCT+CDS 00000361:00:0	98-089/13:36:05.399	PCT+000/06:05:00.666
End	PCT+CDS 00000424:81:0	98-089/14:40:41.399	PCT+000/07:09:36.666
Duration	00000063:81:0	000/01:04:36.000	000/01:04:36.000
Top Label	14NNPCTRLT01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	275	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	Yes
		DMS	No
Observation Objective			
<p>This observation is an NIMS photometric calibration usint the PCT target. The data will be used to calibrate the NIMS visible detectors. The calibration data will be returned using Real-Time telemetry. At this time the off sun angle is about x.x degrees.</p>			
Data Returned			
Design Detail			
<ol style="list-style-type: none"> 1) Turn off PCT heaters 6 hours before calibration. 2) Scan Platform is at Safe/Unstow (cone = 153.00, clock = 0.00) 3) Chopper on, Gain State 4, 4) Set NIMS to Long Map Mode, ETB = PCT252, Mirror Blocking (1B, 1B) (11011, 11011) 5) Select 2 RIMs of Dark in Real-Time (Return 2 LM grating cycle) 6) Slew to PCT (cone 54.88, clock = 244.07) 7) Select 10 RIMS of PCT in Real-Time (Return 10 LM grating cycles) 8) Slew to Safe (cone = 153.00, clock = 0.00) 9) NIMS to Safe Mode, Reset Mirror Blocking (00,00) (00000, 00000) 10) Chopper Off. 			
Long Map (LM), Gain 4, Grating Start 0, RT, PCT252			
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14JNJUPRTS02

165DG:TT= 0 TMC=1 C= 23.00 XC= 0.00 BS= 0/0439 TC= 3
 A= 728 pD= 3630 SR=17.450 RA50= 84.76 DEC50= 25.08 cone= 76.91 clock=280.50
 117DG:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/0439
 1:#s= 1 Cs= -72.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 3640 rD= 2

TARGET G3.1 lisac: 3/12/1998 13:59:49

FILE:P.14JNJUPRTS02

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/E12RE14C.NS

PERIAPSIS:

THINNING:NIM 7

START:JEE 98-088/07:59:20.400 +CDS 1935:00:0

BODY PLOT TIME:TARGET-TIME D= 3630 S= 1.000

OBSERVATION:14JNJUPRTS02

DESCRIP:Jupiter_Realtime_Observation

Jupiter Realtime Observation		ACTIVITY ID:	14JNJUPRTS02*		
		START TIME:	98-089/17:54:42.400		
Activity ID: Orbit 14 Target J Inst N OAPEL JUPRTS SeqNo 02 *					
Title	Jupiter Realtime Observation		Instrument		NIMS
Requestor	NIMS-AWG/R.		Team	NIMS Working Group	AWG
Time System	CDS	Load ID	Calendar Date	03/30/98	Week 13
Start	EEE+CDS	00001695:00:0	98-089/17:54:42.400	EEE+001/04:33:50.000	
End	EEE+CDS	00001721:00:0	98-089/18:20:59.733	EEE+001/05:00:07.333	
Duration		00000026:00:0	000/00:26:17.333	000/00:26:17.333	
Top Label	14JNJUPRTS02*				
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					
Search for Jupiter atmospheric composition and thermal variations over time. Look at 6.5 degrees North latitude.					
FREE_RTS= 0.16 mbits					
Data Returned					
Design Detail					
One scan 20 RIMS long at 6.5 degrees North latitude. No overlap in FOV. The first 11 Rims over night-side Jupiter in gain state 4. The second 9 Rims over day-side Jupiter in gain state 2.					
SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT					
Long Map (LM), Gain 4,2, Grating Start 0, R/T, E14JLM408					
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Callisto Global Map		ACTIVITY ID:	14CNGLOBAL01*		
		START TIME:	98-090/01:06:27.000		
Activity ID: Orbit 14 Target C Inst N OAPEL GLOBAL SeqNo 01 *					
Title	Callisto Global Map		Instrument		NIMS
Requestor	NIMS-SWG/M. SEGURA		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	03/31/98	Week 13
Start	CEE-CDS	00000201:00:0	98-090/01:06:27.000	CEE-000/03:23:14.000	
End	CEE-CDS	00000163:00:0	98-090/01:44:52.334	CEE-000/02:44:48.666	
Duration		00000038:00:0	000/00:38:25.334	000/00:38:25.334	
Top Label	14CNGLOBAL01-				
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					
<p>This observation will allow for trailing side compositional mapping. Prime mission observations as well as VGR and IUE observations have indicated compositional differences from leading side to trailing side. This observation, in conjunction with a C20 observation will answer this question.</p> <p>FMT = LPU, Tics = 424, MBTG = 6.200, PPR_RA=0.299 Mbits for NIMS includes the 2.6 Mbits for delayed playback.</p>					
Data Returned					
Design Detail					
<p>Instrument Mode = LM Scan rate 0.03 mrad, Nyquist sampling, twenty percent overlap. Phase angle = 16.82 degrees. Cone angle = 168.43 degrees. Resolution = 102 km/pixel.</p> <p>The full disk is covered in three swaths, south to north.</p> <p>Central portion of each swath returned in 243 wavelengths (dark box). Full disk returned in 15 wavelengths (gray box).</p> <p>SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT</p> <p style="text-align: right;">E14CLM243C, E14CLM015C</p> <p>Long Map (LM), Gain 4, Grating Start 0, LPU, E14CLM243C, E14CLM243C</p>					
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Chopper off		ACTIVITY ID: 14NNCHOPOF01-	
		START TIME: 98-090/01:52:57.667	
Activity ID: Orbit 14 Target N Inst N OAPEL CHOPOF SeqNo 01 -			
Title	Chopper off	Instrument	
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 03/31/98 Week 13
Start	CEE-CDS 00000155:00:0	98-090/01:52:57.667	CEE-000/02:36:43.333
End	CEE-CDS 00000149:00:0	98-090/01:59:01.667	CEE-000/02:30:39.333
Duration	00000006:00:0	000/00:06:04.000	000/00:06:04.000
Top Label	14NNCHOPOF01-		
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			
Turn off NIMS chopper after instrument reload.			
Design Detail			
Use tow NIMS 37IST commands, the first to set chopper 63Hz, the second to turn off the chopper.			
37IST,1,0,0,OFF,0,0,0 Chopper 63Hz			
37IST,1,1,0,OFF,0,0,0 Chopper Off			
Galileo Activity Plan Form		03/09/98 14:16:21	rev 6/95

NIMS RCT Real-Time Calibration		ACTIVITY ID: 14NNRCTRLT01-	
		START TIME: 98-132/07:59:34.133	
Activity ID: Orbit 14 Target N Inst N OAPEL RCTRLT SeqNo 01 -			
Title	NIMS RCT Real-Time Calibration		Instrument
Requestor	NIMS-AWG/K. BAINES	Team	NIMS Working Group
Time System CDS		Load ID	Calendar Date 05/12/98 Week 19
Start	RTA+CDS 00000000:00:0	98-132/07:59:34.133	RTA+000/00:00:00.000
End	RTA+CDS 00000794:00:0	98-132/21:22:23.466	RTA+000/13:22:49.333
Duration	00000794:00:0	000/13:22:49.333	000/13:22:49.333
Top Label	14NNRCTRLT01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	500	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			
<ol style="list-style-type: none"> 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. <p>Long Map (LM), Gain 1, Grating Start 0, R/T, RCT252 Long Map (LM), Gain 4, Grating Start 0, R/T, OPCAL48</p>			
Galileo Activity Plan Form		03/09/98 14:16:22	rev 6/95

Chapter 6 - Edit Tables

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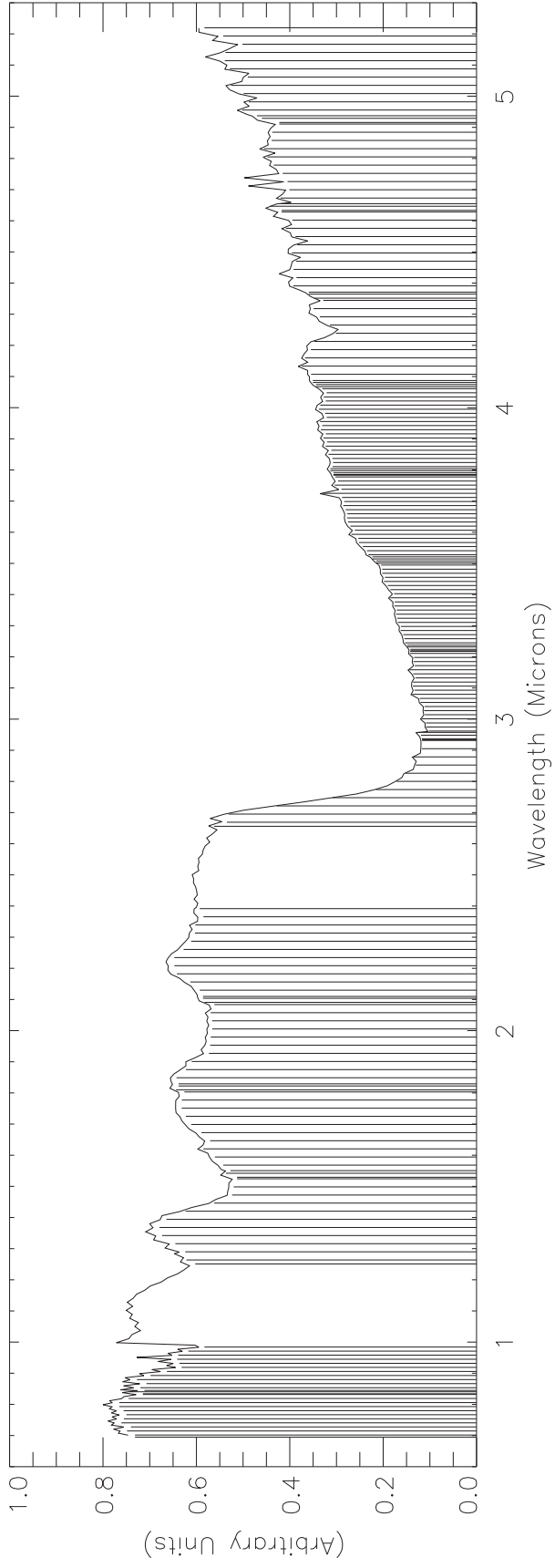
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Introduction to Chapter 6

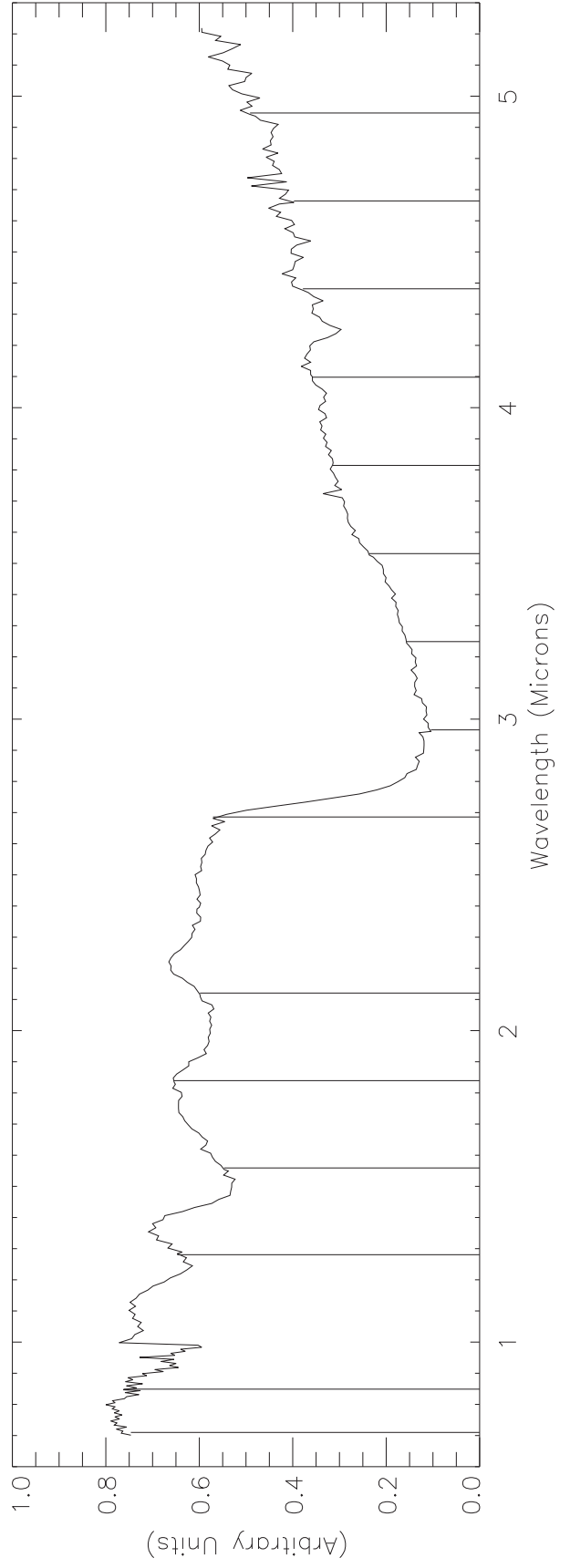
NIMS Edit Table Plots

This chapter contains plots of the NIMS Edit Tables used in E14. 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.

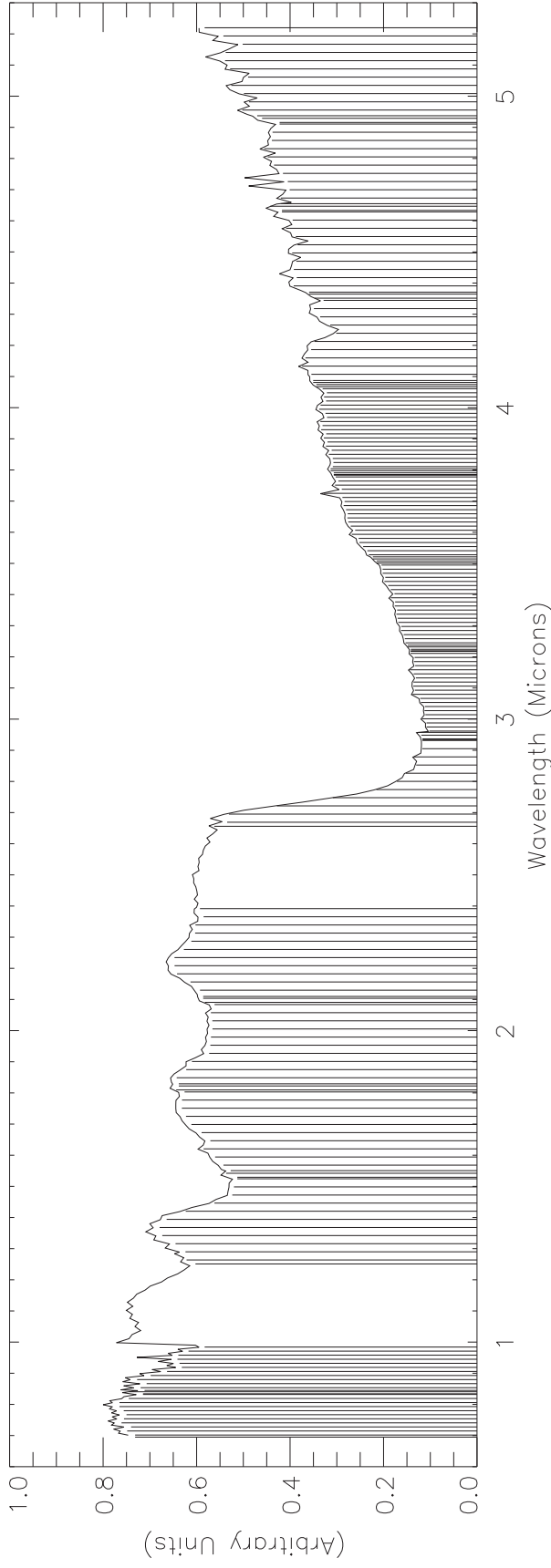
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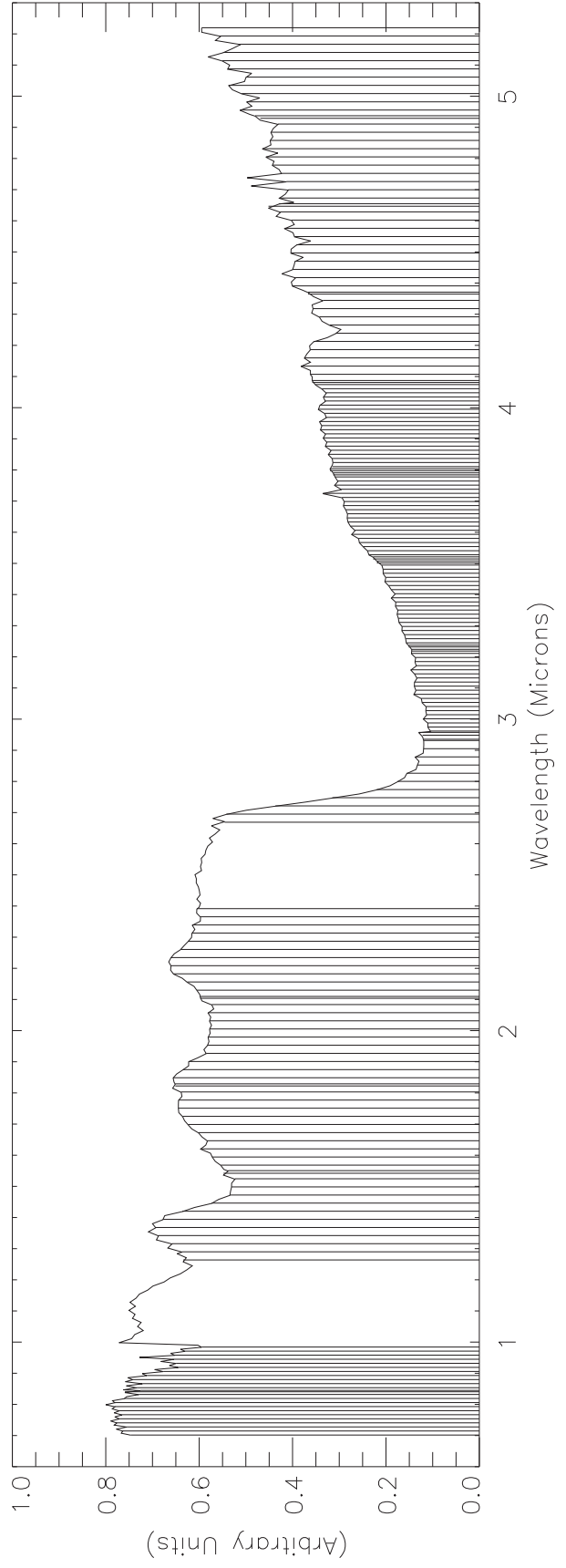
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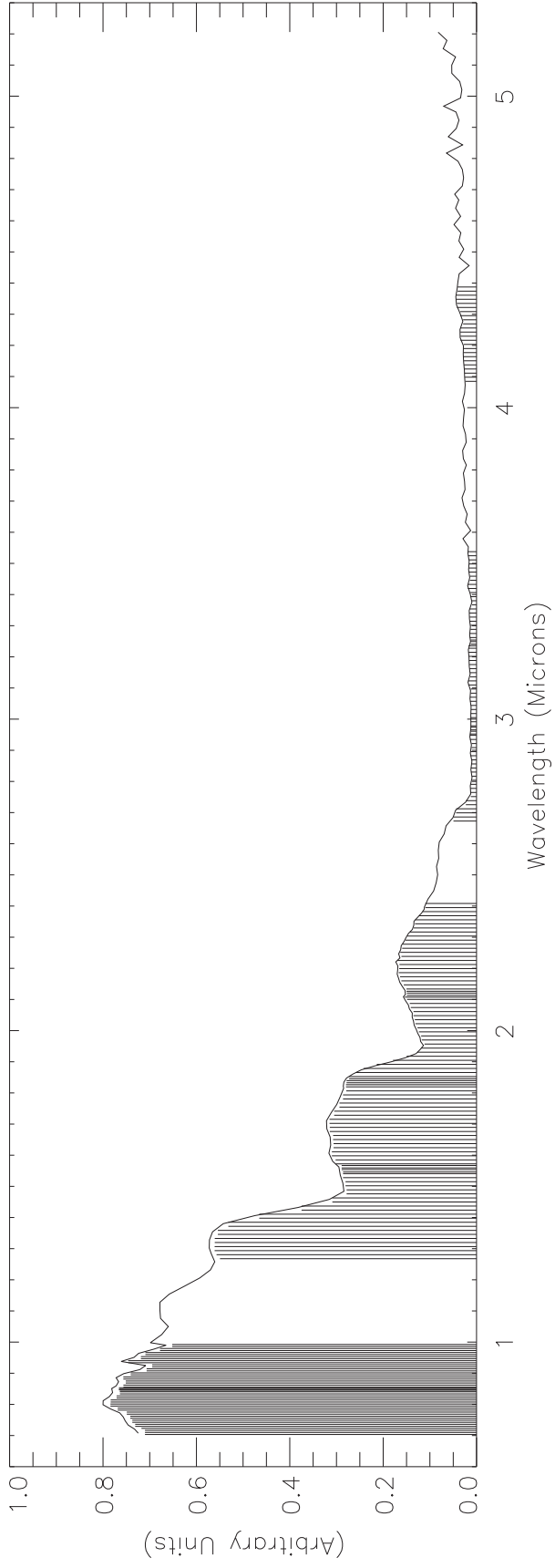
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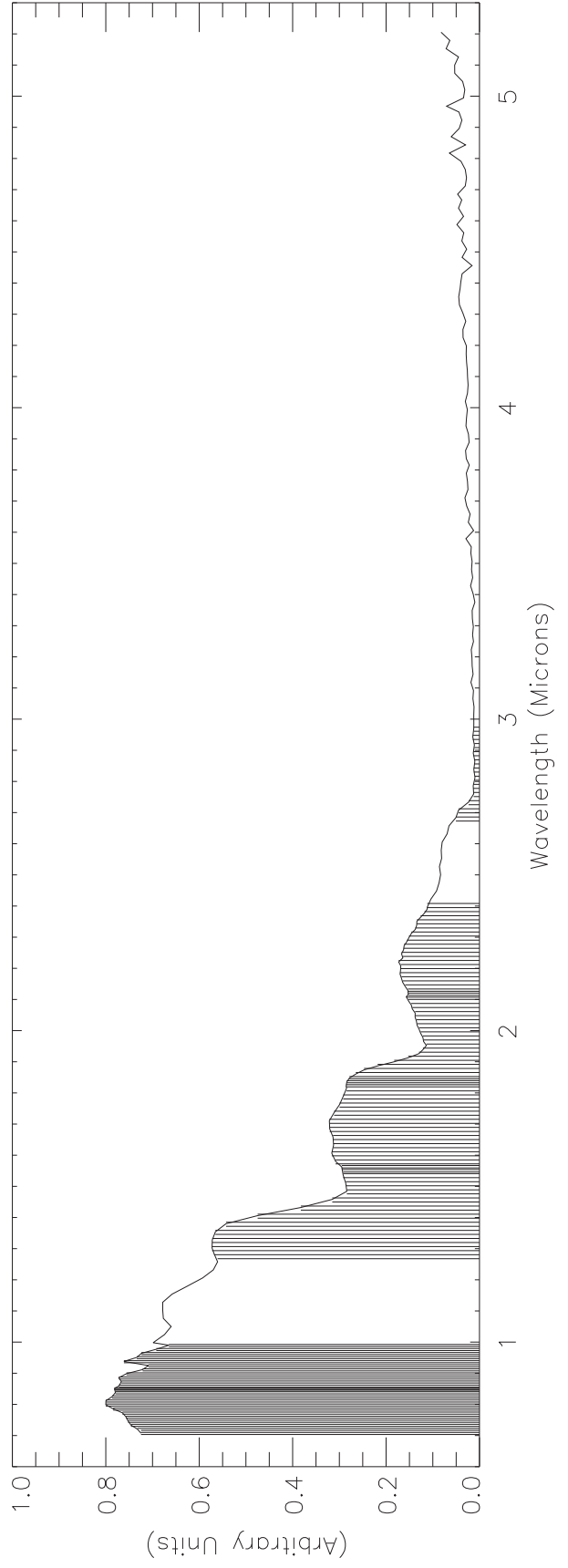
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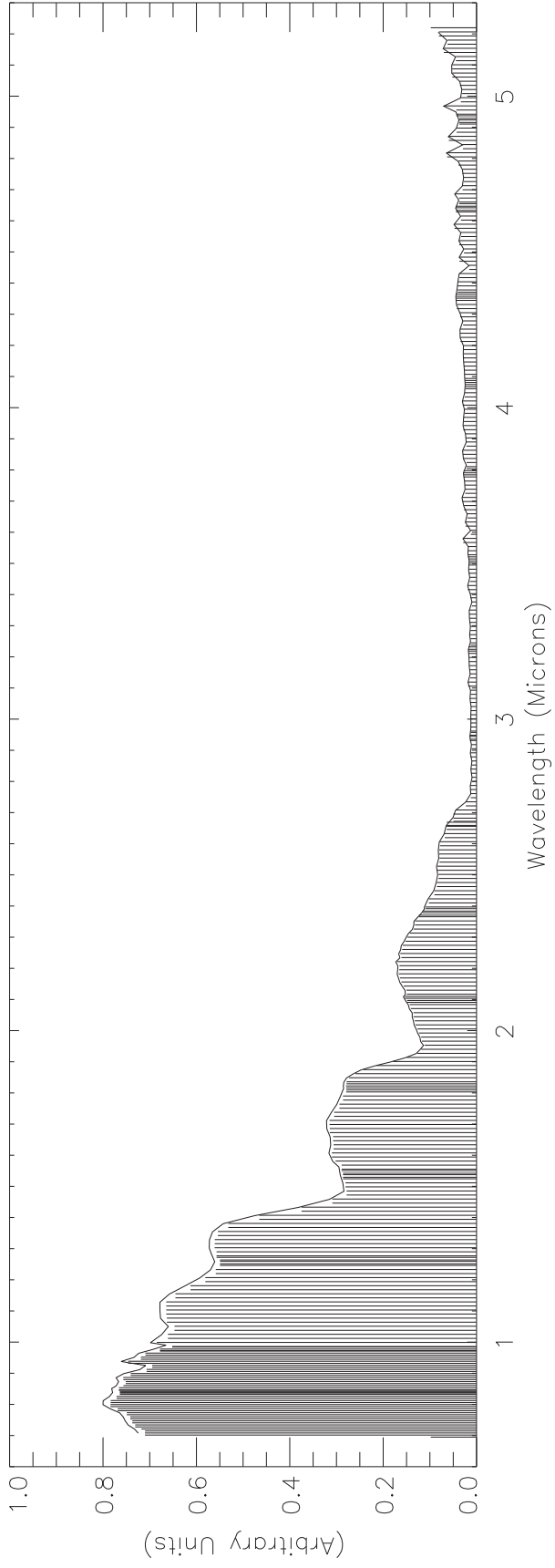
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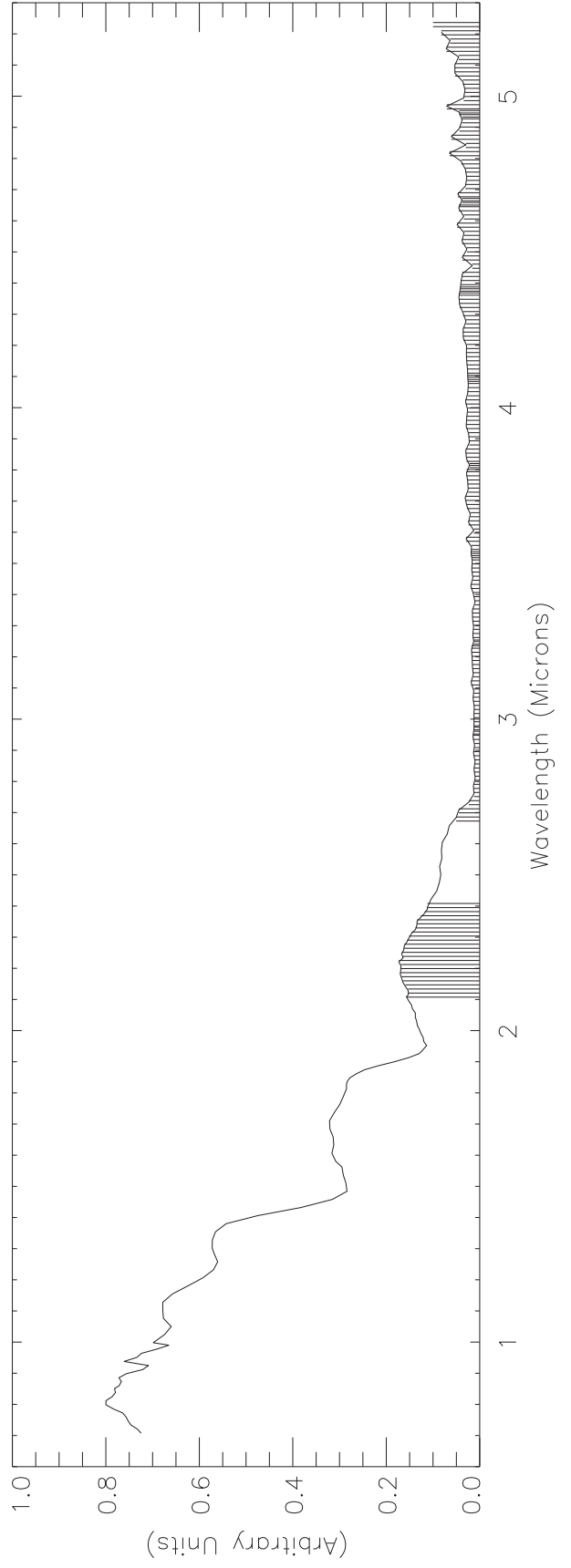
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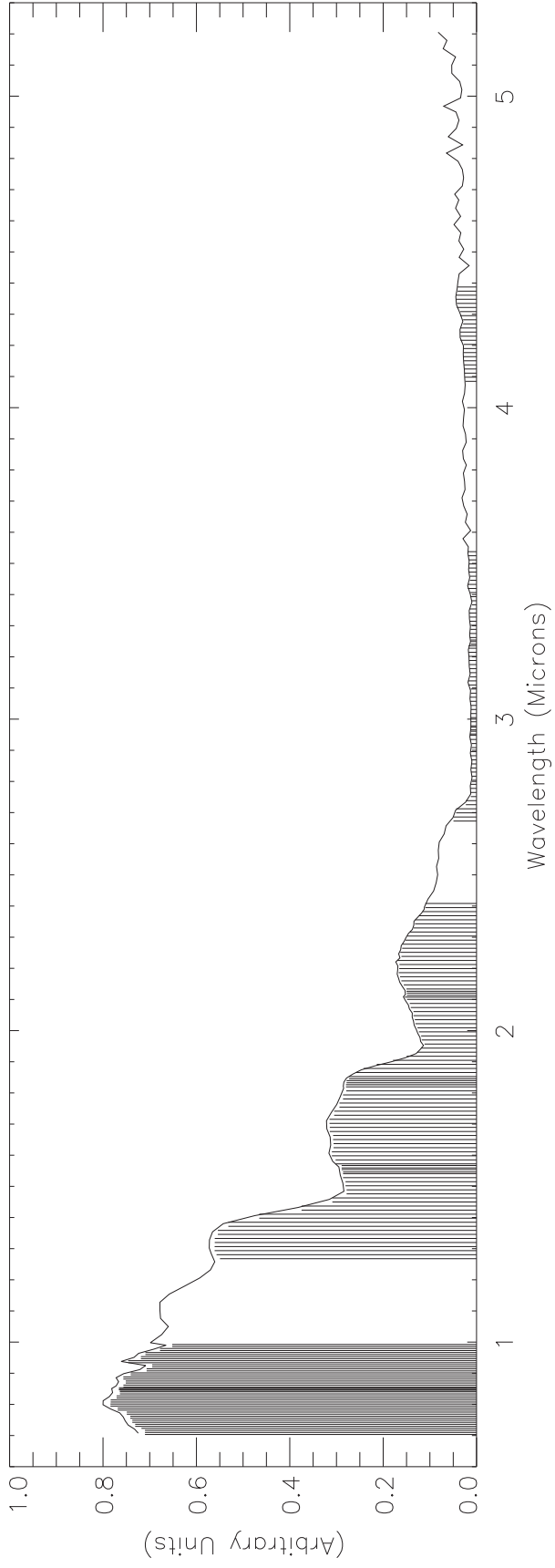
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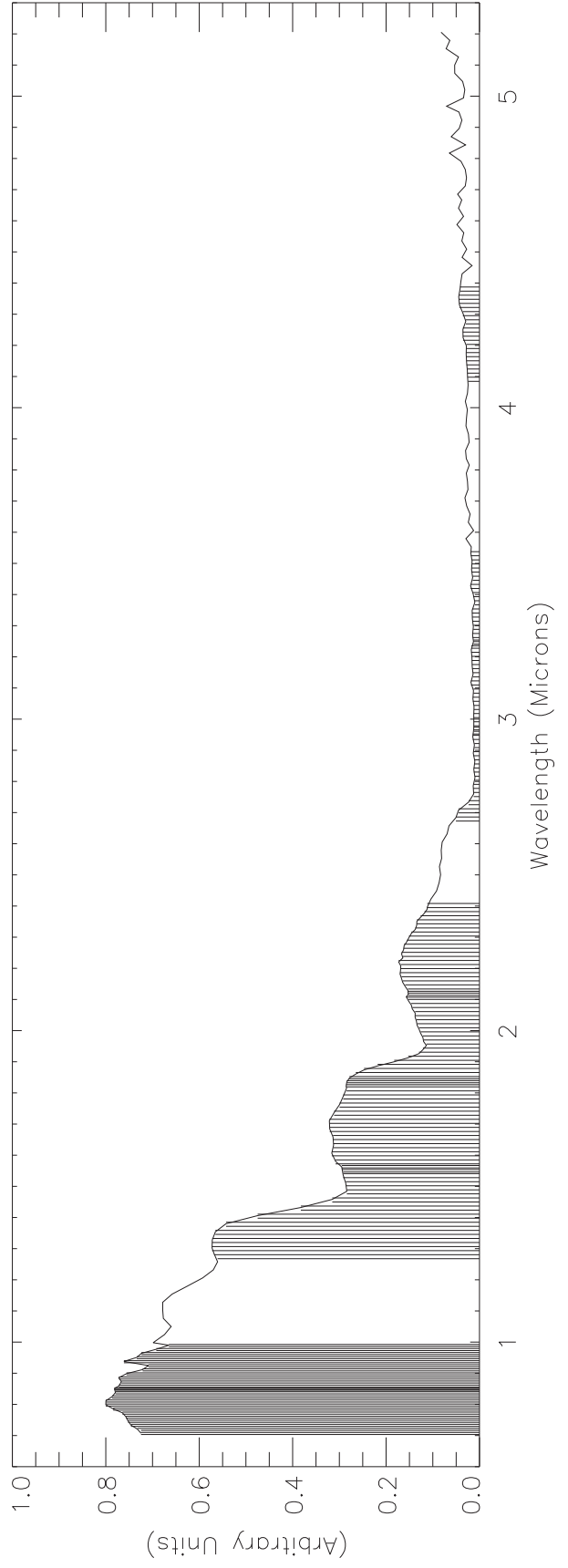
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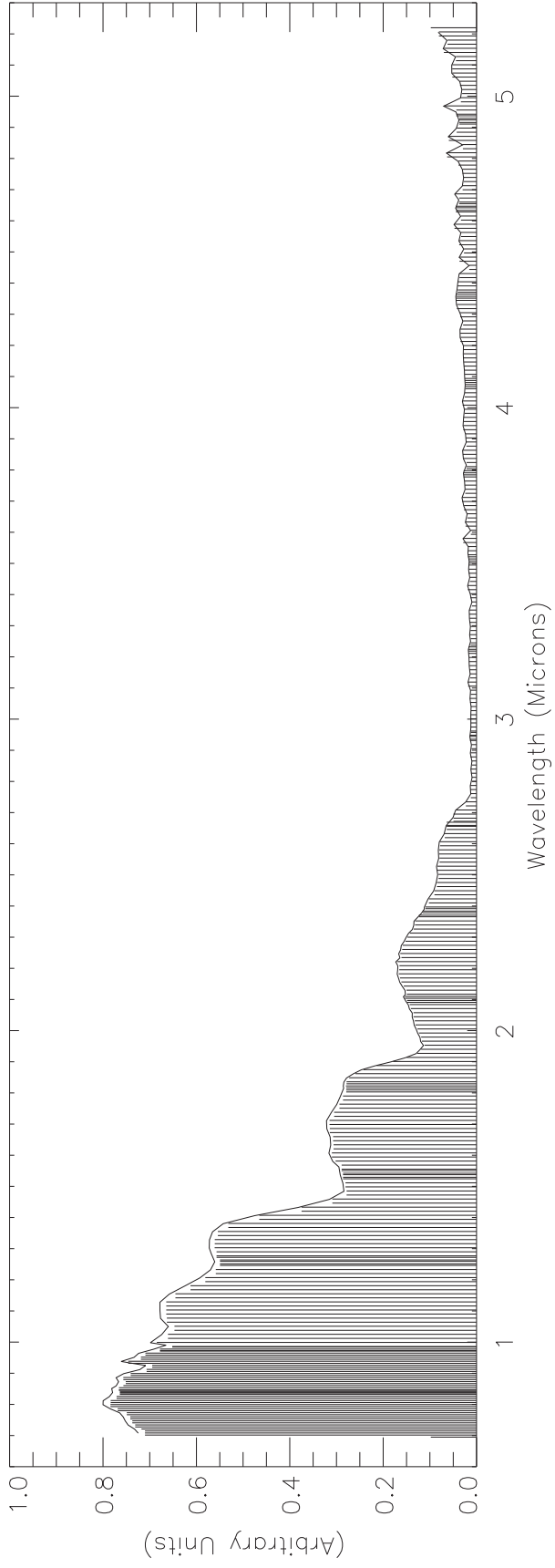
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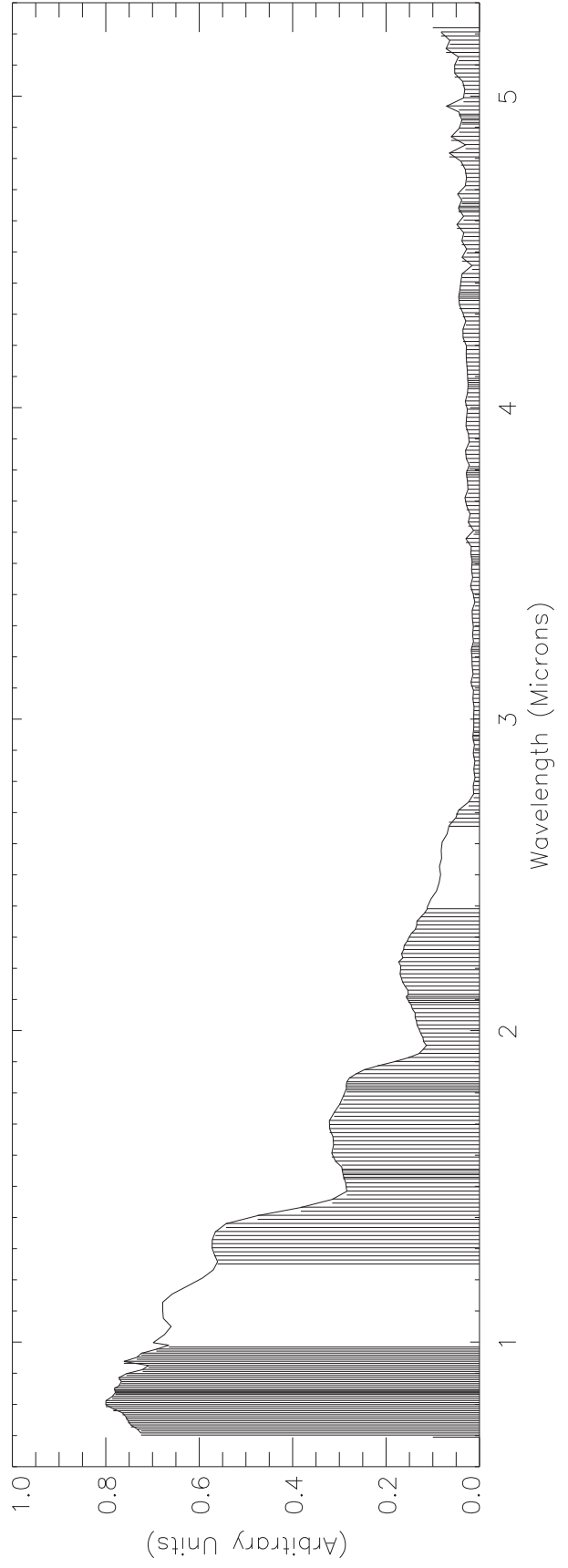
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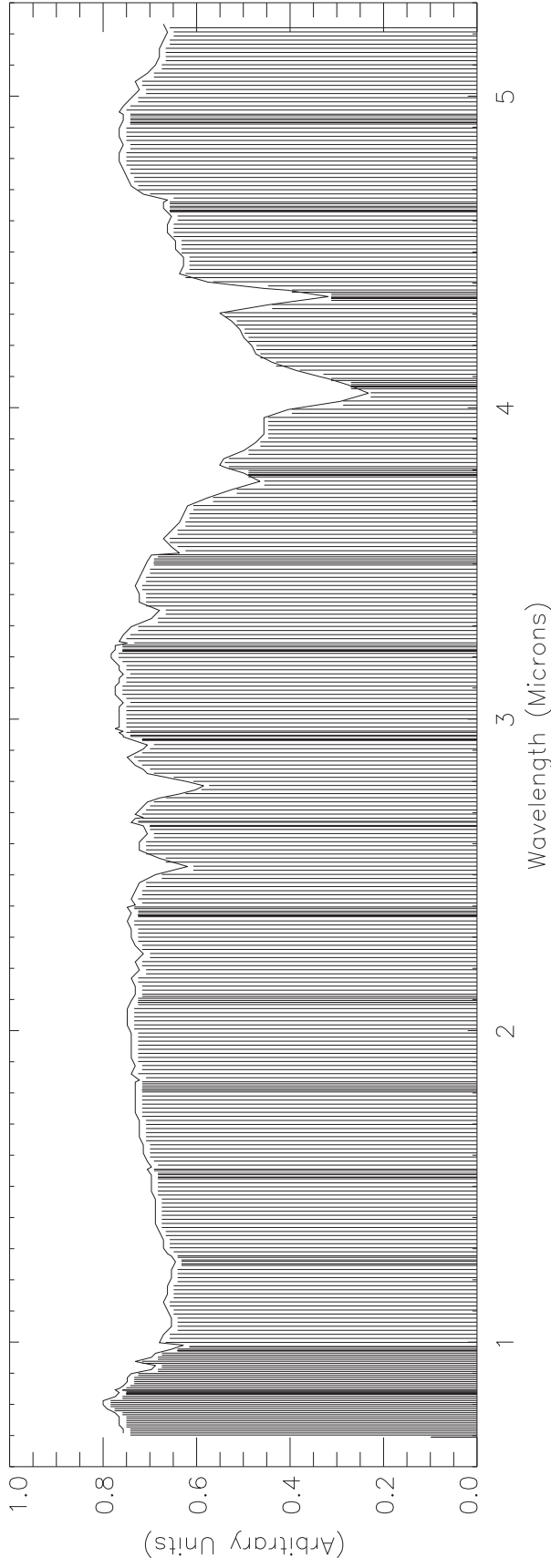
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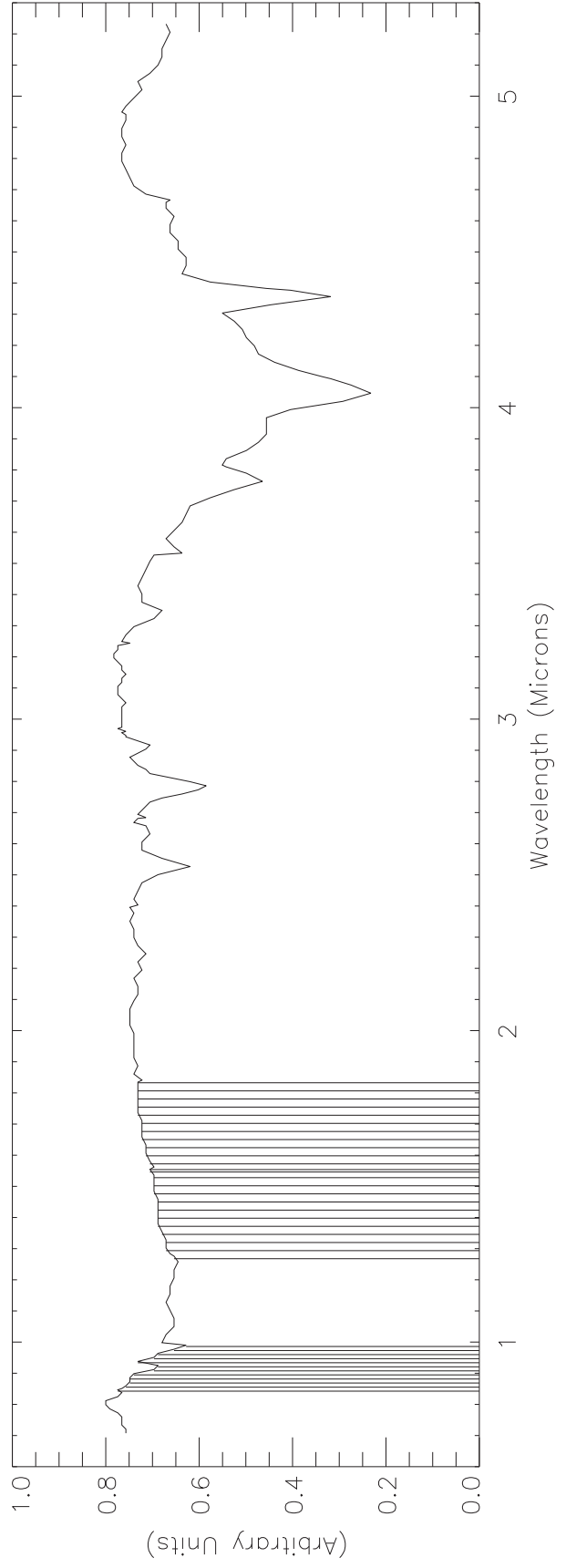
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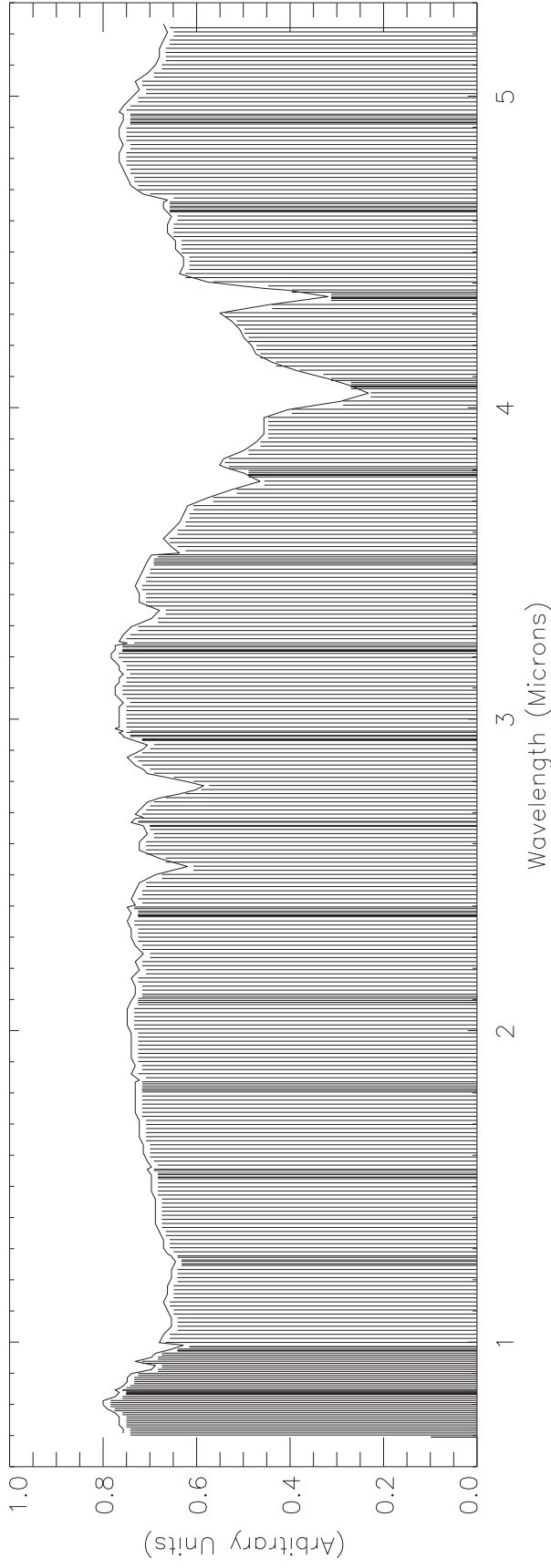
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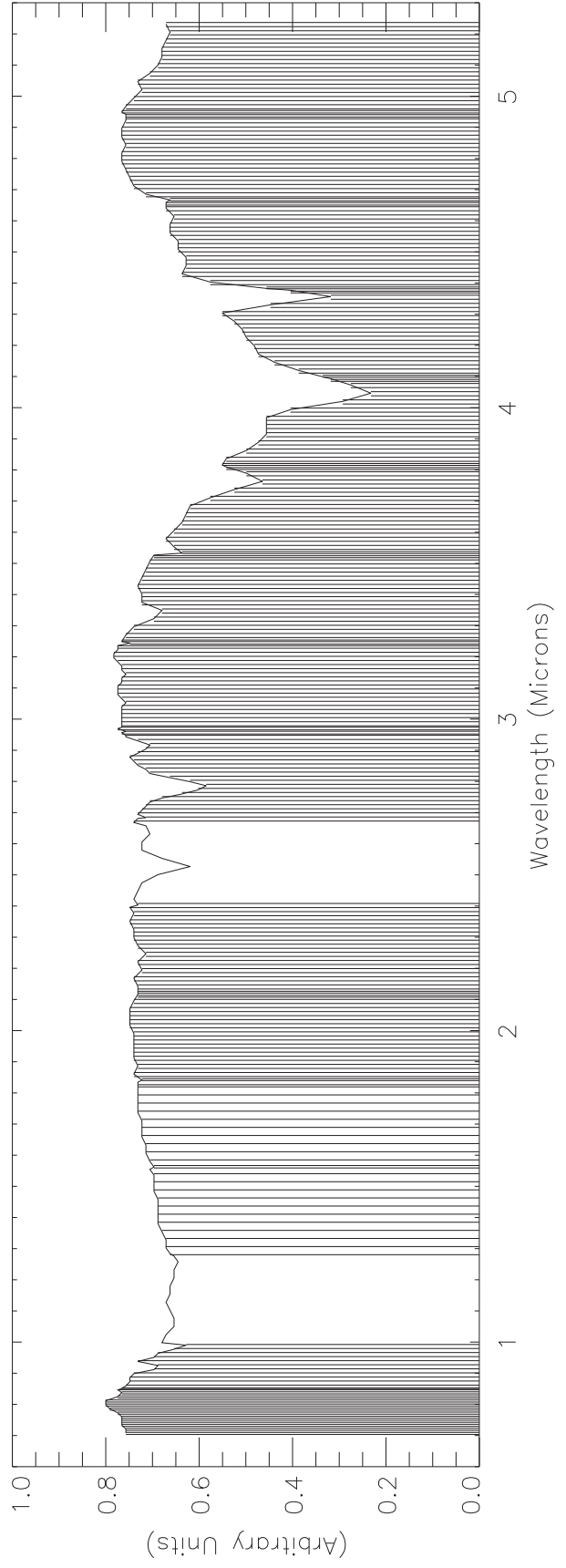
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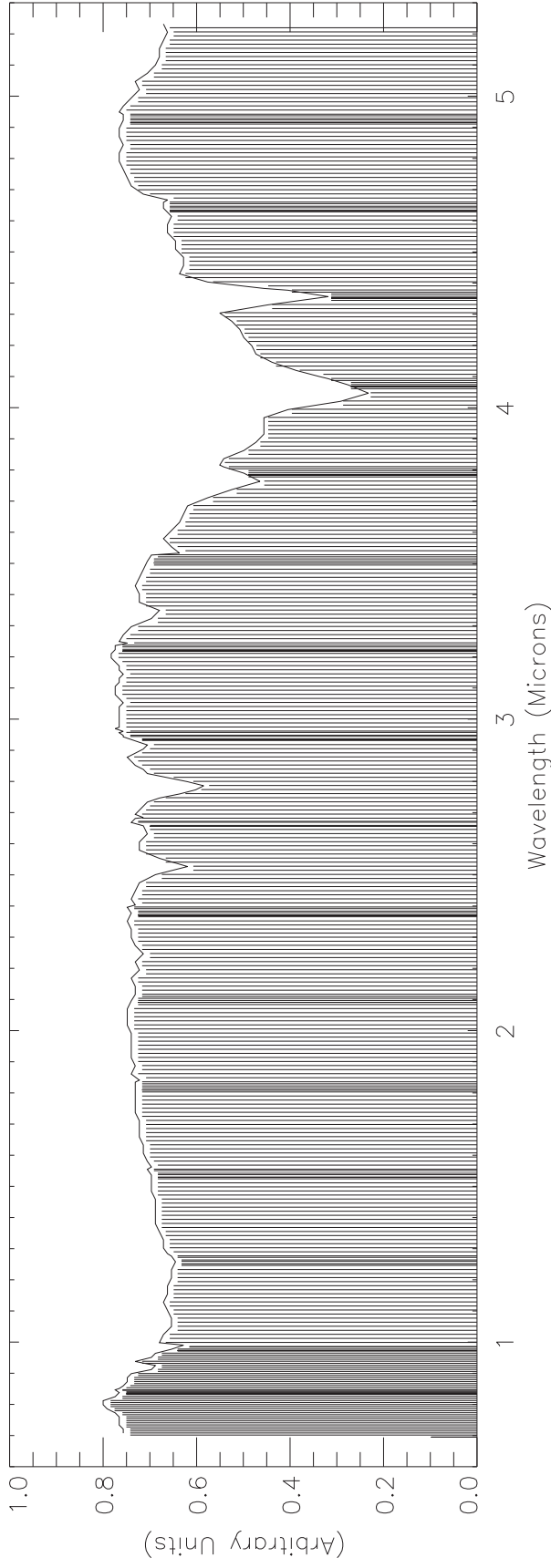
ILM442.ETB



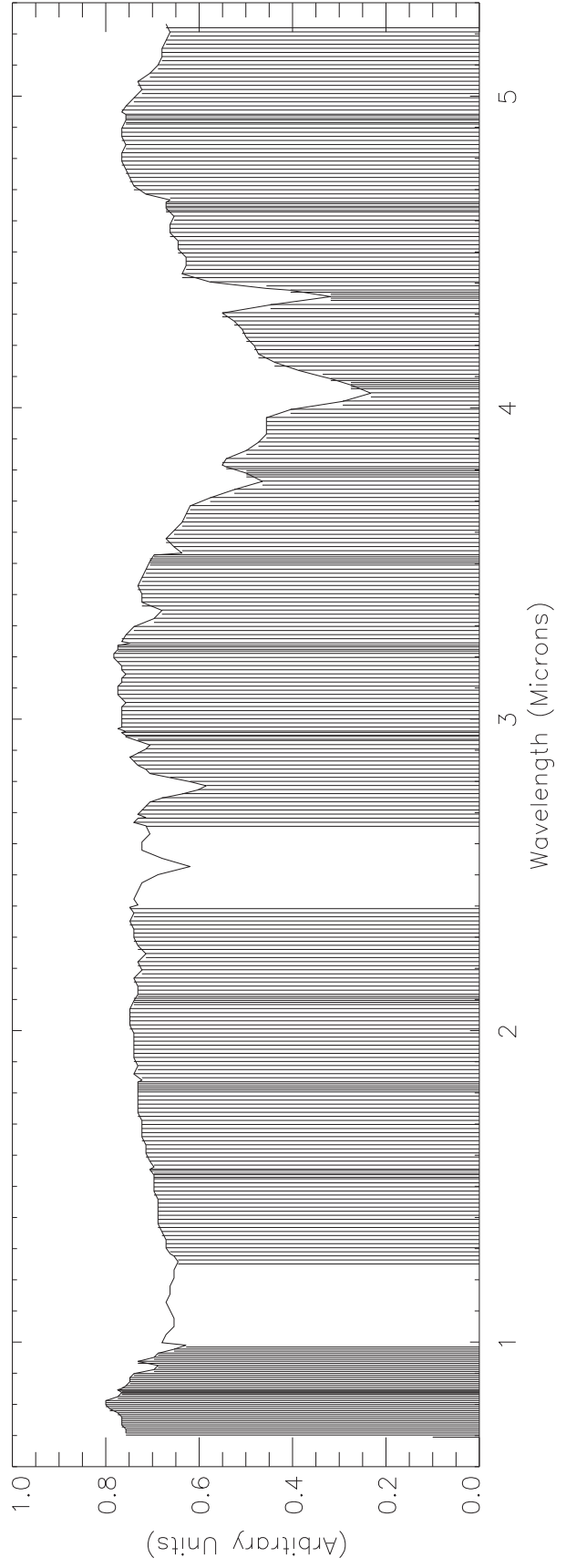
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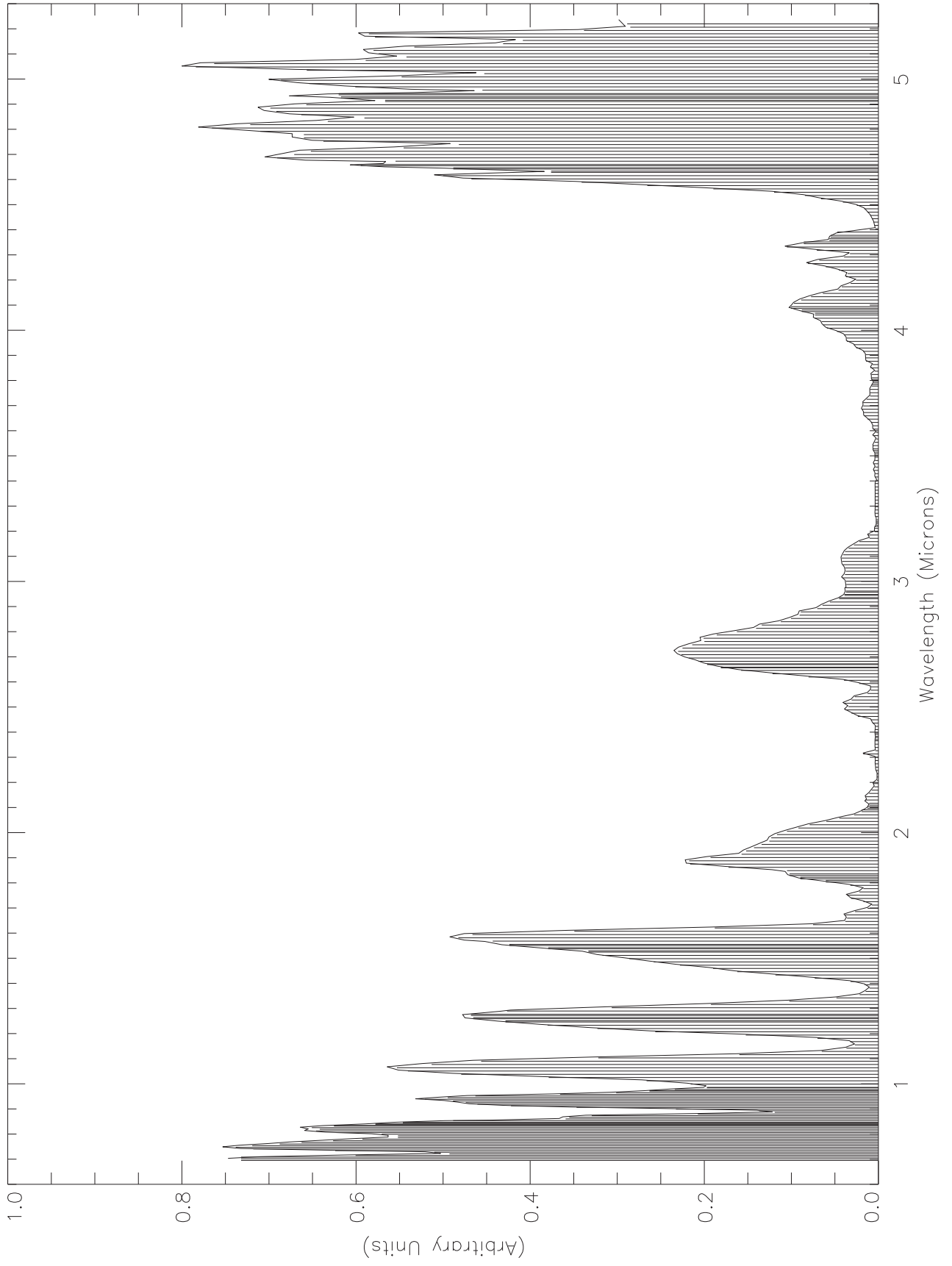
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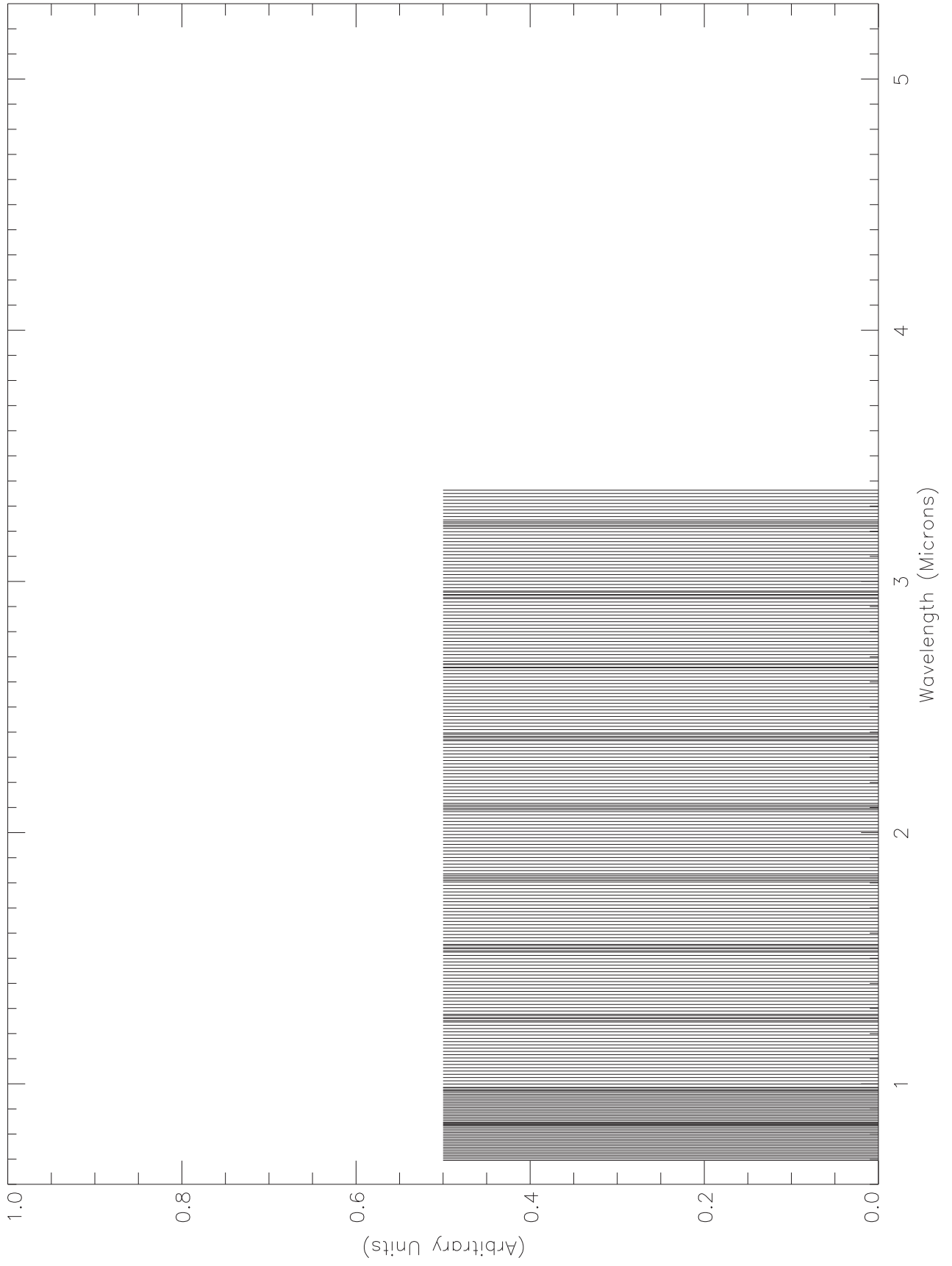
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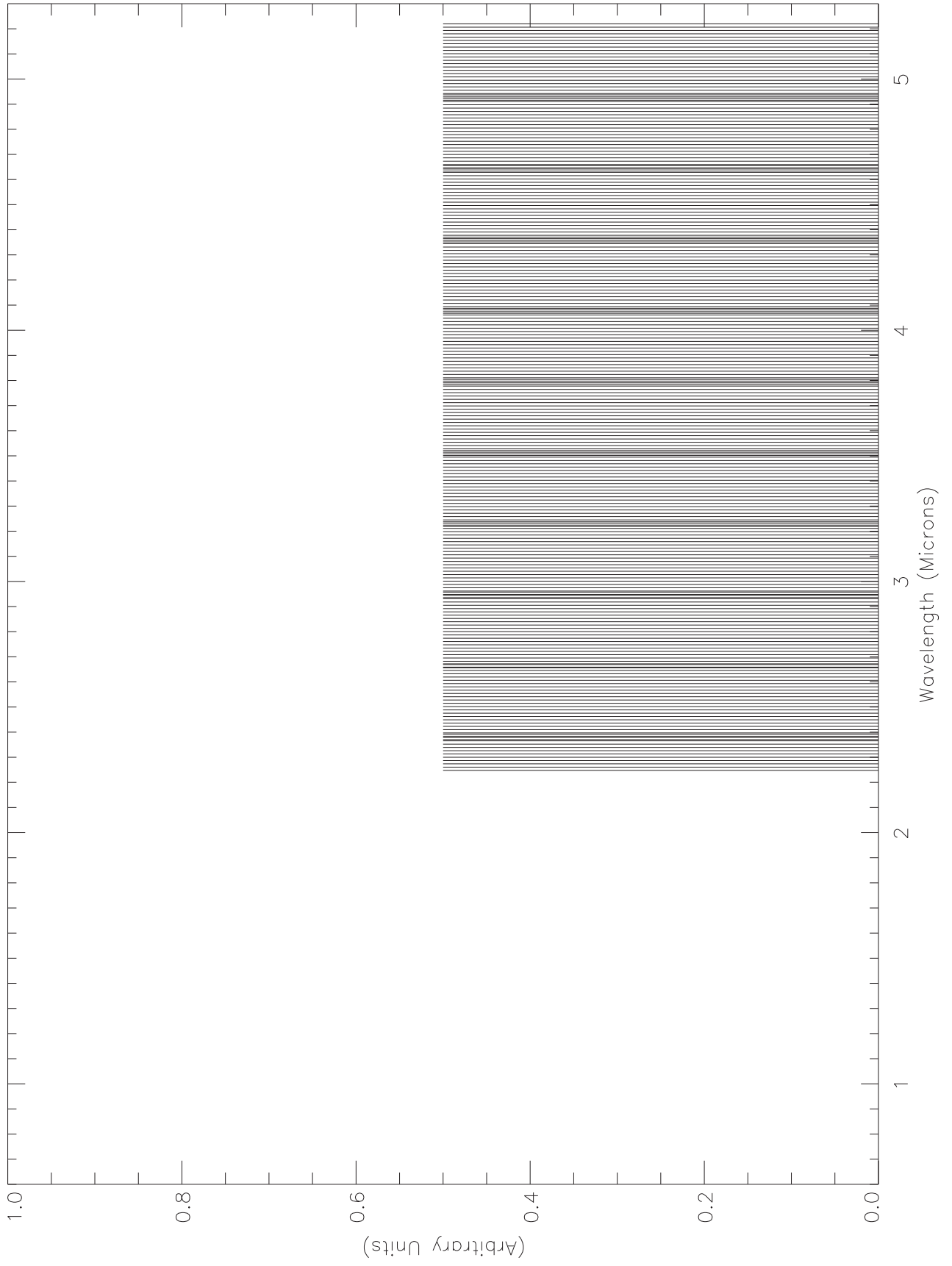
JLM408



PCT252.ETB



RCT252.PBK



Chapter 7 - Data Return

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Introduction to Chapter 7

This chapter is a report on the NIMS data return for the E14 orbit. Due to the low downlink data rates available for Galileo Jupiter Operations and other unforeseen and unpredictable events during the E14 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 twelve autonomous reloads of the NIMS RAM code from CDS during the E12 encounter, one just before each science observation. A single NIMS processor halt was detected, but no NIMS observations were lost due to this 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.

AACS was in Cruise Mode during the entire E14 encounter period. Spacecraft wobble compensation is not active in Cruise Mode. This state of uncompensated wobble makes it more difficult to reconstruct geometrically projected NIMS spectra. The decision to have AACS in Cruise Mode during E14 encounter was due to a conservative response to the AACS anomalies that occurred in E12.

The plots on the pages 3 and 4 show the geometry of the NIMS E14 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' data.

The text on page 7 gives a 'recap' of the E14 playback events which affected which observations were returned.

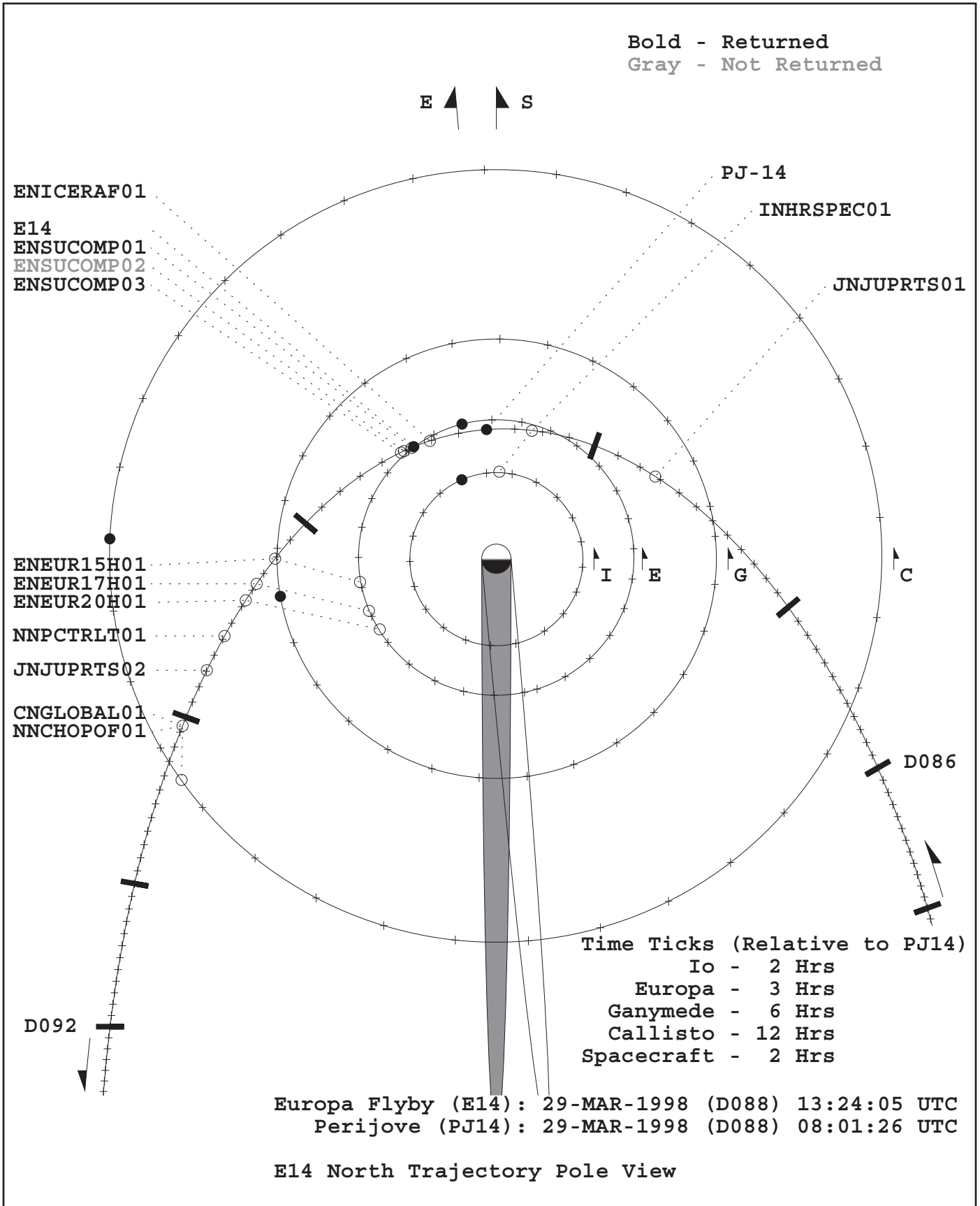
A Timeline of E14 playback events is on pages 8 through 11.

The text on page 12 describes the E14 NIMS Anomalies.

The text on page 13 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 14 and 15.

The text on page 16 is a guide to understanding the NIMS MASK.

NIMS E14 OBSERVATIONS



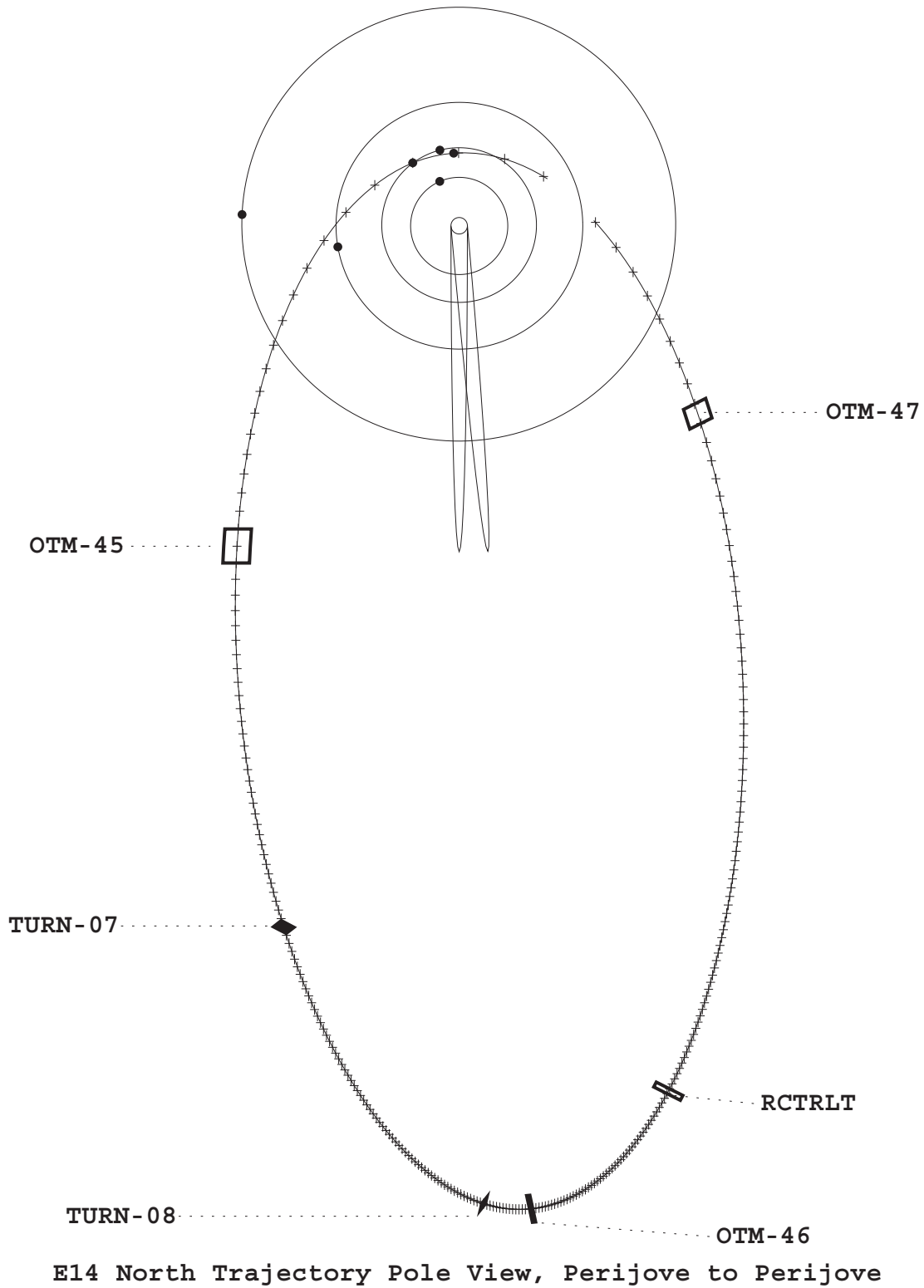
NIMS E14 CRUISE CALIBRATIONS

Europa Flyby (E14): 29-MAR-1998 (D088) 13:24:05 UTC
Perijove (PJ14): 29-MAR-1998 (D088) 08:01:26 UTC
Apojove (AJ14): 30-APR-1998 (D120) 16:00:00 UTC

Time Ticks (Relative to E14)

Spacecraft - 6 Hours

E  S



NIMS E14 DATA RETURN

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
14JNJUPRTS01*	Jupiter Realtime Observation	E14JLM442/MB	R/T	LM	2	0	0	4 R/T	DA
14INHRSPEC01-	Io Monitoring at High Spectral Resolution	E14ILM442	E14B_ILM324	LM	2	0	0	4 MPW	DB
14INHRSPEC01 B-	Io Monitoring at High Spectral Resolution	E14ILM442	E14B_ILM36	LM	2	0	0	4 MPW	DB
14INHRSPEC01 C-	Io Monitoring at High Spectral Resolution	E14ILM442	E14ILM360	LM	2	0	0	4 MPW	DB
14ENICERAF01-	Europa Ice Rift	E14ELM442	E14ELM360	LM	2	0	0	4 MPW	DC
14ENSUCOMP01-	Europa Surface Composition	E14ELM442	E14ELM360	LM	2	0	0	4 MPW	DD
14ENSUCOMP01 B-	Europa Surface Composition	E14ELM442	E14ELM360	LM	2	0	0	4 MPW	DD
14ENSUCOMP03-	Europa Surface Composition	E14B_ELS442	E14B_ELS360	LS	2	0	0	4 MPW	DF
14ENEUR15H01-	Europa Obs at Plus 15 Hours	E14B_ELM240V	E14B_ELM168V	LM	3	0	0	4 LPU	DI
14ENEUR15H01-	Europa Obs at Plus 15 Hours	E14ELM442	E14B_ELM240T	LM	4	0	0	4 MPW	EI
14ENEUR17H01-	Europa Obs beyond 17 Hours	E14B_ELM240T	E14B_ELM240T	LM	4	0	0	4 LPU	EJ
14ENEUR20H01-	Europa Obs beyond 20 Hours	E14B_ELM240T	E14B_ELM240T	LM	4	0	0	4 LPU	EK
14NNPCTRLT01-	NIMS PCT Real-Time Calibration	E14PCT252	R/T	LM	1	0	0	4 R/T	XE
14JNJUPRTS02*	Jupiter Realtime Observation	E14JLM442/MB	R/T	LM	2	0	0	4 R/T	DG
14CNGLOBAL01 A*	Callisto Global Map	E14CLM243C	E14B_CLM15C	LM	4	0	0	4 LPU	DH
14CNGLOBAL01 B*	Callisto Global Map	E14CLM243C	E14CLM228C	LM	4	0	0	4 LPU	DH
14CNGLOBAL01 C*	Callisto Global Map	E14CLM243C	E14 CLM228C	LM	4	0	0	4 LPU	DH
14CNGLOBAL01 D*	Callisto Global Map	E14CLM243C	E14CLM228C	LM	4	0	0	4 LPU	DH
14CNGLOBAL01 E*	Callisto Global Map	E14CLM243C	E14B_CLM15C	LM	4	0	0	4 LPU	DH
14NNPCTRLT01-	NIMS RCT Real-Time Calibration	E14RCT252	R/T	LM	1	0	0	4 R/T	XE

NIMS E14 DATA RETURN

Activity ID	Mode	Record Format	Wave-lengths	Record Time (sec)	PB Time (sec)	Sel Bits of Tape sBOT (Mbits)	Total Bits of Tape BOT (Mbits)	Mode Cycle Time	Thold	Comp	Total BTG Mbits (4% ahead)	Data Reduct Factor	Pass
14JNJUPRTS01	LM	R/T	360										
14INHRSPEC01	LM	MPW	324	1113.3	481	5.54	12.83	8.667	2	1.27	2.9450	1.88	1
14INHRSPEC01	LM	MPW	36	1113.3	481	5.54	12.83	8.667	2	1.32	0.3148	17.60	1
14INHRSPEC01	LM	MPW	360	1113.3	484.3	5.58	12.83	8.667	2	1.23	3.4020	1.64	2
14ENICERAF01	LM	MPW	360	1886.7	121	1.39	21.73	8.667	0	1.52	0.6878	2.03	1
14ENSUCOMP01	LM	MPW	360	1140	460	5.30	13.13	8.667	0	1.50	2.6495	2.00	1
14ENSUCOMP01	LM	MPW	360	1140	467	5.38	13.13	8.667	0	1.53	2.6371	2.04	2
14ENSUCOMP03	LS	MPW	360	1140	182	2.10	13.13	8.667	0	1.62	0.9706	2.16	1
14ENEUR15H01	LM	LPU	168	290.0	285.4	1.76	1.79	8.667	0	1.61	0.7146	2.46	1
14ENEUR15H01	LM	MPW	240	284.0	283.3	3.26	3.27	8.667	0	1.84	0.8869	3.68	1
14ENEUR17H01	LM	LPU	240	242.7	242.7	1.50	1.50	8.667	0	2.02	0.6919	2.16	2
14ENEUR20H01	LM	LPU	240	205.3	196.7	1.21	1.27	8.667	0	2.00	0.5664	2.14	1
14NNRCTRLT01	LM	R/T	252										
14JNJUPRTS02	LM	R/T	360					8.667					
14CNGLOBAL01	LM	LPU	15	2239.3	868	5.35	13.81	8.667	0	1.57			1
14CNGLOBAL01	LM	LPU	228	2239.3	334	2.06	13.81	8.667	2	1.39	1.3148	1.57	2
14CNGLOBAL01	LM	LPU	228	2239.3	495.3	3.06	13.81	8.667	0	1.82	1.4892	2.05	1
14CNGLOBAL01	LM	LPU	228	2239.3	334	2.06	13.81	8.667	2	1.63	1.1212	1.84	2
14CNGLOBAL01	LM	LPU	15	2239.3	850.7	5.25	13.81	8.667	0	1.66	0.1845	28.44	1
14NNRCTRLT01	LM	R/T	252								0.1700		
											2.6940	Delay	
											23.6393	Total	
											23.3360	Allocation	
											0.3033	Over/Under	

RECAP OF E14 PLAYBACK EVENTS

E14 downlink was severely bit-limited, which is unfortunate because of the remarkably low noise levels encountered and the correspondingly excellent quality of the observations returned.

Due to concerns regarding spacecraft safety and the desire to have a successful encounter, the Project decided to fly the E14 encounter in "cruise mode." In this mode instrument pointing may be somewhat degraded. In all prior orbits, observations were obtained in "inertial mode," which includes an automatic compensation for the spacecraft's rotational wobble. This compensation does not occur in cruise mode. The reason for the change to cruise mode involved changes in the performance of one of the spacecraft's two gyros, which began reporting incorrect positional data in E12. The gyros are not employed in cruise mode.

NIMS experienced one software crash during E14, but no observations were affected. The instrument software was reloaded from CDS memory prior to the following observations, as usual. Near the end of playback, a sequencing error caused the spacecraft to go into safe mode, resulting in the loss of the final 3% of the data commanded for playback in E14.

An unusual strategy was employed for the large observation 14CNGLOBAL01. In the first playback pass, the central portion of the center (of 3) scans was returned with 228 wavelengths. In addition, also in pass 1, the balance of the observation was played back, but with only 15 wavelengths selected. This was to obtain the best possible pointing information (employing limb fitting). In pass 2 the central disk portions of the upper and lower scans were also returned in 228 wavelengths.

Due to the limited downlink bits available, 14INHRSPEC01 was returned with a non-standard playback wavelength table which selected 324 (instead of the usual 360) wavelengths. The complimentary 36 wavelengths were eventually returned when the playback reserve was released.

The following timeline details the most significant events of the E14 playback period. Most of the text is taken directly from reports generated at the time.

E14 Playback Events Timeline (02-11-1998 to 05-29-1998)

- 02-11-98: Here are the initial E14 Playback allocations, and a few comments about them:
- 1) Relative to the OPG allocations, the total number of bits available in E14 has increased by about 10 MB.
 - 2) To avoid the situation we had in E12, in which allocations have had to be cut during ops because of SEQ's AACS test sequences, we have increased the amount of margin being held in reserve. The 2-pass inefficiency margin remains at 4%, but the Office margin (aka "Paczkowski margin") has increased from 2.0 MB to 5.0 MB. This increase reflects the approximate worst-case cost of doing 2 separate gyro test sequences.
 - 3) The NIMS RTS Usage below reflects a 2.694 MB charge for delaying the start of playback until after the completion of CNGLOBAL01, as called for in the OPG.
(NIMS Playback Allocation = 20.086 Mb).
- 02-18-98: We have about 10.2 Mbits to spend on Europa. Here is the present strategy, observation by observation:
- 14ENSUCOMP01: We will get about 2/3 of this highest-resolution observation near -30 latitude and 165-190 W longitude (cost about 4 Mb).
- 14ENSUCOMP02: Not planned for playback as it is similar to and partially overlaps 14ENICEBERG01.
- 14ENSUCOMP03: Long spectrometer mode. Spatial coverage cut to the most interesting 3 of 18 Rims recorded. Cost 1.2 Mb
- 14ENICERAF01: Formerly deselected. Now we plan to retarget this to see the dark linea at 10 N 275 W that was lost due to instrument stoppage in E12. Only 2 Rims planned for return, cost 0.8 Mb.
- 14ENEUR15H01: Will receive all of both the visible end and thermal range scans. Cost about 2 Mb.
- 14ENEUR17H01: Will receive only the thermal range scan (detectors 9-17). Cost about .8 Mb.
- 14ENEUR20H01: Will receive only the thermal range scan (dets 9-17 as above). Cost about .8 Mb.
- 02-03-98: I've (J. Gross) just finished modeling the MBTG available in the new E14BGA products, and I've got some bad news. Our total capability has gone down by 5.0 MB. Here's a list of reasons why, in no particular order:
- 1) We lost approx. 24 hrs. of 43 coverage in negotiations with other DSN users,
 - 2) All 3 SITURNS and all 3 OTMs in E14B are now correctly in the sequence at RTE 10, the new rule we have to follow because of the AACS problem, and
 - 3) several stations were converted from 1-way to 2-way.

E14 Playback Events Timeline (02-11-1998 to 05-29-1998)

- 03-04-98: The playback table delivered today includes all of the modifications to the Europa plan mentioned in the last message. Unfortunately we are forced to make additional cuts of about 1 Mb this time, since E14 science downlink capability went down. The total allocation for NIMS is 21.9 Mb. The following outlines the current status by target, along with our strategy in 2-pass playback.
- Io: The full spatial area of 14INHRSPEC01 will be played back, half in pass 1 and half in pass 2. The wavelength table has 324 wavelengths: half-density (Full Map) resolution for detectors 2, 4, and 5, and Long Map (full resolution) for the rest.
- Callisto: Some trimming of spatial coverage near the east and west limb resulted in saving enough bits to increase wavelength coverage to the maximum (228 wavelengths in this case).
- Europa: The addition of the distant observations (14ENEUR15H01, 17H01, 20H01) has necessitated cutbacks in spatial coverage for the balance of the observations. All of the Europa observations return 360 wavelengths.
- 14ENICERAF01: Retargeted to see the area of dark linea at 12 N 277 W. Only 2 Rims are planned for return, all in pass 1.
- 14ENSUCOMP01: The pass 1 portion sees the fresh dark spots / cracks at -29 latitude, 177-185 W longitude. The pass 2 part includes the dark wedge near 171 W. 3.05 and 0.8 Mb respectively.
- 14ENSUCOMP02: deleted from the plan.
- 14ENSUCOMP03: Only 3 Rims of this, testing the long spectrometer mode over a dark linea, will come down-all in pass 1.
- 14ENEUR15H01: Both the visible (168 wavelengths, gain state 3) and thermal (gain 4, 240 wavelengths) scans will come down in pass 1.
- 14ENEUR17H01: Only the gain state 4 scan will come down, in pass 2.
- 14ENEUR20H01: Only the gain state 4 scan will be returned, likewise in pass 1.
- 03-19-98: A new E14 playback table was delivered today. With the exception of Callisto, it contains the plan described by Jim Shirley in his message on March 4. For Callisto the approach (requested by Marcia Segura and Frank Leader) is to return 1.67 MB in pass 1 and 1.34 MB in pass 2.
- 03-20-98: (R. Mitchell) The decision has been made that the encounter sequence for the Europa-14 encounter on March 29 will be done without use of the gyros. The consequence of this is that there will be no compensation for spacecraft wobble and nutation, and therefore some degradation of instrument pointing and stability, with the NIMS instrument data being the most affected. SSI data, particularly the high resolution data with short exposures, should see only minimal effects.

E14 Playback Events Timeline (02-11-1998 to 05-29-1998)

- 03-25-98: NIMS downlink allocation drops to 18.436 Mb.
- 03-28-98: E14 encounter begins at 13:00 UTC.
- 03-29-98: Perijove occurs at 08:01 UTC.
Europa encounter occurs at 13:24 UTC.
- 03-29-98: (R. Mehlman) According to the last SCLK received, the NIMS software halted at ~ 7:36 this morning, local time (day 88, hour 15:36 UTC, SCLK 4409622). This is about an hour after the last data from ENSUCOMP03 was recorded, and half a day before ENEUR15H01.
- 04-08-98: A new E14 playback table was delivered today. The only difference from the playback table delivered on 03-19-98 is that the NIMPBK time for 14INHRSPEC01 in pass 2 was backed up by 3.333 seconds in order to begin data selection at the start of the grating cycle. Also, the WET ID for 14ENSUCOMP03 was corrected. In the previous delivery we were oversubscribed by 0.161 MB. In this delivery we are undersubscribed by ~0.1 MB since the actual compression of 14INHRSPEC01 in pass 1 (1.29), was higher than the predicted compression (1.20).
- 04-21-98: NIMS downlink allocation rises to 19.153 Mb
- 04-22-98: E14 playback has been uneventful so far. Half of 14INHRSPEC01 has come down, along with 2 Rims of 14ENICERAF01 and most of the 8 selected Rims of 14ENSUCOMP01. Radiation noise was relatively low during recording of the Europa encounter observations, and compression is running at about 1.5 versus the 1.3 predicted. The only changes to the playback table in this update involved removing thresholding for the top and bottom scans of 14CNGLOBAL01. This will provide more wavelengths for limb-fitting (all 15 selected, versus 1 if thresholded). Also, revised compression estimates for remaining Europa observations were entered to permit accurate modeling by the Playback Coordinator. We received about 0.5 Mb of new downlink allocation as a result of early office margin release and reduced requirements for gyro testing. In addition, savings from good Europa compression, including data down and still to come, amounts to about 1 Mb. Thus we have a total of about 1.5 Mb to spend in this orbit.
- 05-06-98: Minor changes to the playback table were made to reflect new information on actual compression ratios for Callisto and for the distant Europa observations. The most significant modification involves an increase in the playback of 14ENSUCOMP01, at the expense of 14CNGLOBAL01. 14ENSUCOMP01 is a nice observation with good s/n. By adding just over

E14 Playback Events Timeline (02-11-1998 to 05-29-1998)

2 Rims to the existing playback plan we are able to close a significant gap between the data for the two highest-priority dark features, resulting in a spatially-continuous, single scan observation. To do so we cut a corresponding amount of data from the final playback commands for 14CNGLOBAL01. We will almost certainly be able to reinstate the data affected in a later revision of the playback table; a total of nearly 6 Mb is still being held by the office to support possible gyro anomaly fixes and protect the final observation in E14 playback, which is 14CNGLOBAL01.

- 05-07-98: (T. Johnson) We have agreed to give up a DSS-43 Canberra tracking pass this Friday 5/8/98, for VLBI observations of a newly identified gamma ray burster. This event has been located in a relatively close galaxy, providing a unique opportunity to characterize the event. Essentially all southern hemisphere radio observatories are dropping their regular programs to observe this event, and VLBI with the DSN stations has unique capabilities. After discussion with Bob Preston, the PI of the VLBI experiment, Jim Erickson and I have agreed that the unique nature of the event justifies the loss to the playback (approx 2 megabits). This loss will be taken out of available margin.
- 05-27-98: (J. Gross) I forgot to mention - the reason that we're running so far ahead is a combination of continued SSI overcompression and high data-rates. We actually had 4 hours of 120 bps earlier today!
I've created a new playback schedule based on this week's bested data. Much to my surprise, it appears that we're going to make it most, if not all, of the way through our Pass 3 data! The schedule currently shows that we will terminate during the final Pass 3 observation, ESCRATER. We also have a Pause Playback period tomorrow for OTM-47 that may add an additional 0.1-0.2 MB to our capability, based on the average amount of playback received during Pause Playback periods in E14. The only thing that would prevent us from getting all the way to the end of Pass 3 is if CNGLOBAL significantly undercompresses.
- 05-29-98: (J. Erickson) The Galileo spacecraft is presently in safing, due to an error in the construction of the Europa-15 approach maneuver sequence. On May 28 the spacecraft executed the majority of the maneuver, before the sequence error caused the spacecraft to abort the on-board sequence and safe itself. The flight team is presently reconfiguring the spacecraft to allow the uplink of the encounter sequence on the evening of May 29.
The navigation team has reviewed the trajectory resulting from the aborted maneuver, and the uncorrected errors will have a minimum impact on the flyby. It is expected that the encounter activities beginning on May 30 will be unaffected by the safing event. The other major activity over the past week was the continued playback of the Europa-14 recorded data. The playback process was halted by the maneuver anomaly, with 97% of the planned data returned.

NIMS Anomaly Report - E14 Sequence

The NIMS processor halted once during the E14 Encounter. Detectors 3 and 8 are still not functioning and are expected to be lost for the rest of the mission.

Also, due to problems with the gyros, the spacecraft was in AACS Cruise Mode for the entire E14 encounter time period.

Processor Halts

Facts:

0. Between the start of the E14 Encounter and the single Halt NIMS returned 1 realtime observations and successfully reloaded NIMS from CDS 6 times. The NIMS SCLK engineering channels were continuously monitored for detecting a NIMS processor halt.

1. A NIMS processor halt was detected at SCLK 04409622 from the analysis of the NIMS SCLK engineering telemetry channels S-1931 and S-1932. This occurred about 7 hours and 33 minutes after E14 perijove. The subsequent NIMS observation (14ENEUR15H01) had a reload that restarted the NIMS processor 12 hours and 37 minutes later. Although NIMS was halted for over 12 hours, no observations were lost.

No more Halts occurred during the rest of the encounter. A table of the NIMS engineering SCLK values near the time of the Halt follows (Note that the NIMS engineering SCLK value is normally 2 Rims behind the CDS SCLK Rim when it is reported):

NIMS SCLK	CDS SCLK	CDS SCET	GROUND ERT
04409608	04409610.40	1998-088T16:26:59.573	1998-088T15:22:34.993
04409622	04409795.05	1998-088T19:58:52.760	1998-088T18:29:14.986
04409622	04410012.58	1998-088T23:03:49.520	1998-088T22:09:14.979
04409622	04410177.43	1998-089T01:46:57.102	1998-089T00:55:54.973
04409622	04410210.40	1998-089T03:02:48.525	1998-089T01:29:14.971
04410393	04410395.05	1998-089T05:42:15.727	1998-089T04:35:54.965

2. No NIMS observations were lost due to this Halt.

Timing:

SCLK	Comments
04409622.00	NIMS HALTED
04410370.69	Start Reload 14NNEUR15H01
04410395.05	Good SCLK reported.

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.