NIMS GUIDE TO THE E12 ORBIT

Original: March 1998

Revised: May 2000

VERSION DATE: 000501

E12 Encounter starts 12/15/97, E12 Playback starts 12/17/97

Foreword to the Revised Edition

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

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

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

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

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

Acknowledgements

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

Foreword

This document serves as a guide to the E12 Orbit for the NIMS Team. The aim of this guide is to provide detailed information on the various NIMS E12 observations and calibrations. Also included in this document is background information on the E12 orbit. This guide was produced before the start of the E12 orbit. After analysis of the NIMS E12 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 E12 orbit. Chapter 2 gives an overview of the E12 orbit and summarizes the NIMS science objectives for the E12 orbit using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry for the E12 orbit. Chapter 4 summarizes the NIMS E12 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 E12 orbit.

For more information on the E12 orbit, please refer to the Galileo Orbit Planning guide and the Galileo Orbit Activity Plan for the E12 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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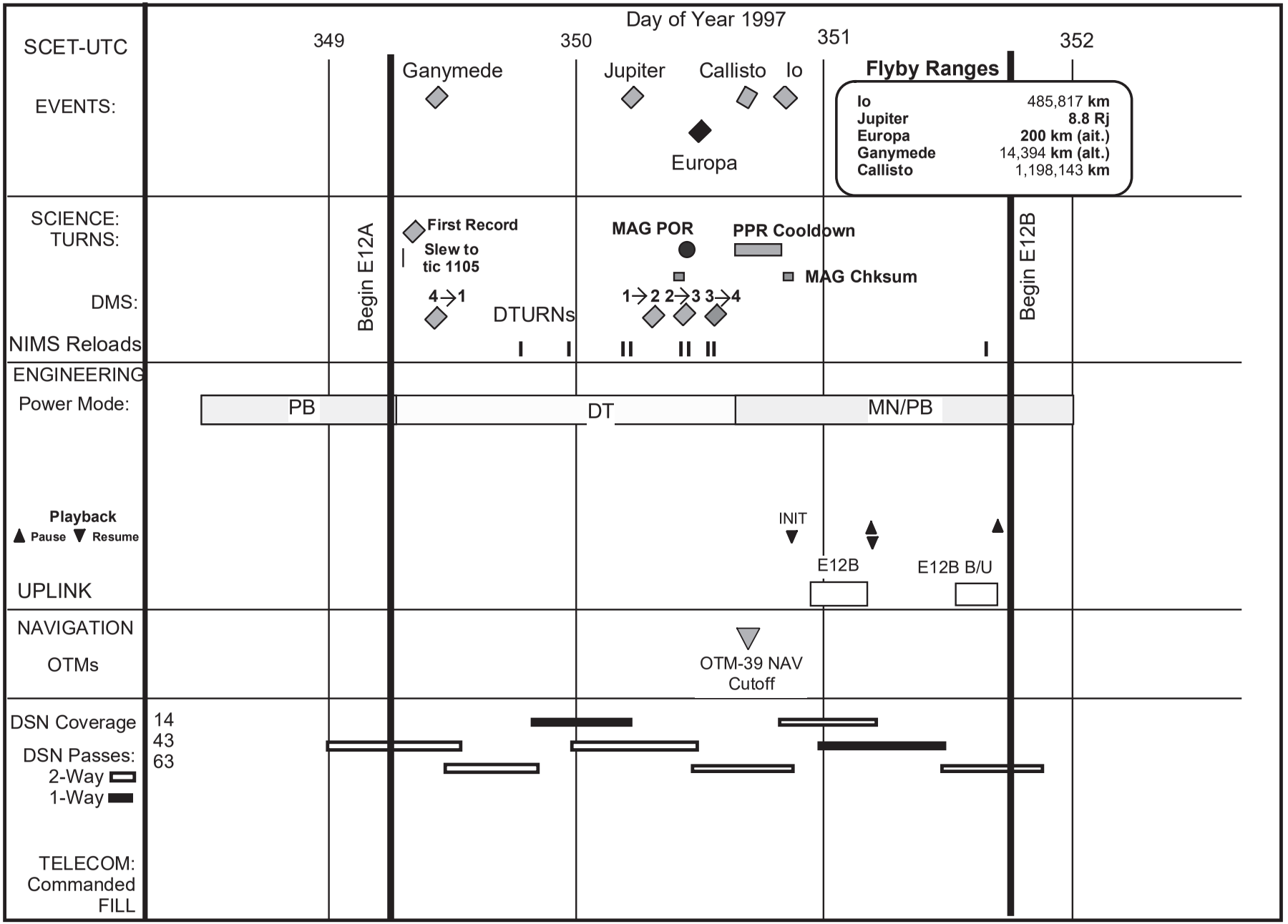
Introduction

This E12 orbit is the twelfth of twenty-five orbits in Galileo's Tour of the Jovian system and the first orbit in the Galileo Europa Mission (GEM). This orbit has a targetted satellite flyby of Europa. NIMS will make observations of Jupiter, Io and Europa in this orbit.

There are 9 autonomous reloads of the NIMS RAM code from CDS planned during the E12A encounter period, one just before each science observation. These reloads are in response to the on-going flight-anomalies where the NIMS RAM code takes some bit hits and halts the instrument during when the spacecraft is close to Jupiter. NIMS personnel will monitior the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

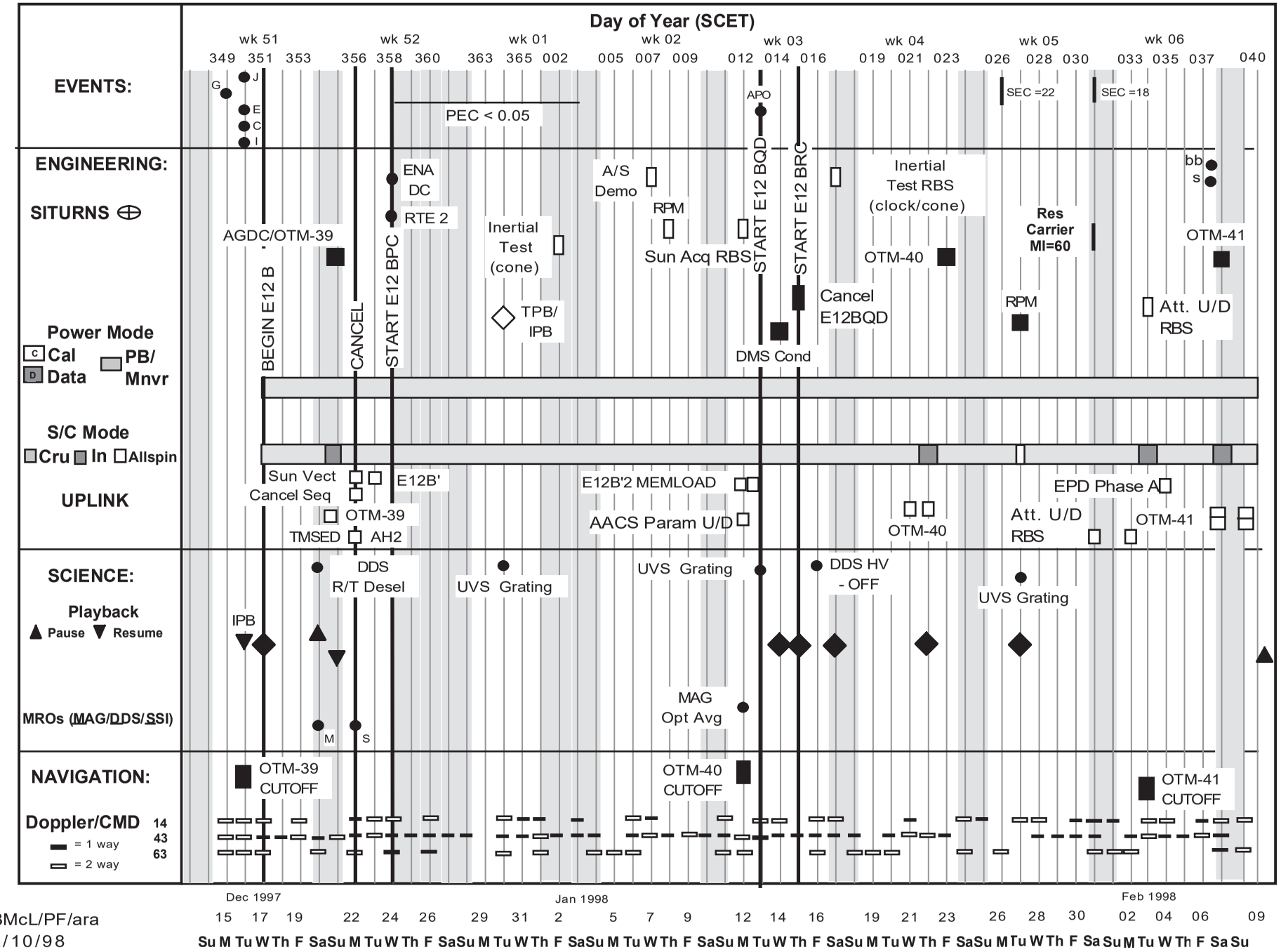
The E12 orbit is divided into 3 sequence loads: one Encounter Load (E12A) and two Orbital Cruise Load (E12B and E12C). The E12A load begins on D349 of 1997 (12/15/97) and ends on D351 of 1997 (12/17/97). This load contains the flybys of Jupiter, Europa and Io. The Cruise Load E12B runs from D351 to D040 of 1998 and the Cruise Load E12C runs from D040 to D087. Playback of the recorded data takes place during the Cruise phase, E12B and E12C. A high-level overview timeline of the E12 orbit can be found on the following three pages.

E12A Sequence Overview



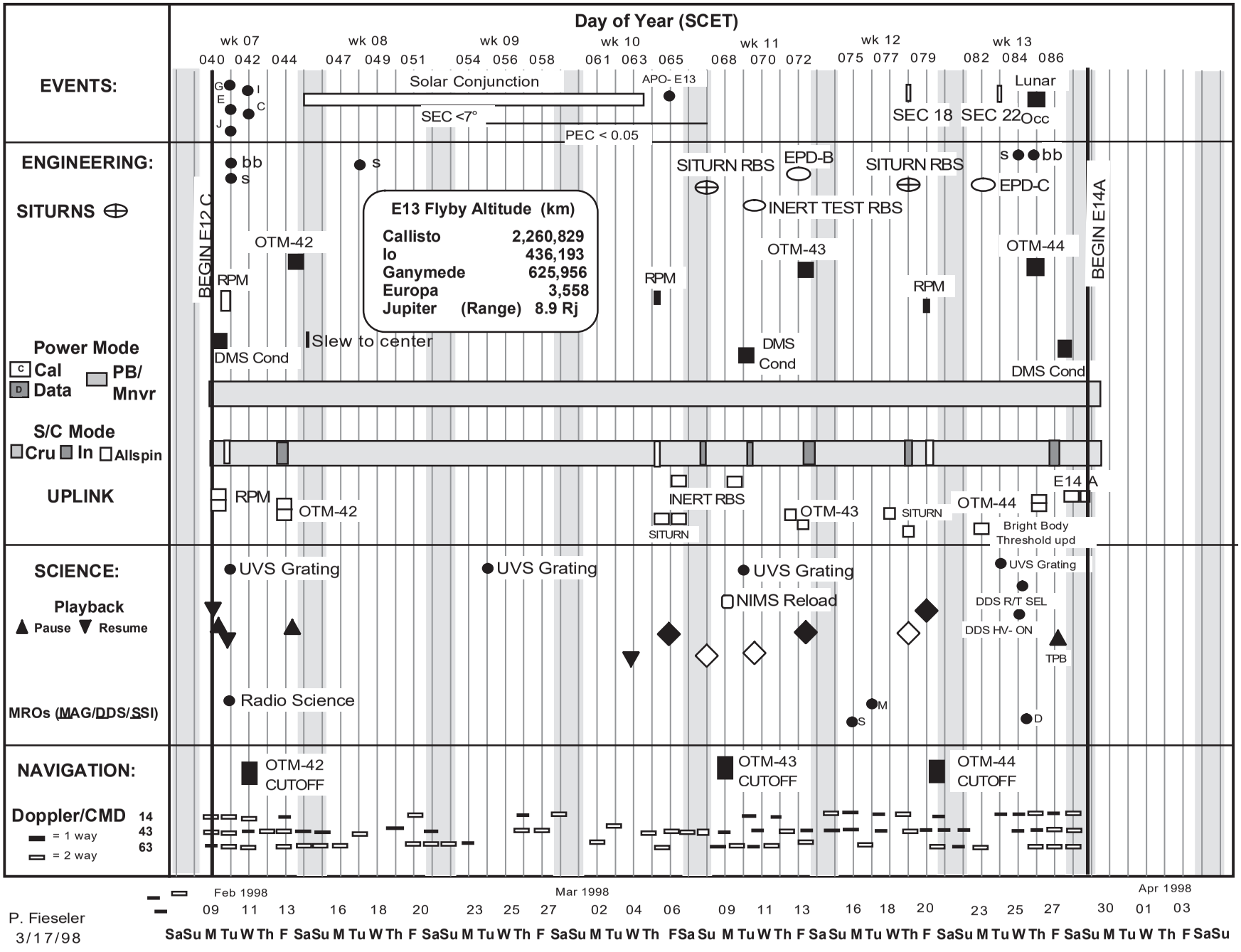
A. Allbaugh
12/10/97

E-12B' Overview



BMcL/PF/ara
2/10/98

E-12C Overview



P. Fieseler
3/17/98

Introduction

The following table lists the major events during E12, including NIMS Real Time observations, in UTC.

12/15/97	97-349/08:00:00	E12 Encounter Start
12/15/97	97-349/17:45:09	NIMS RAM Reload 01
12/15/97	97-349/17:55:15	NIMS R/T Jupiter
12/15/97	97-349/23:39:02	NIMS RAM Reload 02
12/15/97	97-349/23:49:09	NIMS R/T Jupiter
12/16/97	97-350/06:12:21	NIMS RAM Reload 03
12/16/97	97-350/06:22:28	NIMS R/T Jupiter
12/16/97	97-350/06:36:46	Jupiter Closest Approach
12/16/97	97-350/06:48:45	NIMS RAM Reload 04
12/16/97	97-350/11:05:35	NIMS RAM Reload 05
12/16/97	97-350/11:31:52	NIMS RAM Reload 06
12/16/97	97-350/12:05:46	Europa Closest Approach
12/16/97	97-350/12:32:32	NIMS RAM Reload 07
12/16/97	97-350/13:58:29	NIMS RAM Reload 08
12/16/97	97-350/19:10:00	Io Closest Approach
12/17/97	97-351/12:00:00	Start E12 Playback
12/17/97	97-351/17:29:37	NIMS RAM Reload 09
01/28/97	98-028/10:00:00	NIMS R/T RCT CAL
02/04/97	98-035/00:00:00	NIMS R/T PCT CAL
03/28/98	98-117/13:00:00	End E12 Playback

Chapter 2 - Orbit Overview

Contents

Introduction to Chapter 2

This chapter gives an overview of the NIMS observations in the E12 Orbit.

The text on page 3 summarizes the NIMS science objectives for E12. The NIMS calibrations are discussed on page 3. Early data return and E12 playback are also discussed on page 3.

The table on page 4 is a time-ordered listing of the NIMS Oapels for E12.

The plot on page 5 shows the geometry of the NIMS E12 observations using a north trajectory pole view projection. The plot on page 6 shows the NIMS Europa regional observations along the trajectory of the E12 Europa flyby. The plot on page 7 shows the geometry of the NIMS E12 calibrations.

The table on page 8 lists various NIMS E12 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 E12 Observations. The spreadsheet on pages 10 and 11 summarizes the resource usage for the NIMS E12 observations.

The timeline on page 12 shows the placement of the E12 observations for all intruments during the E12 Encounter Period.

The tapemap on page 13 shows the placement of the E12 observations on the spacecraft's tape recorder.

The timeline on pages 14 through 28 shows the preliminary E12 playback schedule.

The NIMS E12 mosaic designs are summarized on page 29.
in time-order.

NIMS E12 SCIENCE OVERVIEW

Jupiter Science

There are three realtime Jupiter observations in E12. Each observation will return 10 Rims of 408 wavelengths. JUPRTS01 looks at the mid-north latitudes at about 30 degrees North. JUPRTS02 looks at the North Equatorial Belt regions at about 7 degrees North. JUPRTS03 looks at southern latitudes at about 15 degrees South.

Io Science

There is one Io observation in E12. INHRSPEC is a high spatial and spectral resolution observation of Io's dayside and nightside.

Europa Science

There are four Europa observations planned for E12. Three regional observations are coordinated with SSI observations. ENGLOBAL is a global map of longitudes not returned during the main mission, from 210 to 300 degrees West longitude. ENDLINEA focuses on a dark linea region (Minos Linea) near 10 degrees North latitude, 272 to 280 degrees West longitude. ENCPWYLL observes the PWYLL impact crater and surrounding areas near 25 degrees South latitude, 271 degrees West longitude. ENICEBRG observes a wedge (ice rift) terrain near 17 degrees South latitude, 173 to 197 degrees West longitude.

Ganymede and Callisto Science

Ganymede and Callisto were not observed in E12.

Calibration

There were three NIMS calibration observations planned for E12: one PCT cal, one RCT cal and one OPCAL. Unfortunately, all of the NIMS calibrations in E12 Cruise were deleted due to the AACS anomaly.

Early Data Return

There are six realtime observations in E12: 3 408 wavelength Jupiter observations (JUPRTS), one PCT calibration, one RCT calibration and one OPCAL (the three calibration observations were cancelled.)

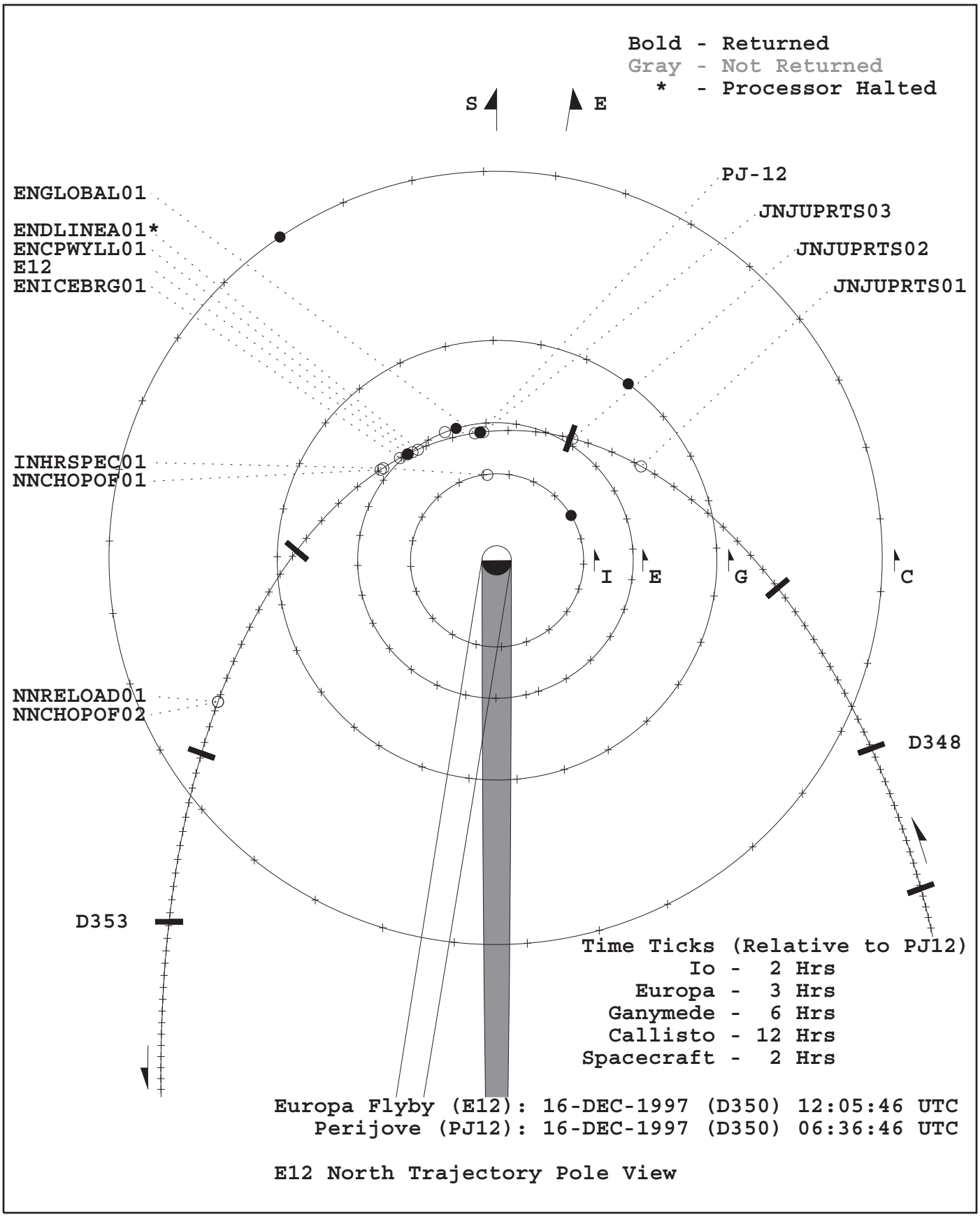
E12 Playback

E12 playback is split into two passes through the tape.

E12 Time-Ordered Listing

OAPEL	Start (UTC)	End (UTC)	Duration
12NNJUPRTS01-	97-349/17:45:09	97-349/17:55:15	000/00:10:06
12JNJUPRTS01*	97-349/17:55:15	97-349/18:10:25	000/00:15:10
12NNJUPRTS02-	97-349/23:39:02	97-349/23:49:09	000/00:10:06
12JNJUPRTS02*	97-349/23:49:09	97-350/00:14:25	000/00:25:16
12NNJUPRTS03-	97-350/06:12:21	97-350/06:22:28	000/00:10:06
12JNJUPRTS03*	97-350/06:22:28	97-350/06:37:38	000/00:15:10
12NNGLOBAL01-	97-350/06:48:45	97-350/06:58:52	000/00:10:06
12ENGLOBAL01-	97-350/06:58:52	97-350/07:38:18	000/00:39:26
12NNDLINEA01-	97-350/11:05:35	97-350/11:15:41	000/00:10:06
12ENDLINEA01-	97-350/11:15:41	97-350/11:24:47	000/00:09:06
12NNCPWYLL01-	97-350/11:31:52	97-350/11:41:59	000/00:10:06
12ENCPWYLL01-	97-350/11:41:59	97-350/11:56:08	000/00:14:09
12NNICEBRG01-	97-350/12:32:32	97-350/12:42:39	000/00:10:06
12ENICEBRG01-	97-350/12:42:39	97-350/12:59:50	000/00:17:11
12NNHRSPEC01-	97-350/13:58:29	97-350/14:08:35	000/00:10:06
12INHRSPEC01-	97-350/14:09:36	97-350/14:23:45	000/00:14:09
12NNCHOPOF01-	97-350/14:23:45	97-350/14:33:52	000/00:10:06
12NNRELOAD01-	97-351/17:29:37	97-351/17:39:44	000/00:10:06
12NNCHOPOF02-	97-351/17:39:44	97-351/17:49:51	000/00:10:06
12NNRCTRLT01-	98-028/10:00:00	98-028/23:21:48	000/13:21:48
12NNPCTRLT01-	98-035/00:00:00	98-035/07:50:10	000/07:50:10

NIMS E12 OBSERVATIONS

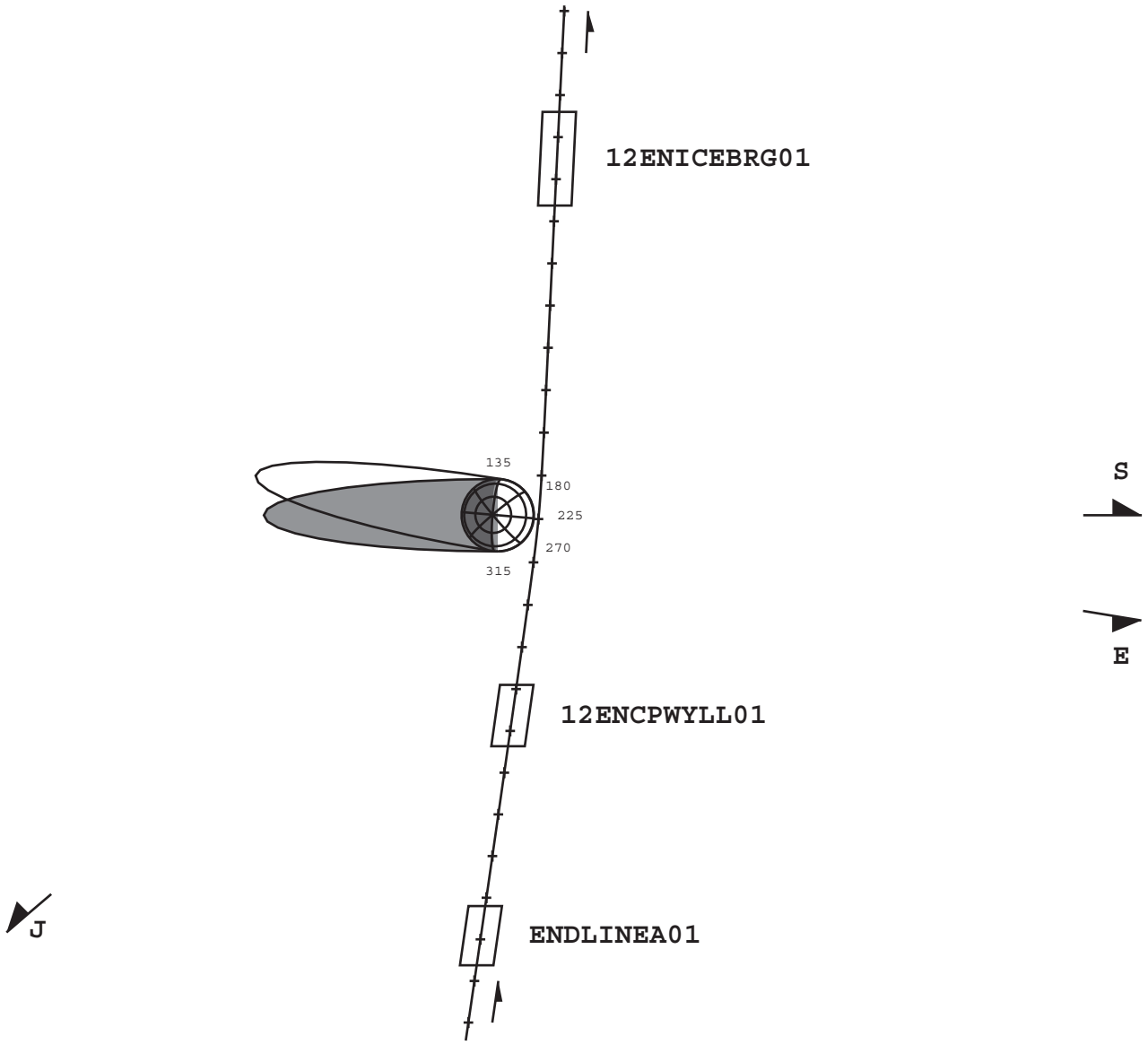


NIMS - FEL - 06/03/99

NIMS E12 EUROPA FLYBY OBSERVATIONS

Europa Flyby (E12): 16-DEC-1997 (D350) 12:05:46 UTC

Time Ticks (Relative to E12)
Spacecraft - 5 Minutes



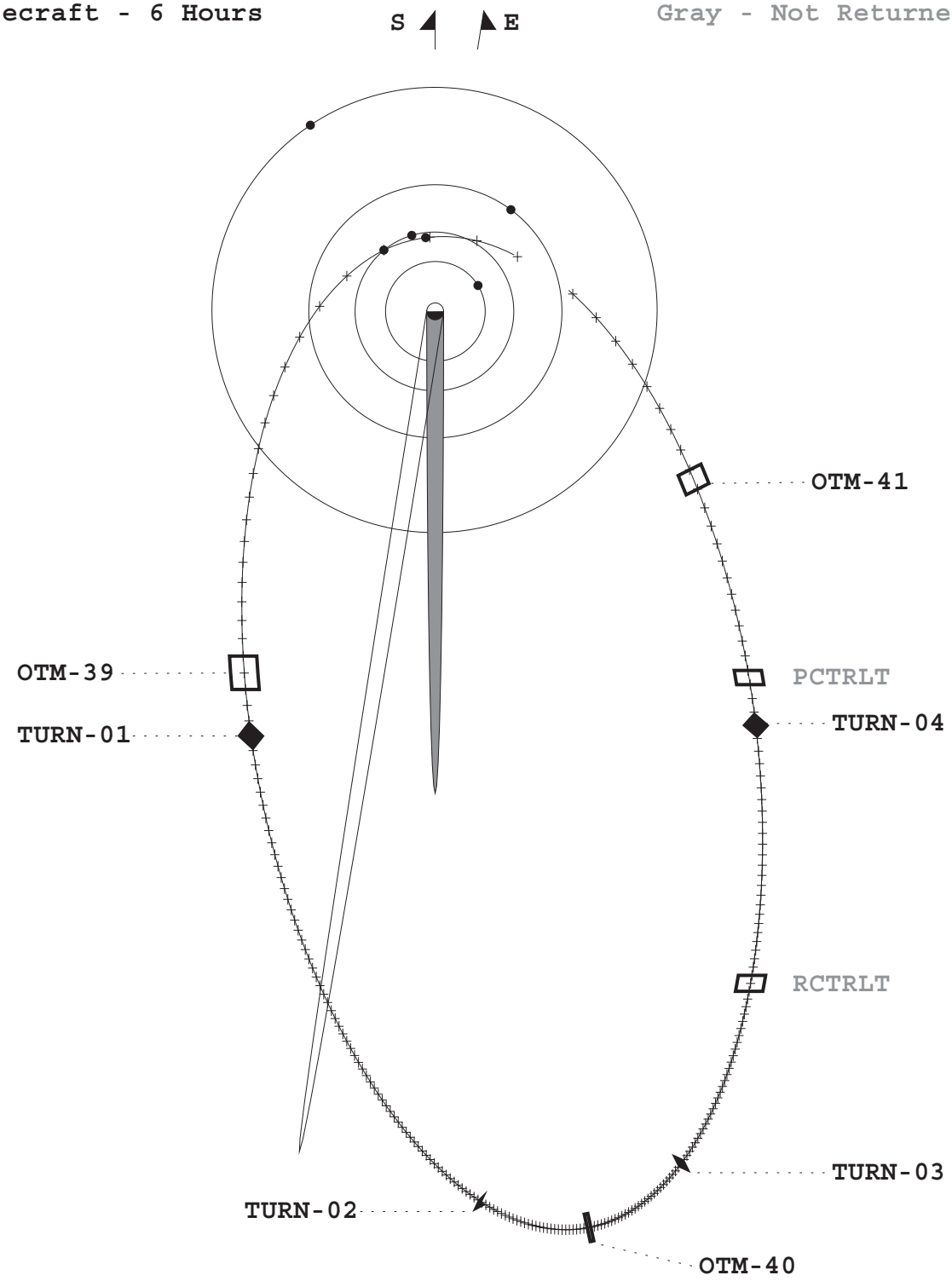
E12 North Trajectory Pole View, +/- 1 Hour

NIMS E12 CRUISE CALIBRATIONS

Europa Flyby (E12): 16-DEC-1997 (D350) 12:05:46 UTC
Perijove (PJ12): 16-DEC-1997 (D350) 06:36:46 UTC
Apojove (AJ12): 13-JAN-1998 (D013) 17:00:00 UTC

Time Ticks (Relative to E12)
Spacecraft - 6 Hours

Bold - Returned
Gray - Not Returned



E12 North Trajectory Pole View, Perijove to Perijove

NIMS E12 OBSERVING GEOMETRY

OAPEL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
12JNJUPRTS01	+20 to +38	247 to 256	783K	131	35 to 43	36 to 49	59
12JNJUPRTS02	+3 to +10	123 to 163	636K	162	46 to 74	18 to 49	28
12JNJUPRTS03	-20 to -7	309 to 315	559K	162	11 to 19	10 to 19	7
12ENGLOBAL01	-90 to +90	209 to 301	100K	91	13 to 99	11 to 90	99
12ENDLINEA01	+7 to +13	272 to 279	14K	96	55 to 62	33 to 41	95
12ENCPWYLL01	-27 to -23	271 to 273	4.0K	100	56 to 58	41 to 47	80
12ENICEBRG01	-20 to -14	173 to 196	17K	85	31 to 53	37 to 60	85
12INHRSPEC01	-90 to +90	10 to 190	515K	83	2 to 177	0 to 90	87

E12 NIMS INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating start	Grating Offset	Record Format	PSID
12NNJUPRTS01-	NIMS Real-Time Software Reload								DA
12JNJUPRTS01*	Jupiter Realtime Observation	E12JLM442/MB	R/T	LM	2	0	4	R/T	DA
12NNJUPRTS02-	NIMS Real-Time Software Reload								DB
12JNJUPRTS02*	Jupiter Realtime Observation	E12JLM442/MB	R/T	LM	2	0	4	R/T	DB
12NNJUPRTS03-	NIMS Real-Time Software Reload								DC
12JNJUPRTS03*	Jupiter Realtime Observation	E12JLM442/MB	R/T	LM	2	0	4	R/T	DC
12NNGLOBAL01-	NIMS Real-Time Software Reload								DD
12ENGLOBAL01-	Europa Global	E12ELM442	E12ELM228C	LM	2	0	4	MPW	DD
12NNDLINEA01-	NIMS Real-Time Software Reload								DE
12ENDLINEA01-	Surface Comp. and Minos Linea	E12ELM442	E12ELM228C	LM	3	0	4	MPW	DE
12NNCPWYLL01-	NIMS Real-Time Software Reload								DF
12ENCPWYLL01-	Europa Surf. Comp. and Mineos Linea	E12ELM442	E12ELM328	LM	2	0	4	MPW	DF
12NNICEBRG01-	NIMS Real-Time Software Reload								DG
12ENICEBRG01-	Europa Surface Composition	E12ELM442	E12ELM228C	LM	2	0	4	MPW	DG
12NNHRSPEC01-	NIMS Real-Time Software Reload								DH
12INHRSPEC01-	Io Monitoring at High Spectral Resolutior	E12ILM442	E12ILM360	LM	2	0	4	MPW	DH
12NNCHOPOF01-	Chopper off								DI
12NNRELOAD01	NIMS Real-Time Software Reload								
12NNCHOPOF02-	Chopper off								
12NNRCTRLT01-	NIMS RCT Real-Time Calibration	E12RCT252	R/T	LM	1	0	4	R/T	XE
12NNPCTRLT01-	NIMS Real-Time PCT Calibration	E12PCT252	R/T	LM	4	0	4	R/T	FA

E12 NIMS RESOURCES

Activity ID	NIMS Mode	Record Mode	Obs. Cost (tracks)	Obs. Cost (ticks)	Number wavelengths Returned	Observation Record Time (sec.)	Observation Playback Time (sec.)	Selected Bits of Tape sBOT (Mbits)	Bits of Tape BOT (Mbits)	Mode Cycle time (sec)
12JNJUPRTS01	LM	R/T			360					
12JNJUPRTS02	LM	R/T			360					
12JNJUPRTS03	LM	R/T			360					
12ENGLOBAL01	LM	MPW	0.3067	1787	228	2030.7	243	2.80	23.39	8.667
12ENDLINEA01	LM	MPW	0.0645	376	360	424.7	211	2.43	4.89	8.667
12ENCPWYLL01	LM	MPW	0.0671	391	360	442	122	1.41	5.09	8.667
12ENICEBRG01	LM	MPW	0.1011	589	360	667.3	122	1.41	7.69	8.667
12INHRSPEC01	LM	MPW	0.0772	450	360	509	269	3.10	5.86	8.667
12ENGLOBAL01	LM	MPW	0.3067	1787	168	2030.7	303	3.49	23.39	8.667
12ENGLOBAL01	LM	MPW	0.3067	1787	168	2030.7	303	3.49	23.39	8.667
12ENCPWYLL01	LM	MPW	0.0671	391	360	442	333	3.84	5.09	8.667
12ENICEBRG01	LM	MPW	0.1011	589	360	667.3	624	7.19	7.69	8.667
12INHRSPEC01	LM	MPW	0.0772	450	360	509	316	3.64	5.86	8.667
Total									70.32	
Allocation										

E12 NIMS RESOURCES

Activity ID	AACS Mbits Comp 2.5	RT BTG Mbits	Thold	Comp	Total MBTG (4% Ohead)	Data Reduct Factor (sBOT/BTG)	Pass	Total MBTG (4% Ohead) Europa	Total MBTG (4% Ohead) Io	Total MBTG Jupiter
12JNJUPRTS01*		0.16								0.16
12JNJUPRTS02*		0.32								0.32
12JNJUPRTS03*		0.16								0.16
12ENGLOBAL01-	0.01		0	1.38	0.9635	2.91	1	0.9635		
12ENDLINEA01-	0.01		0		0.076		1	0.0760		
12ENCPWYLL01-	0.01		0	1.34	0.7866	1.79	1	0.7866		
12ENICEBRG01-	0.01		0	1.36	0.7750	1.81	1	0.7750		
12INHRSPEC01-	0.02		2	1.68	1.3834	2.24	1		1.3834	
12ENGLBAL01B-	0.02		0	1.46	0.8367	4.17	2	0.8367		
12ENGLBAL01C-	0.02		0	1.46	0.8367	4.17	2	0.8367		
12ENCPWYLL01-	0.02		0	1.34	2.1470	1.79	2	2.1470		
12ENICEBRG01-	0.04		0	1.35	3.9934	1.80	2	3.9934		
12INHRSPEC01-	0.02		2	1.68	1.6251	2.24	2		1.6251	
		0.64			13.4236	Total		10.4151	3.0085	0.48
					12.7970	Allocation				
					0.6266	Over/Under				

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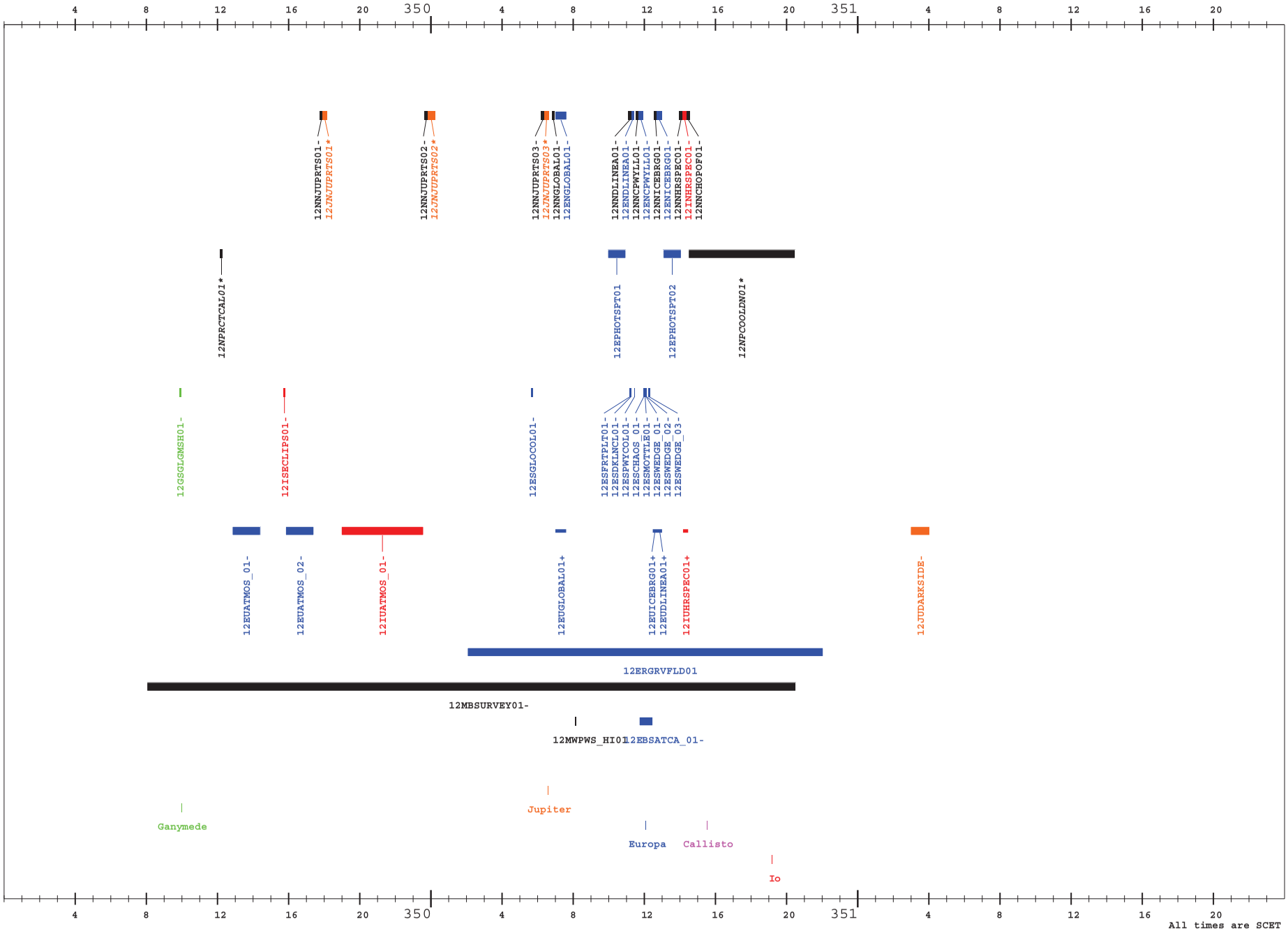
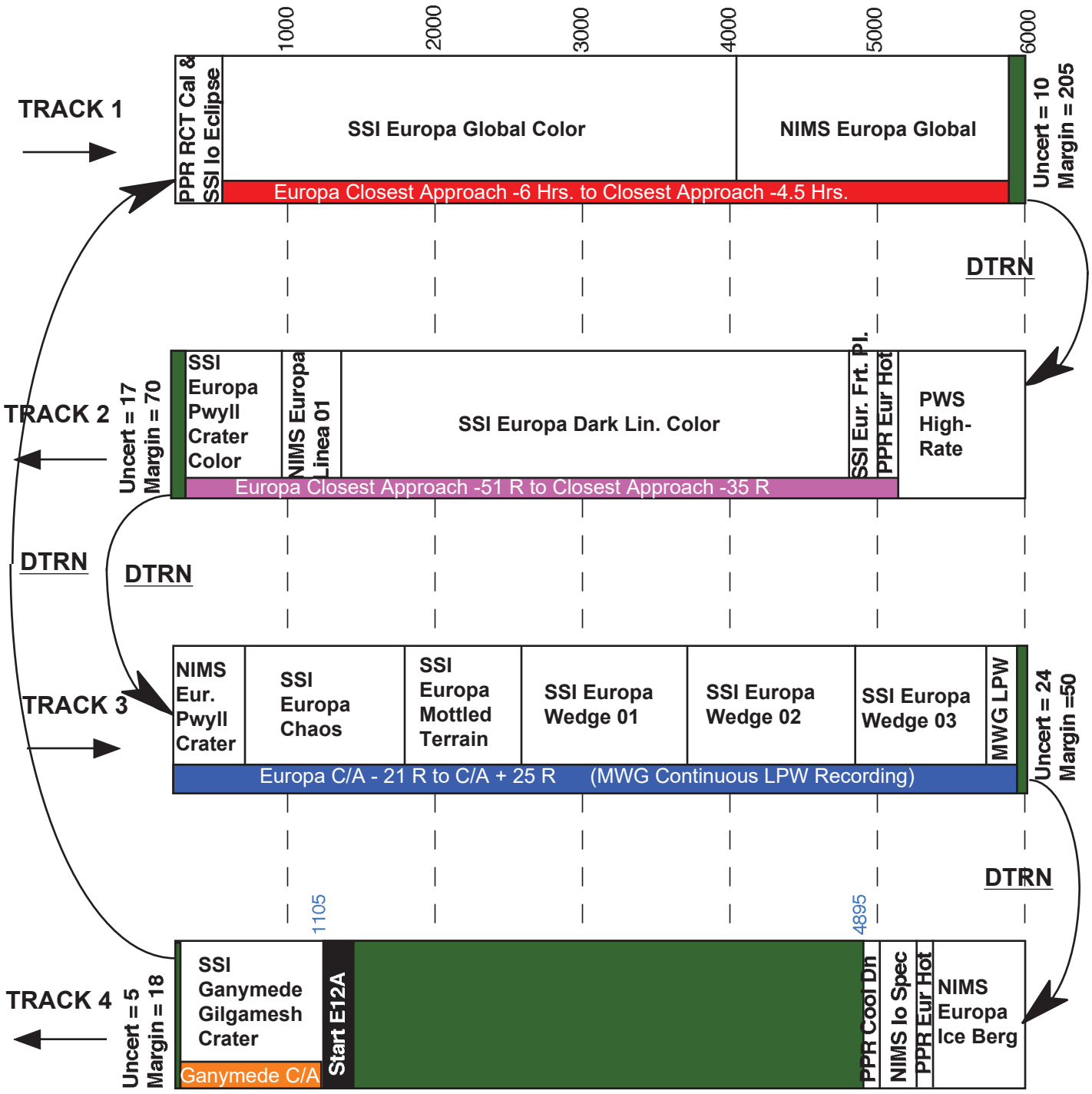
Date of Plot: 24-Nov-97 15:54:20

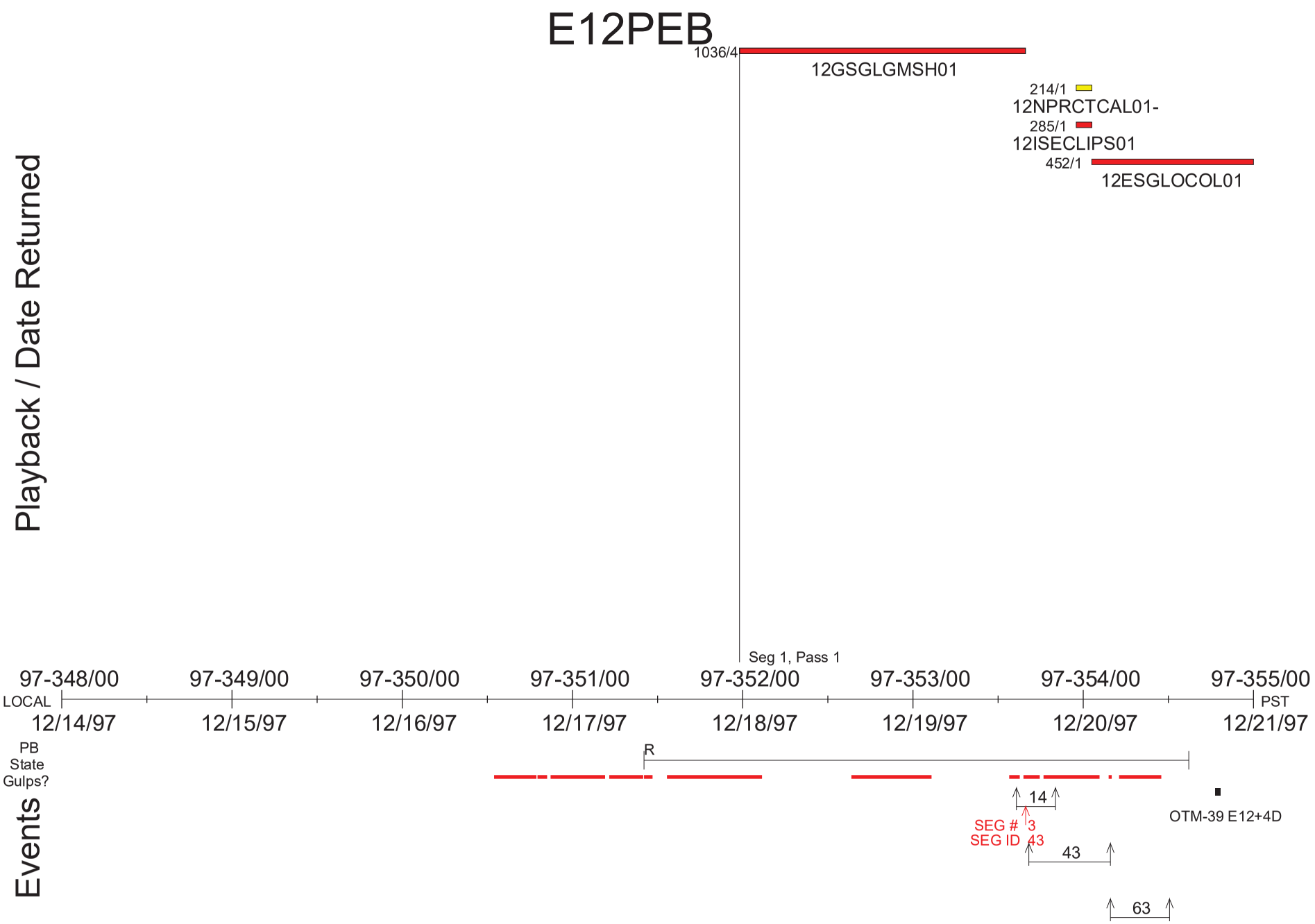
GEM: E12



E12 HIGH-LEVEL TAPEMAP



J. Gross, 11/14/97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1036/4
12GSGLGMSH01
214/1
12NPRCTCAL01-
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452/1
12ESGLOCOL01
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Seg 1, Pass 1
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12/19/97
12/20/97
12/21/97
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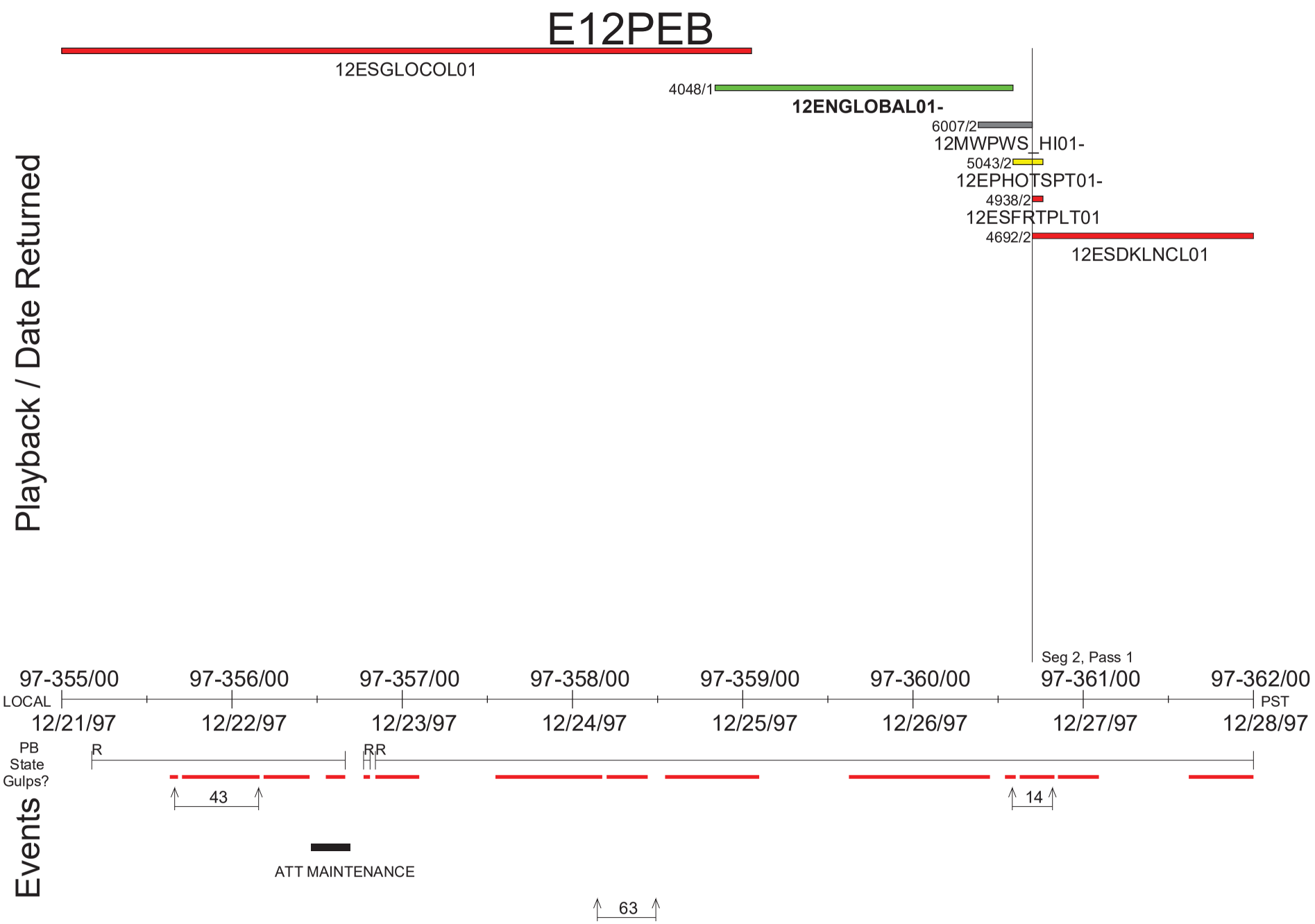
Gulps?
R
14
SEG # 3
SEG ID 43
OTM-39 E12+4D
43
63
Events

2-14


E12PEB
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5043/2
12EPHOTSPT01-
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12ESFRTPLT01
4692/2
12ESDKLNCL01
Playback / Date Returned
Seg 2, Pass 1
97-355/00
97-356/00
97-357/00
97-358/00
97-359/00
97-360/00
97-361/00
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12/23/97
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14
Events
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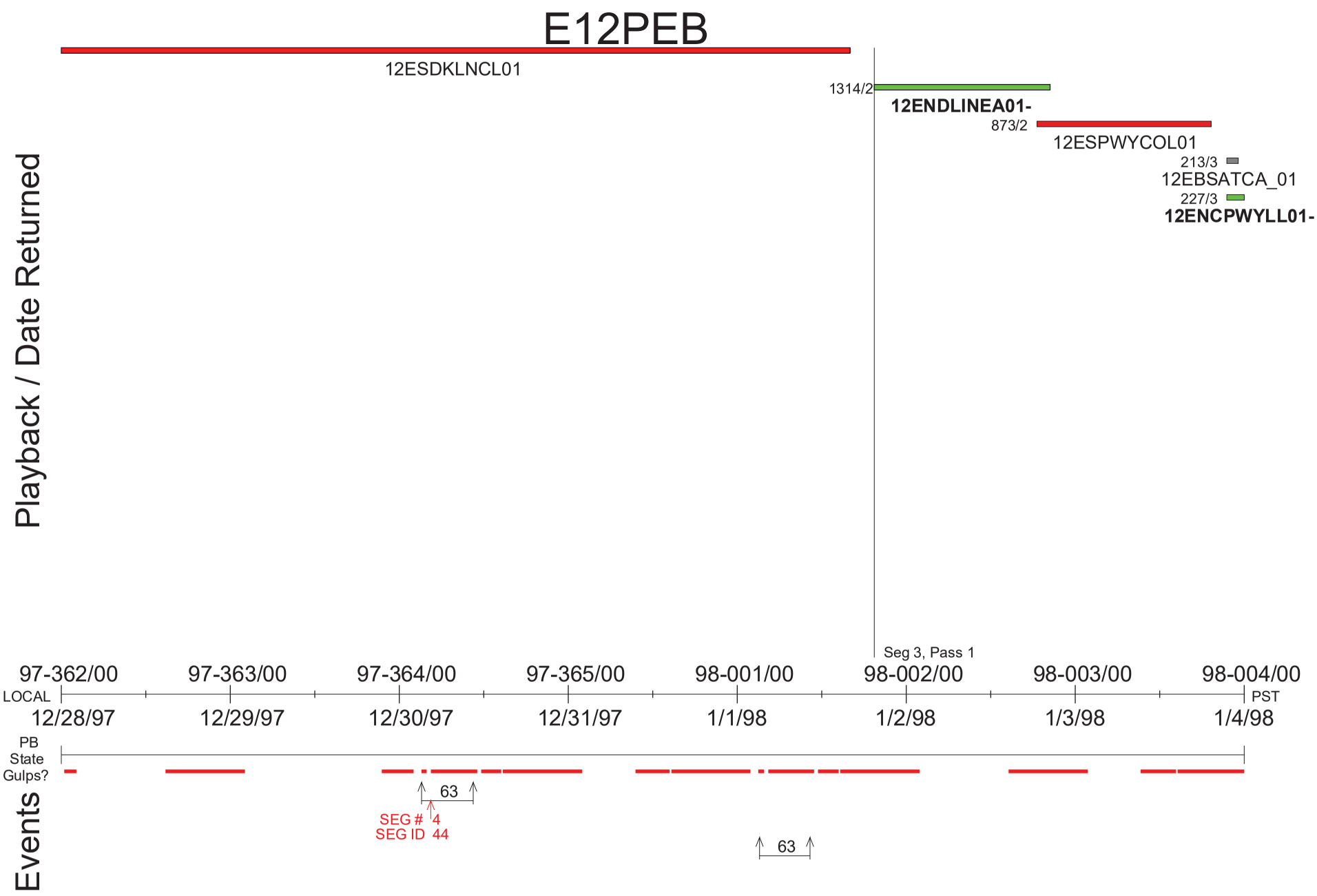
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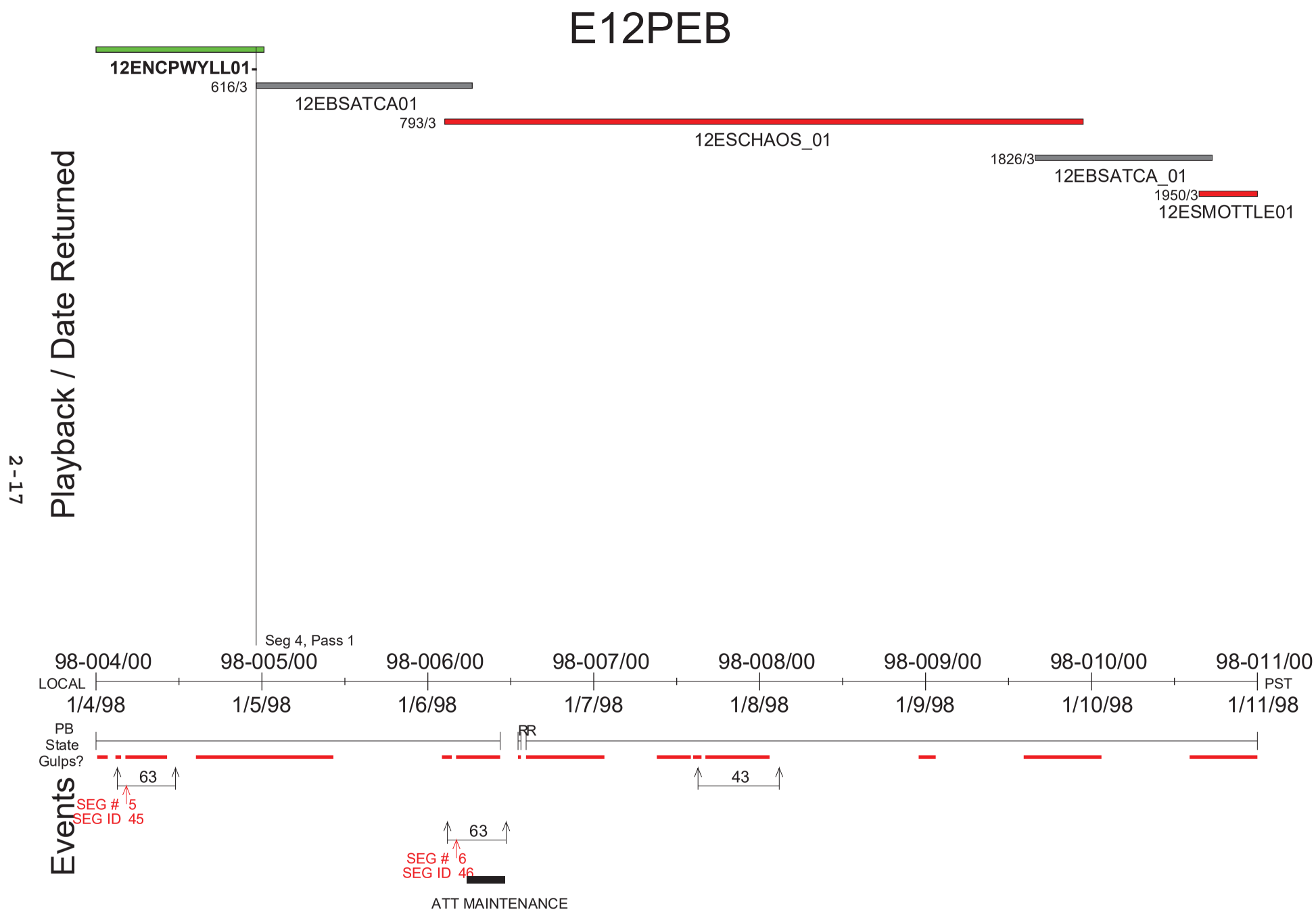
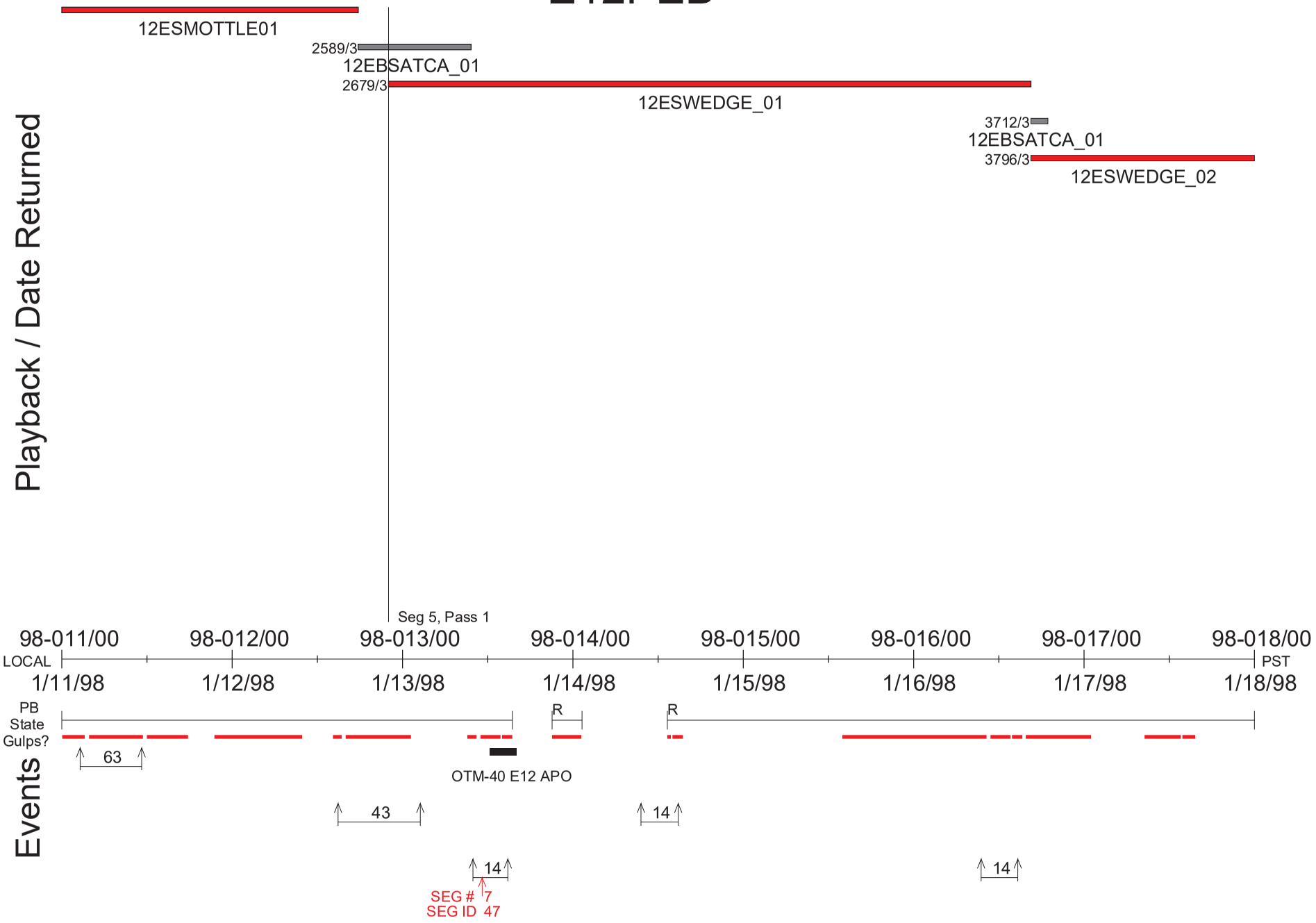
97-363/00
97-364/00
97-365/00
98-001/00
98-002/00
98-003/00
98-004/00
LOCAL
PST
12/28/97
12/29/97
12/30/97
12/31/97
1/1/98
1/2/98
1/3/98
1/4/98
PB State Gulps?
63
SEG # 4
SEG ID 44
63
Events


E12PEB
12ENCPWYLL01-
616/3
12EBSATCA01
793/3
12ESCHAOS_01
1826/3
12EBSATCA_01
1950/3
12ESMOTTLE01
Playback / Date Returned
Seg 4, Pass 1
98-004/00
98-005/00
98-006/00
98-007/00
98-008/00
98-009/00
98-010/00
98-011/00
LOCAL
PST
1/4/98
1/5/98
1/6/98
1/7/98
1/8/98
1/9/98
1/10/98
1/11/98
PB State Gulps?
RR
63
SEG # 5
SEG ID 45
43
63
SEG # 6
SEG ID 46
Events
ATT MAINTENANCE

E12PEB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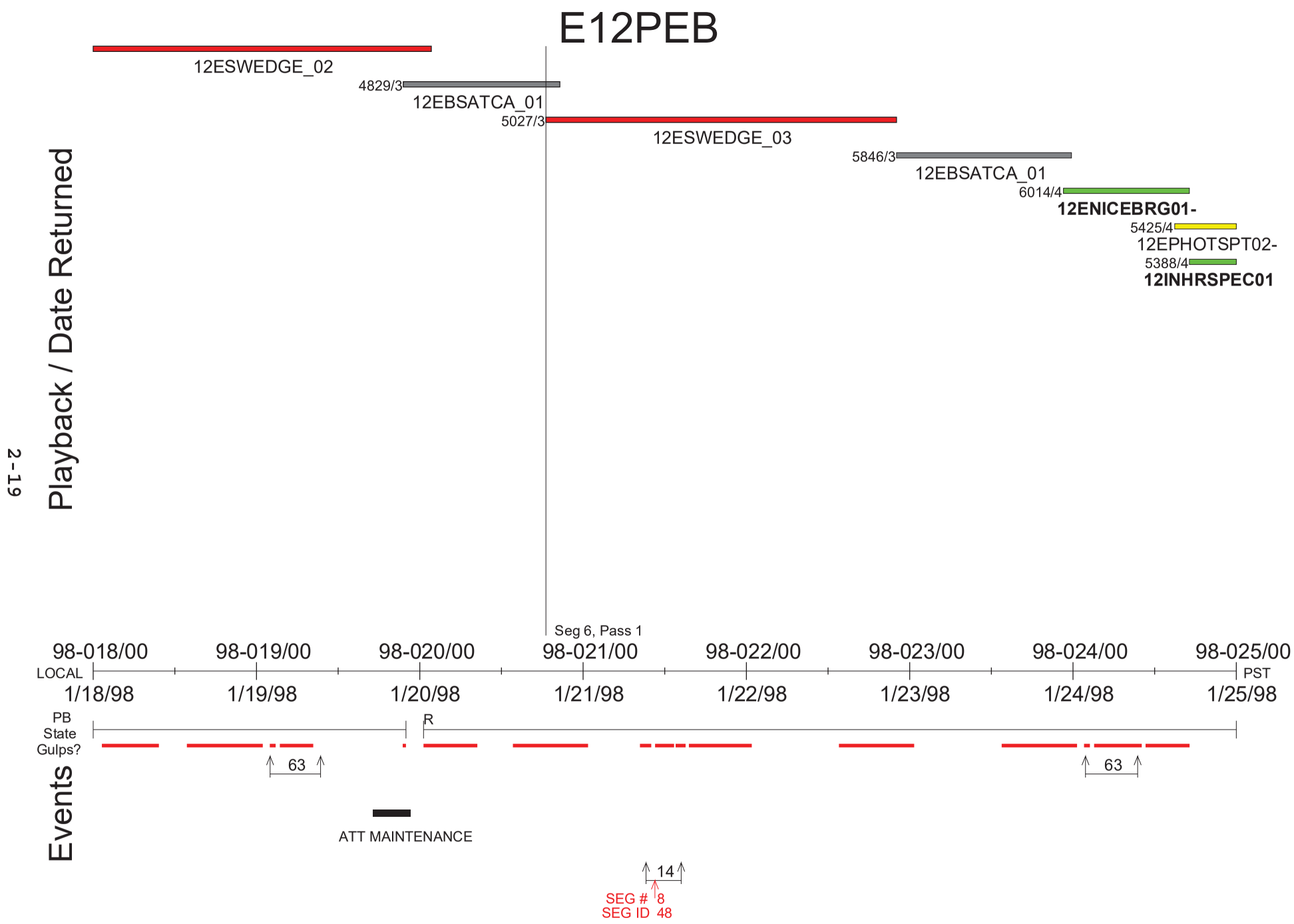
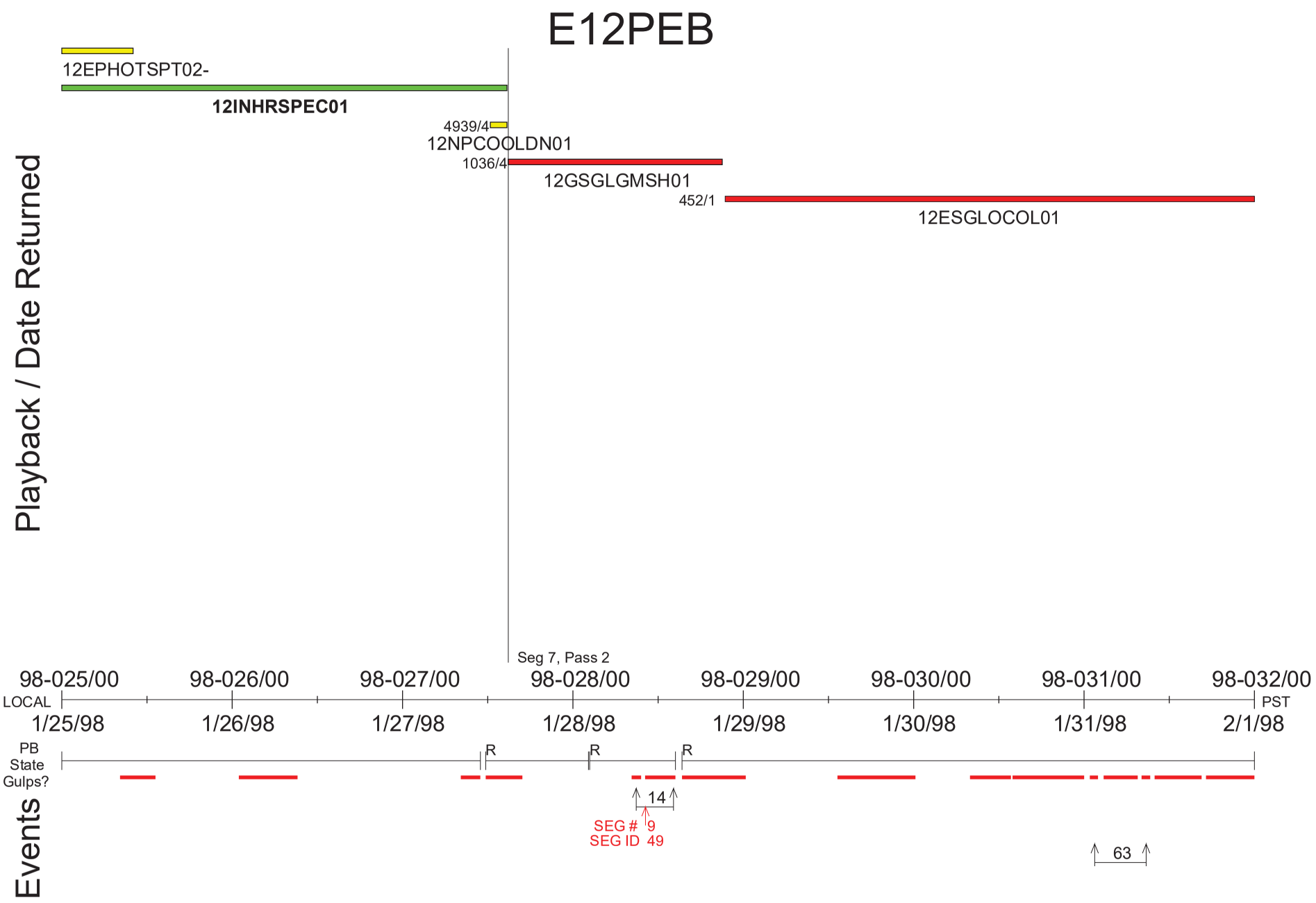
2589/3
12EBSATCA_01
2679/3
12ESWEDGE_01
3712/3
12EBSATCA_01
3796/3
12ESWEDGE_02
Playback / Date Returned
Seg 5, Pass 1
98-011/00
98-012/00
98-013/00
98-014/00
98-015/00
98-016/00
98-017/00
98-018/00
LOCAL
PST
1/11/98
1/12/98
1/13/98
1/14/98
1/15/98
1/16/98
1/17/98
1/18/98
PB State Gulps?
R
R
Events
63
OTM-40 E12 APO
43
14
14
14
SEG # 7
SEG ID 47


E12PEB
12ESWEDGE_02
4829/3
12EBSATCA_01
5027/3
12ESWEDGE_03
5846/3
12EBSATCA_01
6014/4
12ENICEBRG01-
5425/4
12EPHOTSPT02-
5388/4
12INHRSPEC01
Playback / Date Returned
Seg 6, Pass 1
98-018/00
98-019/00
98-020/00
98-021/00
98-022/00
98-023/00
98-024/00
98-025/00
LOCAL
PST
1/18/98
1/19/98
1/20/98
1/21/98
1/22/98
1/23/98
1/24/98
1/25/98
PB State Gulps?
R
63
63
Events
ATT MAINTENANCE
14
SEG # 8
SEG ID 48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Playback / Date Returned
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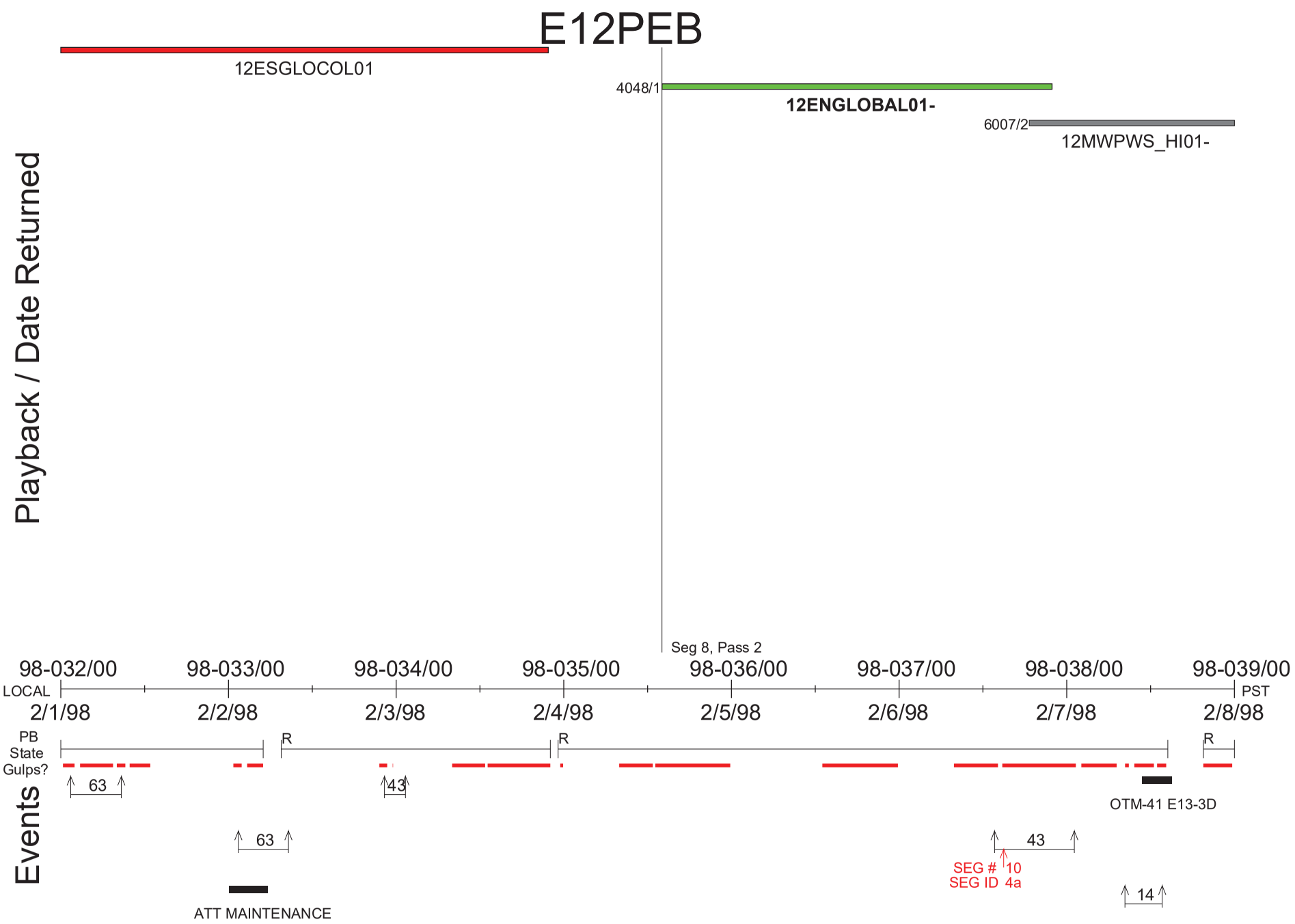
12INHRSPEC01
4939/4
12NPCOOLDN01
1036/4
12GSGLGMSH01
452/1
12ESGLOCOL01
Seg 7, Pass 2
98-025/00
98-026/00
98-027/00
98-028/00
98-029/00
98-030/00
98-031/00
98-032/00
LOCAL
PST
1/25/98
1/26/98
1/27/98
1/28/98
1/29/98
1/30/98
1/31/98
2/1/98
PB State Gulps?
R
R
R
14
SEG # 9
SEG ID 49
63
Events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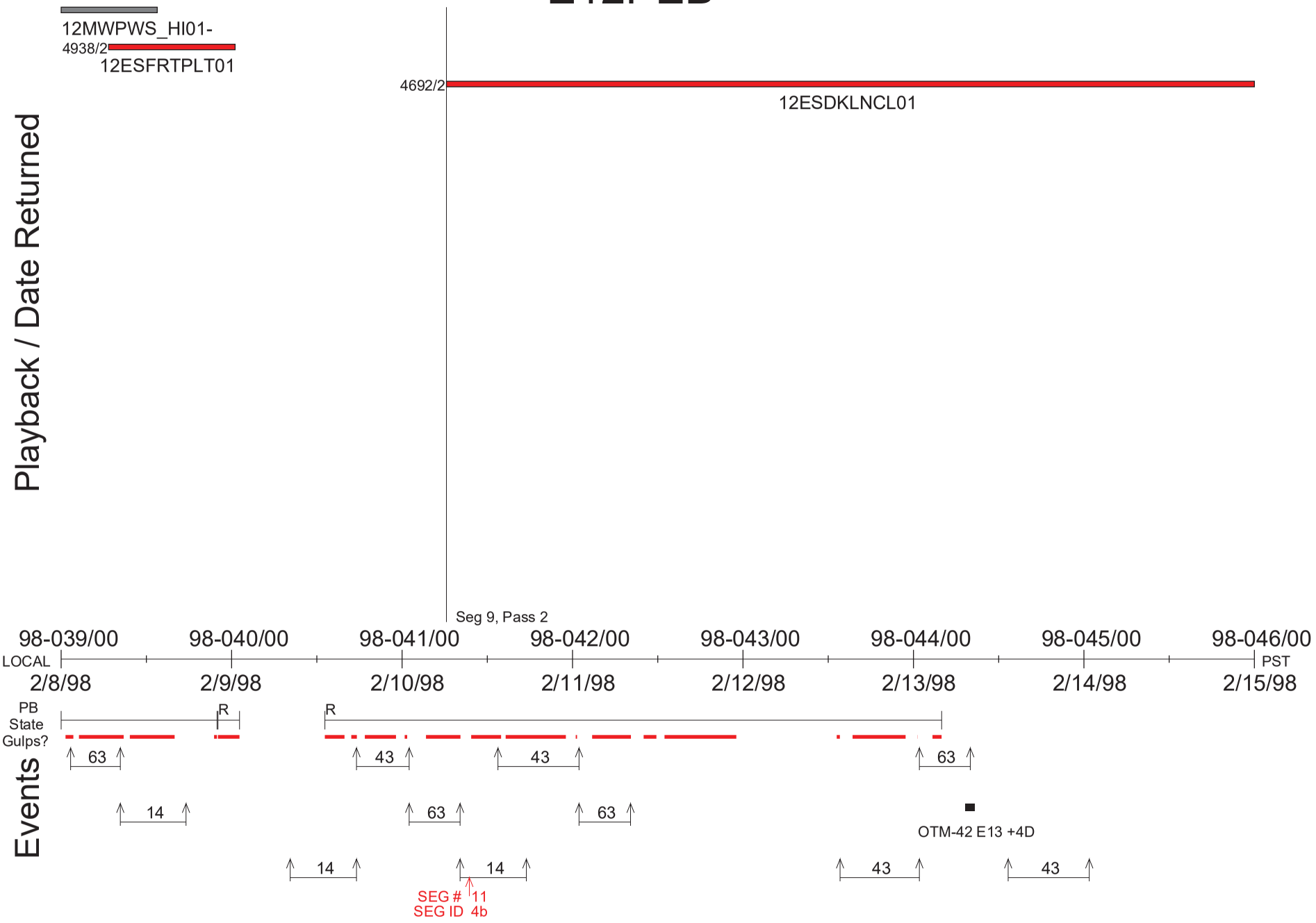
4048/1
12ENGLOBAL01-
6007/2
12MWPWS_HI01-
Playback / Date Returned
Seg 8, Pass 2
98-032/00
98-033/00
98-034/00
98-035/00
98-036/00
98-037/00
98-038/00
98-039/00
LOCAL
PST
2/1/98
2/2/98
2/3/98
2/4/98
2/5/98
2/6/98
2/7/98
2/8/98
PB State Gulps?
R
R
R
63
43
OTM-41 E13-3D
Events
63
43
SEG # 10
SEG ID 4a
14
ATT MAINTENANCE

E12PEB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4938/2
12ESFRTPLT01
4692/2
12ESDKLNCL01
Playback / Date Returned
Seg 9, Pass 2
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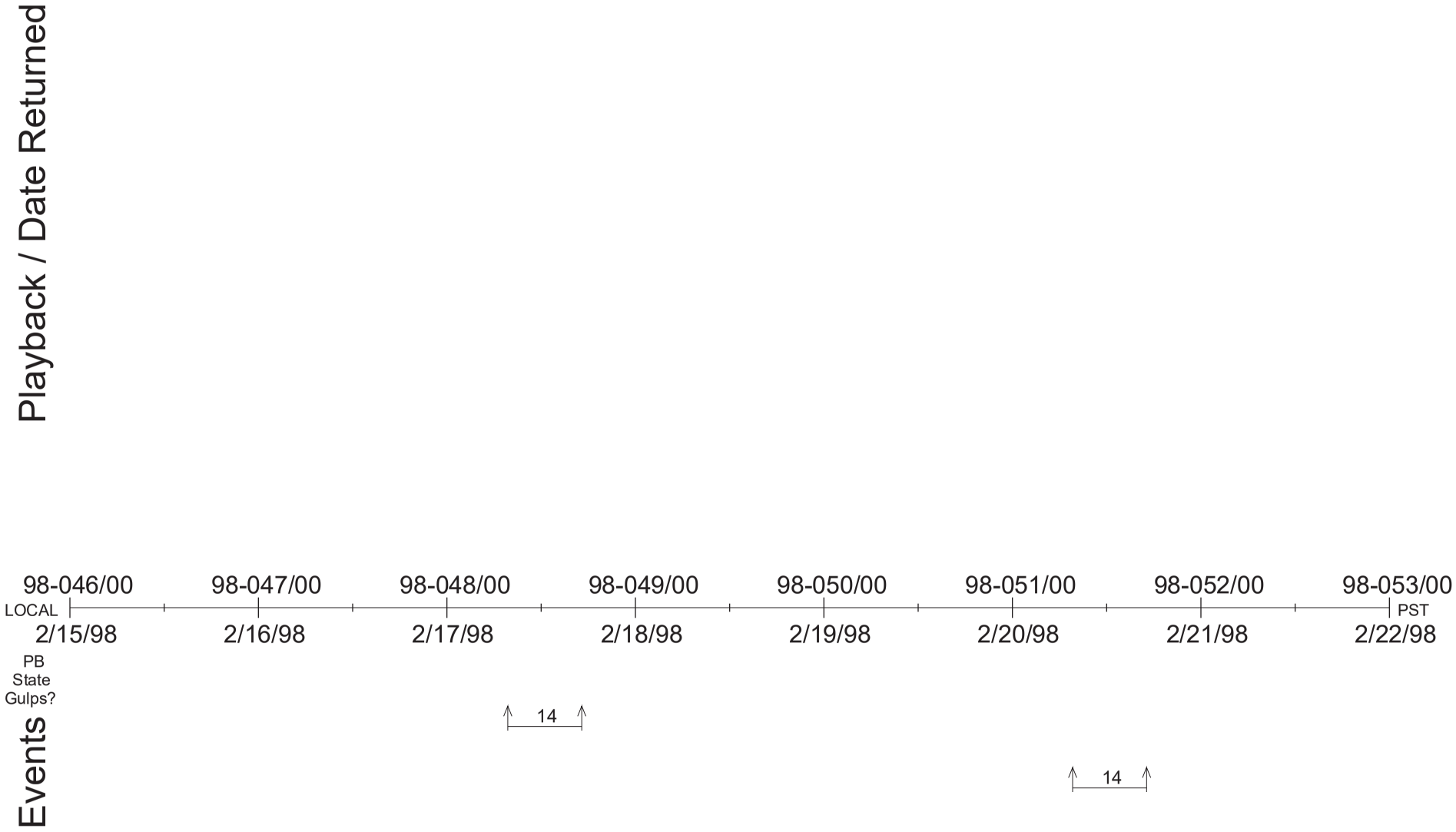
98-040/00
98-041/00
98-042/00
98-043/00
98-044/00
98-045/00
98-046/00
LOCAL
PST
2/8/98
2/9/98
2/10/98
2/11/98
2/12/98
2/13/98
2/14/98
2/15/98
PB State Gulps?
R
R
Events
63
43
43
63
14
63
63
OTM-42 E13 +4D
14
14
43
43
SEG # 11
SEG ID 4b

E12PEB

12ESDKLNCL01



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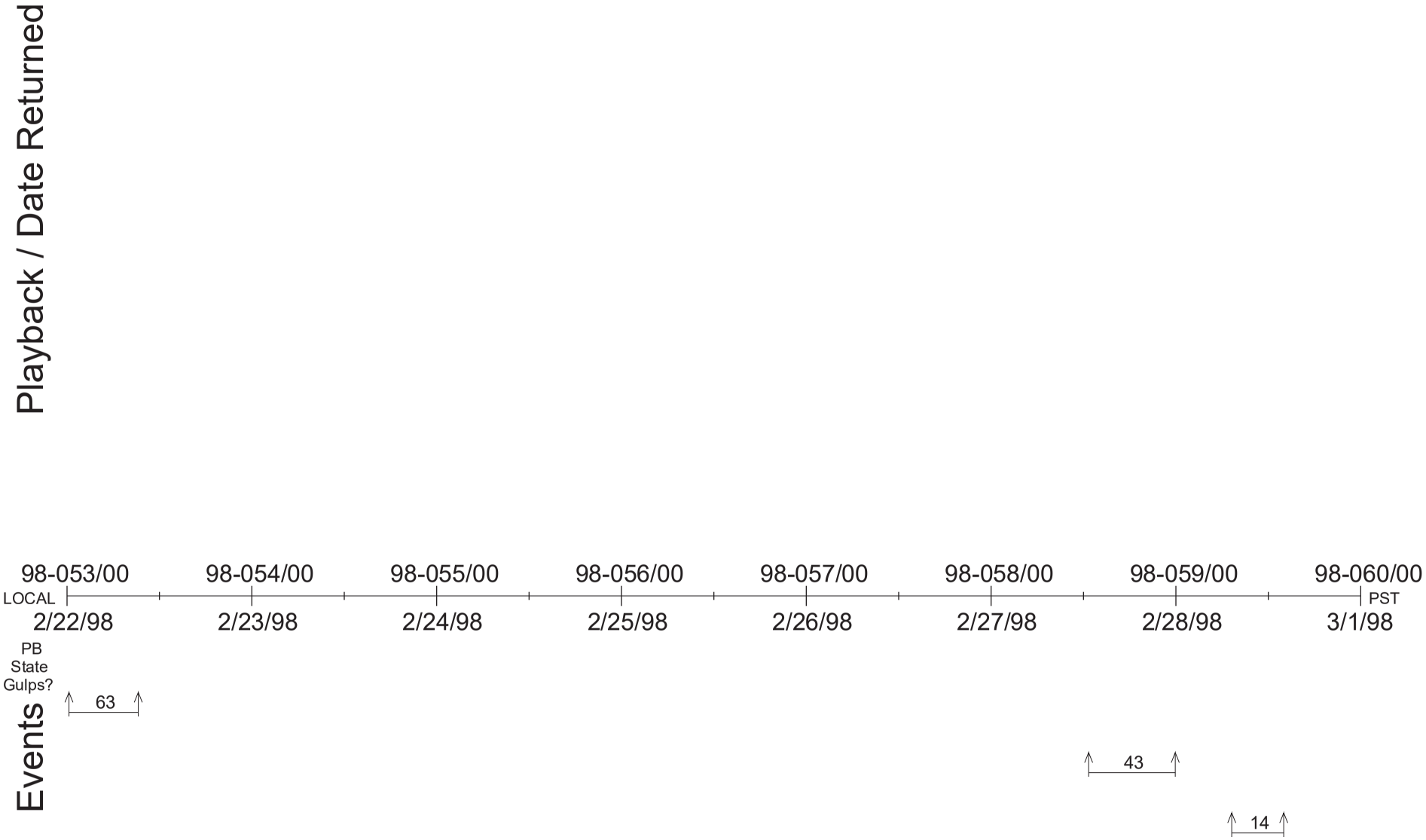

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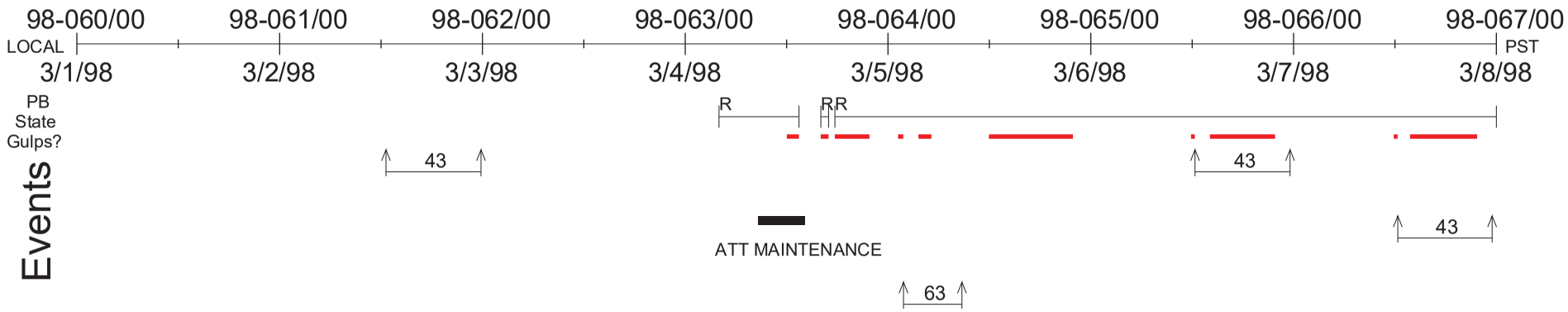
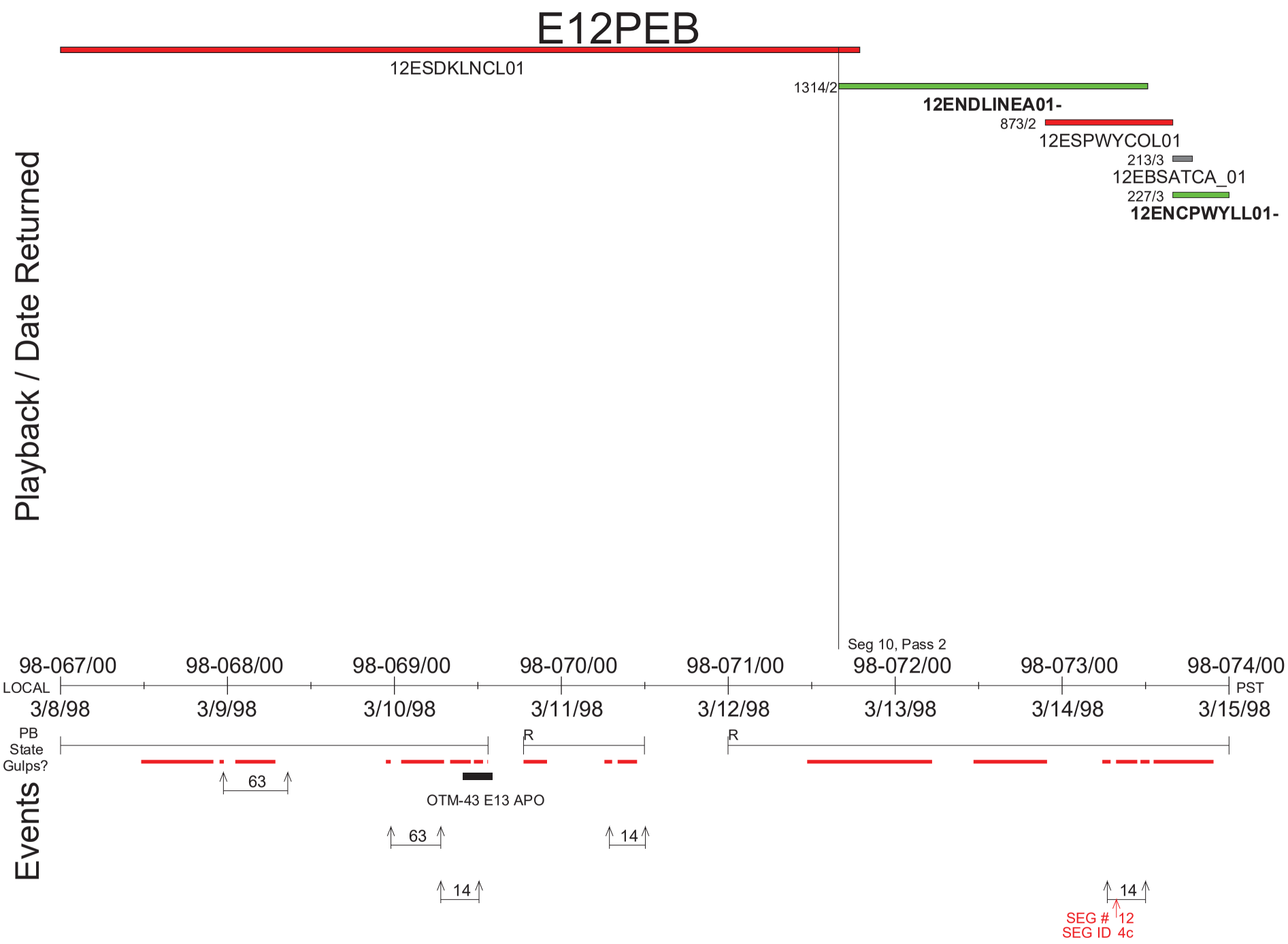
12ESDKLNCL01

Playback / Date Returned



Events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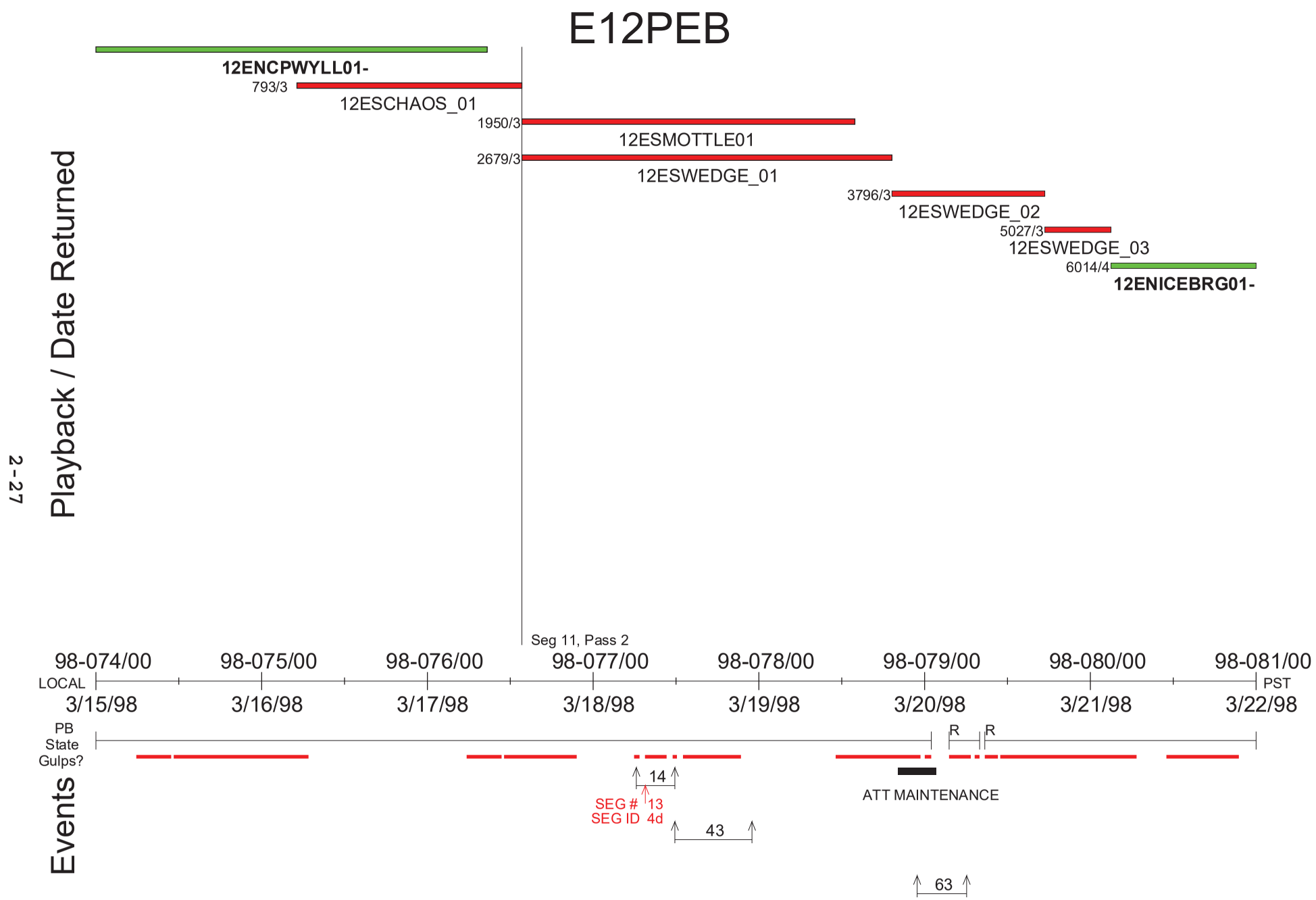
1314/2
12ENDLINEA01-
873/2
12ESPWYCOL01
213/3
12EBSATCA_01
227/3
12ENCPWYLL01-
Playback / Date Returned
Seg 10, Pass 2
98-067/00
98-068/00
98-069/00
98-070/00
98-071/00
98-072/00
98-073/00
98-074/00
LOCAL
PST
3/8/98
3/9/98
3/10/98
3/11/98
3/12/98
3/13/98
3/14/98
3/15/98
PB State Gulps?
R
R
Events
63
OTM-43 E13 APO
63
14
14
14
SEG # 12
SEG ID 4c


E12PEB
12ENCPWYLL01-
793/3
12ESCHAOS_01
1950/3
12ESMOTTLE01
2679/3
12ESWEDGE_01
3796/3
12ESWEDGE_02
5027/3
12ESWEDGE_03
6014/4
12ENICEBRG01-
Playback / Date Returned
Seg 11, Pass 2
98-074/00
98-075/00
98-076/00
98-077/00
98-078/00
98-079/00
98-080/00
98-081/00
LOCAL
PST
3/15/98
3/16/98
3/17/98
3/18/98
3/19/98
3/20/98
3/21/98
3/22/98
PB State Gulps?
R
R
14
SEG # 13
SEG ID 4d
43
ATT MAINTENANCE
63
Events

E12PEB

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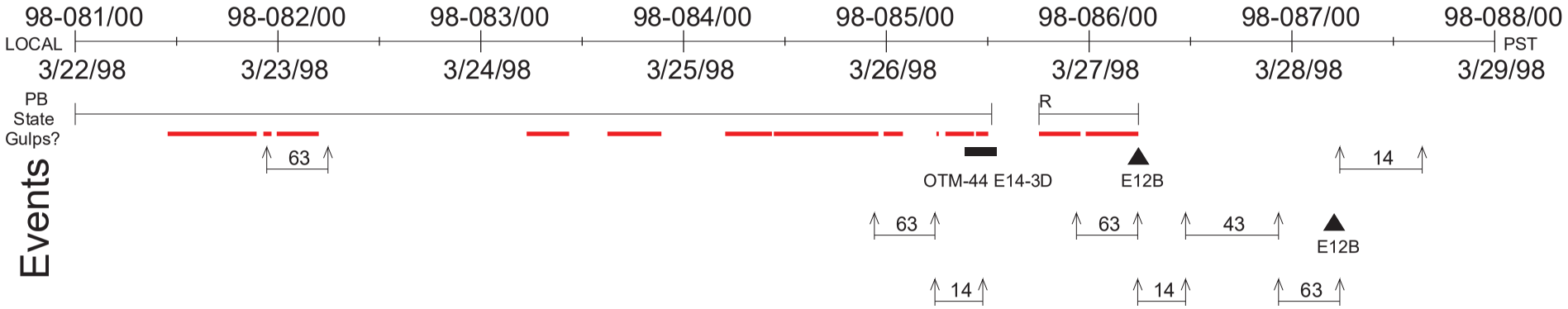
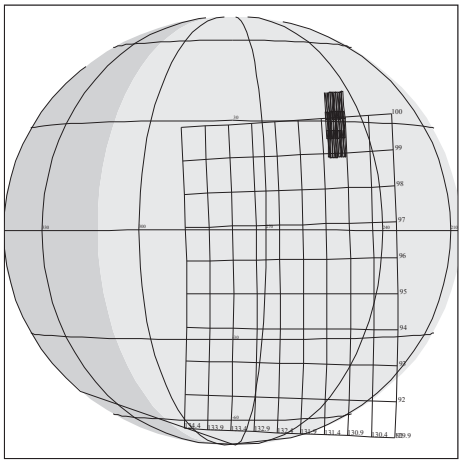
5388/4
12INHRSPEC01

Playback / Date Returned



E12 NIMS A



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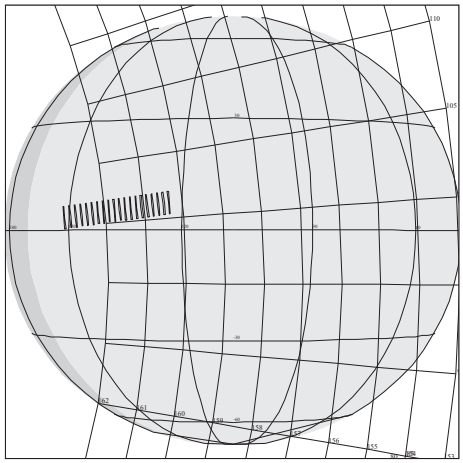
97-349/17:55:15



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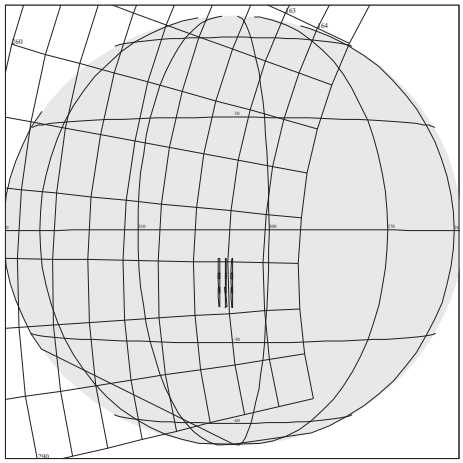
97-349/23:49:09



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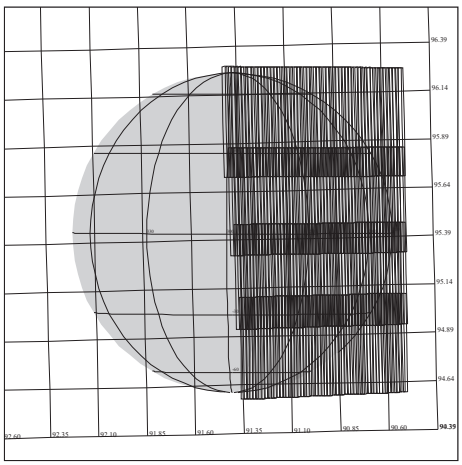
97-350/06:22:28



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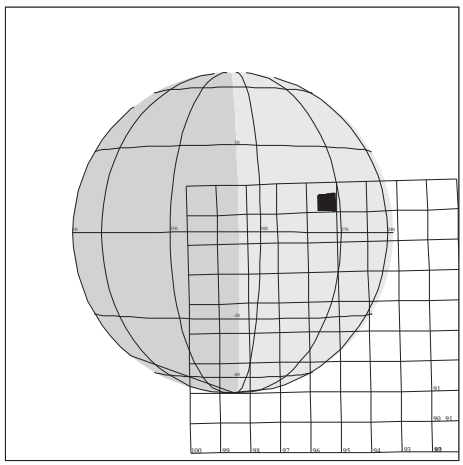
97-350/06:58:52



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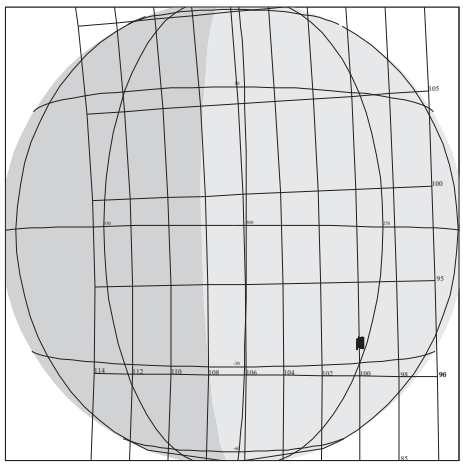
97-350/11:15:41



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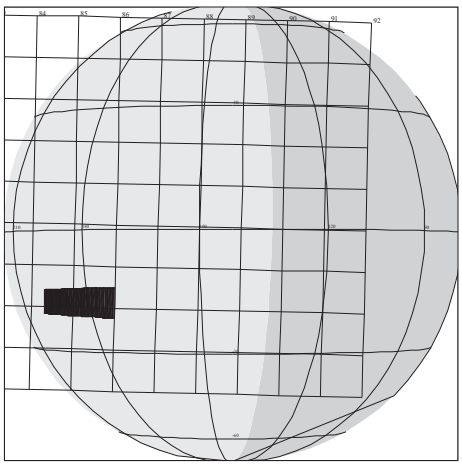
97-350/11:41:59



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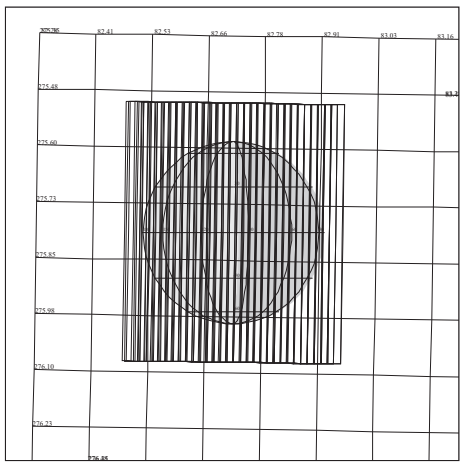
97-350/12:42:39



12INHRSPEC01
97-350/14:09:36

Chapter 3 - Orbit Geometries

Contents

Introduction to Chapter 3

This chapter contains diagrams of various aspects of geometry for the E12 Orbit.

The figure on page 3 is a North Trajectory Pole View of the E12 Orbit from apoapsis to apoapsis.

The figure on page 4 is a North Trajectory Pole View of the E12 Orbit from +/- 5 days of Europa closest approach.

The figure on page 5 is a North Trajectory Pole View of the E12 Orbit from +/- 2 days of Europa closest approach.

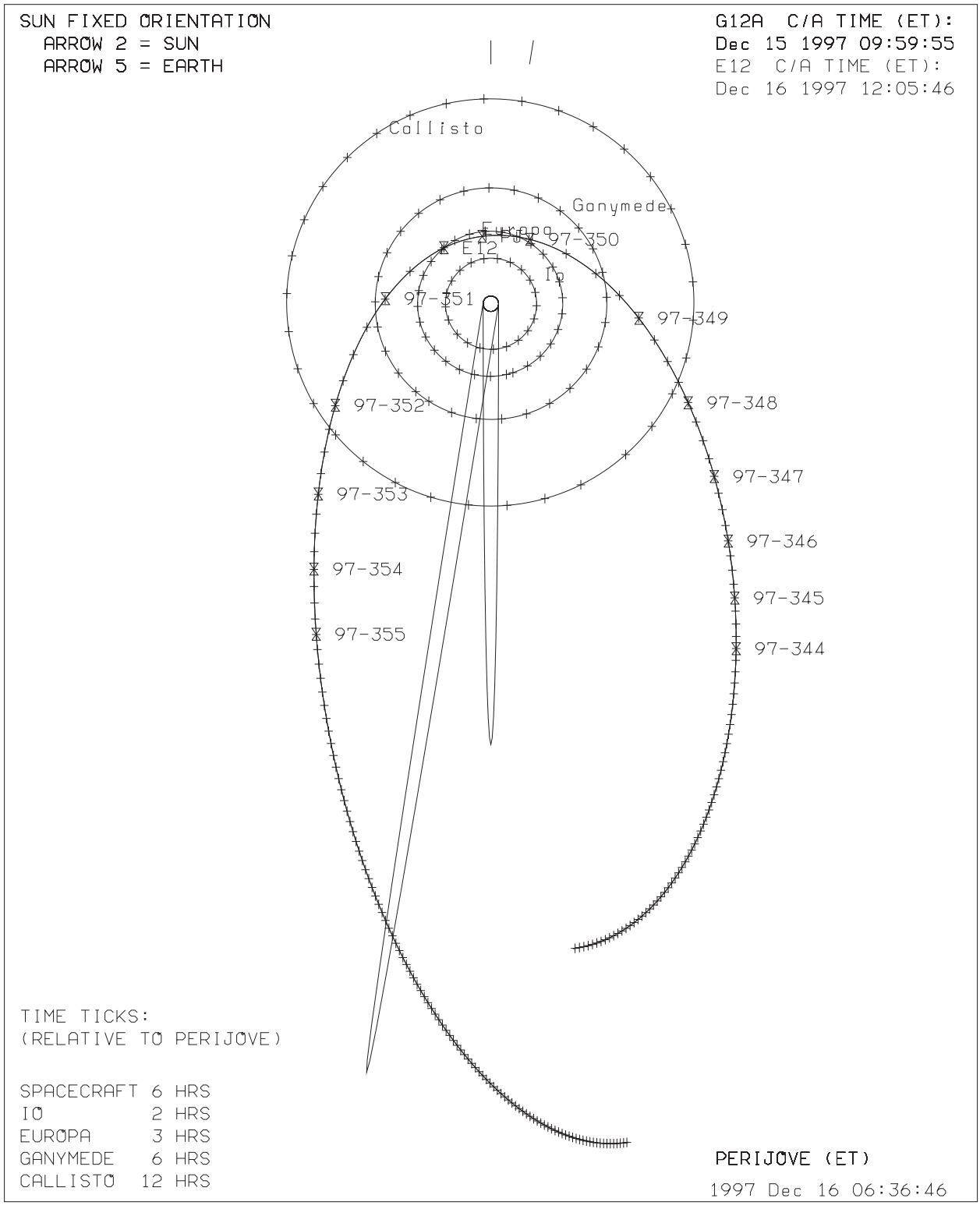
The figure on page 6 is a North Trajectory Pole View of the E12 Orbit from +/- 1 day of Europa closest approach.

The figure on page 7 is a North Trajectory Pole View of the E12 Orbit from +/- 6 hours of Europa closest approach.

The figure on page 8 is a North Trajectory Pole View of the E12 Orbit from +/- 1 hour of Europa closest approach.

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

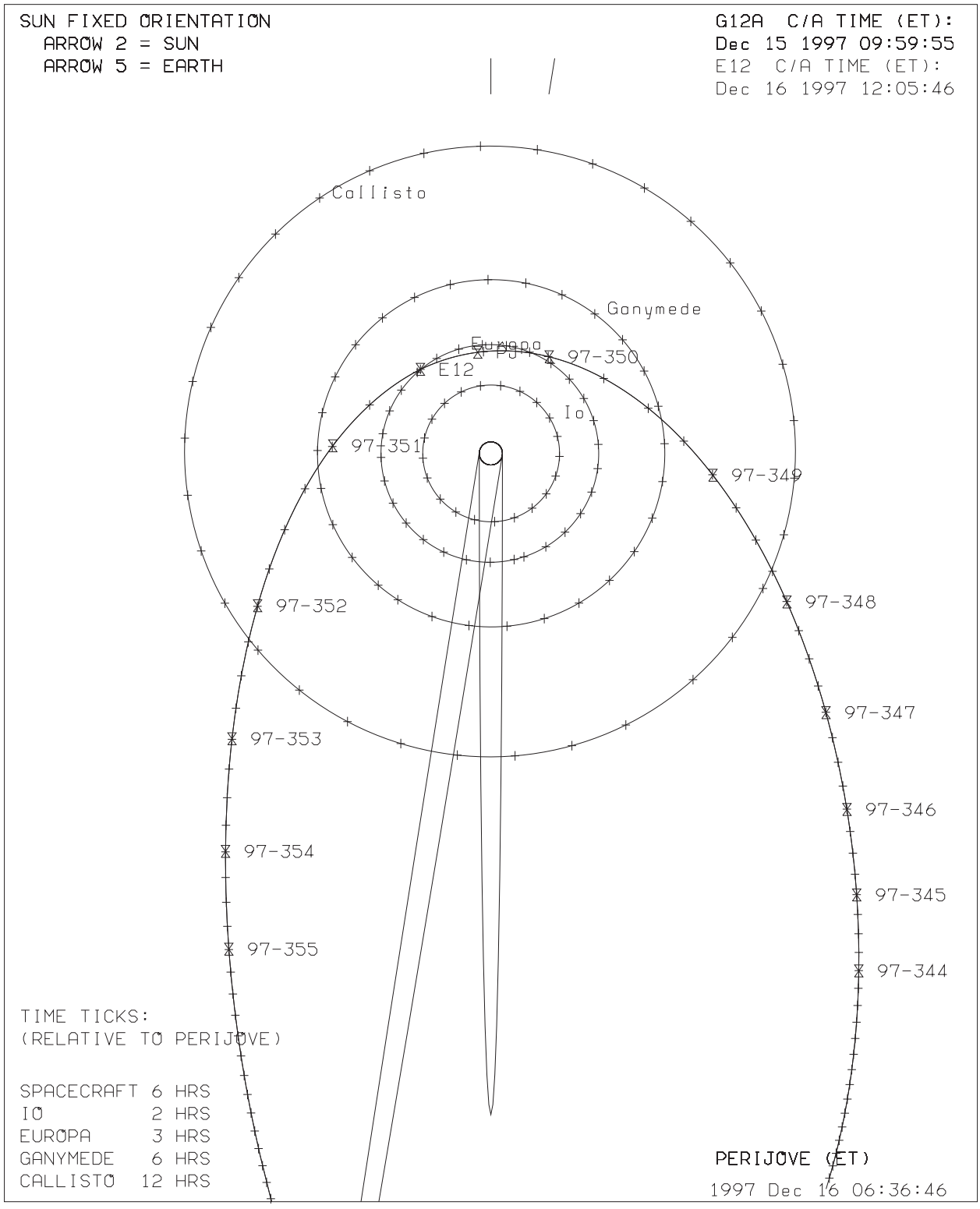
JUPITER 12: N. TRAJ. ~POLE VIEW (APO TO APO)



GEM-970401

NAV Apr 11, 1997

JUPITER 12: N. TRAJ. POLE VIEW (+/- 5 DAYS)



GEM-970401

NAV Apr 24, 1997

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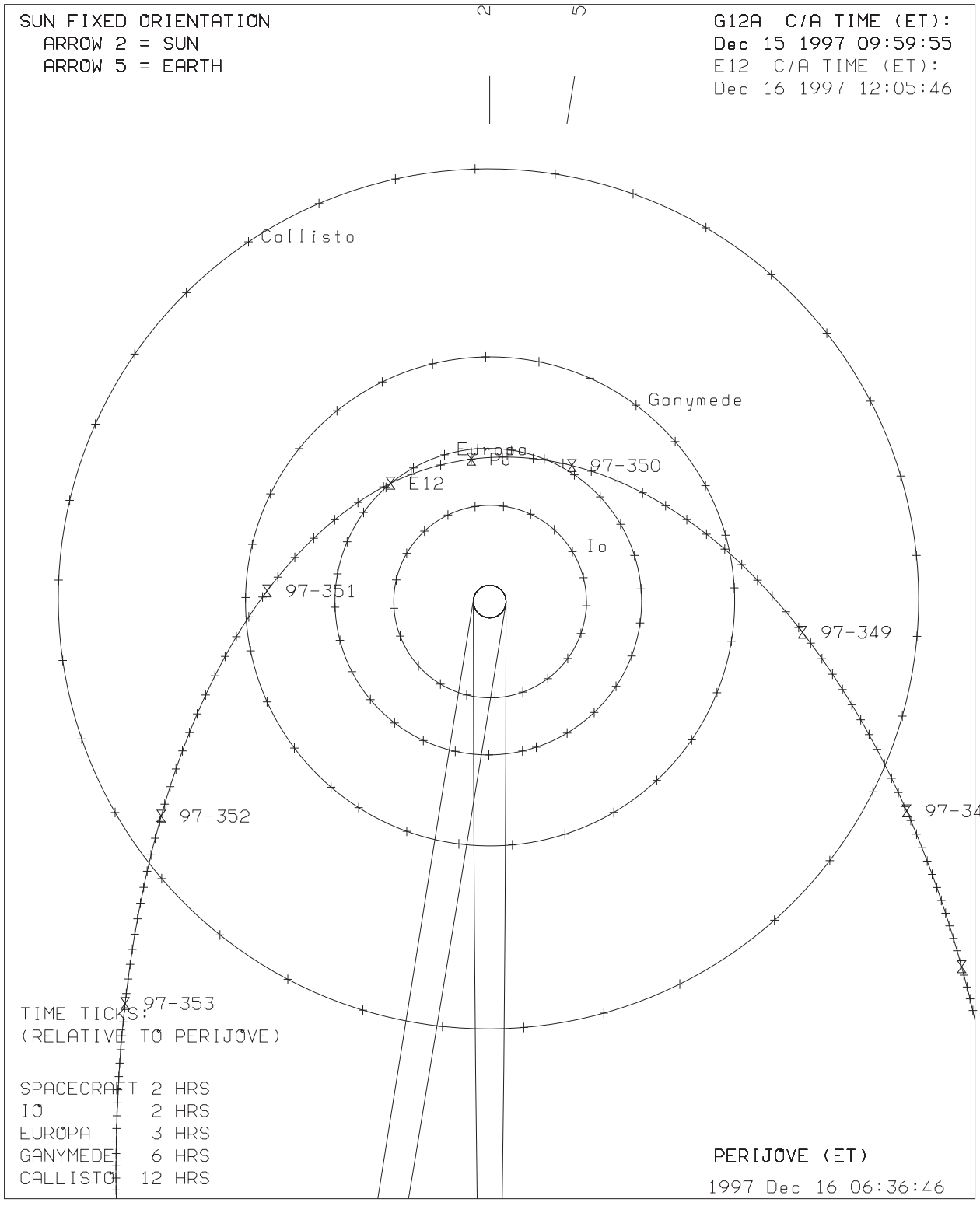
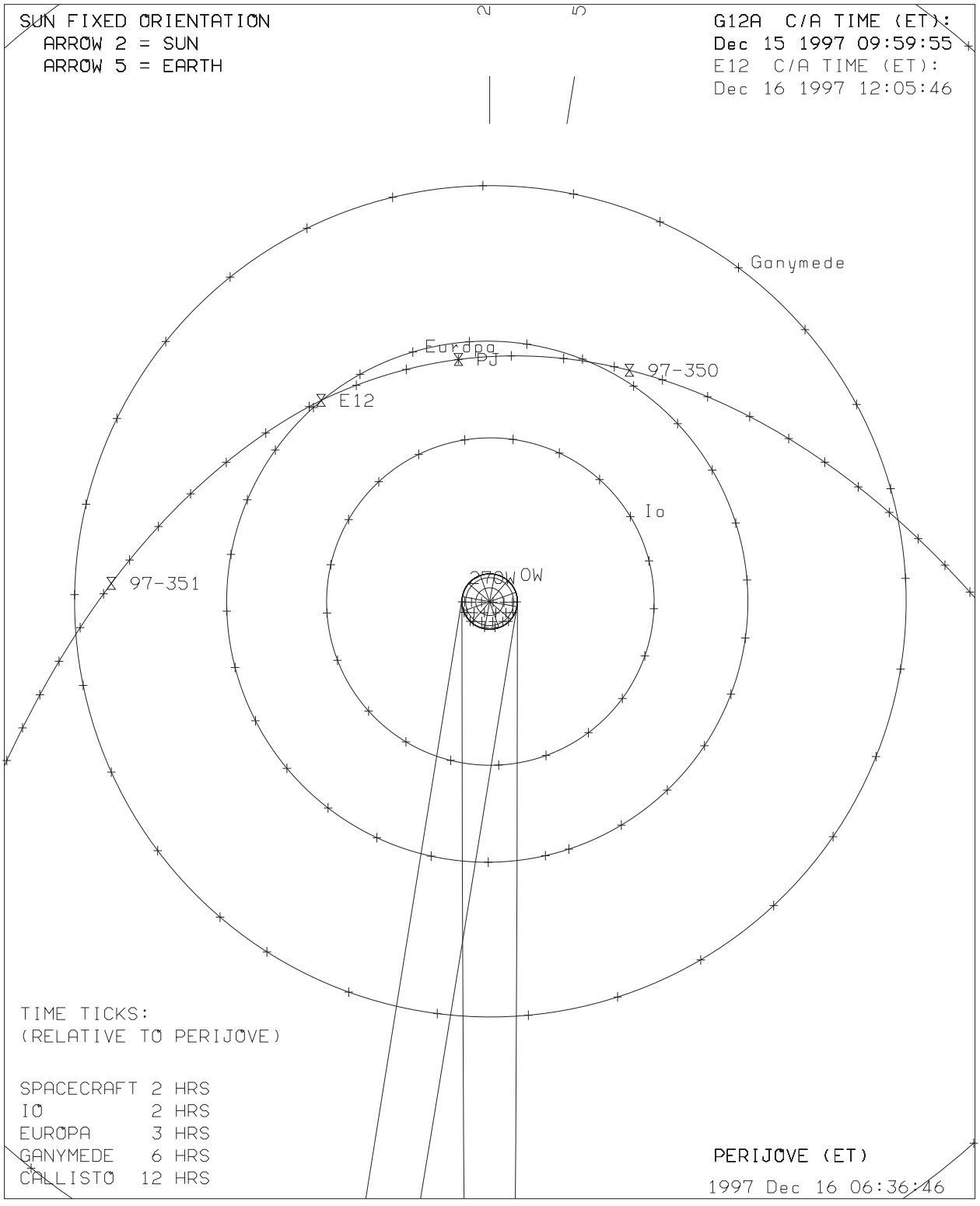


GEM-970401

NAV Apr 24, 1997

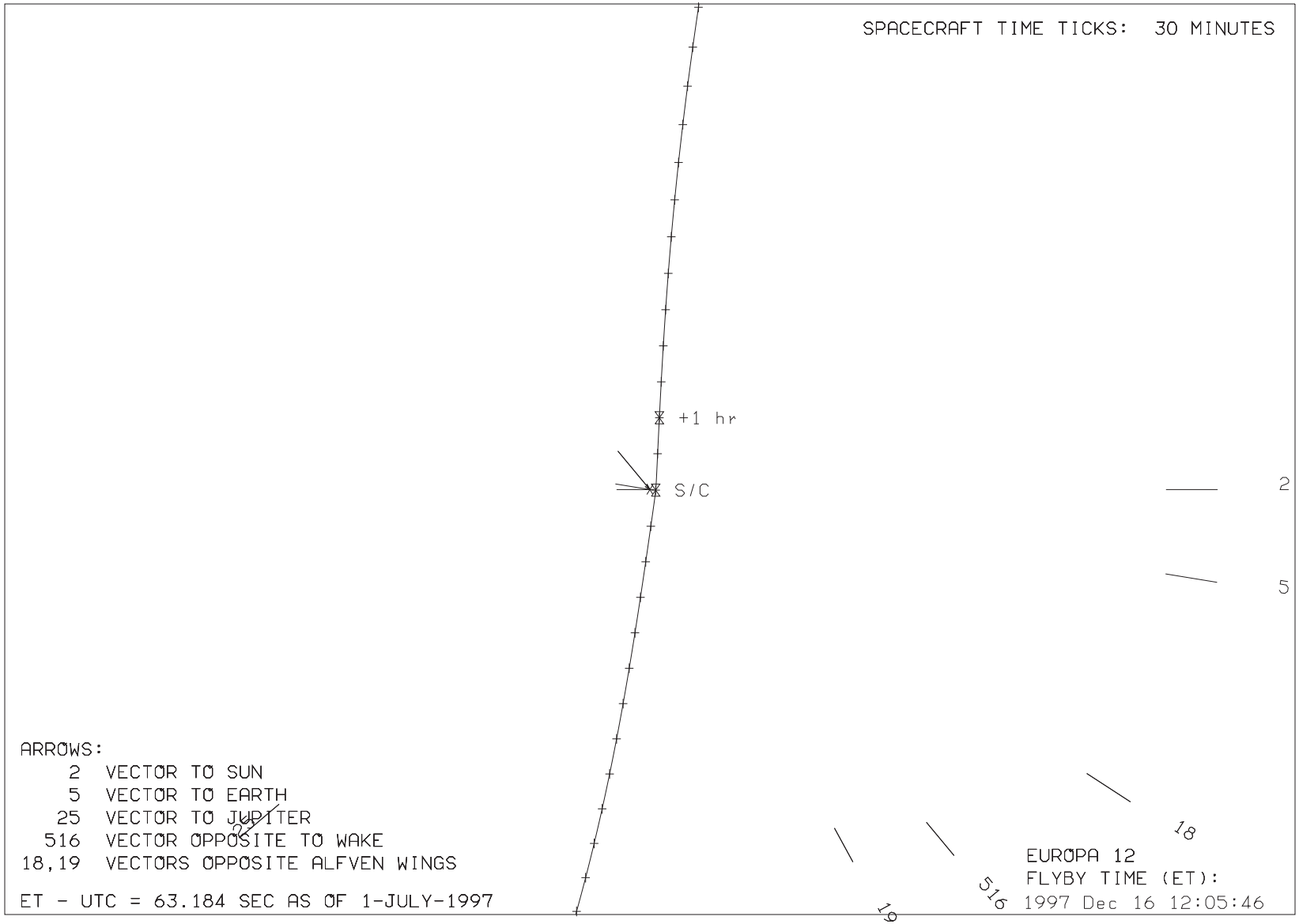
JUPITER 12: N. TRAJ. POLE VIEW (+/- 1 DAY)



GEM-970401

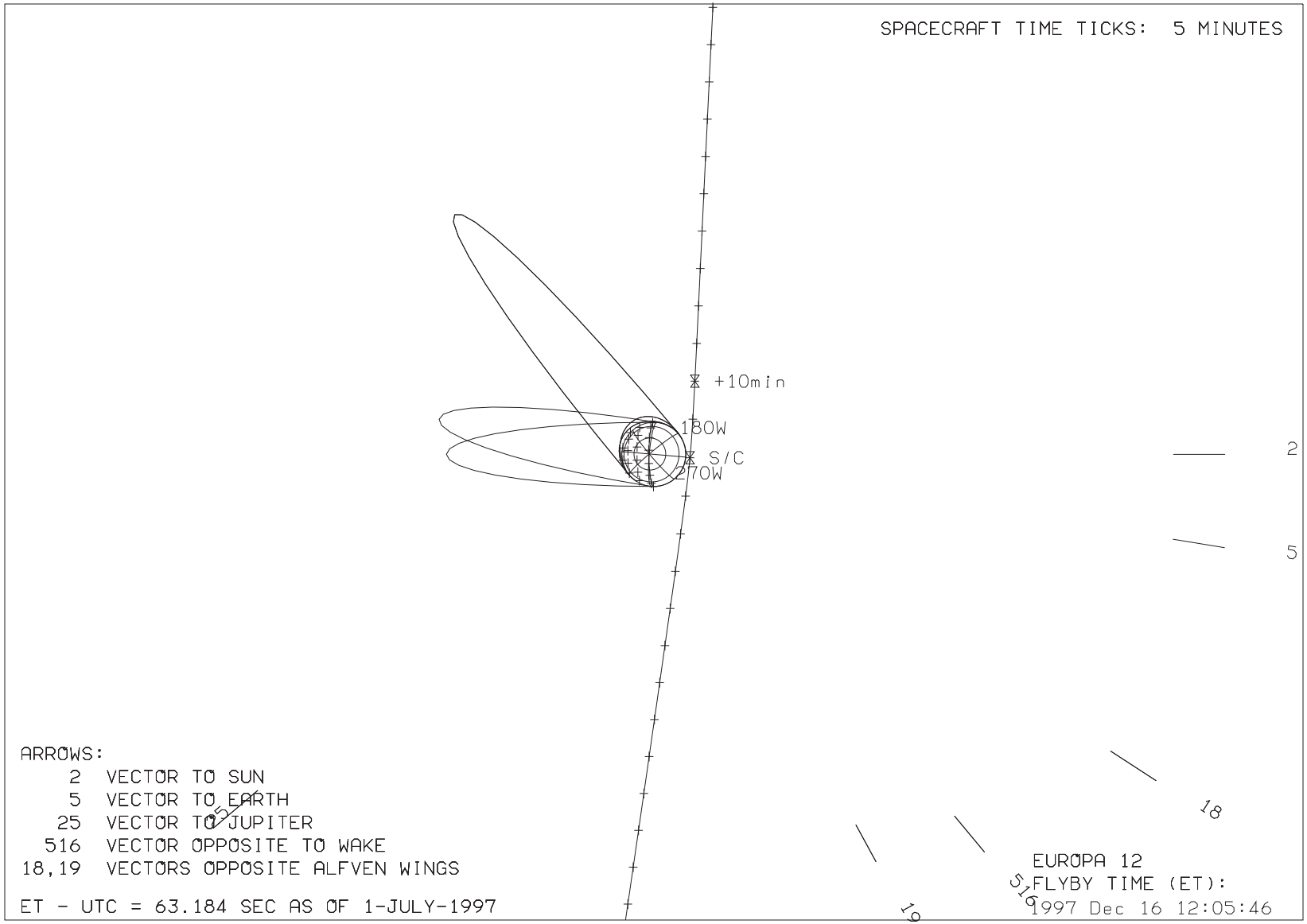
NAV Apr 24, 1997

EUROPA 12: N. TRAJ POLE VIEW (+/- 6 HRS)



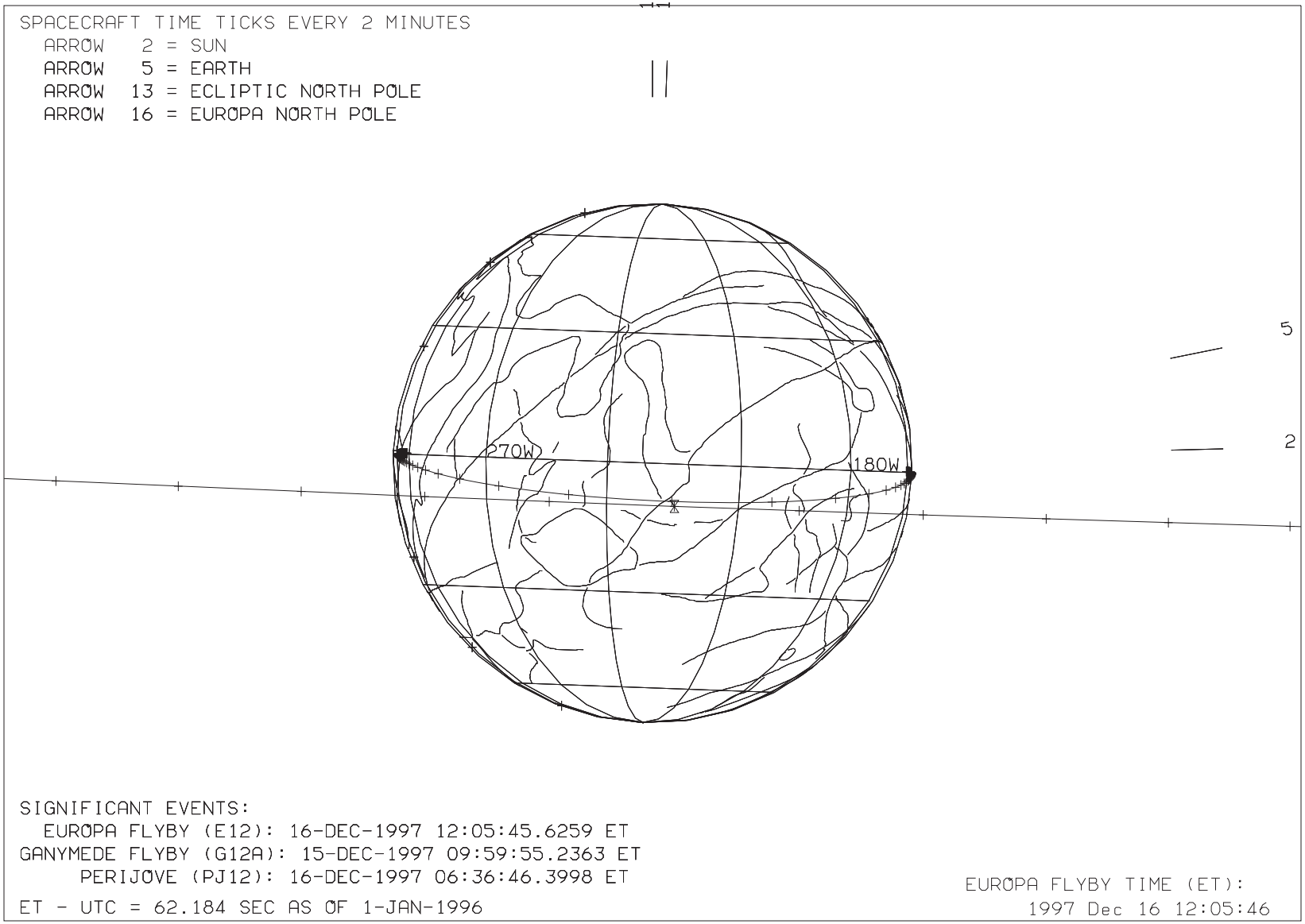
NAV 4/30/97

EUROPA 12: N. TRAJ POLE VIEW (+/- 1 HR)



NAV 4/30/97

EUROPA 12: GROUNDTRACK AT CLOSEST APPROACH



NAV Apr 4, 1997

Chapter 4 - NIMS Observation Summaries

Contents

Introduction to Chapter 4

This chapter summarizes the NIMS E12 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 E12 Sequence. The information in this summary is derived from the E12 SEFs (Spacecraft Event File) and PBTs (Playback Tables) with inputs from the NIMS Science Coordinators regarding the start time and duration of the NIMS observations. There are twelve columns of information in this table:

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

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

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

The NIMS Obstab (Observation Table) is a time-ordered listing of the NIMS obsrvation parameters for use by downlink data processing of the NIMS E12 data. It is also derived from the E12 SEFs and PBTs. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry.

Sequence:	E12A-AR	Created: 3/25/98	Begin: 97-349/08:00:00 Finish: 97-351/18:00:00

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
1	97	349	07:59:59.800		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,261,058:31:0
2	**97**	**349**	**08:00:00.000**	**20A3EY**	**37C1PR**	**Initial Condition**	**Optics Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**4,261,058:31:3**
3	**97**	**349**	**08:00:00.000**	**20A3EW**	**37A**	**Initial Condition**	**NIMS Power ON**	**4O0**	**4**	**0**	**4,261,058:31:3**
4	**97**	**349**	**08:00:00.000**	**20A3EX**	**37HR**	**Initial Condition**	**Replacement Heaters OFF**	**4O0**	**4**	**0**	**4,261,058:31:3**
5	**97**	**349**	**08:00:00.000**	**20A3EZ**	**37C2PR**	**Initial Condition**	**Optics Heater 2 OFF (primary relay)**	**4O0**	**4**	**0**	**4,261,058:31:3**
6	**97**	**349**	**08:00:00.000**	**20A3FA**	**37F1PR**	**Initial Condition**	**Radiator Flash Heater OFF (primary relay)**	**4O0**	**4**	**0**	**4,261,058:31:3**
7	**97**	**349**	**08:00:00.000**	**20A3FB**	**37F2PR**	**Initial Condition**	**Shield Flash Heater OFF (primary relay)**	**4O0**	**4**	**0**	**4,261,058:31:3**
8	**97**	**349**	**08:00:00.000**	**20A3FD**	**40HRPR**	**Initial Condition**	**RCT Heater OFF (primary relay)**	**4O0**	**4**	**0**	**4,261,058:31:3**
9	**97**	**349**	**08:00:00.000**	**20A3FE**	**40T1P**	**Initial Condition**	**PCT Heater 1 ON (primary relay)**	**4O0**	**4**	**0**	**4,261,058:31:3**
10	**97**	**349**	**08:00:00.000**	**20A3FF**	**40T2**	**Initial Condition**	**PCT Heater 2 ON**	**4O0**	**4**	**0**	**4,261,058:31:3**
11	97	349	08:00:59.800	20OA6A	6HICON			4O0	4	0	4,261,059:30:0
12	97	349	08:01:33.800	488AA6A	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4O0	4	0	4,261,059:81:0
13	**97**	**349**	**08:01:39.133**	**432JA6B**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**4O0**	**4**	**0**	**4,261,059:89:0**
14	97	349	08:01:39.800	432JA431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	4O0	4	0	4,261,059:90:0
15	97	349	08:01:40.466	432JA6C	6RTSL1		R/T Select of DDS and	4O0	4	0	4,261,060:00:0
16	**97**	**349**	**08:01:40.466**	**432JA6D**	**6RTSL2**	**NIMNCG,AACSEL,RT**	**AACS SELECT**	**4O0**	**4**	**0**	**4,261,060:00:0**
17	97	349	08:05:03.133	41AA99A	**POWER**	**PWR MODE change**	Change to Data Taking Mode	4O0	4	0	4,261,063:31:0
18	**97**	**349**	**08:05:07.133**	**41AA3A**	**40T1PR**	**1**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**4,261,063:37:0**
19	**97**	**349**	**08:05:17.133**	**41AA3B**	**40T1PR**	**2**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**4,261,063:52:0**
20	**97**	**349**	**08:05:27.133**	**41AA3C**	**40T2R**	**1**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**4,261,063:67:0**
21	**97**	**349**	**08:05:37.133**	**41AA3D**	**40T2R**	**2**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**4,261,063:82:0**
22	97	349	08:29:59.133		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,261,088:00:0
23	97	349	08:29:59.133		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,261,088:00:0
24	97	349	08:29:59.133		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,261,088:00:0
25	97	349	08:29:59.133	465KA6A	6DMST	1105	DMS Slew to TIC	4O0	4	0	4,261,088:00:0
26	97	349	08:30:05.800		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,261,088:10:0
27	97	349	08:30:07.200		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	4O0	4	0	4,261,088:12:1
28	97	349	08:35:23.133	444UA443A4B	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	4,261,093:31:0
29	97	349	09:34:09.266		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *1102.94 +/-	4O0	4	0	4,261,151:42:2
30	97	349	09:34:10.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *1103.00 +/-	4O0	4	0	4,261,151:44:0
31	97	349	09:40:45.800		DMS:	: READY	RDY, TRACK *4, *REV, TIC 1103.00 +/-	4O0	4	0	4,261,158:00:0
32	97	349	09:40:45.800	465KB6A	6DMSC	RDY,4	DMS Control Tape stop	4O0	4	0	4,261,158:00:0
33	97	349	09:51:52.466	165IA4A	7SCAN	NORM,338.056999,	Check S/P Position	4O0	4	0	4,261,168:90:0
34	97	349	09:55:44.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1103.00 +/-	4O0	4	0	4,261,172:74:0
35	97	349	09:55:44.466	175IA422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	4O0	4	0	4,261,172:74:0
36	97	349	09:55:45.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1103.12 +/-	4O0	4	0	4,261,172:76:1
37	97	349	09:55:47.800	118IA	**SMOS**	GS		4O0	4	0	4,261,172:79:0
38	97	349	09:55:51.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1104.35 +/-	4O0	4	0	4,261,172:84:0
39	97	349	09:55:52.333		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *1104.41 +/-	4O0	4	0	4,261,172:85:8
40	97	349	09:55:54.466	165IA4B	7VECT		Inert vect update UTC	4O0	4	0	4,261,172:89:0
41	97	349	09:55:57.133	175IA176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	4O0	4	0	4,261,173:02:0
42	97	349	09:55:57.600		DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC 1038.41 +/-	4O0	4	0	4,261,173:02:7
43	97	349	09:55:57.600		DMS:	**: *RECORD**	R806, TRACK 4, REV, TIC *1038.41 +/-	4O0	4	0	4,261,173:02:7
44	97	349	09:55:57.800	118IA110A111A4A	7STRP	0.0065,0.006001,	Slew =3,5.0	4O0	4	0	4,261,173:03:0
45	97	349	09:56:15.133	118IA110A111B4A	7STRP	0.0075,0.0013,0,	Slew =0,5.0	4O0	4	0	4,261,173:29:0
46	97	349	09:56:23.800	118IA110A111B4B	7STRP	0.0065,0.006001,	Slew =2,5.0	4O0	4	0	4,261,173:42:0
47	97	349	09:56:30.466	175IA422A6B	6DMSC	RDY,0	DMS Control Tape stop	4O0	4	0	4,261,173:52:0
48	97	349	09:56:30.466		DMS:	**: *RUNDOWN**	R806, TRACK 4, REV, TIC * 229.59 +/-	4O0	4	0	4,261,173:52:0
49	97	349	09:56:32.466	118IA11A	**SMOS**	GE		4O0	4	0	4,261,173:55:0
50	97	349	09:56:33.200		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 218.09 +/-	4O0	4	0	4,261,173:56:1
51	97	349	09:57:50.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 218.09 +/-	4O0	4	0	4,261,174:81:0
52	97	349	09:57:50.466	465KC6A	6DTRN	CMD,6DTRN,465KC6	DMS TRACK TURNAROUND	4O0	4	0	4,261,174:81:0
53	97	349	09:57:50.466		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 218.09 +/-	4O0	4	0	4,261,174:81:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	97	349	09:57:51.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 218.21 +/-	4O0	4	0	4,261,174:83:1	
55	97	349	09:57:57.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 219.44 +/-	4O0	4	0	4,261,175:00:0	
56	97	349	09:57:58.333		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 219.50 +/-	4O0	4	0	4,261,175:01:8	
57	97	349	09:57:59.733		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 219.38 +/-	4O0	4	0	4,261,175:03:9	
58	97	349	09:59:22.933		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	4O0	4	0	4,261,176:37:7	
59	97	349	09:59:24.133		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	4O0	4	0	4,261,176:39:5	
60	97	349	09:59:24.133		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	4O0	4	0	4,261,176:39:5	
61	97	349	09:59:25.533		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	4O0	4	0	4,261,176:41:6	
62	97	349	09:59:37.533		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	4O0	4	0	4,261,176:59:6	
63	97	349	09:59:38.733		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	4O0	4	0	4,261,176:61:4	
64	97	349	10:06:55.133	465KD6A	6DMSC	P7,1	DMS Control Tape P/B 7.68kbps	4O0	4	0	4,261,183:79:0	
65	97	349	10:06:55.133		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,261,183:79:0	
66	97	349	10:07:01.800		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	4,261,183:89:0	
67	97	349	10:07:03.200		DMS:	: *P_SLEW	P7, TRACK 1, FWD, TIC * 202.24 +/-	4O0	4	0	4,261,184:00:1	
68	97	349	10:07:03.200		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC 202.24 +/-	4O0	4	0	4,261,184:00:1	
69	97	349	10:08:03.800		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC * 216.45 +/-	4O0	4	0	4,261,185:00:0	
70	97	349	10:08:03.800	465KD6B	6DMSC	RDY,1	DMS Control Tape stop	4O0	4	0	4,261,185:00:0	
71	97	349	10:08:05.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 216.51 +/-	4O0	4	0	4,261,185:01:8	
72	97	349	10:11:41.800	488AA6B	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	4O0	4	0	4,261,188:54:0	
73	97	349	10:56:29.733	488AA6C	6TMSED	NORM,DL2	Sci, Eng, and D/L Chan	4O0	4	0	4,261,232:82:0	
74	97	349	11:34:53.733	488AA6D	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	4O0	4	0	4,261,270:80:0	
75	97	349	12:09:23.733	192GA4A	**7CONE**	**17.4,0.0**	Check S/P Position	4O0	4	0	4,261,305:00:0	
76	97	349	12:12:21.066	176GA6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	4O0	4	0	4,261,307:84:0	
77	97	349	12:14:35.733	176GA6B	6TMREC	**NRC**	NO RECORD Record Mode Change	4O0	4	0	4,261,310:13:0	
78	97	349	12:14:37.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	4O0	4	0	4,261,310:16:0	
79	97	349	12:14:37.733		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 216.51 +/-	4O0	4	0	4,261,310:16:0	
80	97	349	12:14:44.400		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 216.51 +/-	4O0	4	0	4,261,310:26:0	
81	97	349	12:14:45.800		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC * 216.63 +/-	4O0	4	0	4,261,310:28:1	
82	97	349	12:14:47.733		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC * 217.08 +/-	4O0	4	0	4,261,310:31:0	
83	97	349	12:14:59.066	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	4O0	4	0	4,261,310:48:0	
84	97	349	12:14:59.066		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC * 219.74 +/-	4O0	4	0	4,261,310:48:0	
85	97	349	12:15:00.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 219.80 +/-	4O0	4	0	4,261,310:49:8	
86	97	349	12:15:27.733	488AA6E	6TMSED	FILL,DL3	Sci, Eng, and D/L Chan	4O0	4	0	4,261,311:00:0	
87	97	349	12:49:49.733	165CA4A	7SCAN	NORM,227.095999,	Check S/P Position	4O0	4	0	4,261,344:90:0	
88	97	349	12:53:51.733	165CA4B	7VECT		Inert vect update UTC	4O0	4	0	4,261,348:89:0	
89	97	349	13:10:53.733	488AB6A	6TMSED	FILL,DL4	Sci, Eng, and D/L Chan	4O0	4	0	4,261,365:75:0	
90	97	349	13:20:15.733	488AB6B	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4O0	4	0	4,261,375:08:0	
91	97	349	15:42:43.733	165IB4A	7SCAN	NORM,283.255997,	Check S/P Position	4O0	4	0	4,261,515:90:0	
92	97	349	15:47:46.400	175IB422A6A	6DMSC	R806,1	DMS Control	4O0	4	0	4,261,520:89:0	
93	97	349	15:47:46.400		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 219.80 +/-	4O0	4	0	4,261,520:89:0	
94	97	349	15:47:46.400	165IB4B	7VECT		Inert vect update UTC	4O0	4	0	4,261,520:89:0	
95	97	349	15:47:53.066		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 219.80 +/-	4O0	4	0	4,261,521:08:0	
96	97	349	15:47:57.733	175IB176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	4O0	4	0	4,261,521:15:0	
97	97	349	15:47:58.333		DMS:	: *AT_SPD	R806, TRACK 1, FWD, TIC 285.80 +/-	4O0	4	0	4,261,521:15:9	
98	97	349	15:47:58.333		DMS:	**: *RECORD**	R806, TRACK 1, FWD, TIC * 285.80 +/-	4O0	4	0	4,261,521:15:9	
99	97	349	15:48:01.733	175IB422A6B	6DMSC	RDY,0	DMS Control Tape stop	4O0	4	0	4,261,521:21:0	
100	97	349	15:48:01.733		DMS:	**: *RUNDOWN**	R806, TRACK 1, FWD, TIC * 369.47 +/-	4O0	4	0	4,261,521:21:0	
101	97	349	15:48:04.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 380.97 +/-	4O0	4	0	4,261,521:25:1	
102	97	349	15:49:48.400	165CB4A	7SCAN	NORM,222.379999,	Check S/P Position	4O0	4	0	4,261,522:90:0	
103	97	349	15:53:50.400	165CB4B	7VECT		Inert vect update UTC	4O0	4	0	4,261,526:89:0	
104	97	349	17:33:17.733	488AB6C	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	4O0	4	0	4,261,625:31:0	
105	**97**	**349**	**17:45:09.067**	**12NNJUPRTS01-**		**-----START------**		**4O0**	**4**	**0**	**: :**	
106	**97**	**349**	**17:47:10.400**	**20DA5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**260**	**4**	**0**	**4,261,639:06:0**	
107	**97**	**349**	**17:47:11.733**	**20DA5B**	**37MRL**		**Memory Realocate (software operates from R**	**260**	**4**	**0**	**4,261,639:08:0**	
108	**97**	**349**	**17:47:13.066**	**20DA6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**260**	**4**	**0**	**4,261,639:10:0**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
109	**97**	**349**	**17:47:23.066**	**20DA6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**260**	**4**	**0**	**4,261,639:25:0**
110	**97**	**349**	**17:47:33.066**	**20DA5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,261,639:40:0**
111	**97**	**349**	**17:47:53.066**	**20DA5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,261,639:70:0**
112	**97**	**349**	**17:48:15.733**	**20DA4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,261,640:13:0**
113	**97**	**349**	**17:49:16.400**	**20DA4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,261,641:13:0**
114	**97**	**349**	**17:54:06.400**	**127DA4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,261,645:84:0**
115	97	349	17:54:06.400	127DA	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,261,645:84:0
116	**97**	**349**	**17:54:07.066**	**127DA4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,261,645:85:0**
117	97	349	17:54:15.066	127DA11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,261,646:06:0
118	97	349	17:55:07.066	125DA	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,261,646:84:0
119	**97**	**349**	**17:55:07.066**	**125DA4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**4,261,646:84:0**
120	**97**	**349**	**17:55:15.734**	**12JNJUPRTS01***		**-----START------**		**2R3**	**4**	**0**	**: :**
121	**97**	**349**	**17:55:15.734**	**12NNJUPRTS01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**
122	**97**	**349**	**17:56:07.733**	**125DA4B**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**4,261,647:84:0**
123	97	349	17:56:07.733	125DA11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,261,647:84:0
124	97	349	17:56:11.733	165DA4A	7SCAN	NORM,268.684998,	Check S/P Position	2R3	4	0	4,261,647:90:0
125	**97**	**349**	**17:56:32.400**	**432DA6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**2R3**	**4**	**0**	**4,261,648:30:0**
126	97	349	17:57:03.733	117DA	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,261,648:77:0
127	97	349	17:57:11.733	165DA4B	7VECT		Inert vect update UTC	2R3	4	0	4,261,648:89:0
128	97	349	17:57:13.066	117DA105A106A4A	**7STRP**	**-0.0049,0.0,0,0,**	**Slew =,0.03**	2R3	4	0	4,261,649:00:0
129	97	349	17:59:59.066	117DA105A106A4B	**7STRP**	**0.0069,-0.007,0,**	**Slew =12.01**	2R3	4	0	4,261,651:67:0
130	97	349	18:00:11.066	117DA105A106A4C	**7STRP**	**-0.0049,0.0,0,0,**	**Slew =,0.03**	2R3	4	0	4,261,651:85:0
131	97	349	18:02:57.066	117DA105A106A4D	**7STRP**	**0.0069,-0.007,0,**	**Slew =12.01**	2R3	4	0	4,261,654:61:0
132	97	349	18:03:09.066	117DA105A106A4E	**7STRP**	**-0.0049,0.0,0,0,**	**Slew =,0.03**	2R3	4	0	4,261,654:79:0
133	97	349	18:05:55.066	117DA11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,261,657:55:0
134	**97**	**349**	**18:06:37.733**	**432DZ6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**2R3**	**4**	**0**	**4,261,658:28:0**
135	**97**	**349**	**18:10:25.734**	**12JNJUPRTS01***		**-----STOP-------**		**2R3**	**4**	**0**	**: :**
136	97	349	18:54:21.733	488AB6D	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	4,261,705:47:0
137	97	349	18:57:52.400	165CC4A	7SCAN	NORM,301.533997,	Check S/P Position	2R3	4	0	4,261,708:90:0
138	97	349	19:01:54.400	165CC4B	7VECT		Inert vect update UTC	2R3	4	0	4,261,712:89:0
139	97	349	20:02:34.400	488AC6A	6TMSED	FILL,DL4	Sci, Eng, and D/L Chan	2R3	4	0	4,261,772:89:0
140	97	349	20:36:13.733	488AC6B	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	4,261,806:24:0
141	97	349	22:02:54.400	165CE4A	7SCAN	NORM,320.019997,	Check S/P Position	2R3	4	0	4,261,891:90:0
142	97	349	22:03:54.400	165CE4B	7VECT		Inert vect update UTC	2R3	4	0	4,261,892:89:0
143	97	349	22:33:14.400	165CD4A	7SCAN	NORM,323.132999,	Check S/P Position	2R3	4	0	4,261,921:90:0
144	97	349	22:34:14.400	165CD4B	7VECT		Inert vect update UTC	2R3	4	0	4,261,922:89:0
145	97	349	23:03:34.400	165CF4A	7SCAN	NORM,326.553997,	Check S/P Position	2R3	4	0	4,261,951:90:0
146	97	349	23:04:34.400	165CF4B	7VECT		Inert vect update UTC	2R3	4	0	4,261,952:89:0
147	97	349	23:25:17.733	488AC6C	6TMSED	NORM,DL6	Sci, Eng, and D/L Chan	2R3	4	0	4,261,973:43:0
148	**97**	**349**	**23:39:02.400**	**12NNJUPRTS02-**		**-----START------**		**2R3**	**4**	**0**	**: :**
149	**97**	**349**	**23:41:03.733**	**20DB5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**4,261,989:06:0**
150	**97**	**349**	**23:41:05.066**	**20DB5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**4,261,989:08:0**
151	**97**	**349**	**23:41:06.400**	**20DB6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**4,261,989:10:0**
152	**97**	**349**	**23:41:16.400**	**20DB6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**4,261,989:25:0**
153	**97**	**349**	**23:41:26.400**	**20DB5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,261,989:40:0**
154	**97**	**349**	**23:41:46.400**	**20DB5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,261,989:70:0**
155	**97**	**349**	**23:42:09.066**	**20DB4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,261,990:13:0**
156	**97**	**349**	**23:43:09.733**	**20DB4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,261,991:13:0**
157	**97**	**349**	**23:47:59.733**	**127DB4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,261,995:84:0**
158	97	349	23:47:59.733	127DB	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,261,995:84:0
159	**97**	**349**	**23:48:00.400**	**127DB4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,261,995:85:0**
160	97	349	23:48:08.400	127DB11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,261,996:06:0
161	97	349	23:49:00.400	125DB	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,261,996:84:0
162	**97**	**349**	**23:49:00.400**	**125DB4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**4,261,996:84:0**
163	**97**	**349**	**23:49:09.067**	**12NNJUPRTS02-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	**97**	**349**	**23:49:09.067**	**12JNJUPRTS02***		**-----START------**		**2R3**	**4**	**0**	**: :**	
165	**97**	**349**	**23:50:01.066**	**125DB4B**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**4,261,997:84:0**	
166	97	349	23:50:01.066	125DB11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,261,997:84:0	
167	97	349	23:50:05.066	165DB4A	7SCAN	NORM,299.983997,	Check S/P Position	2R3	4	0	4,261,997:90:0	
168	**97**	**349**	**23:53:27.733**	**432DB6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**2R3**	**4**	**0**	**4,262,001:30:0**	
169	97	349	23:53:59.066	117DB	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,001:77:0	
170	97	349	23:54:07.066	165DB4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,001:89:0	
171	97	349	23:54:08.400	117DB105A106A4A	**7STRP**	**0.072627,0.0,0,0**	**Slew =,0.06**	2R3	4	0	4,262,002:00:0	
172	**97**	**350**	**00:13:39.733**	**432DY6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**2R3**	**4**	**0**	**4,262,021:28:0**	
173	97	350	00:14:21.733	117DB11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,022:00:0	
174	**97**	**350**	**00:14:25.734**	**12JNJUPRTS02***		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
175	97	350	00:46:44.400	488AC6D	6TMSED	FILL,DL6	Sci, Eng, and D/L Chan	2R3	4	0	4,262,054:02:0	
176	97	350	01:13:34.400	488AC6E	6TMSED	NORM,DL6	Sci, Eng, and D/L Chan	2R3	4	0	4,262,080:51:0	
177	97	350	03:17:49.733	488AD6A	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	4,262,203:41:0	
178	97	350	05:37:54.400	165IC4A	7SCAN	NORM,223.825998,	Check S/P Position	2R3	4	0	4,262,341:90:0	
179	97	350	05:41:47.733		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 380.97 +/-	2R3	4	0	4,262,345:76:0	
180	97	350	05:41:47.733	175IC422A6A	6DMSC	R806,1	DMS Control	2R3	4	0	4,262,345:76:0	
181	97	350	05:41:54.400		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 380.97 +/-	2R3	4	0	4,262,345:86:0	
182	97	350	05:41:56.400	165IC4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,345:89:0	
183	97	350	05:41:59.066	175IC176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,262,346:02:0	
184	97	350	05:41:59.666		DMS:	**: *RECORD**	R806, TRACK 1, FWD, TIC * 446.97 +/-	2R3	4	0	4,262,346:02:9	
185	97	350	05:41:59.666		DMS:	: *AT_SPD	R806, TRACK 1, FWD, TIC 446.97 +/-	2R3	4	0	4,262,346:02:9	
186	97	350	05:42:01.733	118IC	**SMOS**	GS		2R3	4	0	4,262,346:06:0	
187	97	350	05:42:43.066	118IC110A111A4A	7STRP	-0.0005,0.0075,1	Slew =2,5.0	2R3	4	0	4,262,346:68:0	
188	97	350	05:43:35.066	118IC110A111B4A	7STRP	0.0005,0.0075,0,	Slew =0,5.0	2R3	4	0	4,262,347:55:0	
189	97	350	05:44:25.066		DMS:	**: *RUNDOWN**	R806, TRACK 1, FWD, TIC *4025.17 +/-	2R3	4	0	4,262,348:39:0	
190	97	350	05:44:25.066	175IC422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,348:39:0	
191	97	350	05:44:27.066	118IC110A111B4B	7STRP	-0.0005,0.0075,1	Slew =2,5.0	2R3	4	0	4,262,348:42:0	
192	97	350	05:44:27.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4036.67 +/-	2R3	4	0	4,262,348:43:1	
193	97	350	05:45:19.066	118IC11A	**SMOS**	GE		2R3	4	0	4,262,349:29:0	
194	**97**	**350**	**06:12:21.734**	**12NNJUPRTS03-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
195	**97**	**350**	**06:18:25.733**	**20DC5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**4,262,382:06:0**	
196	**97**	**350**	**06:18:27.066**	**20DC5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**4,262,382:08:0**	
197	**97**	**350**	**06:18:28.400**	**20DC6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**4,262,382:10:0**	
198	**97**	**350**	**06:18:38.400**	**20DC6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**4,262,382:25:0**	
199	**97**	**350**	**06:18:48.400**	**20DC5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,262,382:40:0**	
200	**97**	**350**	**06:19:08.400**	**20DC5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,262,382:70:0**	
201	**97**	**350**	**06:19:31.066**	**20DC4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,262,383:13:0**	
202	**97**	**350**	**06:20:31.733**	**20DC4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,384:13:0**	
203	**97**	**350**	**06:22:28.400**	**12JNJUPRTS03***		**-----START------**		**2R3**	**4**	**0**	**: :**	
204	**97**	**350**	**06:22:28.400**	**12NNJUPRTS03-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
205	97	350	06:23:20.400	125DC	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,262,386:84:0	
206	**97**	**350**	**06:23:20.400**	**125DC4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**4,262,386:84:0**	
207	97	350	06:23:24.400	165DC4A	7SCAN	NORM,336.886997,	Check S/P Position	2R3	4	0	4,262,386:90:0	
208	97	350	06:24:21.066	125DC11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,262,387:84:0	
209	**97**	**350**	**06:24:21.066**	**125DC4B**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**4,262,387:84:0**	
210	97	350	06:26:22.400	127DC	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,262,389:84:0	
211	**97**	**350**	**06:26:22.400**	**127DC4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,389:84:0**	
212	**97**	**350**	**06:26:23.066**	**127DC4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,262,389:85:0**	
213	97	350	06:26:31.066	127DC11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,262,390:06:0	
214	**97**	**350**	**06:26:47.066**	**432DC6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**2R3**	**4**	**0**	**4,262,390:30:0**	
215	97	350	06:27:18.400	117DC	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,390:77:0	
216	97	350	06:27:26.400	165DC4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,390:89:0	
217	97	350	06:27:27.733	117DC105A106A4A	**7STRP**	**0.005,0.0,0,0,0,**	**Slew =,0.03**	2R3	4	0	4,262,391:00:0	
218	97	350	06:29:59.733	488AD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R3	4	0	4,262,393:46:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
219	97	350	06:30:16.400	117DC105A106A4B	**7STRP**	**-0.009,0.007001,**	**Slew =12.01**	2R3	4	0	4,262,393:71:0
220	97	350	06:30:28.400	117DC105A106A4C	**7STRP**	**0.005,0.0,0,0,0,**	**Slew =,0.03**	2R3	4	0	4,262,393:89:0
221	97	350	06:33:17.066	117DC105A106A4D	**7STRP**	**-0.009,0.007001,**	**Slew =12.01**	2R3	4	0	4,262,396:69:0
222	97	350	06:33:29.066	117DC105A106A4E	**7STRP**	**0.005,0.0,0,0,0,**	**Slew =,0.03**	2R3	4	0	4,262,396:87:0
223	97	350	06:36:17.733	117DC11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,399:67:0
224	**97**	**350**	**06:36:52.400**	**432DX6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**2R3**	**4**	**0**	**4,262,400:28:0**
225	**97**	**350**	**06:37:38.400**	**12JNJUPRTS03***		**-----STOP-------**		**2R3**	**4**	**0**	**: :**
226	**97**	**350**	**06:48:45.733**	**12NNGLOBAL01-**		**-----START------**		**2R3**	**4**	**0**	**: :**
227	**97**	**350**	**06:50:47.066**	**20DD5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**4,262,414:06:0**
228	**97**	**350**	**06:50:48.400**	**20DD5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**4,262,414:08:0**
229	**97**	**350**	**06:50:49.733**	**20DD6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**4,262,414:10:0**
230	**97**	**350**	**06:50:59.733**	**20DD6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**4,262,414:25:0**
231	**97**	**350**	**06:51:09.733**	**20DD5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,262,414:40:0**
232	**97**	**350**	**06:51:29.733**	**20DD5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,262,414:70:0**
233	**97**	**350**	**06:51:52.400**	**20DD4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,262,415:13:0**
234	**97**	**350**	**06:52:53.066**	**20DD4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,416:13:0**
235	97	350	06:57:43.066	127DD	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,262,420:84:0
236	**97**	**350**	**06:57:43.066**	**127DD4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,420:84:0**
237	**97**	**350**	**06:57:43.733**	**127DD4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,262,420:85:0**
238	97	350	06:57:51.733	127DD11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,262,421:06:0
239	97	350	06:58:43.733	125DD	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,262,421:84:0
240	**97**	**350**	**06:58:43.733**	**125DD4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**4,262,421:84:0**
241	**97**	**350**	**06:58:52.400**	**12NNGLOBAL01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**
242	**97**	**350**	**06:58:52.400**	**12ENGLOBAL01-**		**-----START------**		**2R3**	**4**	**0**	**: :**
243	97	350	06:59:44.400	125DD11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,262,422:84:0
244	**97**	**350**	**06:59:44.400**	**125DD4B**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**4,262,422:84:0**
245	97	350	06:59:48.400	165DD4A	7SCAN	NORM,225.785,-19	Check S/P Position	2R3	4	0	4,262,422:90:0
246	97	350	07:03:38.400		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4036.67 +/-	2R3	4	0	4,262,426:71:0
247	97	350	07:03:38.400	175DD422A6A	6DMSC	R28,1	DMS Control	2R3	4	0	4,262,426:71:0
248	97	350	07:03:42.400	117DD	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,426:77:0
249	97	350	07:03:45.066		DMS:	: *RUNUP	R28, TRACK 1, FWD, TIC 4036.67 +/-	2R3	4	0	4,262,426:81:0
250	97	350	07:03:48.400	175DD176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,262,426:86:0
251	97	350	07:03:49.066		DMS:	: *AT_SPD	R28, TRACK 1, FWD, TIC 4038.17 +/-	2R3	4	0	4,262,426:87:0
252	97	350	07:03:49.066		DMS:	**: *RECORD**	R28, TRACK 1, FWD, TIC *4038.17 +/-	2R3	4	0	4,262,426:87:0
253	97	350	07:03:51.733	117DD105A106A4A	**7STRP**	**-0.014301,0.0,0,**	**Slew =,0.03**	2R3	4	0	4,262,427:00:0
254	97	350	07:11:51.733	117DD105A106A4B	**7STRP**	**0.016001,-0.007,**	**Slew =12.01**	2R3	4	0	4,262,434:83:0
255	97	350	07:11:58.400	117DD105A106A4C	**7STRP**	**-0.014301,0.0,0,**	**Slew =,0.03**	2R3	4	0	4,262,435:02:0
256	**97**	**350**	**07:12:00.400**	**12ENGLOBAL01-**	**NIMPBK**	**301ED**	**EUROPA GLOBAL**	**2R3**	**4**	**0**	**: :**
257	**97**	**350**	**07:14:55.066**	**12ENGLBAL01B-**	**NIMPBK**	**301DQ**	**EUROPA GLOBAL**	**2R3**	**4**	**0**	**: :**
258	**97**	**350**	**07:16:03.066**	**12ENGLOBAL01-**	**DESELC**	**300ED**	**EUROPA GLOBAL**	**2R3**	**4**	**0**	**: :**
259	97	350	07:19:58.400	117DD105A106A4D	**7STRP**	**0.016001,-0.007,**	**Slew =12.01**	2R3	4	0	4,262,442:85:0
260	**97**	**350**	**07:19:58.400**	**12ENGLBAL01B-**	**DESELC**	**300DQ**	**EUROPA GLOBAL**	**2R3**	**4**	**0**	**: :**
261	97	350	07:20:05.066	117DD105A106A4E	**7STRP**	**-0.014301,0.0,0,**	**Slew =,0.03**	2R3	4	0	4,262,443:04:0
262	**97**	**350**	**07:23:01.733**	**12ENGLBAL01B-**	**NIMPBK**	**301EQ**	**EUROPA GLOBAL**	**2R3**	**4**	**0**	**: :**
263	97	350	07:28:05.066	117DD105A106A4F	**7STRP**	**0.016001,-0.007,**	**Slew =12.01**	2R3	4	0	4,262,450:87:0
264	**97**	**350**	**07:28:05.066**	**12ENGLBAL01B-**	**DESELC**	**300EQ**	**EUROPA GLOBAL**	**2R3**	**4**	**0**	**: :**
265	97	350	07:28:11.733	117DD105A106A4G	**7STRP**	**-0.014301,0.0,0,**	**Slew =,0.03**	2R3	4	0	4,262,451:06:0
266	97	350	07:36:11.733	117DD11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,458:89:0
267	97	350	07:37:39.733	175DD422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,460:39:0
268	97	350	07:37:39.733		DMS:	**: *RUNDOWN**	R28, TRACK 1, FWD, TIC *5822.94 +/-	2R3	4	0	4,262,460:39:0
269	97	350	07:37:40.933		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5823.24 +/-	2R3	4	0	4,262,460:40:8
270	**97**	**350**	**07:38:18.400**	**12ENGLOBAL01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**
271	97	350	07:40:09.066		DMS:	: *DMS-TURN	P7, TRACK 1, FWD, TIC 5823.24 +/-	2R3	4	0	4,262,462:81:0
272	97	350	07:40:09.066		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5823.24 +/-	2R3	4	0	4,262,462:81:0
273	97	350	07:40:09.066	465KE6A	6DTRN	CMD,6DTRN,465KE6	DMS TRACK TURNAROUND	2R3	4	0	4,262,462:81:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	97	350	07:40:15.733		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 5823.24 +/-	2R3	4	0	4,262,463:00:0	
275	97	350	07:40:17.133		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *5823.36 +/-	2R3	4	0	4,262,463:02:1	
276	97	350	07:54:48.666		DMS:	: *REVERSE	P7, TRACK 1, FWD, TIC *6027.63 +/-	2R3	4	0	4,262,477:35:4	
277	97	350	07:54:49.866		DMS:	: *RUNUP	P7, TRACK 2, REV, TIC 6027.69 +/-	2R3	4	0	4,262,477:37:2	
278	97	350	07:54:49.866		DMS:	: *TURNARND	P7, TRACK *2, *REV, TIC *6027.69 +/-	2R3	4	0	4,262,477:37:2	
279	97	350	07:54:51.266		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC *6027.57 +/-	2R3	4	0	4,262,477:39:3	
280	97	350	07:55:03.266		DMS:	: *AUTOSTOP	P7, TRACK 2, REV, TIC *6025.44 +/-	2R3	4	0	4,262,477:57:3	
281	97	350	07:55:04.466		DMS:	: *READY	RDY, TRACK 2, REV, TIC *6025.38 +/-	2R3	4	0	4,262,477:59:1	
282	97	350	08:00:19.733	465KF6A	6DMSC	P7,2	DMS Control Tape P/B 7.68kbps	2R3	4	0	4,262,482:77:0	
283	97	350	08:00:19.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 6025.38 +/-	2R3	4	0	4,262,482:77:0	
284	97	350	08:00:21.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6025.50 +/-	2R3	4	0	4,262,482:79:1	
285	97	350	08:00:26.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6026.73 +/-	2R3	4	0	4,262,482:87:0	
286	97	350	08:00:27.600		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC *6026.79 +/-	2R3	4	0	4,262,482:88:8	
287	97	350	08:00:29.000		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC 6026.67 +/-	2R3	4	0	4,262,482:90:9	
288	97	350	08:00:29.000		DMS:	: *P_SLEW	P7, TRACK 2, REV, TIC *6026.67 +/-	2R3	4	0	4,262,482:90:9	
289	97	350	08:01:36.400		DMS:	**: *RUNDOWN**	P7, TRACK 2, REV, TIC *6010.87 +/-	2R3	4	0	4,262,484:10:0	
290	97	350	08:01:36.400	465KF6B	6DMSC	RDY,2	DMS Control Tape stop	2R3	4	0	4,262,484:10:0	
291	97	350	08:01:37.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC *6010.81 +/-	2R3	4	0	4,262,484:11:8	
292	97	350	08:04:48.400	175NA422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	4,262,487:25:0	
293	97	350	08:04:48.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 6010.81 +/-	2R3	4	0	4,262,487:25:0	
294	97	350	08:04:49.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6010.93 +/-	2R3	4	0	4,262,487:27:1	
295	97	350	08:04:55.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6012.17 +/-	2R3	4	0	4,262,487:35:0	
296	97	350	08:04:56.266		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *6012.23 +/-	2R3	4	0	4,262,487:36:8	
297	97	350	08:04:59.733	175NA176A6A	6TMREC	HPW	115.2 KBPS PWS RECORD Record Mode Change	2R3	4	0	4,262,487:42:0	
298	97	350	08:05:00.266		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 6005.93 +/-	2R3	4	0	4,262,487:42:8	
299	97	350	08:05:00.266		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *6005.93 +/-	2R3	4	0	4,262,487:42:8	
300	97	350	08:09:33.733	175NA422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,491:89:0	
301	97	350	08:09:33.733		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *5044.52 +/-	2R3	4	0	4,262,491:89:0	
302	97	350	08:09:34.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5043.52 +/-	2R3	4	0	4,262,491:90:8	
303	97	350	09:56:45.066	165GB4A	7SCAN	NORM,230.473,-20	Check S/P Position	2R3	4	0	4,262,597:90:0	
304	97	350	09:56:45.733	488AE6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R3	4	0	4,262,598:00:0	
305	97	350	09:59:43.066	176GB6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,262,600:84:0	
306	97	350	10:00:39.066	117GB	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,601:77:0	
307	97	350	10:00:48.400	117GB105A106A4A	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,602:00:0	
308	97	350	10:02:22.400	117GB105A106A4B	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,603:50:0	
309	97	350	10:02:29.066	117GB105A106A4C	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,603:60:0	
310	97	350	10:04:03.066	117GB105A106A4D	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,605:19:0	
311	97	350	10:04:09.733	117GB105A106A4E	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,605:29:0	
312	97	350	10:05:43.733	117GB105A106A4F	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,606:79:0	
313	97	350	10:05:50.400	117GB105A106A4G	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,606:89:0	
314	97	350	10:07:24.400	117GB105A106A4H	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,608:48:0	
315	97	350	10:07:31.066	117GB105A106A4I	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,608:58:0	
316	97	350	10:09:05.066	117GB105A106A4J	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,610:17:0	
317	97	350	10:09:11.733	117GB105A106A4K	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,610:27:0	
318	97	350	10:10:45.733	117GB105A106A4L	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,611:77:0	
319	97	350	10:10:52.400	117GB105A106A4M	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,611:87:0	
320	97	350	10:12:26.400	117GB105A106A4N	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,613:46:0	
321	97	350	10:12:33.066	117GB105A106A4O	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,613:56:0	
322	97	350	10:13:37.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5043.52 +/-	2R3	4	0	4,262,614:61:0	
323	97	350	10:13:37.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,614:61:0	
324	97	350	10:13:38.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5043.64 +/-	2R3	4	0	4,262,614:63:1	
325	97	350	10:13:43.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5044.88 +/-	2R3	4	0	4,262,614:71:0	
326	97	350	10:13:44.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *5044.94 +/-	2R3	4	0	4,262,614:72:8	
327	97	350	10:13:46.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *5044.82 +/-	2R3	4	0	4,262,614:74:9	
328	97	350	10:14:05.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *5040.43 +/-	2R3	4	0	4,262,615:12:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	97	350	10:14:07.066	117GB105A106A4P	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,615:15:0	
330	97	350	10:14:13.733	117GB105A106A4Q	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,615:25:0	
331	97	350	10:14:27.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *5035.11 +/-	2R3	4	0	4,262,615:46:0	
332	97	350	10:14:27.733	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,615:46:0	
333	97	350	10:14:28.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5035.05 +/-	2R3	4	0	4,262,615:47:8	
334	97	350	10:15:47.733	117GB105A106A4R	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,616:75:0	
335	97	350	10:15:54.400	117GB105A106A4S	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,616:85:0	
336	97	350	10:17:28.400	117GB105A106A4T	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,618:44:0	
337	97	350	10:17:35.066	117GB105A106A4U	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,618:54:0	
338	97	350	10:19:09.066	117GB105A106A4V	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,620:13:0	
339	97	350	10:19:15.733	117GB105A106A4W	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,620:23:0	
340	97	350	10:20:49.733	117GB105A106A4X	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,621:73:0	
341	97	350	10:20:56.400	117GB105A106A4Y	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,621:83:0	
342	97	350	10:22:30.400	117GB105A106A4Z	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,623:42:0	
343	97	350	10:22:37.066	117GB105A106A4AA	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,623:52:0	
344	97	350	10:24:11.066	117GB105A106A4AB	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,625:11:0	
345	97	350	10:24:17.733	117GB105A106A4AC	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,625:21:0	
346	97	350	10:25:51.733	117GB105A106A4AD	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,626:71:0	
347	97	350	10:25:58.400	117GB105A106A4AE	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,626:81:0	
348	97	350	10:27:32.400	117GB105A106A4AF	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,628:40:0	
349	97	350	10:27:39.066	117GB105A106A4AG	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,628:50:0	
350	97	350	10:28:01.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,628:83:0	
351	97	350	10:28:01.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5035.05 +/-	2R3	4	0	4,262,628:83:0	
352	97	350	10:28:02.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5035.17 +/-	2R3	4	0	4,262,628:85:1	
353	97	350	10:28:07.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5036.41 +/-	2R3	4	0	4,262,629:02:0	
354	97	350	10:28:08.933		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *5036.47 +/-	2R3	4	0	4,262,629:03:8	
355	97	350	10:28:10.333		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *5036.35 +/-	2R3	4	0	4,262,629:05:9	
356	97	350	10:28:29.066		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *5031.96 +/-	2R3	4	0	4,262,629:34:0	
357	97	350	10:28:51.733		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *5026.65 +/-	2R3	4	0	4,262,629:68:0	
358	97	350	10:28:51.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,629:68:0	
359	97	350	10:28:52.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5026.59 +/-	2R3	4	0	4,262,629:69:8	
360	97	350	10:29:13.066	117GB105A106A4AH	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,630:09:0	
361	97	350	10:29:19.733	117GB105A106A4AI	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,630:19:0	
362	97	350	10:30:53.733	117GB105A106A4AJ	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,631:69:0	
363	97	350	10:31:00.400	117GB105A106A4AK	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,631:79:0	
364	97	350	10:32:34.400	117GB105A106A4AL	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,633:38:0	
365	97	350	10:32:41.066	117GB105A106A4AM	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,633:48:0	
366	97	350	10:34:15.066	117GB105A106A4AN	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,635:07:0	
367	97	350	10:34:21.733	117GB105A106A4AO	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,635:17:0	
368	97	350	10:35:55.733	117GB105A106A4AP	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,636:67:0	
369	97	350	10:36:02.400	117GB105A106A4AQ	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,636:77:0	
370	97	350	10:37:36.400	117GB105A106A4AR	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,638:36:0	
371	97	350	10:37:43.066	117GB105A106A4AS	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,638:46:0	
372	97	350	10:38:38.400	488AE6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2R3	4	0	4,262,639:38:0	
373	97	350	10:39:17.066	117GB105A106A4AT	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,640:05:0	
374	97	350	10:39:23.733	117GB105A106A4AU	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,640:15:0	
375	97	350	10:40:57.733	117GB105A106A4AV	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,641:65:0	
376	97	350	10:41:04.400	117GB105A106A4AW	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,641:75:0	
377	97	350	10:42:25.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5026.59 +/-	2R3	4	0	4,262,643:15:0	
378	97	350	10:42:25.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,643:15:0	
379	97	350	10:42:27.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5026.71 +/-	2R3	4	0	4,262,643:17:1	
380	97	350	10:42:32.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5027.94 +/-	2R3	4	0	4,262,643:25:0	
381	97	350	10:42:33.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *5028.00 +/-	2R3	4	0	4,262,643:26:8	
382	97	350	10:42:35.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *5027.88 +/-	2R3	4	0	4,262,643:28:9	
383	97	350	10:42:38.400	117GB105A106A4AX	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,643:34:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	97	350	10:42:45.066	117GB105A106A4AY	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,643:44:0	
385	97	350	10:42:53.733		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *5023.49 +/-	2R3	4	0	4,262,643:57:0	
386	97	350	10:43:16.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,644:00:0	
387	97	350	10:43:16.400		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *5018.18 +/-	2R3	4	0	4,262,644:00:0	
388	97	350	10:43:17.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5018.12 +/-	2R3	4	0	4,262,644:01:8	
389	97	350	10:44:19.066	117GB105A106A4AZ	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,645:03:0	
390	97	350	10:44:25.733	117GB105A106A4BA	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,645:13:0	
391	97	350	10:45:59.733	117GB105A106A4BB	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,646:63:0	
392	97	350	10:46:06.400	117GB105A106A4BC	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,646:73:0	
393	97	350	10:47:40.400	117GB105A106A4BD	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,648:32:0	
394	97	350	10:47:47.066	117GB105A106A4BE	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,648:42:0	
395	97	350	10:49:21.066	117GB105A106A4BF	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,650:01:0	
396	97	350	10:49:27.733	117GB105A106A4BG	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,650:11:0	
397	97	350	10:51:01.733	117GB105A106A4BH	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,651:61:0	
398	97	350	10:51:08.400	117GB105A106A4BI	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,651:71:0	
399	97	350	10:52:42.400	117GB105A106A4BJ	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,653:30:0	
400	97	350	10:52:49.066	117GB105A106A4BK	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,653:40:0	
401	97	350	10:54:23.066	117GB105A106A4BL	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,654:90:0	
402	97	350	10:54:29.733	117GB105A106A4BM	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,655:09:0	
403	97	350	10:56:03.733	117GB105A106A4BN	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,656:59:0	
404	97	350	10:56:10.400	117GB105A106A4BO	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,656:69:0	
405	97	350	10:56:50.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5018.12 +/-	2R3	4	0	4,262,657:38:0	
406	97	350	10:56:50.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,657:38:0	
407	97	350	10:56:51.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5018.24 +/-	2R3	4	0	4,262,657:40:1	
408	97	350	10:56:57.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5019.47 +/-	2R3	4	0	4,262,657:48:0	
409	97	350	10:56:58.266		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *5019.53 +/-	2R3	4	0	4,262,657:49:8	
410	97	350	10:56:59.666		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *5019.41 +/-	2R3	4	0	4,262,657:51:9	
411	97	350	10:57:18.400		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *5015.02 +/-	2R3	4	0	4,262,657:80:0	
412	97	350	10:57:41.066		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *5009.71 +/-	2R3	4	0	4,262,658:23:0	
413	97	350	10:57:41.066	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,658:23:0	
414	97	350	10:57:42.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5009.65 +/-	2R3	4	0	4,262,658:24:8	
415	97	350	10:57:44.400	117GB105A106A4BP	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,658:28:0	
416	97	350	10:57:51.066	117GB105A106A4BQ	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,658:38:0	
417	97	350	10:59:25.066	117GB105A106A4BR	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,659:88:0	
418	97	350	10:59:31.733	117GB105A106A4BS	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,660:07:0	
419	97	350	11:01:05.733	117GB105A106A4BT	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,661:57:0	
420	97	350	11:01:12.400	117GB105A106A4BU	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,661:67:0	
421	97	350	11:02:46.400	117GB105A106A4BV	7STRP	0.028908,-0.0011	Slew =12.01	2R3	4	0	4,262,663:26:0	
422	97	350	11:02:53.066	117GB105A106A4BW	7STRP	-0.027707,0.0,0,	Slew =,0.31	2R3	4	0	4,262,663:36:0	
423	97	350	11:04:27.066	117GB105A106B4A	7STRP	0.095287,0.0,0,0	Slew =12.01	2R3	4	0	4,262,664:86:0	
424	97	350	11:04:40.400	117GB105A106B4B	7STRP	0.0,0.0,0,0,0,0,	Slew =,0.31	2R3	4	0	4,262,665:15:0	
425	**97**	**350**	**11:05:35.066**	**12NNDLINEA01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
426	97	350	11:05:41.066	117GB11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,666:15:0	
427	97	350	11:06:31.733	176GB6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	4,262,667:00:0	
428	97	350	11:06:33.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5009.65 +/-	2R3	4	0	4,262,667:03:0	
429	97	350	11:06:33.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,667:03:0	
430	97	350	11:06:35.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5009.77 +/-	2R3	4	0	4,262,667:05:1	
431	**97**	**350**	**11:06:37.066**	**20DE5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**4,262,667:08:0**	
432	**97**	**350**	**11:06:38.400**	**20DE6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**4,262,667:10:0**	
433	97	350	11:06:40.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5011.00 +/-	2R3	4	0	4,262,667:13:0	
434	97	350	11:06:41.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *5011.06 +/-	2R3	4	0	4,262,667:14:8	
435	97	350	11:06:43.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *5010.94 +/-	2R3	4	0	4,262,667:16:9	
436	97	350	11:06:43.733		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *5010.77 +/-	2R3	4	0	4,262,667:18:0	
437	**97**	**350**	**11:06:48.400**	**20DE6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**4,262,667:25:0**	
438	**97**	**350**	**11:06:58.400**	**20DE5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,262,667:40:0**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	97	350	11:07:01.066	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	260	4	0	4,262,667:44:0	
440	97	350	11:07:01.066		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *5006.71 +/-	260	4	0	4,262,667:44:0	
441	97	350	11:07:02.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5006.65 +/-	260	4	0	4,262,667:45:8	
442	**97**	**350**	**11:07:18.400**	**20DE5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,262,667:70:0**	
443	**97**	**350**	**11:07:36.400**	**20DE5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**260**	**4**	**0**	**4,262,668:06:0**	
444	**97**	**350**	**11:07:41.066**	**20DE4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,262,668:13:0**	
445	**97**	**350**	**11:08:41.733**	**20DE4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,669:13:0**	
446	97	350	11:09:16.400	20YK6B	6CKSUM	MAG,4040,46F0		2R3	4	0	4,262,669:65:0	
447	97	350	11:09:33.066	165ID4A	7SCAN	NORM,230.681,-24	Check S/P Position	2R3	4	0	4,262,669:90:0	
448	97	350	11:11:23.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5006.65 +/-	2R3	4	0	4,262,671:74:0	
449	97	350	11:11:23.733	175ID422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	4,262,671:74:0	
450	97	350	11:11:25.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5006.77 +/-	2R3	4	0	4,262,671:76:1	
451	97	350	11:11:30.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5008.00 +/-	2R3	4	0	4,262,671:84:0	
452	97	350	11:11:31.600		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *5008.06 +/-	2R3	4	0	4,262,671:85:8	
453	97	350	11:11:33.733	165ID4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,671:89:0	
454	97	350	11:11:36.400	175ID176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,262,672:02:0	
455	97	350	11:11:36.866		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *4942.06 +/-	2R3	4	0	4,262,672:02:7	
456	97	350	11:11:36.866		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 4942.06 +/-	2R3	4	0	4,262,672:02:7	
457	97	350	11:11:43.733	175ID422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,672:13:0	
458	97	350	11:11:43.733		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *4773.08 +/-	2R3	4	0	4,262,672:13:0	
459	97	350	11:11:46.466		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4761.58 +/-	2R3	4	0	4,262,672:17:1	
460	97	350	11:12:35.066	165IE4A	7SCAN	NORM,229.917999,	Check S/P Position	2R3	4	0	4,262,672:90:0	
461	97	350	11:12:39.733	118IE	**SMOS**	GS		2R3	4	0	4,262,673:06:0	
462	97	350	11:13:07.733	175IE422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	4,262,673:48:0	
463	97	350	11:13:07.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4761.58 +/-	2R3	4	0	4,262,673:48:0	
464	97	350	11:13:09.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4761.70 +/-	2R3	4	0	4,262,673:50:1	
465	97	350	11:13:14.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4762.93 +/-	2R3	4	0	4,262,673:58:0	
466	97	350	11:13:15.600		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *4762.99 +/-	2R3	4	0	4,262,673:59:8	
467	97	350	11:13:17.733	165IE4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,673:63:0	
468	97	350	11:13:20.400	175IE176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,262,673:67:0	
469	97	350	11:13:20.866		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 4696.99 +/- 1	2R3	4	0	4,262,673:67:7	
470	97	350	11:13:20.866		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *4696.99 +/-	2R3	4	0	4,262,673:67:7	
471	97	350	11:13:21.066	118IE110A111A4A	7STRP	-0.0074,0.0,26,0	Slew =,3.01	2R3	4	0	4,262,673:68:0	
472	97	350	11:13:29.733	118IE110A111B4A	7STRP	0.0074,-0.0074,0	Slew =,3.01	2R3	4	0	4,262,673:81:0	
473	97	350	11:13:31.733	125DE	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,262,673:84:0	
474	**97**	**350**	**11:13:31.733**	**125DE4A**	**37IST**	**0,2,0,OFF,0,1,2**	**Gain State 3**	**3R3**	**4**	**0**	**4,262,673:84:0**	
475	97	350	11:13:38.400	118IE110A111B4B	7STRP	-0.0074,0.0,26,0	Slew =,3.01	3R3	4	0	4,262,674:03:0	
476	97	350	11:13:47.066	118IE110A111A4B	7STRP	0.0074,0.0074,0,	Slew =,3.01	3R3	4	0	4,262,674:16:0	
477	97	350	11:13:55.733	118IE110A111A4C	7STRP	-0.0074,0.0,26,0	Slew =,3.01	3R3	4	0	4,262,674:29:0	
478	97	350	11:14:04.400	118IE110A111B4C	7STRP	0.0074,-0.0074,0	Slew =,3.01	3R3	4	0	4,262,674:42:0	
479	97	350	11:14:13.066	118IE110A111B4D	7STRP	-0.0074,0.0,26,0	Slew =,3.01	3R3	4	0	4,262,674:55:0	
480	97	350	11:14:21.733	118IE110A111A4D	7STRP	0.0074,0.0074,0,	Slew =,3.01	3R3	4	0	4,262,674:68:0	
481	97	350	11:14:30.400	118IE110A111A4E	7STRP	-0.0074,0.0,26,0	Slew =,3.01	3R3	4	0	4,262,674:81:0	
482	97	350	11:14:32.400	125DE11A	NIMSINIT	GE	##### GROUP END INIT	3R3	4	0	4,262,674:84:0	
483	**97**	**350**	**11:14:32.400**	**125DE4B**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**3R3**	**4**	**0**	**4,262,674:84:0**	
484	97	350	11:14:39.066	118IE110A111B4E	7STRP	0.0074,-0.0074,0	Slew =,3.01	3R3	4	0	4,262,675:03:0	
485	97	350	11:14:47.733	118IE110A111B4F	7STRP	-0.0074,0.0,26,0	Slew =,3.01	3R3	4	0	4,262,675:16:0	
486	97	350	11:14:56.400	118IE110A111A4F	7STRP	0.0074,0.0074,0,	Slew =,3.01	3R3	4	0	4,262,675:29:0	
487	97	350	11:15:05.066	118IE110A111A4G	7STRP	-0.0074,0.0,26,0	Slew =,3.01	3R3	4	0	4,262,675:42:0	
488	97	350	11:15:13.733	118IE110A111B4G	7STRP	0.0074,-0.0074,0	Slew =,3.01	3R3	4	0	4,262,675:55:0	
489	97	350	11:15:22.400	118IE110A111B4H	7STRP	-0.0074,0.0,26,0	Slew =,3.01	3R3	4	0	4,262,675:68:0	
490	97	350	11:15:31.066	118IE11A	**SMOS**	GE		3R3	4	0	4,262,675:81:0	
491	97	350	11:15:31.733	20YK6C	6MROH		12 read from LLM1A12,2282,0,A2	3R3	4	0	4,262,675:82:0	
492	97	350	11:15:31.733	20YK6C	6MROH	12,2282,0,A2	read from LLM1A12,2282,0,A2	3R3	4	0	4,262,675:82:0	
493	97	350	11:15:37.733	175IE422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	4,262,676:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
494	97	350	11:15:37.733		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *1328.79 +/- 1	3R3	4	0	4,262,676:00:0
495	97	350	11:15:40.466		DMS:	: *READY	RDY, TRACK 2, REV, TIC *1317.29 +/- 1	3R3	4	0	4,262,676:04:1
496	**97**	**350**	**11:15:41.733**	**12NNDLINEA01-**		**-----STOP-------**		**3R3**	**4**	**0**	**: :**
497	**97**	**350**	**11:15:41.733**	**12ENDLINEA01-**		**-----START------**		**3R3**	**4**	**0**	**: :**
498	97	350	11:16:37.733	165DE4A	7SCAN	NORM,229.875,-18	Check S/P Position	3R3	4	0	4,262,676:90:0
499	97	350	11:17:24.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1317.29 +/- 1	3R3	4	0	4,262,677:69:0
500	97	350	11:17:24.400	175DE422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	3R3	4	0	4,262,677:69:0
501	97	350	11:17:25.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1317.41 +/- 1	3R3	4	0	4,262,677:71:1
502	97	350	11:17:29.733	117DE	**CSMOS**	GS	***** GROUP START CSMOS	3R3	4	0	4,262,677:77:0
503	97	350	11:17:31.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1318.64 +/- 1	3R3	4	0	4,262,677:79:0
504	97	350	11:17:32.266		DMS:	: *RUNUP	R28, TRACK *2, *REV, TIC *1318.70 +/- 1	3R3	4	0	4,262,677:80:8
505	**97**	**350**	**11:17:34.400**	**127DE4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**3R3**	**4**	**0**	**4,262,677:84:0**
506	97	350	11:17:34.400	127DE	NIMSTAB	GS	%%%%% GROUP START TAB	3R3	4	0	4,262,677:84:0
507	**97**	**350**	**11:17:35.066**	**127DE4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**3R3**	**4**	**0**	**4,262,677:85:0**
508	97	350	11:17:35.733	175DE176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	3R3	4	0	4,262,677:86:0
509	97	350	11:17:36.266		DMS:	**: *RECORD**	R28, TRACK 2, REV, TIC *1317.20 +/- 1	3R3	4	0	4,262,677:86:8
510	97	350	11:17:36.266		DMS:	: *AT_SPD	R28, TRACK 2, REV, TIC 1317.20 +/- 1	3R3	4	0	4,262,677:86:8
511	97	350	11:17:37.733	165DE4B	7VECT		Inert vect update UTC	3R3	4	0	4,262,677:89:0
512	**97**	**350**	**11:17:39.066**	**12ENDLINEA01-**	**NIMPBK**	**301DE**	**SURFACE COMP. AND MINOS LINEA**	**3R3**	**4**	**0**	**: :**
513	97	350	11:17:39.066	117DE105A106A4A	**7STRP**	**0.012501,0.0,0,0**	**Slew =,0.03**	3R3	4	0	4,262,678:00:0
514	97	350	11:17:43.066	127DE11A	NIMSTAB	GE	%%%%% GROUP END TAB	3R3	4	0	4,262,678:06:0
515	**97**	**350**	**11:21:09.733**	**12ENDLINEA01-**	**DESELC**	**300DE**	**SURFACE COMP. AND MINOS LINEA**	**3R3**	**4**	**0**	**: :**
516	97	350	11:24:41.066	175DE422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	4,262,684:87:0
517	97	350	11:24:41.066		DMS:	**: *RUNDOWN**	R28, TRACK 2, REV, TIC * 943.84 +/- 1	3R3	4	0	4,262,684:87:0
518	97	350	11:24:42.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 943.54 +/- 1	3R3	4	0	4,262,684:88:8
519	97	350	11:24:43.733	117DE11A	**CSMOS**	GE	***** GROUP END CSMOS	3R3	4	0	4,262,685:00:0
520	**97**	**350**	**11:24:47.733**	**12ENDLINEA01-**		**-----STOP-------**		**3R3**	**4**	**0**	**: :**
521	97	350	11:25:43.733	165IF4A	7SCAN	NORM,229.875999,	Check S/P Position	3R3	4	0	4,262,685:90:0
522	97	350	11:26:33.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 943.54 +/- 1	3R3	4	0	4,262,686:74:0
523	97	350	11:26:33.733	175IF422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	3R3	4	0	4,262,686:74:0
524	97	350	11:26:35.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 943.66 +/- 1	3R3	4	0	4,262,686:76:1
525	97	350	11:26:40.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 944.90 +/- 1	3R3	4	0	4,262,686:84:0
526	97	350	11:26:41.600		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC * 944.96 +/- 1	3R3	4	0	4,262,686:85:8
527	97	350	11:26:43.733	165IF4B	7VECT		Inert vect update UTC	3R3	4	0	4,262,686:89:0
528	97	350	11:26:46.400	175IF176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	3R3	4	0	4,262,687:02:0
529	97	350	11:26:46.866		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 878.96 +/- 1	3R3	4	0	4,262,687:02:7
530	97	350	11:26:46.866		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC * 878.96 +/- 1	3R3	4	0	4,262,687:02:7
531	97	350	11:27:11.066	175IF422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	4,262,687:39:0
532	97	350	11:27:11.066		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC * 283.41 +/- 1	3R3	4	0	4,262,687:39:0
533	97	350	11:27:13.800		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 271.91 +/- 1	3R3	4	0	4,262,687:43:1
534	97	350	11:27:36.400	20YT6B	6CKSUM	MAG,4040,46F0		3R3	4	0	4,262,687:77:0
535	97	350	11:29:40.400		DMS:	: *DMS-TURN	P7, TRACK 2, REV, TIC 271.91 +/- 1	3R3	4	0	4,262,689:81:0
536	97	350	11:29:40.400	465KG6A	6DTRN	CMD,6DTRN,465KG6	DMS TRACK TURNAROUND	3R3	4	0	4,262,689:81:0
537	97	350	11:29:40.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 271.91 +/- 1	3R3	4	0	4,262,689:81:0
538	97	350	11:29:41.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 272.03 +/- 1	3R3	4	0	4,262,689:83:1
539	97	350	11:29:47.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 273.27 +/- 1	3R3	4	0	4,262,690:00:0
540	97	350	11:29:48.266		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC * 273.33 +/- 1	3R3	4	0	4,262,690:01:8
541	97	350	11:29:49.666		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC * 273.21 +/- 1	3R3	4	0	4,262,690:03:9
542	**97**	**350**	**11:31:52.400**	**12NNCPWYLL01-**		**-----START------**		**3R3**	**4**	**0**	**: :**
543	**97**	**350**	**11:33:53.733**	**20DF5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**3R3**	**4**	**0**	**4,262,694:06:0**
544	**97**	**350**	**11:33:55.066**	**20DF5B**	**37MRL**		**Memory Realocate (software operates from R**	**3R3**	**4**	**0**	**4,262,694:08:0**
545	**97**	**350**	**11:33:56.400**	**20DF6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**3R3**	**4**	**0**	**4,262,694:10:0**
546	**97**	**350**	**11:34:06.400**	**20DF6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**3R3**	**4**	**0**	**4,262,694:25:0**
547	**97**	**350**	**11:34:16.400**	**20DF5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,262,694:40:0**
548	**97**	**350**	**11:34:36.400**	**20DF5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,262,694:70:0**

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	**97**	**350**	**11:34:59.066**	**20DF4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,262,695:13:0**	
550	97	350	11:35:02.533		DMS:	: *REVERSE	P7, TRACK 2, REV, TIC * 199.87 +/- 1	2R0	4	0	4,262,695:18:2	
551	97	350	11:35:03.733		DMS:	: *TURNARND	P7, TRACK *3, *FWD, TIC * 199.81 +/- 1	2R0	4	0	4,262,695:20:0	
552	97	350	11:35:03.733		DMS:	: *RUNUP	P7, TRACK 3, FWD, TIC 199.81 +/- 1	2R0	4	0	4,262,695:20:0	
553	97	350	11:35:05.133		DMS:	: *AT_SPD	P7, TRACK 3, FWD, TIC * 199.93 +/-	2R0	4	0	4,262,695:22:1	
554	97	350	11:35:06.400	20YT6C	6MROH	12	read from LLM1A12,2282,0,A2	2R0	4	0	4,262,695:24:0	
555	97	350	11:35:06.400	20YT6C	6MROH	12,2282,0,A2	read from LLM1A12,2282,0,A2	2R0	4	0	4,262,695:24:0	
556	97	350	11:35:17.133		DMS:	: *AUTOSTOP	P7, TRACK 3, FWD, TIC * 202.06 +/-	2R0	4	0	4,262,695:40:1	
557	97	350	11:35:18.333		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 202.12 +/-	2R0	4	0	4,262,695:41:9	
558	**97**	**350**	**11:35:59.733**	**20DF4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,696:13:0**	
559	**97**	**350**	**11:37:47.733**	**125DF4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**4,262,697:84:0**	
560	97	350	11:37:47.733	125DF	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,262,697:84:0	
561	97	350	11:38:48.400	125DF11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,262,698:84:0	
562	**97**	**350**	**11:38:48.400**	**125DF4B**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**4,262,698:84:0**	
563	97	350	11:40:46.400		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 202.12 +/-	2R3	4	0	4,262,700:79:0	
564	97	350	11:40:46.400	465KH6A	6DMSC	P7,3	DMS Control Tape P/B 7.68kbps	2R3	4	0	4,262,700:79:0	
565	97	350	11:40:53.066		DMS:	: *RUNUP	P7, TRACK *3, FWD, TIC 202.12 +/-	2R3	4	0	4,262,700:89:0	
566	97	350	11:40:54.466		DMS:	: *AT_SPD	P7, TRACK 3, FWD, TIC 202.24 +/-	2R3	4	0	4,262,701:00:1	
567	97	350	11:40:54.466		DMS:	: *P_SLEW	P7, TRACK 3, FWD, TIC * 202.24 +/-	2R3	4	0	4,262,701:00:1	
568	97	350	11:41:47.733		DMS:	**: *RUNDOWN**	P7, TRACK 3, FWD, TIC * 214.73 +/-	2R3	4	0	4,262,701:80:0	
569	97	350	11:41:47.733	465KH6B	6DMSC	RDY,3	DMS Control Tape stop	2R3	4	0	4,262,701:80:0	
570	97	350	11:41:48.933		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 214.79 +/-	2R3	4	0	4,262,701:81:8	
571	**97**	**350**	**11:41:59.066**	**12NNCPWYLL01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
572	**97**	**350**	**11:41:59.066**	**12ENCPWYLL01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
573	97	350	11:42:45.066		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 214.79 +/-	2R3	4	0	4,262,702:75:0	
574	97	350	11:42:45.066	175TA422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,262,702:75:0	
575	97	350	11:42:49.733	282NA431A6A	6RCSEL	DDSNCG,PLSSEL,EP	Record Select (DDS onl	2R3	4	0	4,262,702:82:0	
576	**97**	**350**	**11:42:51.066**	**127DF4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,702:84:0**	
577	97	350	11:42:51.066	127DF	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,262,702:84:0	
578	**97**	**350**	**11:42:51.733**	**127DF4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,262,702:85:0**	
579	97	350	11:42:51.733		DMS:	: *RUNUP	R7, TRACK *3, FWD, TIC 214.79 +/-	2R3	4	0	4,262,702:85:0	
580	97	350	11:42:53.066	175TA176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,262,702:87:0	
581	97	350	11:42:53.133		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 214.91 +/-	2R3	4	0	4,262,702:87:1	
582	97	350	11:42:53.133		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC * 214.91 +/-	2R3	4	0	4,262,702:87:1	
583	97	350	11:42:55.066	165DF4A	7SCAN	NORM,233.226,-25	Check S/P Position	2R3	4	0	4,262,702:90:0	
584	97	350	11:42:55.733	431OA6A	6RCSEL	DDSSEL,PLSNCG,EP	Record Select (DDS onl	2R3	4	0	4,262,703:00:0	
585	97	350	11:42:59.733	127DF11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,262,703:06:0	
586	97	350	11:43:19.733	428JA6A	6RCCLR			2R3	4	0	4,262,703:36:0	
587	97	350	11:43:20.400	428JA6B	6RCSET	12		2R3	4	0	4,262,703:37:0	
588	97	350	11:43:47.066	117DF	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,703:77:0	
589	97	350	11:43:47.733	175DF422A6A	6DMSC	R28,3	DMS Control	2R3	4	0	4,262,703:78:0	
590	97	350	11:43:47.733		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC * 227.70 +/-	2R3	4	0	4,262,703:78:0	
591	97	350	11:43:48.933		DMS:	: *RUNUP	R28, TRACK 3, FWD, TIC * 227.76 +/-	2R3	4	0	4,262,703:79:8	
592	97	350	11:43:52.933		DMS:	**: *RECORD**	R28, TRACK 3, FWD, TIC * 229.26 +/-	2R3	4	0	4,262,703:85:8	
593	97	350	11:43:52.933		DMS:	: *AT_SPD	R28, TRACK 3, FWD, TIC 229.26 +/-	2R3	4	0	4,262,703:85:8	
594	97	350	11:43:53.066	175DF176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,262,703:86:0	
595	97	350	11:43:55.066	165DF4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,703:89:0	
596	97	350	11:43:56.400	117DF105A106A4A	**7STRP**	**0.021703,0.0,0,0**	**Slew =,0.03**	2R3	4	0	4,262,704:00:0	
597	**97**	**350**	**11:43:56.400**	**12ENCPWYLL01-**	**NIMPBK**	**301EF**	**EUROPA SURF. COMP. AND MINEOS LI**	**2R3**	**4**	**0**	**: :**	
598	**97**	**350**	**11:45:33.733**	**12ENCPWYLL01-**	**NIMPBK**	**301DF**	**EUROPA SURF. COMP. AND MINEOS LI**	**2R3**	**4**	**0**	**: :**	
599	**97**	**350**	**11:45:41.733**	**12ENCPWYLL01-**	**DESELC**	**300EF**	**EUROPA SURF. COMP. AND MINEOS LI**	**2R3**	**4**	**0**	**: :**	
600	**97**	**350**	**11:47:27.066**	**12ENCPWYLL01-**	**NIMPBK**	**301ER**	**EUROPA SURF. COMP. AND MINEOS LI**	**2R3**	**4**	**0**	**: :**	
601	97	350	11:47:33.733	428JB6A	6RCCLR			2R3	4	0	4,262,707:53:0	
602	97	350	11:47:34.400	428JB6B	6RCSET	8		2R3	4	0	4,262,707:54:0	
603	**97**	**350**	**11:47:35.733**	**12ENCPWYLL01-**	**DESELC**	**300DF**	**EUROPA SURF. COMP. AND MINEOS LI**	**2R3**	**4**	**0**	**: :**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	**97**	**350**	**11:51:13.733**	**12ENCPWYLL01-**	**DESELC**	**300ER**	**EUROPA SURF. COMP. AND MINEOS LI**	**2R3**	**4**	**0**	**: :**	
605	97	350	11:51:15.733		DMS:	**: *RUNDOWN**	R28, TRACK 3, FWD, TIC * 618.44 +/-	2R3	4	0	4,262,711:22:0	
606	97	350	11:51:15.733	175TB422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,262,711:22:0	
607	97	350	11:51:16.933		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC * 618.74 +/-	2R3	4	0	4,262,711:23:8	
608	97	350	11:51:18.333		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC * 618.86 +/-	2R3	4	0	4,262,711:25:9	
609	97	350	11:51:18.333		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 618.86 +/-	2R3	4	0	4,262,711:25:9	
610	97	350	11:51:18.400	175TB176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,262,711:26:0	
611	97	350	11:55:09.733	428JC6A	6RCCLR			2R3	4	0	4,262,715:09:0	
612	97	350	11:55:10.400	428JC6B	6RCSET	14		2R3	4	0	4,262,715:10:0	
613	97	350	11:56:01.733	117DF11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,715:87:0	
614	97	350	11:56:03.733	165IG4A	7SCAN	NORM,287.508999,	Check S/P Position	2R3	4	0	4,262,715:90:0	
615	**97**	**350**	**11:56:08.400**	**12ENCPWYLL01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
616	97	350	11:58:58.400	118IG	**SMOS**	GS		2R3	4	0	4,262,718:79:0	
617	97	350	11:59:01.733		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC * 727.47 +/-	2R3	4	0	4,262,718:84:0	
618	97	350	11:59:01.733	175IG422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	4,262,718:84:0	
619	97	350	11:59:02.933		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC * 727.53 +/-	2R3	4	0	4,262,718:85:8	
620	97	350	11:59:05.066	165IG4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,718:89:0	
621	97	350	11:59:07.733	175IG176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,262,719:02:0	
622	97	350	11:59:08.200		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 793.53 +/-	2R3	4	0	4,262,719:02:7	
623	97	350	11:59:08.200		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC * 793.53 +/-	2R3	4	0	4,262,719:02:7	
624	97	350	11:59:08.400	118IG110A111A4A	7STRP	-0.00425,-0.0067	Slew =,3.01	2R3	4	0	4,262,719:03:0	
625	97	350	11:59:25.733	118IG110A111B4A	7STRP	-0.004,-0.006,0,	Slew =,3.01	2R3	4	0	4,262,719:29:0	
626	97	350	11:59:28.400	428JD6A	6RCCLR			2R3	4	0	4,262,719:33:0	
627	97	350	11:59:29.066	428JD6B	6RCSET	11		2R3	4	0	4,262,719:34:0	
628	97	350	11:59:34.400	118IG110A111B4B	7STRP	-0.00425,-0.0067	Slew =,3.01	2R3	4	0	4,262,719:42:0	
629	97	350	11:59:43.066	118IG11A	**SMOS**	GE		2R3	4	0	4,262,719:55:0	
630	97	350	11:59:49.733	175TC422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,262,719:65:0	
631	97	350	11:59:49.733		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *1815.64 +/-	2R3	4	0	4,262,719:65:0	
632	97	350	11:59:52.466		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *1827.14 +/-	2R3	4	0	4,262,719:69:1	
633	97	350	11:59:53.733	175TC176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,262,719:71:0	
634	97	350	11:59:53.866		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 1827.26 +/-	2R3	4	0	4,262,719:71:2	
635	97	350	11:59:53.866		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC *1827.26 +/-	2R3	4	0	4,262,719:71:2	
636	97	350	12:01:07.066	165IH4A	7SCAN	NORM,27.334,3.83	Check S/P Position	2R3	4	0	4,262,720:90:0	
637	97	350	12:01:54.400	428JE6A	6RCCLR			2R3	4	0	4,262,721:70:0	
638	97	350	12:01:55.066	428JE6B	6RCSET	14		2R3	4	0	4,262,721:71:0	
639	97	350	12:03:13.066	117IH	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,723:06:0	
640	97	350	12:03:56.400		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC *1884.11 +/-	2R3	4	0	4,262,723:71:0	
641	97	350	12:03:56.400	175IH422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	4,262,723:71:0	
642	97	350	12:03:57.600		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *1884.17 +/-	2R3	4	0	4,262,723:72:8	
643	97	350	12:03:59.733	165IH4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,723:76:0	
644	97	350	12:04:02.400	175IH176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,262,723:80:0	
645	97	350	12:04:02.866		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 1950.17 +/-	2R3	4	0	4,262,723:80:7	
646	97	350	12:04:02.866		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *1950.17 +/-	2R3	4	0	4,262,723:80:7	
647	97	350	12:04:03.066	116IH4A	7STRP	0.004,0.0,0,0,0,	Slew =0,5.0	2R3	4	0	4,262,723:81:0	
648	97	350	12:04:08.400	117IH105A106A4A	7STRP	0.050042,0.02000	Slew =,2.16	2R3	4	0	4,262,723:89:0	
649	97	350	12:04:09.733	176IA6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	4,262,724:00:0	
650	97	350	12:04:15.066	428JF6A	6RCCLR			2R3	4	0	4,262,724:08:0	
651	97	350	12:04:15.733	428JF6B	6RCSET	11		2R3	4	0	4,262,724:09:0	
652	97	350	12:04:28.400	175TD422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,262,724:28:0	
653	97	350	12:04:28.400		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *2578.53 +/-	2R3	4	0	4,262,724:28:0	
654	97	350	12:04:31.133		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *2590.03 +/- 1	2R3	4	0	4,262,724:32:1	
655	97	350	12:04:32.400	175TD176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,262,724:34:0	
656	97	350	12:04:32.533		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 2590.15 +/- 1	2R3	4	0	4,262,724:34:2	
657	97	350	12:04:32.533		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC *2590.15 +/- 1	2R3	4	0	4,262,724:34:2	
658	97	350	12:04:39.733	117IH11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,724:45:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	97	350	12:04:41.066	165IJ4A	7SCAN	NORM,12.185,-13.	Check S/P Position	2R3	4	0	4,262,724	47:0
660	97	350	12:05:14.400	117IJ	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,725	06:0
661	97	350	12:05:18.400	428JG6A	6RCCLR			2R3	4	0	4,262,725	12:0
662	97	350	12:05:19.066	428JG6B	6RCSET	14		2R3	4	0	4,262,725	13:0
663	97	350	12:06:05.066	175II422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	4,262,725	82:0
664	97	350	12:06:05.066		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC *2611.83 +/- 1	2R3	4	0	4,262,725	82:0
665	97	350	12:06:06.266		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *2611.89 +/- 1	2R3	4	0	4,262,725	83:8
666	97	350	12:06:07.733	165IJ4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,725	86:0
667	97	350	12:06:09.066	117IJ105A106A4A	7STRP	0.11551,0.014002	Slew =0,2.8	2R3	4	0	4,262,725	88:0
668	97	350	12:06:11.066	175II176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	4,262,726	00:0
669	97	350	12:06:11.533		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *2677.89 +/- 1	2R3	4	0	4,262,726	00:7
670	97	350	12:06:11.533		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 2677.89 +/- 1	2R3	4	0	4,262,726	00:7
671	97	350	12:06:31.733	428JH6A	6RCCLR			2R3	4	0	4,262,726	31:0
672	97	350	12:06:32.400	428JH6B	6RCSET	11		2R3	4	0	4,262,726	32:0
673	97	350	12:06:53.066	175TE422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,262,726	63:0
674	97	350	12:06:53.066		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *3700.00 +/- 1	2R3	4	0	4,262,726	63:0
675	97	350	12:06:54.400	117IJ11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,726	65:0
676	97	350	12:06:55.800		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *3711.50 +/- 1	2R3	4	0	4,262,726	67:1
677	97	350	12:06:57.066	175TE176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,262,726	69:0
678	97	350	12:06:57.200		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 3711.62 +/- 1	2R3	4	0	4,262,726	69:2
679	97	350	12:06:57.200		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC *3711.62 +/- 1	2R3	4	0	4,262,726	69:2
680	97	350	12:07:09.066	165IK4A	7SCAN	NORM,33.669,3.43	Check S/P Position	2R3	4	0	4,262,726	87:0
681	97	350	12:07:15.733	117IK	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,727	06:0
682	97	350	12:07:31.066	428JI6A	6RCCLR			2R3	4	0	4,262,727	29:0
683	97	350	12:07:31.733	428JI6B	6RCSET	14		2R3	4	0	4,262,727	30:0
684	97	350	12:08:06.400	175IJ422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	4,262,727	82:0
685	97	350	12:08:06.400		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC *3727.84 +/- 1	2R3	4	0	4,262,727	82:0
686	97	350	12:08:07.600		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *3727.90 +/- 1	2R3	4	0	4,262,727	83:8
687	97	350	12:08:09.066	165IK4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,727	86:0
688	97	350	12:08:10.400	117IK105A106A4A	7STRP	0.050042,-0.1155	Slew =,3.01	2R3	4	0	4,262,727	88:0
689	97	350	12:08:12.400	175IJ176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	4,262,728	00:0
690	97	350	12:08:12.866		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 3793.90 +/- 1	2R3	4	0	4,262,728	00:7
691	97	350	12:08:12.866		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *3793.90 +/- 1	2R3	4	0	4,262,728	00:7
692	97	350	12:08:33.066	428JJ6A	6RCCLR			2R3	4	0	4,262,728	31:0
693	97	350	12:08:33.733	428JJ6B	6RCSET	11		2R3	4	0	4,262,728	32:0
694	97	350	12:08:54.400	175TF422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,262,728	63:0
695	97	350	12:08:54.400		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *4816.01 +/- 1	2R3	4	0	4,262,728	63:0
696	97	350	12:08:55.733	117IK11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,728	65:0
697	97	350	12:08:57.133		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *4827.51 +/- 1	2R3	4	0	4,262,728	67:1
698	97	350	12:08:58.400	175TF176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,262,728	69:0
699	97	350	12:08:58.533		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 4827.63 +/- 1	2R3	4	0	4,262,728	69:2
700	97	350	12:08:58.533		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC *4827.63 +/- 1	2R3	4	0	4,262,728	69:2
701	97	350	12:13:15.066	165IL4A	7SCAN	NORM,46.616,17.4	Check S/P Position	2R3	4	0	4,262,732	90:0
702	97	350	12:13:35.733	428JK6A	6RCCLR			2R3	4	0	4,262,733	30:0
703	97	350	12:13:36.400	428JK6B	6RCSET	14		2R3	4	0	4,262,733	31:0
704	97	350	12:18:11.066	118IL	**SMOS**	GS		2R3	4	0	4,262,737	79:0
705	97	350	12:18:14.400	175IK422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	4,262,737	84:0
706	97	350	12:18:14.400		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC *4957.91 +/- 1	2R3	4	0	4,262,737	84:0
707	97	350	12:18:15.600		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *4957.97 +/- 1	2R3	4	0	4,262,737	85:8
708	97	350	12:18:17.733	165IL4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,737	89:0
709	97	350	12:18:20.400	175IK176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	4,262,738	02:0
710	97	350	12:18:20.866		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *5023.97 +/- 1	2R3	4	0	4,262,738	02:7
711	97	350	12:18:20.866		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 5023.97 +/- 2	2R3	4	0	4,262,738	02:7
712	97	350	12:18:21.066	118IL110A111A4A	7STRP	-0.0076,0.0,26,0	Slew =,3.01	2R3	4	0	4,262,738	03:0
713	97	350	12:18:29.733	118IL110A111A4B	7STRP	0.0076,0.0076,0,	Slew =,3.01	2R3	4	0	4,262,738	16:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	97	350	12:18:36.400	428JL6A	6RCCLR			2R3	4	0	4,262,738:26:0	
715	97	350	12:18:37.066	428JL6B	6RCSET		11	2R3	4	0	4,262,738:27:0	
716	97	350	12:18:38.400	118IL110A111A4C	7STRP	-0.0076,0.0,26,0	Slew =,3.01	2R3	4	0	4,262,738:29:0	
717	97	350	12:18:47.066	118IL11A	**SMOS**	GE		2R3	4	0	4,262,738:42:0	
718	97	350	12:18:53.733		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *5832.80 +/- 2	2R3	4	0	4,262,738:52:0	
719	97	350	12:18:53.733	175TG422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	4,262,738:52:0	
720	97	350	12:18:56.466		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *5844.30 +/- 2	2R3	4	0	4,262,738:56:1	
721	97	350	12:18:57.733	175TG176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	4,262,738:58:0	
722	97	350	12:18:57.866		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 5844.42 +/- 2	2R3	4	0	4,262,738:58:2	
723	97	350	12:18:57.866		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC *5844.42 +/- 2	2R3	4	0	4,262,738:58:2	
724	97	350	12:23:43.066	428JM6A	6RCCLR			2R3	4	0	4,262,743:31:0	
725	97	350	12:28:23.733	432MA431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	4,262,747:88:0	
726	97	350	12:28:24.400	432MA6A	6RTSL1		R/T Select of DDS and	2R3	4	0	4,262,747:89:0	
727	97	350	12:28:27.733		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC *5977.98 +/- 2	2R3	4	0	4,262,748:03:0	
728	97	350	12:28:27.733	175TG422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,748:03:0	
729	97	350	12:28:27.733	432OA431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	4,262,748:03:0	
730	97	350	12:28:28.400	432OA6A	6RTSL1		R/T Select of DDS and	2R3	4	0	4,262,748:04:0	
731	97	350	12:28:28.933		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *5978.04 +/- 2	2R3	4	0	4,262,748:04:8	
732	97	350	12:28:31.733	282NB431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R3	4	0	4,262,748:09:0	
733	97	350	12:29:20.400	282NB432A431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R3	4	0	4,262,748:82:0	
734	97	350	12:29:21.066	282NB432A6A	6RTSL1		R/T Select of DDS and	2R3	4	0	4,262,748:83:0	
735	97	350	12:31:21.066	465KI6A	6DTRN	CMD,6DTRN,465KI6	DMS TRACK TURNAROUND	2R3	4	0	4,262,750:81:0	
736	97	350	12:31:21.066		DMS:	: *DMS-TURN	P7, TRACK 3, FWD, TIC 5978.04 +/- 2	2R3	4	0	4,262,750:81:0	
737	97	350	12:31:21.066		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 5978.04 +/- 2	2R3	4	0	4,262,750:81:0	
738	97	350	12:31:27.733		DMS:	: *RUNUP	P7, TRACK *3, FWD, TIC 5978.04 +/- 2	2R3	4	0	4,262,751:00:0	
739	97	350	12:31:29.133		DMS:	: *AT_SPD	P7, TRACK 3, FWD, TIC *5978.16 +/- 2	2R3	4	0	4,262,751:02:1	
740	**97**	**350**	**12:32:32.399**	**12NNICEBRG01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
741	97	350	12:35:00.133		DMS:	: *REVERSE	P7, TRACK 3, FWD, TIC *6027.63 +/- 2	2R3	4	0	4,262,754:45:6	
742	97	350	12:35:01.333		DMS:	: *RUNUP	P7, TRACK 4, REV, TIC 6027.69 +/- 2	2R3	4	0	4,262,754:47:4	
743	97	350	12:35:01.333		DMS:	: *TURNARND	P7, TRACK *4, *REV, TIC *6027.69 +/- 2	2R3	4	0	4,262,754:47:4	
744	97	350	12:35:02.733		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC *6027.57 +/-	2R3	4	0	4,262,754:49:5	
745	97	350	12:35:14.733		DMS:	: *AUTOSTOP	P7, TRACK 4, REV, TIC *6025.44 +/-	2R3	4	0	4,262,754:67:5	
746	97	350	12:35:15.933		DMS:	: *READY	RDY, TRACK 4, REV, TIC *6025.38 +/-	2R3	4	0	4,262,754:69:3	
747	**97**	**350**	**12:38:17.733**	**20DG5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**4,262,757:69:0**	
748	**97**	**350**	**12:38:25.066**	**20DG5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**4,262,757:80:0**	
749	**97**	**350**	**12:38:26.400**	**20DG6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**4,262,757:82:0**	
750	**97**	**350**	**12:38:36.400**	**20DG6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**4,262,758:06:0**	
751	**97**	**350**	**12:38:46.400**	**20DG5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,262,758:21:0**	
752	**97**	**350**	**12:38:47.733**	**20DG5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,262,758:23:0**	
753	**97**	**350**	**12:39:25.733**	**20DG4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,262,758:80:0**	
754	**97**	**350**	**12:40:26.400**	**20DG4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,759:80:0**	
755	**97**	**350**	**12:42:30.400**	**125DG4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**4,262,761:84:0**	
756	97	350	12:42:30.400	125DG	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,262,761:84:0	
757	**97**	**350**	**12:42:39.066**	**12NNICEBRG01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
758	**97**	**350**	**12:42:39.066**	**12ENICEBRG01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
759	97	350	12:43:31.066	125DG11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,262,762:84:0	
760	**97**	**350**	**12:43:31.066**	**125DG4B**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**4,262,762:84:0**	
761	97	350	12:43:35.066	165DG4A	7SCAN	NORM,50.385,19.6	Check S/P Position	2R3	4	0	4,262,762:90:0	
762	97	350	12:44:27.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 6025.38 +/-	2R3	4	0	4,262,763:77:0	
763	97	350	12:44:27.066	465KJ6A	6DMSC	P7,4	DMS Control Tape P/B 7.68kbps	2R3	4	0	4,262,763:77:0	
764	97	350	12:44:28.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6025.50 +/-	2R3	4	0	4,262,763:79:1	
765	97	350	12:44:33.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6026.73 +/-	2R3	4	0	4,262,763:87:0	
766	97	350	12:44:34.933		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC *6026.79 +/-	2R3	4	0	4,262,763:88:8	
767	97	350	12:44:36.333		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC 6026.67 +/-	2R3	4	0	4,262,763:90:9	
768	97	350	12:44:36.333		DMS:	: *P_SLEW	P7, TRACK 4, REV, TIC *6026.67 +/-	2R3	4	0	4,262,763:90:9	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	**97**	**350**	**12:45:32.400**	**127DG4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,764:84:0**	
770	97	350	12:45:32.400	127DG	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,262,764:84:0	
771	**97**	**350**	**12:45:33.066**	**127DG4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,262,764:85:0**	
772	97	350	12:45:37.066		DMS:	**: *RUNDOWN**	P7, TRACK 4, REV, TIC *6012.44 +/-	2R3	4	0	4,262,765:00:0	
773	97	350	12:45:37.066	465KJ6B	6DMSC	RDY,4	DMS Control Tape stop	2R3	4	0	4,262,765:00:0	
774	97	350	12:45:38.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC *6012.38 +/-	2R3	4	0	4,262,765:01:8	
775	97	350	12:45:41.066	127DG11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,262,765:06:0	
776	97	350	12:47:23.733	175DG422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	2R3	4	0	4,262,766:69:0	
777	97	350	12:47:23.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 6012.38 +/-	2R3	4	0	4,262,766:69:0	
778	97	350	12:47:25.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6012.50 +/-	2R3	4	0	4,262,766:71:1	
779	97	350	12:47:29.066	117DG	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,766:77:0	
780	97	350	12:47:30.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6013.73 +/-	2R3	4	0	4,262,766:79:0	
781	97	350	12:47:31.600		DMS:	: *RUNUP	R28, TRACK *4, *REV, TIC *6013.79 +/-	2R3	4	0	4,262,766:80:8	
782	97	350	12:47:35.066	175DG176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,262,766:86:0	
783	97	350	12:47:35.600		DMS:	**: *RECORD**	R28, TRACK 4, REV, TIC *6012.29 +/-	2R3	4	0	4,262,766:86:8	
784	97	350	12:47:35.600		DMS:	: *AT_SPD	R28, TRACK 4, REV, TIC 6012.29 +/-	2R3	4	0	4,262,766:86:8	
785	97	350	12:47:37.066	165DG4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,766:89:0	
786	**97**	**350**	**12:47:38.400**	**12ENICEBRG01-**	**NIMPBK**	**301EG**	**EUROPA SURFACE COMPOSITION**	**2R3**	**4**	**0**	**: :**	
787	97	350	12:47:38.400	117DG105A106A4A	**7STRP**	**0.021803,0.0,0,0**	**Slew =,0.03**	2R3	4	0	4,262,767:00:0	
788	**97**	**350**	**12:52:39.066**	**12ENICEBRG01-**	**NIMPBK**	**301DG**	**EUROPA SURFACE COMPOSITION**	**2R3**	**4**	**0**	**: :**	
789	**97**	**350**	**12:53:01.733**	**12ENICEBRG01-**	**DESELC**	**300EG**	**EUROPA SURFACE COMPOSITION**	**2R3**	**4**	**0**	**: :**	
790	**97**	**350**	**12:53:16.400**	**12ENICEBRG01-**	**NIMPBK**	**301FG**	**EUROPA SURFACE COMPOSITION**	**2R3**	**4**	**0**	**: :**	
791	**97**	**350**	**12:53:42.400**	**12ENICEBRG01-**	**DESELC**	**300FG**	**EUROPA SURFACE COMPOSITION**	**2R3**	**4**	**0**	**: :**	
792	**97**	**350**	**12:54:08.400**	**12ENICEBRG01-**	**NIMPBK**	**301EP**	**EUROPA SURFACE COMPOSITION**	**2R3**	**4**	**0**	**: :**	
793	**97**	**350**	**12:54:41.066**	**12ENICEBRG01-**	**DESELC**	**300DG**	**EUROPA SURFACE COMPOSITION**	**2R3**	**4**	**0**	**: :**	
794	**97**	**350**	**12:58:43.066**	**12ENICEBRG01-**	**DESELC**	**300EP**	**EUROPA SURFACE COMPOSITION**	**2R3**	**4**	**0**	**: :**	
795	97	350	12:58:45.733		DMS:	**: *RUNDOWN**	R28, TRACK 4, REV, TIC *5423.31 +/-	2R3	4	0	4,262,778:00:0	
796	97	350	12:58:45.733	175DG422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,778:00:0	
797	97	350	12:58:46.933		DMS:	: *READY	RDY, TRACK 4, REV, TIC *5423.01 +/-	2R3	4	0	4,262,778:01:8	
798	97	350	12:59:46.400	117DG11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,779:00:0	
799	**97**	**350**	**12:59:50.399**	**12ENICEBRG01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
800	97	350	13:03:48.400	165GC4A	7SCAN	NORM,46.098,21.4	Check S/P Position	2R3	4	0	4,262,782:90:0	
801	97	350	13:06:46.400	176GC6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	4,262,785:84:0	
802	97	350	13:07:42.400	117GC	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,786:77:0	
803	97	350	13:07:51.733	117GC105A106A4A	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,787:00:0	
804	97	350	13:09:15.066	117GC105A106A4B	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,788:34:0	
805	97	350	13:09:21.733	117GC105A106A4C	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,788:44:0	
806	97	350	13:10:45.066	117GC105A106A4D	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,789:78:0	
807	97	350	13:10:51.733	117GC105A106A4E	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,789:88:0	
808	97	350	13:10:53.733	488AE6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R3	4	0	4,262,790:00:0	
809	97	350	13:12:15.066	117GC105A106A4F	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,791:31:0	
810	97	350	13:12:21.733	117GC105A106A4G	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,791:41:0	
811	97	350	13:13:45.066	117GC105A106A4H	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,792:75:0	
812	97	350	13:13:51.733	117GC105A106A4I	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,792:85:0	
813	97	350	13:15:15.066	117GC105A106A4J	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,794:28:0	
814	97	350	13:15:21.733	117GC105A106A4K	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,794:38:0	
815	97	350	13:16:21.733	488AE6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R3	4	0	4,262,795:37:0	
816	97	350	13:16:45.066	117GC105A106A4L	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,795:72:0	
817	97	350	13:16:51.733	117GC105A106A4M	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,795:82:0	
818	97	350	13:18:15.066	117GC105A106A4N	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,797:25:0	
819	97	350	13:18:21.733	117GC105A106A4O	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,797:35:0	
820	97	350	13:19:45.066	117GC105A106A4P	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,798:69:0	
821	97	350	13:19:51.733	117GC105A106A4Q	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,798:79:0	
822	97	350	13:20:40.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5423.01 +/-	2R3	4	0	4,262,799:61:0	
823	97	350	13:20:40.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,799:61:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	97	350	13:20:41.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5423.13 +/-	2R3	4	0	4,262,799:63:1	
825	97	350	13:20:47.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5424.36 +/-	2R3	4	0	4,262,799:71:0	
826	97	350	13:20:48.266		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *5424.42 +/-	2R3	4	0	4,262,799:72:8	
827	97	350	13:20:49.666		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *5424.30 +/-	2R3	4	0	4,262,799:74:9	
828	97	350	13:21:08.400		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *5419.91 +/-	2R3	4	0	4,262,800:12:0	
829	97	350	13:21:15.066	117GC105A106A4R	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,800:22:0	
830	97	350	13:21:21.733	117GC105A106A4S	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,800:32:0	
831	97	350	13:21:31.066		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *5414.60 +/-	2R3	4	0	4,262,800:46:0	
832	97	350	13:21:31.066	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,800:46:0	
833	97	350	13:21:32.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC *5414.54 +/-	2R3	4	0	4,262,800:47:8	
834	97	350	13:22:45.066	117GC105A106A4T	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,801:66:0	
835	97	350	13:22:51.733	117GC105A106A4U	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,801:76:0	
836	97	350	13:24:15.066	117GC105A106A4V	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,803:19:0	
837	97	350	13:24:21.733	117GC105A106A4W	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,803:29:0	
838	97	350	13:25:45.066	117GC105A106A4X	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,804:63:0	
839	97	350	13:25:51.733	117GC105A106A4Y	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,804:73:0	
840	97	350	13:27:15.066	117GC105A106A4Z	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,806:16:0	
841	97	350	13:27:21.733	117GC105A106A4AA	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,806:26:0	
842	97	350	13:28:45.066	117GC105A106A4AB	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,807:60:0	
843	97	350	13:28:51.733	117GC105A106A4AC	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,807:70:0	
844	97	350	13:30:15.066	117GC105A106A4AD	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,809:13:0	
845	97	350	13:30:21.733	117GC105A106A4AE	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,809:23:0	
846	97	350	13:31:45.066	117GC105A106A4AF	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,810:57:0	
847	97	350	13:31:51.733	117GC105A106A4AG	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,810:67:0	
848	97	350	13:33:15.066	117GC105A106A4AH	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,812:10:0	
849	97	350	13:33:21.733	117GC105A106A4AI	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,812:20:0	
850	97	350	13:34:45.066	117GC105A106A4AJ	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,813:54:0	
851	97	350	13:34:51.733	117GC105A106A4AK	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,813:64:0	
852	97	350	13:35:04.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,813:83:0	
853	97	350	13:35:04.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5414.54 +/-	2R3	4	0	4,262,813:83:0	
854	97	350	13:35:05.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5414.66 +/-	2R3	4	0	4,262,813:85:1	
855	97	350	13:35:11.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5415.89 +/-	2R3	4	0	4,262,814:02:0	
856	97	350	13:35:12.266		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *5415.95 +/-	2R3	4	0	4,262,814:03:8	
857	97	350	13:35:13.666		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *5415.83 +/-	2R3	4	0	4,262,814:05:9	
858	97	350	13:35:32.400		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *5411.44 +/-	2R3	4	0	4,262,814:34:0	
859	97	350	13:35:55.066	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,814:68:0	
860	97	350	13:35:55.066		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *5406.13 +/-	2R3	4	0	4,262,814:68:0	
861	97	350	13:35:56.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC *5406.07 +/-	2R3	4	0	4,262,814:69:8	
862	97	350	13:36:15.066	117GC105A106A4AL	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,815:07:0	
863	97	350	13:36:21.733	117GC105A106A4AM	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,815:17:0	
864	97	350	13:37:45.066	117GC105A106A4AN	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,816:51:0	
865	97	350	13:37:51.733	117GC105A106A4AO	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,816:61:0	
866	97	350	13:39:15.066	117GC105A106A4AP	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,818:04:0	
867	97	350	13:39:21.733	117GC105A106A4AQ	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,818:14:0	
868	97	350	13:40:45.066	117GC105A106A4AR	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,819:48:0	
869	97	350	13:40:51.733	117GC105A106A4AS	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,819:58:0	
870	97	350	13:42:15.066	117GC105A106A4AT	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,821:01:0	
871	97	350	13:42:21.733	117GC105A106A4AU	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,821:11:0	
872	97	350	13:43:45.066	117GC105A106A4AV	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,822:45:0	
873	97	350	13:43:51.733	117GC105A106A4AW	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,822:55:0	
874	97	350	13:45:15.066	117GC105A106A4AX	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,823:89:0	
875	97	350	13:45:21.733	117GC105A106A4AY	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,824:08:0	
876	97	350	13:46:45.066	117GC105A106A4AZ	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,825:42:0	
877	97	350	13:46:51.733	117GC105A106A4BA	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,825:52:0	
878	97	350	13:48:15.066	117GC105A106A4BB	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,826:86:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
879	97	350	13:48:21.733	117GC105A106A4BC	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,827	05:0
880	97	350	13:49:29.066	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,828	15:0
881	97	350	13:49:29.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5406.07 +/-	2R3	4	0	4,262,828	15:0
882	97	350	13:49:30.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5406.19 +/-	2R3	4	0	4,262,828	17:1
883	97	350	13:49:35.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5407.42 +/-	2R3	4	0	4,262,828	25:0
884	97	350	13:49:36.933		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *5407.48 +/-	2R3	4	0	4,262,828	26:8
885	97	350	13:49:38.333		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *5407.36 +/-	2R3	4	0	4,262,828	28:9
886	97	350	13:49:45.066	117GC105A106A4BD	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,828	39:0
887	97	350	13:49:51.733	117GC105A106A4BE	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,828	49:0
888	97	350	13:49:57.066		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *5402.97 +/-	2R3	4	0	4,262,828	57:0
889	97	350	13:50:19.733		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *5397.66 +/-	2R3	4	0	4,262,829	00:0
890	97	350	13:50:19.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,829	00:0
891	97	350	13:50:20.933		DMS:	: *READY	RDY, TRACK 4, REV, TIC *5397.60 +/-	2R3	4	0	4,262,829	01:8
892	97	350	13:51:15.066	117GC105A106A4BF	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,829	83:0
893	97	350	13:51:21.733	117GC105A106A4BG	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,830	02:0
894	97	350	13:52:45.066	117GC105A106A4BH	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,831	36:0
895	97	350	13:52:51.733	117GC105A106A4BI	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,831	46:0
896	97	350	13:54:15.066	117GC105A106A4BJ	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,832	80:0
897	97	350	13:54:21.733	117GC105A106A4BK	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,832	90:0
898	97	350	13:55:45.066	117GC105A106A4BL	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,834	33:0
899	97	350	13:55:51.733	117GC105A106A4BM	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,834	43:0
900	97	350	13:57:15.066	117GC105A106A4BN	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,835	77:0
901	97	350	13:57:21.733	117GC105A106A4BO	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,835	87:0
902	**97**	**350**	**13:58:29.000**	**12NNHRSPEC01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
903	**97**	**350**	**13:58:29.066**	**20DH5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**4,262,837**	**06:0**
904	**97**	**350**	**13:58:30.400**	**20DH5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**4,262,837**	**08:0**
905	**97**	**350**	**13:58:31.733**	**20DH6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**4,262,837**	**10:0**
906	**97**	**350**	**13:58:41.733**	**20DH6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**4,262,837**	**25:0**
907	97	350	13:58:45.066	117GC105A106A4BP	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,837	30:0
908	97	350	13:58:51.733	117GC105A106A4BQ	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,837	40:0
909	**97**	**350**	**13:58:51.733**	**20DH5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,262,837**	**40:0**
910	**97**	**350**	**13:59:11.733**	**20DH5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,262,837**	**70:0**
911	**97**	**350**	**13:59:34.400**	**20DH4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,262,838**	**13:0**
912	97	350	14:00:15.066	117GC105A106A4BR	7STRP	-0.025956,0.0012	Slew =12.01	2R0	4	0	4,262,838	74:0
913	97	350	14:00:21.733	117GC105A106A4BS	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R0	4	0	4,262,838	84:0
914	**97**	**350**	**14:00:35.066**	**20DH4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,839**	**13:0**
915	97	350	14:01:45.066	117GC105A106A4BT	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,840	27:0
916	97	350	14:01:51.733	117GC105A106A4BU	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,840	37:0
917	97	350	14:03:15.066	117GC105A106A4BV	7STRP	-0.025956,0.0012	Slew =12.01	2R3	4	0	4,262,841	71:0
918	97	350	14:03:21.733	117GC105A106A4BW	7STRP	0.024905,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,841	81:0
919	97	350	14:03:53.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5397.60 +/-	2R3	4	0	4,262,842	38:0
920	97	350	14:03:53.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,842	38:0
921	97	350	14:03:55.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5397.72 +/-	2R3	4	0	4,262,842	40:1
922	97	350	14:04:00.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5398.96 +/-	2R3	4	0	4,262,842	48:0
923	97	350	14:04:01.600		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *5399.02 +/-	2R3	4	0	4,262,842	49:8
924	97	350	14:04:03.000		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *5398.90 +/-	2R3	4	0	4,262,842	51:9
925	97	350	14:04:21.733		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *5394.50 +/-	2R3	4	0	4,262,842	80:0
926	97	350	14:04:44.400		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *5389.19 +/-	2R3	4	0	4,262,843	23:0
927	97	350	14:04:44.400	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,843	23:0
928	97	350	14:04:45.066	117GC105A106B4A	7STRP	-0.008,0.0012,0,	Slew =12.01	2R3	4	0	4,262,843	24:0
929	97	350	14:04:45.600		DMS:	: *READY	RDY, TRACK 4, REV, TIC *5389.13 +/-	2R3	4	0	4,262,843	24:8
930	97	350	14:04:51.733	117GC105A106B4B	7STRP	0.029008,0.0,0,0	Slew =,0.31	2R3	4	0	4,262,843	34:0
931	97	350	14:06:25.733	125DH	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	4,262,844	84:0
932	**97**	**350**	**14:06:25.733**	**125DH4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**4,262,844**	**84:0**
933	**97**	**350**	**14:07:26.400**	**125DH4B**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**4,262,845**	**84:0**

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
934	97	350	14:07:26.400	125DH11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	4,262,845:84:0	
935	97	350	14:07:53.733	117GC11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,846:34:0	
936	97	350	14:08:31.733	176GC6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	4,262,847:00:0	
937	97	350	14:08:33.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	4,262,847:03:0	
938	97	350	14:08:33.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5389.13 +/-	2R3	4	0	4,262,847:03:0	
939	97	350	14:08:35.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5389.25 +/-	2R3	4	0	4,262,847:05:1	
940	**97**	**350**	**14:08:35.667**	**12NNHRSPEC01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
941	97	350	14:08:40.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5390.49 +/-	2R3	4	0	4,262,847:13:0	
942	97	350	14:08:41.600		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *5390.55 +/-	2R3	4	0	4,262,847:14:8	
943	97	350	14:08:43.000		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *5390.43 +/-	2R3	4	0	4,262,847:16:9	
944	97	350	14:08:43.733		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *5390.25 +/-	2R3	4	0	4,262,847:18:0	
945	97	350	14:08:57.066	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,847:38:0	
946	97	350	14:08:57.066		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *5387.13 +/-	2R3	4	0	4,262,847:38:0	
947	97	350	14:08:58.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC *5387.07 +/-	2R3	4	0	4,262,847:39:8	
948	**97**	**350**	**14:09:36.334**	**12INHRSPEC01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
949	97	350	14:10:28.400	127DH	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,262,848:84:0	
950	**97**	**350**	**14:10:28.400**	**127DH4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,262,848:84:0**	
951	**97**	**350**	**14:10:29.066**	**127DH4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**4,262,848:85:0**	
952	97	350	14:10:32.400	165DH4A	7SCAN	NORM,51.945,21.1	Check S/P Position	2R3	4	0	4,262,848:90:0	
953	97	350	14:10:37.066	127DH11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	4,262,849:06:0	
954	97	350	14:14:21.066	175DH422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	2R3	4	0	4,262,852:69:0	
955	97	350	14:14:21.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5387.07 +/-	2R3	4	0	4,262,852:69:0	
956	97	350	14:14:22.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5387.19 +/-	2R3	4	0	4,262,852:71:1	
957	97	350	14:14:26.400	117DH	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	4,262,852:77:0	
958	97	350	14:14:27.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5388.42 +/-	2R3	4	0	4,262,852:79:0	
959	97	350	14:14:28.933		DMS:	: *RUNUP	R28, TRACK *4, *REV, TIC *5388.48 +/-	2R3	4	0	4,262,852:80:8	
960	97	350	14:14:32.400	175DH176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	4,262,852:86:0	
961	97	350	14:14:32.933		DMS:	: *AT_SPD	R28, TRACK 4, REV, TIC 5386.98 +/-	2R3	4	0	4,262,852:86:8	
962	97	350	14:14:32.933		DMS:	**: *RECORD**	R28, TRACK 4, REV, TIC *5386.98 +/-	2R3	4	0	4,262,852:86:8	
963	97	350	14:14:34.400	165DH4B	7VECT		Inert vect update UTC	2R3	4	0	4,262,852:89:0	
964	97	350	14:14:35.733	117DH105A106A4A	**7STRP**	**0.008,0.0,0,0,0,**	**Slew =,0.03**	2R3	4	0	4,262,853:00:0	
965	**97**	**350**	**14:14:35.733**	**12INHRSPEC01-**	**NIMPBK**	**301FH**	**IO MONITORING AT HIGH SPECTRAL R**	**2R3**	**4**	**0**	**: :**	
966	**97**	**350**	**14:14:35.733**	**12INHRSPEC01-**	**NIMPBK**	**301DH**	**IO MONITORING AT HIGH SPECTRAL R**	**2R3**	**4**	**0**	**: :**	
967	**97**	**350**	**14:15:25.733**	**12INHRSPEC01-**	**DESELC**	**300FH**	**IO MONITORING AT HIGH SPECTRAL R**	**2R3**	**4**	**0**	**: :**	
968	**97**	**350**	**14:15:45.066**	**12INHRSPEC01-**	**NIMPBK**	**301FI**	**IO MONITORING AT HIGH SPECTRAL R**	**2R3**	**4**	**0**	**: :**	
969	**97**	**350**	**14:16:17.733**	**12INHRSPEC01-**	**DESELC**	**300FI**	**IO MONITORING AT HIGH SPECTRAL R**	**2R3**	**4**	**0**	**: :**	
970	97	350	14:19:05.066	117DH105A106A4B	**7STRP**	**-0.008,0.0,0,0,0**	**Slew =12.01**	2R3	4	0	4,262,857:40:0	
971	**97**	**350**	**14:19:05.066**	**12INHRSPEC01-**	**DESELC**	**300DH**	**IO MONITORING AT HIGH SPECTRAL R**	**2R3**	**4**	**0**	**: :**	
972	97	350	14:19:11.733	117DH105A106A4C	**7STRP**	**0.008,0.0,0,0,0,**	**Slew =,0.03**	2R3	4	0	4,262,857:50:0	
973	**97**	**350**	**14:19:11.733**	**12INHRSPEC01-**	**NIMPBK**	**301FJ**	**IO MONITORING AT HIGH SPECTRAL R**	**2R3**	**4**	**0**	**: :**	
974	**97**	**350**	**14:23:01.066**	**12INHRSPEC01-**	**DESELC**	**300FJ**	**IO MONITORING AT HIGH SPECTRAL R**	**2R3**	**4**	**0**	**: :**	
975	97	350	14:23:05.066		DMS:	**: *RUNDOWN**	R28, TRACK 4, REV, TIC *4936.87 +/-	2R3	4	0	4,262,861:36:0	
976	97	350	14:23:05.066	175DH422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	4,262,861:36:0	
977	97	350	14:23:06.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC *4936.57 +/-	2R3	4	0	4,262,861:37:8	
978	97	350	14:23:41.066	117DH11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	4,262,861:90:0	
979	**97**	**350**	**14:23:45.667**	**12NNCHOPOF01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
980	**97**	**350**	**14:23:45.667**	**12INHRSPEC01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
981	97	350	14:24:37.733	127DI	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,262,862:84:0	
982	**97**	**350**	**14:24:37.733**	**127DI4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**2R0**	**4**	**0**	**4,262,862:84:0**	
983	**97**	**350**	**14:24:38.400**	**127DI4B**	**37ETB**	**04,C4,2,0,00**	**Loads wavelength edit table**	**2R0**	**4**	**0**	**4,262,862:85:0**	
984	97	350	14:24:46.400	127DI11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R0	4	0	4,262,863:06:0	
985	**97**	**350**	**14:27:39.733**	**125DI4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**260**	**4**	**0**	**4,262,865:84:0**	
986	97	350	14:27:39.733	125DI	NIMSINIT	GS	##### GROUP START INIT	260	4	0	4,262,865:84:0	
987	**97**	**350**	**14:28:40.400**	**125DI4B**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**2O0**	**4**	**0**	**4,262,866:84:0**	
988	**97**	**350**	**14:29:41.066**	**125DI4C**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2O0**	**4**	**0**	**4,262,867:84:0**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters		Description	GCM	GO	GS	RIM	MF I
989	97	350	14:29:41.066	125DI11A	NIMSINIT	GE		##### GROUP END INIT	2O0	4	0	4,262,867:84:0	
990	97	350	14:30:55.066	20KA4A	**7SAFE**	**UNSTOW**		S/P TO 153 deg cone	2O0	4	0	4,262,869:13:0	
991	**97**	**350**	**14:33:52.334**	**12NNCHOPOF01-**		**-----STOP-------**			**2O0**	**4**	**0**	**: :**	
992	97	350	14:35:53.733	41AB99A	**POWER**	**PWR MODE change**		Change to Maneuver/Playback Mode	2O0	4	0	4,262,874:06:0	
993	**97**	**350**	**14:37:47.733**	**41AB3G**	**40T1P**		**1**	**PCT Heater 1 ON (primary relay)**	**2O0**	**4**	**0**	**4,262,875:86:0**	
994	**97**	**350**	**14:37:57.733**	**41AB3H**	**40T1P**		**2**	**PCT Heater 1 ON (primary relay)**	**2O0**	**4**	**0**	**4,262,876:10:0**	
995	**97**	**350**	**14:38:07.733**	**41AB3I**	**40T2**		**1**	**PCT Heater 2 ON**	**2O0**	**4**	**0**	**4,262,876:25:0**	
996	**97**	**350**	**14:38:17.733**	**41AB3J**	**40T2**		**2**	**PCT Heater 2 ON**	**2O0**	**4**	**0**	**4,262,876:40:0**	
997	97	350	17:26:53.733	488AF6A	6TMSED	NORM,AL3		Sci, Eng, and D/L Chan	2O0	4	0	4,263,043:17:0	
998	97	350	19:24:13.666	488AF6B	6TMSED	NORM,AL4		Sci, Eng, and D/L Chan	2O0	4	0	4,263,159:21:0	
999	97	350	19:52:42.333	488AF6C	6TMSED	FILL,AL4		Sci, Eng, and D/L Chan	2O0	4	0	4,263,187:36:0	
1000	**97**	**350**	**20:30:42.333**	**432JB6B**	**6RTDS2**	**NIMNCG,AACDSL,RT**		**AACS DESELECT**	**2O0**	**4**	**0**	**4,263,224:89:0**	
1001	97	350	20:31:21.666	488AF6D	6TMSED	NORM,AL4		Sci, Eng, and D/L Chan	2O0	4	0	4,263,225:57:0	
1002	97	350	20:37:39.000		DMS:	: *US-RUNUP		P7, TRACK *1, *FWD, TIC 4936.57 +/-	2O0	4	0	4,263,231:77:0	
1003	97	350	20:37:39.000	175GD422A6A	6DMSC	R7,0		DMS Control Tape runup 7.68kps	2O0	4	0	4,263,231:77:0	
1004	97	350	20:37:40.400		DMS:	: *US_AT_SP		P7, TRACK 1, FWD, TIC *4936.69 +/-	2O0	4	0	4,263,231:79:1	
1005	97	350	20:37:45.666		DMS:	: *US_RD		P7, TRACK 1, FWD, TIC *4937.92 +/-	2O0	4	0	4,263,231:87:0	
1006	97	350	20:37:46.866		DMS:	: *RUNUP		R7, TRACK *4, *REV, TIC *4937.98 +/-	2O0	4	0	4,263,231:88:8	
1007	97	350	20:37:47.666	175GD176A6A	6TMREC	LPW		7.68 KBPS LOW RATE SCI PWS RECORD Record	2O0	4	0	4,263,231:90:0	
1008	97	350	20:37:48.266		DMS:	**: *RECORD**		R7, TRACK 4, REV, TIC *4937.86 +/-	2O0	4	0	4,263,231:90:9	
1009	97	350	20:37:48.266		DMS:	: *AT_SPD		R7, TRACK 4, REV, TIC 4937.86 +/-	2O0	4	0	4,263,231:90:9	
1010	97	350	20:40:52.333		DMS:	**: *RUNDOWN**		R7, TRACK 4, REV, TIC *4894.72 +/-	2O0	4	0	4,263,235:03:0	
1011	97	350	20:40:52.333	175GD422A6B	6DMSC	RDY,0		DMS Control Tape stop	2O0	4	0	4,263,235:03:0	
1012	97	350	20:40:53.533		DMS:	: *READY		RDY, TRACK 4, REV, TIC *4894.66 +/-	2O0	4	0	4,263,235:04:8	
1013	97	350	20:50:00.333	444UB443A4A	**7MODE**	**CRU**		AACS CRUISE MODE	2O0	4	0	4,263,244:06:0	
1014	97	350	20:54:30.333	418SA6B	6BUFHI		10	MUB Buffer high water	2O0	4	0	4,263,248:47:0	
1015	97	350	20:54:30.333	418SA6A	6BUFLO		2	MUB Buffer low water m	2O0	4	0	4,263,248:47:0	
1016	97	350	20:55:04.333	20WA4A	**7SAFE**	**STOP**		S/P NO MOVEMENT	2O0	4	0	4,263,249:07:0	
1017	97	350	20:55:54.333	20WA4B	7SLEW	DIS,POS,0.0		Stator movement	2O0	4	0	4,263,249:82:0	
1018	97	350	20:57:01.000	176UA6A	6TMREC	**IPB**		INITIATE PLAYBACK (PB CONTROL) Record Mod	2O0	4	0	4,263,251:00:0	
1019	97	350	21:19:23.666	20MC6A	6CKSUM	MAG,4040,46F0			2O0	4	0	4,263,273:12:0	
1020	97	350	21:20:20.333	480MB6	6MROH		12	read from LLM1A12,2282,0,A2	2O0	4	0	4,263,274:06:0	
1021	97	350	21:20:20.333	480MB6A	6MROH	12,2282,0,A2		read from LLM1A12,2282,0,A2	2O0	4	0	4,263,274:06:0	
1022	97	350	23:21:01.666	488AF6E	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan	2O0	4	0	4,263,393:39:0	
1023	97	351	02:54:57.000	176AA6A	6TMREC	**PPB**		PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,263,605:00:0	
1024	97	351	02:57:58.333	165AA4A	7SCAN	NORM,57.969,22.0		Check S/P Position	2O0	4	0	4,263,607:90:0	
1025	97	351	03:02:00.333	165AA4B	7VECT			Inert vect update UTC	2O0	4	0	4,263,611:89:0	
1026	97	351	03:02:09.666	20UP4A	**7SAFE**	**STOP**		S/P NO MOVEMENT	2O0	4	0	4,263,612:12:0	
1027	97	351	03:02:59.666	20UP4B	7SLEW	DIS,POS,0.0		Stator movement	2O0	4	0	4,263,612:87:0	
1028	97	351	03:04:03.000	176AB6A	6TMREC	**RPB**		RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,263,614:00:0	
1029	97	351	03:17:49.666	488AG6A	6TMSED	NORM,AL5		Sci, Eng, and D/L Chan	2O0	4	0	4,263,627:57:0	
1030	97	351	04:25:31.666	488AG6B	6TMSED	FILL,AL5		Sci, Eng, and D/L Chan	2O0	4	0	4,263,694:53:0	
1031	97	351	04:54:37.666	488AG6C	6TMSED	NORM,AL5		Sci, Eng, and D/L Chan	2O0	4	0	4,263,723:33:0	
1032	97	351	09:41:49.666	488AH6A	6TMSED	NORM,AL4		Sci, Eng, and D/L Chan	2O0	4	0	4,264,007:37:0	
1033	97	351	10:52:13.666	488AH6B	6TMSED	NORM,AL2		Sci, Eng, and D/L Chan	2O0	4	0	4,264,077:03:0	
1034	97	351	11:30:37.666	488AH6C	6TMSED	NORM,AL3		Sci, Eng, and D/L Chan	2O0	4	0	4,264,115:01:0	
1035	97	351	12:35:44.333	488AH6D	6TMSED	FILL,AL3		Sci, Eng, and D/L Chan	2O0	4	0	4,264,179:37:0	
1036	97	351	13:02:21.666	488AH6E	6TMSED	FILL,AL4		Sci, Eng, and D/L Chan	2O0	4	0	4,264,205:67:0	
1037	97	351	13:10:47.000	488AI6A	6TMSED	NORM,AL4		Sci, Eng, and D/L Chan	2O0	4	0	4,264,214:06:0	
1038	**97**	**351**	**17:29:37.732**	**12NNRELOAD01-**		**-----START------**			**2O0**	**4**	**0**	**: :**	
1039	**97**	**351**	**17:30:19.666**	**20DI5A**	**37PL**			**Program Load (halts microprocessor & unwri**	**2O0**	**4**	**0**	**4,264,470:69:0**	
1040	**97**	**351**	**17:30:27.000**	**20DI5B**	**37MRL**			**Memory Realocate (software operates from R**	**2O0**	**4**	**0**	**4,264,470:80:0**	
1041	**97**	**351**	**17:30:28.333**	**20DI6A**	**6MCOPY**	**NIMS**		**NIMS,1000,LLM1A,7300,77F7**	**2O0**	**4**	**0**	**4,264,470:82:0**	
1042	**97**	**351**	**17:30:38.333**	**20DI6B**	**6MCOPY**	**NIMS**		**NIMS,1598,LLM1A,77F8,781D**	**2O0**	**4**	**0**	**4,264,471:06:0**	
1043	**97**	**351**	**17:30:48.333**	**20DI5C**	**37IRT**			**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,264,471:21:0**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
1044	**97**	**351**	**17:30:49.666**	**20DI5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,264,471:23:0**
1045	**97**	**351**	**17:31:27.666**	**20DI4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,264,471:80:0**
1046	**97**	**351**	**17:32:28.333**	**20DI4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,264,472:80:0**
1047	97	351	17:37:33.666	488AI6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2R3	4	0	4,264,477:83:0
1048	**97**	**351**	**17:39:44.399**	**12NNRELOAD01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**
1049	**97**	**351**	**17:39:44.399**	**12NNCHOPOF02-**		**-----START------**		**2R3**	**4**	**0**	**: :**
1050	97	351	17:40:36.333	127EI	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,264,480:84:0
1051	**97**	**351**	**17:40:36.333**	**127EI4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**2R0**	**4**	**0**	**4,264,480:84:0**
1052	**97**	**351**	**17:40:37.000**	**127EI4B**	**37ETB**	**04,C4,2,0,00**	**Loads wavelength edit table**	**2R0**	**4**	**0**	**4,264,480:85:0**
1053	97	351	17:40:45.000	127EI11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R0	4	0	4,264,481:06:0
1054	97	351	17:43:38.333	125EI	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	4,264,483:84:0
1055	**97**	**351**	**17:43:38.333**	**125EI4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**260**	**4**	**0**	**4,264,483:84:0**
1056	**97**	**351**	**17:44:39.000**	**125EI4B**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**2O0**	**4**	**0**	**4,264,484:84:0**
1057	97	351	17:45:39.666	125EI11A	NIMSINIT	GE	##### GROUP END INIT	2O0	4	0	4,264,485:84:0
1058	**97**	**351**	**17:45:39.666**	**125EI4C**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2O0**	**4**	**0**	**4,264,485:84:0**
1059	**97**	**351**	**17:49:51.066**	**12NNCHOPOF02-**		**-----STOP-------**		**2O0**	**4**	**0**	**: :**
1060	97	351	17:57:52.333	176TR6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,264,498:00:0
1061	**97**	**351**	**18:00:00.000**	**20A3EW**	**37A**	**Final Condition**	**NIMS Power ON**	**2O0**	**4**	**0**	**4,264,500:09:5**
1062	**97**	**351**	**18:00:00.000**	**20A3EX**	**37HR**	**Final Condition**	**Replacement Heaters OFF**	**2O0**	**4**	**0**	**4,264,500:09:5**
1063	**97**	**351**	**18:00:00.000**	**20A3EY**	**37C1PR**	**Final Condition**	**Optics Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
1064	**97**	**351**	**18:00:00.000**	**20A3EZ**	**37C2PR**	**Final Condition**	**Optics Heater 2 OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
1065	**97**	**351**	**18:00:00.000**	**20A3FA**	**37F1PR**	**Final Condition**	**Radiator Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
1066	**97**	**351**	**18:00:00.000**	**20A3FB**	**37F2PR**	**Final Condition**	**Shield Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
1067	**97**	**351**	**18:00:00.000**	**20A3FD**	**40HRPR**	**Final Condition**	**RCT Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
1068	**97**	**351**	**18:00:00.000**	**20A3FE**	**40T1P**	**Final Condition**	**PCT Heater 1 ON (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
1069	**97**	**351**	**18:00:00.000**	**20A3FF**	**40T2**	**Final Condition**	**PCT Heater 2 ON**	**2O0**	**4**	**0**	**4,264,500:09:5**
1070	97	351	18:00:00.333		DMS:	: READY	RDY, TRACK 4, REV, TIC 4894.66 +/-	2O0	4	0	4,264,500:10:0

			Sequence:	E12B-AR		Created: 4/14/98	Begin: 97-351/18:00:00 Finish: 98-040/06:00:00				
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
1	**97**	**351**	**18:00:00.000**	**20A3FB**	**37F2PR**	**Initial Condition**	**Shield Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
2	**97**	**351**	**18:00:00.000**	**20A3EW**	**37A**	**Initial Condition**	**NIMS Power ON**	**2O0**	**4**	**0**	**4,264,500:09:5**
3	**97**	**351**	**18:00:00.000**	**20A3EX**	**37HR**	**Initial Condition**	**Replacement Heaters OFF**	**2O0**	**4**	**0**	**4,264,500:09:5**
4	**97**	**351**	**18:00:00.000**	**20A3EY**	**37C1PR**	**Initial Condition**	**Optics Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
5	**97**	**351**	**18:00:00.000**	**20A3EZ**	**37C2PR**	**Initial Condition**	**Optics Heater 2 OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
6	**97**	**351**	**18:00:00.000**	**20A3FA**	**37F1PR**	**Initial Condition**	**Radiator Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
7	**97**	**351**	**18:00:00.000**	**20A3FF**	**40T2**	**Initial Condition**	**PCT Heater 2 ON**	**2O0**	**4**	**0**	**4,264,500:09:5**
8	**97**	**351**	**18:00:00.000**	**20A3FE**	**40T1P**	**Initial Condition**	**PCT Heater 1 ON (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
9	**97**	**351**	**18:00:00.000**	**20A3FD**	**40HRPR**	**Initial Condition**	**RCT Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,264,500:09:5**
10	97	351	18:00:00.333		DMS:	: READY	RDY, TRACK 4, REV, TIC 4894.66 +/-	2O0	4	0	4,264,500:10:0
11	97	351	18:01:01.666	488AA6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,264,501:11:0
12	**97**	**351**	**18:01:53.666**	**432NA6B**	**6RTDS2**	**NIMDSL,AACDSL,RT**	**NIMS R/T DESELECTAACS DESELECT**	**2O0**	**4**	**0**	**4,264,501:89:0**
13	97	351	18:03:04.333	20UP4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,264,503:13:0
14	97	351	18:03:54.333	20UP4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,264,503:88:0
15	97	351	18:04:57.000	176SA6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,264,505:00:0
16	97	351	18:56:29.666	488AA6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,264,555:89:0
17	97	351	19:17:11.666	488AA6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,264,576:41:0
18	97	351	19:34:53.666	488AA6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,264,593:87:0
19	97	351	21:19:08.333	488AA6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,264,697:05:0
20	97	351	23:18:53.666	488AB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	4,264,815:45:0
21	97	352	00:50:37.600	488AB6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	4,264,906:20:0
22	97	352	02:18:05.600	488AB6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	4,264,992:66:0
23	97	352	03:11:25.600	488AB6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,265,045:43:0
24	97	352	09:37:33.600	488AC6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,265,427:33:0
25	97	352	10:43:03.600	488AC6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,265,492:13:0
26	97	352	10:47:57.600	488AC6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,265,496:90:0
27	97	352	11:24:13.600	488AC6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,265,532:78:0
28	97	352	23:18:58.266	488AD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,266,239:68:0
29	97	353	00:20:45.600	488AD6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,266,300:78:0
30	97	353	09:26:53.533	488AE6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,266,840:90:0
31	97	353	10:36:54.866	488AE6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,266,910:22:0
32	97	353	10:41:33.533	488AE6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,266,914:76:0
33	97	353	11:17:49.533	488AE6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,266,950:64:0
34	97	353	21:33:50.200	488AF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,267,559:86:0
35	97	353	23:03:10.200	488AF6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,267,648:27:0
36	97	353	23:31:41.533	488AF6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	4,267,676:46:0
37	97	353	23:34:25.533	488AF6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	4,267,679:19:0
38	97	354	01:52:20.866	488AF6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	4,267,815:56:0
39	97	354	02:24:10.200	488AG6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	4,267,847:08:0
40	97	354	02:45:49.533	488AG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,267,868:46:0
41	97	354	03:11:25.533	488AG6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,267,893:75:0
42	97	354	09:37:33.533	488AH6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,268,275:65:0
43	97	354	10:18:02.200	488AH6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,268,315:68:0
44	97	354	11:35:06.866	488AH6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,268,391:89:0
45	97	354	12:01:10.200	488AH6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,268,417:68:0
46	97	354	13:03:14.866	488AH6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,268,479:13:0
47	97	354	13:23:41.533	488AI6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,268,499:33:0
48	97	354	16:35:41.466	488AI6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,268,689:23:0
49	97	354	18:37:17.466	488AI6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,268,809:47:0
50	97	354	19:00:20.133	488AI6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,268,832:28:0
51	97	354	19:15:41.466	488AI6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,268,847:45:0
52	97	354	19:51:57.466	488AJ6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,268,883:33:0
53	97	354	22:52:34.800	176SB6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,269,062:00:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	97	354	23:01:20.133	20UZ4B	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,269,070	60:0
55	97	354	23:13:42.133	488AJ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,269,082	81:0
56	97	354	23:20:20.133	20UZ4D	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,269,089	41:0
57	97	355	00:29:17.466	488AJ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,269,157	59:0
58	97	355	01:44:15.466	488AJ6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,269,231	72:0
59	97	355	01:48:13.466	488AJ6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,269,235	65:0
60	97	355	02:01:30.133	20SC6A	6TMSED	NORM,AH1	Sci, Eng, and D/L Chan	2O0	4	0	4,269,248	77:0
61	97	355	02:10:00.133	474AA416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,269,257	23:0
62	97	355	02:12:00.133	474AA416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,269,259	21:0
63	97	355	02:16:14.133	474AA416A4E	7BURN	240.336899,29.14	ALERT -- Thruster fire	2O0	4	0	4,269,263	38:0
64	97	355	03:22:02.133	474AA416A4I	7BURN	240.336899,29.14	ALERT -- Thruster fire	2O0	4	0	4,269,328	45:0
65	97	355	04:49:31.466	474AA416A4P	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,269,415	02:0
66	97	355	10:11:44.133	20SC6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,269,733	63:0
67	97	355	12:00:00.133	444UC443A4A	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,269,840	70:0
68	97	355	12:04:45.466	488AK6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,269,845	43:0
69	97	355	12:11:04.133	20UA4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,269,851	65:0
70	97	355	12:11:54.133	20UA4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,269,852	49:0
71	97	355	12:13:22.800	176SC6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,269,854	00:0
72	97	355	23:13:54.733	488AL6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,270,507	25:0
73	97	355	23:18:53.400	488AL6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,270,512	18:0
74	97	356	00:18:37.400	488AL6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,270,571	25:0
75	97	356	00:23:26.066	488AL6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,270,576	03:0
76	97	356	00:57:05.400	488AL6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,270,609	29:0
77	97	356	09:05:33.400	488AM6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,271,092	38:0
78	97	356	10:15:57.400	488AM6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,271,162	04:0
79	97	356	11:05:01.400	488AM6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,271,210	52:0
80	97	356	11:53:16.733	488AM6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,271,258	27:0
81	97	356	11:54:05.400	488AM6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,271,259	09:0
82	97	356	12:27:09.400	488AN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,271,291	73:0
83	97	358	23:01:49.266	488CA6B	6TMSED	NORM,AH2	Sci, Eng, and D/L Chan	2O0	4	0	4,274,767	77:0
84	97	358	23:05:03.933	20UX4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,274,771	05:0
85	97	358	23:05:53.933	20UX4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,274,771	80:0
86	97	358	23:29:33.266	488CA6C	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	2O0	4	0	4,274,795	25:0
87	97	359	00:01:59.933	488CA6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,274,827	33:0
88	97	359	00:39:57.266	488CA6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,274,864	82:0
89	97	359	03:58:49.266	488CB6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,275,061	53:0
90	97	359	04:32:28.600	488CB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,275,094	79:0
91	97	359	08:27:09.266	488CB6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,275,326	88:0
92	97	359	09:41:49.266	488CB6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,275,400	74:0
93	97	359	10:08:49.933	488CC6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,275,427	48:0
94	97	359	10:20:13.266	488CC6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,275,438	72:0
95	97	359	10:56:29.266	488CC6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,275,474	60:0
96	97	359	22:58:26.533	488CD6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,276,188	62:0
97	97	359	23:29:33.200	488CD6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,276,219	41:0
98	97	360	00:48:29.200	488CD6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,276,297	47:0
99	97	360	08:10:05.200	488CE6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,276,734	24:0
100	97	360	09:31:09.200	488CE6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,276,814	40:0
101	97	360	10:04:13.200	488CE6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,276,847	13:0
102	97	360	10:15:57.200	488CE6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,276,858	68:0
103	97	360	10:54:23.866	488CE6E	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,276,896	70:0
104	97	360	11:28:29.200	488CF6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,276,930	44:0
105	97	360	17:56:45.200	488CG6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,277,314	44:0
106	97	360	18:16:05.866	488CG6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,277,333	56:0
107	97	360	18:58:37.200	488CG6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,277,375	61:0
108	97	360	21:03:20.533	488CG6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,277,499	02:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	97	360	22:20:42.533	488CG6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,277,575	49:0
110	97	360	23:08:00.533	488CH6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,277,622	29:0
111	97	360	23:48:45.200	488CH6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,277,662	56:0
112	97	361	01:03:25.200	488CH6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,277,736	42:0
113	97	361	03:54:03.133	488CH6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,277,905	20:0
114	97	361	04:27:42.466	488CH6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,277,938	46:0
115	97	361	07:50:53.133	488CI6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,278,139	41:0
116	97	361	09:20:29.133	488CI6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,278,228	06:0
117	97	361	09:59:37.133	488CI6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,278,266	70:0
118	97	361	10:11:41.133	488CI6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,278,278	64:0
119	97	361	10:47:57.133	488CI6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,278,314	52:0
120	97	361	22:58:13.800	488CJ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,279,036	75:0
121	97	361	23:33:49.133	488CJ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,279,072	02:0
122	97	362	01:18:21.133	488CJ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,279,175	37:0
123	97	362	07:25:17.133	488CK6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,279,538	28:0
124	97	362	09:16:13.066	488CK6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,279,648	02:0
125	97	362	09:51:11.066	488CK6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,279,682	55:0
126	97	362	10:01:01.066	488CK6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,279,692	30:0
127	97	362	10:37:17.066	488CK6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,279,728	18:0
128	97	362	22:58:07.066	488CL6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,280,460	81:0
129	97	362	23:38:05.066	488CL6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,280,500	38:0
130	97	363	01:37:33.066	488CL6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,280,618	52:0
131	97	363	07:06:05.066	488CM6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,280,943	45:0
132	97	363	09:05:33.066	488CM6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,281,061	59:0
133	97	363	09:47:17.733	488CM6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,281,102	85:0
134	97	363	09:54:37.066	488CM6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,281,110	16:0
135	97	363	10:30:53.066	488CM6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,281,146	04:0
136	97	364	05:17:39.666	488CN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,282,260	40:0
137	97	364	06:36:13.000	488CN6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,282,338	12:0
138	97	364	08:54:53.000	488CN6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,282,475	25:0
139	97	364	09:42:41.666	488CN6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,282,522	51:0
140	97	364	09:50:21.000	488CN6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,282,530	12:0
141	97	364	11:13:59.000	488CO6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,282,612	77:0
142	97	364	11:21:07.666	488CO6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,282,619	83:0
143	97	364	13:08:32.333	488CO6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,282,726	13:0
144	97	364	16:55:41.000	488CO6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,282,950	72:0
145	97	364	18:13:57.000	488CP6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,283,028	18:0
146	97	364	18:31:09.666	488CP6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,283,045	20:0
147	97	364	19:58:21.000	488CP6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,283,131	41:0
148	97	364	20:08:34.333	488CP6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,283,141	51:0
149	97	364	22:20:36.333	488CP6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,283,272	13:0
150	97	364	22:57:54.933	488CQ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,283,309	04:0
151	97	364	23:42:20.933	488CQ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,283,352	90:0
152	97	365	00:02:21.600	488CQ6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,283,372	71:0
153	97	365	00:39:25.600	488CQ6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,283,409	40:0
154	97	365	02:33:00.933	488CQ6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,283,521	71:0
155	97	365	05:55:40.933	488CR6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,283,722	20:0
156	97	365	08:46:20.933	488CR6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,283,891	01:0
157	97	365	09:38:05.600	488CR6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,283,942	17:0
158	97	365	09:46:04.933	488CR6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,283,950	08:0
159	97	365	17:53:52.266	488CS6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,284,432	47:0
160	97	365	18:22:20.933	488CS6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,284,460	62:0
161	97	365	22:15:30.266	488CS6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,284,691	25:0
162	97	365	22:52:48.933	488CS6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,284,728	16:0
163	97	365	23:42:20.933	488CS6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,284,777	15:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	98	1	03:47:40.933	488CT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,285,019:73:0	
165	98	1	04:26:04.933	488CT6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,285,057:71:0	
166	98	1	08:39:56.866	488CT6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,285,308:78:0	
167	98	1	09:32:13.533	488CT6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,285,360:51:0	
168	98	1	09:39:40.866	488CT6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,285,367:85:0	
169	98	1	11:13:46.866	488CU6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,285,461:00:0	
170	98	1	11:16:20.200	488CU6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,285,463:48:0	
171	98	1	13:03:44.200	488CU6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,285,569:68:0	
172	98	1	16:45:28.866	488CU6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,285,789:05:0	
173	98	1	17:53:46.200	488CV6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,285,856:54:0	
174	98	1	18:22:20.866	488CV6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,285,884:78:0	
175	98	1	18:46:18.200	488CV6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,285,908:50:0	
176	98	1	19:33:36.866	488CV6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,285,955:31:0	
177	98	1	22:15:25.533	488CV6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,286,115:34:0	
178	98	1	22:52:44.200	488CW6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,286,152:25:0	
179	98	1	23:42:20.866	488CW6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,286,201:31:0	
180	98	2	08:35:40.866	488CX6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,286,728:74:0	
181	98	2	09:29:37.533	488CX6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,286,782:15:0	
182	98	2	09:35:24.866	488CX6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,286,787:81:0	
183	98	2	22:58:39.466	488CY6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,287,582:28:0	
184	98	2	23:16:28.133	488CY6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,287,599:84:0	
185	98	3	00:42:04.800	488CY6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,287,684:54:0	
186	98	3	00:50:59.466	488CY6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,287,693:37:0	
187	98	3	07:29:32.800	488CZ6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,288,087:53:0	
188	98	3	09:00:20.800	488CZ6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,288,177:35:0	
189	98	3	17:48:34.800	488BA6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,288,699:74:0	
190	98	3	18:22:20.800	488BA6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,288,733:19:0	
191	98	3	18:22:30.133	20NV6A	6TMSED	NORM,AH2	Sci, Eng, and D/L Chan	2O0	4	0	4,288,733:33:0	
192	98	3	18:23:00.133	20NV6B	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,288,733:78:0	
193	98	3	18:33:44.133	20NV6K	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	2O0	4	0	4,288,744:43:0	
194	98	3	18:37:56.133	20NV6O	6MROH	7,693C,2,A10	read from AACSA7,693C,2,A10	2O0	4	0	4,288,748:57:0	
195	98	3	18:47:56.133	20NV4P	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,288,758:47:0	
196	98	3	18:48:56.133	20NV6Q	6MROH	7,673E,2,A10	read from AACSA7,673E,2,A10	2O0	4	0	4,288,759:46:0	
197	98	3	18:52:56.133	20NV6R	6MROH	7,693C,2,A10	read from AACSA7,693C,2,A10	2O0	4	0	4,288,763:42:0	
198	98	3	19:06:56.133	20NV6T	6MROH	7,673E,2,A10	read from AACSA7,673E,2,A10	2O0	4	0	4,288,777:28:0	
199	98	3	19:10:56.133	20NV6U	6MROH	7,693C,2,A10	read from AACSA7,693C,2,A10	2O0	4	0	4,288,781:24:0	
200	98	3	19:14:56.133	20NV4V	**7CONE**	**17.45,180.0**	Check S/P Position	2O0	4	0	4,288,785:20:0	
201	98	3	19:25:40.800	20NV6W	6MROH	7,673E,2,A10	read from AACSA7,673E,2,A10	2O0	4	0	4,288,795:77:0	
202	98	3	19:29:40.800	20NV6X	6MROH	7,693C,2,A10	read from AACSA7,693C,2,A10	2O0	4	0	4,288,799:73:0	
203	98	3	19:33:40.800	20NV4Y	**7CONE**	**17.45,135.0**	Check S/P Position	2O0	4	0	4,288,803:69:0	
204	98	3	19:44:26.133	20NV6Z	6MROH	7,673E,2,A10	read from AACSA7,673E,2,A10	2O0	4	0	4,288,814:36:0	
205	98	3	19:48:26.133	20NV6AA	6MROH	7,693C,2,A10	read from AACSA7,693C,2,A10	2O0	4	0	4,288,818:32:0	
206	98	3	19:52:26.133	20NV4AB	**7CONE**	**17.45,90.0**	Check S/P Position	2O0	4	0	4,288,822:28:0	
207	98	3	20:03:10.733	20NV6AC	6MROH	7,673E,2,A10	read from AACSA7,673E,2,A10	2O0	4	0	4,288,832:85:0	
208	98	3	20:07:10.733	20NV6AD	6MROH	7,693C,2,A10	read from AACSA7,693C,2,A10	2O0	4	0	4,288,836:81:0	
209	98	3	20:11:10.733	20NV4AE	**7CONE**	**17.45,45.0**	Check S/P Position	2O0	4	0	4,288,840:77:0	
210	98	3	20:21:56.066	20NV6AF	6MROH	7,673E,2,A10	read from AACSA7,673E,2,A10	2O0	4	0	4,288,851:44:0	
211	98	3	20:25:56.066	20NV6AG	6MROH	7,693C,2,A10	read from AACSA7,693C,2,A10	2O0	4	0	4,288,855:40:0	
212	98	3	20:56:44.733	20NV6AN	6MROH	7,673E,2,A10	read from AACSA7,673E,2,A10	2O0	4	0	4,288,885:83:0	
213	98	3	21:00:44.733	20NV6AO	6MROH	7,693C,2,A10	read from AACSA7,693C,2,A10	2O0	4	0	4,288,889:79:0	
214	98	3	21:04:44.733	20NV4AP	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,288,893:75:0	
215	98	3	21:08:44.733	20NV4AQ	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,288,897:71:0	
216	98	3	21:17:24.733	20NV6AY	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	2O0	4	0	4,288,906:32:0	
217	98	3	21:21:24.733	20NV4AZ	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,288,910:28:0	
218	98	3	21:25:24.733	20NV4BA	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,288,914:24:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	98	3	22:10:14.066	488BA6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,288,958:54:0	
220	98	3	22:10:20.066	20NV6BB	6TMSED	FILL,AH2	Sci, Eng, and D/L Chan	2O0	4	0	4,288,958:63:0	
221	98	3	22:47:32.733	488BA6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,288,995:45:0	
222	98	3	22:47:40.066	20NV6BC	6TMSED	NORM,AH2	Sci, Eng, and D/L Chan	2O0	4	0	4,288,995:56:0	
223	98	3	23:38:04.733	488BA6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,289,045:43:0	
224	98	3	23:38:10.066	20NV6BD	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	2O0	4	0	4,289,045:51:0	
225	98	4	08:25:00.733	488BB6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,289,566:56:0	
226	98	4	09:22:59.400	488BB6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,289,623:87:0	
227	98	4	09:31:08.733	488BB6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,289,632:02:0	
228	98	4	12:54:00.066	488BB6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,289,832:59:0	
229	98	4	17:10:14.066	488BC6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,290,086:06:0	
230	98	4	17:52:28.733	488BC6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,290,127:77:0	
231	98	4	22:47:28.066	488BC6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,290,419:54:0	
232	98	4	23:38:04.733	488BD6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,290,469:59:0	
233	98	5	08:25:00.666	488BE6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,290,990:72:0	
234	98	5	09:19:06.666	488BE6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,291,044:27:0	
235	98	5	09:24:44.666	488BE6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,291,049:79:0	
236	98	5	12:49:05.333	488BE6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,291,251:88:0	
237	98	5	17:05:08.000	488BF6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,291,505:18:0	
238	98	6	10:33:21.266	488BG6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,292,541:82:0	
239	98	6	11:47:40.600	488BG6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,292,615:37:0	
240	98	6	16:29:16.600	488BG6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,292,893:83:0	
241	98	6	18:16:47.933	488BH6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,293,000:23:0	
242	98	6	20:04:11.933	488BH6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,293,106:43:0	
243	98	6	20:32:28.600	488BH6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,293,134:40:0	
244	98	6	22:29:58.600	488BH6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,293,250:59:0	
245	98	6	23:02:16.600	488BH6E	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,293,282:54:0	
246	98	6	23:31:40.600	488BI6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,293,311:61:0	
247	98	7	02:47:56.600	488BI6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,293,505:71:0	
248	98	7	03:20:05.266	488BI6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,293,537:52:0	
249	98	7	03:53:44.600	488BI6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,293,570:78:0	
250	98	7	05:00:12.600	488BI6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,293,636:54:0	
251	98	7	08:20:44.600	488BJ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,293,834:84:0	
252	98	7	09:12:29.266	488BJ6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,293,886:09:0	
253	98	7	09:20:28.600	488BJ6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,293,894:00:0	
254	98	7	17:38:15.200	488BK6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,294,386:28:0	
255	98	7	18:07:24.533	488BK6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,294,415:13:0	
256	98	7	21:54:33.200	488BK6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,294,639:72:0	
257	98	7	22:10:36.533	488BK6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,294,655:61:0	
258	98	7	22:48:13.866	488BK6E	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,294,692:80:0	
259	98	7	23:01:53.866	488BL6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,294,706:36:0	
260	98	8	00:42:04.533	488BL6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,294,805:43:0	
261	98	8	00:45:09.866	488BL6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,294,808:48:0	
262	98	8	02:12:35.866	176WX6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,294,895:00:0	
263	98	8	02:16:59.866	20WS4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,294,899:32:0	
264	98	8	02:17:59.866	20WS4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2O0	4	0	4,294,900:31:0	
265	98	8	02:19:59.866	20WS4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,294,902:29:0	
266	98	8	02:25:29.866	20WS4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2O0	4	0	4,294,907:69:0	
267	98	8	02:25:30.533	20WS4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2O0	4	0	4,294,907:70:0	
268	98	8	02:25:50.533	20WS4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2O0	4	0	4,294,908:09:0	
269	98	8	02:25:51.200	20WS4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2O0	4	0	4,294,908:10:0	
270	98	8	02:26:11.200	20WS4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,294,908:40:0	
271	98	8	02:26:11.866	20WS4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,294,908:41:0	
272	98	8	02:26:21.866	20WS4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,294,908:56:0	
273	98	8	02:26:22.533	20WS4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,294,908:57:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	98	8	02:26:32.533	20WS4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2O0	4	0	4,294,908	72:0
275	98	8	02:26:33.200	20WS4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2O0	4	0	4,294,908	73:0
276	98	8	02:28:19.866	20WS4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2O0	4	0	4,294,910	51:0
277	98	8	02:28:20.533	20WS4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2O0	4	0	4,294,910	52:0
278	98	8	02:28:40.533	20WS4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2O0	4	0	4,294,910	82:0
279	98	8	02:28:41.200	20WS4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2O0	4	0	4,294,910	83:0
280	98	8	02:29:01.200	20WS4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,294,911	22:0
281	98	8	02:29:01.866	20WS4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,294,911	23:0
282	98	8	02:29:11.866	20WS4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,294,911	38:0
283	98	8	02:29:12.533	20WS4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,294,911	39:0
284	98	8	02:29:22.533	20WS4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2O0	4	0	4,294,911	54:0
285	98	8	02:29:23.200	20WS4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2O0	4	0	4,294,911	55:0
286	98	8	02:30:19.866	20WS4Z	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,294,912	49:0
287	98	8	02:55:03.866	20WL4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,294,937	00:0
288	98	8	02:55:53.866	20WL4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,294,937	75:0
289	98	8	02:57:05.200	176WY6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,294,939	00:0
290	98	8	06:59:40.533	488BM6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,295,178	84:0
291	98	8	08:39:55.200	488BM6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,295,278	06:0
292	98	8	09:22:36.533	488BM6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,295,320	26:0
293	98	9	06:48:05.800	488BN6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,296,591	59:0
294	98	9	08:10:04.466	488BN6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,296,672	66:0
295	98	9	09:04:01.133	488BN6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,296,726	07:0
296	98	9	09:09:48.466	488BN6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,296,731	73:0
297	98	9	22:48:03.800	488BO6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,297,541	06:0
298	98	9	22:57:03.133	488BO6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,297,549	87:0
299	98	10	00:42:04.466	488BO6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,297,653	75:0
300	98	10	00:43:13.800	488BO6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,297,654	88:0
301	98	10	06:44:44.466	488BP6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,298,012	46:0
302	98	10	08:29:45.733	488BP6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,298,116	34:0
303	98	10	09:11:56.400	488BP6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,298,158	08:0
304	98	10	22:31:59.066	488BQ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,298,949	31:0
305	98	10	23:16:44.400	488BQ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,298,993	55:0
306	98	11	02:11:40.400	488BQ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,299,166	56:0
307	98	11	05:15:08.400	488BR6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,299,348	06:0
308	98	11	08:03:40.400	488BR6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,299,514	68:0
309	98	11	08:59:24.400	488BR6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,299,569	79:0
310	98	11	09:05:32.400	488BR6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,299,575	85:0
311	98	11	12:29:34.400	488BS6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,299,777	66:0
312	98	11	16:39:41.000	488BS6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,300,025	08:0
313	98	11	18:32:56.333	488BT6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,300,137	09:0
314	98	11	18:52:11.000	488BT6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,300,156	12:0
315	98	11	20:58:04.333	488BT6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,300,280	58:0
316	98	11	20:58:52.333	488BT6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,300,281	39:0
317	98	11	21:45:00.333	488BT6E	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,300,327	05:0
318	98	12	00:44:39.000	488BU6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,300,504	66:0
319	98	12	01:26:52.333	488BU6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,300,546	44:0
320	98	12	05:08:44.333	488BU6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,300,765	83:0
321	98	12	05:17:52.333	488BU6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,300,774	86:0
322	98	12	06:01:04.333	20VB6A	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	2O0	4	0	4,300,817	61:0
323	98	12	06:07:28.333	176VA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,300,824	00:0
324	98	12	06:12:04.333	20VA4A	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2O0	4	0	4,300,828	50:0
325	98	12	06:22:04.333	20VA4B	7SUN		Check S/P Position	2O0	4	0	4,300,838	40:0
326	98	12	06:26:04.333	20VA4C	7VECT	RTH	Inert vect update UTC	2O0	4	0	4,300,842	36:0
327	98	12	06:26:06.333	20VA4D	7STAR	1,3000,95.711,-5	Star catalog update	2O0	4	0	4,300,842	39:0
328	98	12	06:26:08.333	20VA4E	7STAR	2,184,84.459,-34	Star catalog update	2O0	4	0	4,300,842	42:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	98	12	06:26:10.333	20VA4F	7STAR	3,121,222.025,-1	Star catalog update	2O0	4	0	4,300,842:45:0	
330	98	12	06:26:12.333	20VA4G	7STAR	4,278,204.176,-5	Star catalog update	2O0	4	0	4,300,842:48:0	
331	98	12	06:26:14.333	20VA4H	7STAR	5,0,0.0,0.0	Star catalog update	2O0	4	0	4,300,842:51:0	
332	98	12	06:26:16.333	20VA4I	7STAR	6,0,0.0,0.0	Star catalog update	2O0	4	0	4,300,842:54:0	
333	98	12	06:26:18.333	20VA4J	7STAR	13,9000,135.0,16	Star catalog update	2O0	4	0	4,300,842:57:0	
334	98	12	06:26:20.333	20VA4K	7STAR	14,9000,180.0,1.	Star catalog update	2O0	4	0	4,300,842:60:0	
335	98	12	06:26:22.333	20VA4L	7STAR	15,9000,105.0,23	Star catalog update	2O0	4	0	4,300,842:63:0	
336	98	12	06:26:24.333	20VA4M	7STAR	16,0,0.0,0.0	Star catalog update	2O0	4	0	4,300,842:66:0	
337	98	12	06:26:26.333	20VA4N	7STAR	17,0,0.0,0.0	Star catalog update	2O0	4	0	4,300,842:69:0	
338	98	12	06:26:28.333	20VA4O	7STAR	18,0,0.0,0.0	Star catalog update	2O0	4	0	4,300,842:72:0	
339	98	12	06:58:30.333	20VA4R	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,300,874:43:0	
340	98	12	07:01:00.333	20VA4S	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,300,876:86:0	
341	98	12	07:02:00.333	20VA6K	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	2O0	4	0	4,300,877:85:0	
342	98	12	07:05:00.333	20VA4T	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,300,880:82:0	
343	98	12	07:07:07.666	176VB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,300,883:00:0	
344	98	12	07:10:04.333	20VC6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,300,885:83:0	
345	98	12	07:59:24.333	488BV6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,300,934:64:0	
346	98	12	08:53:32.333	488BV6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,300,988:22:0	
347	98	12	08:59:08.333	488BV6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,300,993:71:0	
348	98	12	12:24:38.333	488BV6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,301,197:02:0	
349	98	12	16:34:35.666	488BW6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,301,444:21:0	
350	98	12	22:37:52.266	488BX6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,301,803:47:0	
351	98	12	22:52:15.600	488BX6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,301,817:68:0	
352	98	13	00:39:40.266	488BX6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,301,923:89:0	
353	98	13	00:52:44.266	488BX6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,301,936:82:0	
354	98	13	06:19:08.266	488BY6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,302,259:65:0	
355	98	13	08:14:34.266	488BY6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,302,373:80:0	
356	98	13	17:42:48.266	488BZ6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,302,935:79:0	
357	98	13	17:52:18.933	488BZ6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,302,945:25:0	
358	98	13	18:01:00.266	488ZA6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,302,953:79:0	
359	98	13	19:39:42.933	488ZA6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,303,051:45:0	
360	98	13	22:21:16.266	488ZA6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,303,211:25:0	
361	98	13	23:12:28.266	488ZA6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,303,261:83:0	
362	98	13	23:23:30.266	488ZA6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,303,272:75:0	
363	98	14	00:00:34.266	488ZB6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,303,309:44:0	
364	98	14	02:11:40.266	488ZB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,303,439:13:0	
365	98	14	04:53:48.200	488ZB6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,303,599:45:0	
366	98	14	07:48:44.200	488ZC6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,303,772:46:0	
367	98	14	08:45:04.866	488ZC6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,303,828:21:0	
368	98	14	08:48:28.200	488ZC6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,303,831:53:0	
369	98	14	09:16:11.533	176SN6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,303,859:00:0	
370	98	14	09:22:15.533		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4894.66 +/-	2O0	4	0	4,303,865:00:0	
371	98	14	09:22:15.533		DMS:	: *SLEW-TIC	P7, TRACK *1, *FWD, TIC 4894.66 +/-	2O0	4	0	4,303,865:00:0	
372	98	14	09:22:15.533	465WA6A	6DMST	5000	DMS Slew to TIC	2O0	4	0	4,303,865:00:0	
373	98	14	09:22:22.200		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 4894.66 +/-	2O0	4	0	4,303,865:10:0	
374	98	14	09:22:23.600		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *4894.78 +/-	2O0	4	0	4,303,865:12:1	
375	98	14	09:29:43.000		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *4997.94 +/-	2O0	4	0	4,303,872:34:2	
376	98	14	09:29:44.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	2O0	4	0	4,303,872:36:0	
377	98	14	15:15:56.866	465WB6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,304,214:73:0	
378	98	14	15:15:56.866		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	2O0	4	0	4,304,214:73:0	
379	98	14	15:15:58.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	2O0	4	0	4,304,214:75:1	
380	98	14	15:16:03.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	2O0	4	0	4,304,214:83:0	
381	98	14	15:16:04.733		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	2O0	4	0	4,304,214:84:8	
382	98	14	15:16:08.600		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	2O0	4	0	4,304,214:90:6	
383	98	14	15:16:08.600		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	2O0	4	0	4,304,214:90:6	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	98	14	15:41:48.866	465WB6B	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	4,304,240	35:0
385	98	14	15:41:48.866		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 255.79 +/-	2O0	4	0	4,304,240	35:0
386	98	14	15:41:50.066		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	2O0	4	0	4,304,240	36:8
387	98	14	17:37:44.200	488ZD6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,304,355	03:0
388	98	14	17:40:37.533	465WC6A	6DTRN	CMD,6DTRN,465WC6	DMS TRACK TURNAROUND	2O0	4	0	4,304,357	81:0
389	98	14	17:40:37.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	2O0	4	0	4,304,357	81:0
390	98	14	17:40:37.533		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	2O0	4	0	4,304,357	81:0
391	98	14	17:40:38.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	2O0	4	0	4,304,357	83:1
392	98	14	17:40:44.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	2O0	4	0	4,304,358	00:0
393	98	14	17:40:45.400		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	2O0	4	0	4,304,358	01:8
394	98	14	17:40:46.800		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	2O0	4	0	4,304,358	03:9
395	98	14	17:44:47.466		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	4,304,362	00:9
396	98	14	17:44:48.666		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	4,304,362	02:7
397	98	14	17:44:48.666		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	4,304,362	02:7
398	98	14	17:44:50.066		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	4,304,362	04:8
399	98	14	17:45:02.066		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	4,304,362	22:8
400	98	14	17:45:03.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	4,304,362	24:6
401	98	14	17:47:22.866	488ZD6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,304,364	52:0
402	98	14	17:50:40.200		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,304,367	75:0
403	98	14	17:50:40.200	465WD6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,304,367	75:0
404	98	14	17:50:46.866		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,304,367	85:0
405	98	14	17:50:50.733		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	2O0	4	0	4,304,367	90:8
406	98	14	17:50:50.733		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	2O0	4	0	4,304,367	90:8
407	98	14	18:22:34.200		DMS:	: *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	2O0	4	0	4,304,399	34:0
408	98	14	18:22:34.200	465WD6B	6DMSC	RDY,1	DMS Control Tape stop	2O0	4	0	4,304,399	34:0
409	98	14	18:22:35.400		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	2O0	4	0	4,304,399	35:8
410	98	14	18:38:10.200	465WE6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,304,414	73:0
411	98	14	18:38:10.200		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	2O0	4	0	4,304,414	73:0
412	98	14	18:38:11.600		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	2O0	4	0	4,304,414	75:1
413	98	14	18:38:16.866		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	2O0	4	0	4,304,414	83:0
414	98	14	18:38:18.066		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	2O0	4	0	4,304,414	84:8
415	98	14	18:38:21.933		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	2O0	4	0	4,304,414	90:6
416	98	14	18:38:21.933		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	2O0	4	0	4,304,414	90:6
417	98	14	19:10:18.200	465WF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,304,446	53:0
418	98	14	19:10:18.200		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC * 164.96 +/-	2O0	4	0	4,304,446	53:0
419	98	14	19:10:19.400		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	2O0	4	0	4,304,446	54:8
420	98	14	19:10:23.266		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	2O0	4	0	4,304,446	60:6
421	98	14	19:10:23.266		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	2O0	4	0	4,304,446	60:6
422	98	14	19:34:46.866	488ZD6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,304,470	72:0
423	98	14	19:42:18.866	465WF6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	4,304,478	22:0
424	98	14	19:42:18.866		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	2O0	4	0	4,304,478	22:0
425	98	14	19:42:20.066		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	2O0	4	0	4,304,478	23:8
426	98	14	19:57:02.200	465WG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,304,492	73:0
427	98	14	19:57:02.200		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	2O0	4	0	4,304,492	73:0
428	98	14	19:57:03.600		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	2O0	4	0	4,304,492	75:1
429	98	14	19:57:08.866		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	2O0	4	0	4,304,492	83:0
430	98	14	19:57:10.066		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	2O0	4	0	4,304,492	84:8
431	98	14	19:57:13.933		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	2O0	4	0	4,304,492	90:6
432	98	14	19:57:13.933		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	2O0	4	0	4,304,492	90:6
433	98	14	20:29:09.533		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	2O0	4	0	4,304,524	52:0
434	98	14	20:29:09.533	465WH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,304,524	52:0
435	98	14	20:29:10.733		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	2O0	4	0	4,304,524	53:8
436	98	14	20:29:14.600		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	2O0	4	0	4,304,524	59:6
437	98	14	20:29:14.600		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	2O0	4	0	4,304,524	59:6
438	98	14	20:30:15.533		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	2O0	4	0	4,304,525	60:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	98	14	20:30:15.533	465WH6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	4,304,525	60:0
440	98	14	20:30:16.733		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	2O0	4	0	4,304,525	61:8
441	98	14	20:44:45.533		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	2O0	4	0	4,304,540	00:0
442	98	14	20:44:45.533	465WI6A	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	4,304,540	00:0
443	98	14	20:45:39.533		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	2O0	4	0	4,304,540	81:0
444	98	14	20:45:39.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	2O0	4	0	4,304,540	81:0
445	98	14	20:45:39.533	465WJ6A	6DTRN	CMD,6DTRN,465WJ6	DMS TRACK TURNAROUND	2O0	4	0	4,304,540	81:0
446	98	14	20:45:40.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	2O0	4	0	4,304,540	83:1
447	98	14	20:45:46.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	2O0	4	0	4,304,541	00:0
448	98	14	20:45:47.400		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	2O0	4	0	4,304,541	01:8
449	98	14	20:45:48.800		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	2O0	4	0	4,304,541	03:9
450	98	14	20:57:14.600		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	4,304,552	31:6
451	98	14	20:57:15.800		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	4,304,552	33:4
452	98	14	20:57:15.800		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	4,304,552	33:4
453	98	14	20:57:17.200		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	4,304,552	35:5
454	98	14	20:57:29.200		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	4,304,552	53:5
455	98	14	20:57:30.400		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	4,304,552	55:3
456	98	14	21:15:04.866	20VE4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,304,569	90:0
457	98	14	21:15:54.866	20VE4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,304,570	74:0
458	98	14	21:17:06.866	176SO6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,304,572	00:0
459	98	14	22:17:00.200	488ZD6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,304,631	21:0
460	98	14	23:12:28.200	488ZD6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,304,686	08:0
461	98	14	23:23:34.200	488ZE6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,304,697	06:0
462	98	14	23:55:08.200	488ZE6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,304,728	26:0
463	98	15	22:16:38.800	488ZF6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,306,055	05:0
464	98	15	23:12:28.133	488ZF6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,306,110	24:0
465	98	16	00:09:50.133	176TA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,306,167	00:0
466	98	16	00:17:00.133	20ZZ6B	6MROH	4,5B28,1,A2	read from HLM1A4,5B28,1,A2	2O0	4	0	4,306,174	08:0
467	98	16	00:25:00.133	176TB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,306,182	00:0
468	98	16	00:30:00.133	20ZZ6C	6MROH	5,5B28,1,B2	read from HLM1B5,5B28,1,B2	2O0	4	0	4,306,186	86:0
469	98	16	00:31:32.133	488EA6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,306,188	42:0
470	98	16	07:33:48.133	488EB6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,306,606	08:0
471	98	16	08:59:08.133	488EB6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,306,690	44:0
472	98	16	09:03:22.133	488EB6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,306,694	61:0
473	98	16	09:09:48.133	488EB6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,306,701	03:0
474	98	16	09:31:36.800	488EB6E	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,306,722	55:0
475	98	16	10:11:40.133	488EC6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,306,762	20:0
476	98	16	10:58:39.466	488EC6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,306,808	63:0
477	98	16	11:35:43.466	488EC6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,306,845	32:0
478	98	16	16:29:16.133	488ED6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,307,135	61:0
479	98	16	17:07:40.133	488ED6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,307,173	59:0
480	98	16	18:03:40.800	488ED6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,307,229	04:0
481	98	16	18:39:24.066	488ED6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,307,264	34:0
482	98	16	18:48:32.733	488ED6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,307,273	38:0
483	98	16	21:34:20.066	488EE6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,307,437	35:0
484	98	16	21:53:32.066	488EE6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,307,456	34:0
485	98	16	23:12:28.066	488EE6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,307,534	40:0
486	98	16	23:18:32.733	488EE6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,307,540	41:0
487	98	16	23:47:38.733	488EE6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,307,569	21:0
488	98	17	00:05:04.066	20NW6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	4,307,586	42:0
489	98	17	00:10:04.066	176VF6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,307,591	37:0
490	98	17	00:12:12.066	20NW6BA	6MROH	7,6CE0,1,A10	read from AACSA7,6CE0,1,A10	2O0	4	0	4,307,593	47:0
491	98	17	00:18:56.066	20NW6F	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	2O0	4	0	4,307,600	16:0
492	98	17	00:32:30.066	20NW6K	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	2O0	4	0	4,307,613	54:0
493	98	17	00:46:38.066	20NW4I	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,307,627	52:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	98	17	01:01:38.066	20NW4K	7SLEW	INIT,POS,17.45	Stator movement	2O0	4	0	4,307,642:37:0	
495	98	17	01:13:38.066	20NW4L	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,307,654:25:0	
496	98	17	01:20:38.066	20NW4M	7SLEW	INIT,NEG,17.45	Stator movement	2O0	4	0	4,307,661:18:0	
497	98	17	01:32:38.066	20NW4N	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,307,673:06:0	
498	98	17	01:39:38.066	20NW4O	7SLEW	INIT,POS,4.36	Stator movement	2O0	4	0	4,307,679:90:0	
499	98	17	01:51:38.066	20NW4P	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,307,691:78:0	
500	98	17	01:58:38.066	20NW4Q	7SLEW	INIT,NEG,4.36	Stator movement	2O0	4	0	4,307,698:71:0	
501	98	17	02:10:38.066	20NW4R	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,307,710:59:0	
502	98	17	02:17:38.066	20NW4S	**7CONE**	**17.45,0.0**	Check S/P Position	2O0	4	0	4,307,717:52:0	
503	98	17	02:23:38.066	20NW4T	**7CONE**	**17.45,180.0**	Check S/P Position	2O0	4	0	4,307,723:46:0	
504	98	17	02:29:38.066	20NW4U	**7CONE**	**4.36,0.0**	Check S/P Position	2O0	4	0	4,307,729:40:0	
505	98	17	02:44:38.066	20NW4V	**7CONE**	**4.36,153.0**	Check S/P Position	2O0	4	0	4,307,744:25:0	
506	98	17	03:21:42.066	20NW4AA	7SLEW	INIT,POS,17.45	Stator movement	2O0	4	0	4,307,780:85:0	
507	98	17	03:33:42.066	20NW4AB	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,307,792:73:0	
508	98	17	03:40:42.066	20NW4AC	7SLEW	INIT,NEG,17.45	Stator movement	2O0	4	0	4,307,799:66:0	
509	98	17	03:52:42.066	20NW4AD	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,307,811:54:0	
510	98	17	03:59:42.066	20NW4AE	**7CONE**	**17.45,0.0**	Check S/P Position	2O0	4	0	4,307,818:47:0	
511	98	17	04:05:42.066	20NW4AF	**7CONE**	**17.45,180.0**	Check S/P Position	2O0	4	0	4,307,824:41:0	
512	98	17	04:11:42.066	20NW4AG	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,307,830:35:0	
513	98	17	04:15:42.066	20NW4AH	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,307,834:31:0	
514	98	17	04:24:22.066	20NW6U	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	2O0	4	0	4,307,842:83:0	
515	98	17	04:28:22.066	20NW4AL	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,307,846:79:0	
516	98	17	04:29:22.066	20NW4AM	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,307,847:78:0	
517	98	17	04:37:30.066	176VG6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,307,855:82:0	
518	98	17	04:38:30.066	20NW6BB	6MROH	7,6CE0,1,A10	read from AACSA7,6CE0,1,A10	2O0	4	0	4,307,856:81:0	
519	98	17	04:41:10.066	20NW6Y	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	2O0	4	0	4,307,859:48:0	
520	98	17	04:45:40.066	20NW6AA	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,307,863:89:0	
521	98	17	07:40:12.066	488EF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,308,036:54:0	
522	98	17	08:59:08.066	488EF6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,308,114:60:0	
523	98	17	09:02:25.400	488EF6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,308,117:83:0	
524	98	17	09:09:48.066	488EF6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,308,125:19:0	
525	98	17	09:46:04.066	488EF6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,308,161:07:0	
526	98	17	16:36:32.733	488EG6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,308,567:04:0	
527	98	17	16:57:00.066	488EG6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,308,587:25:0	
528	98	17	18:07:24.066	488EG6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,308,656:82:0	
529	98	17	18:10:49.400	488EG6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,308,660:26:0	
530	98	17	18:44:28.733	488EG6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,308,693:52:0	
531	98	17	21:34:20.066	488EH6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,308,861:51:0	
532	98	17	21:53:32.066	488EH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,308,880:50:0	
533	98	17	23:01:48.066	488EH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,308,948:06:0	
534	98	17	23:18:36.733	488EH6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,308,964:63:0	
535	98	17	23:44:28.066	488EH6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,308,990:24:0	
536	98	18	09:21:30.000	488EI6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,309,560:87:0	
537	98	18	09:56:44.000	488EI6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,309,595:73:0	
538	98	18	10:48:46.666	488EI6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,309,647:25:0	
539	98	18	11:25:50.666	488EI6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,309,683:85:0	
540	98	18	12:11:08.000	488EI6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,309,728:66:0	
541	98	18	14:53:16.000	488EJ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,309,889:07:0	
542	98	18	17:09:48.000	488EJ6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,310,024:10:0	
543	98	18	17:34:48.666	488EJ6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,310,048:77:0	
544	98	18	17:48:12.000	488EJ6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,310,062:08:0	
545	98	18	18:24:28.000	488EJ6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,310,097:87:0	
546	98	18	21:37:28.666	488EK6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,310,288:77:0	
547	98	18	21:47:08.000	488EK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,310,298:36:0	
548	98	18	22:57:32.000	488EK6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,310,368:02:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	98	19	07:38:04.000	488EL6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,310,882:76:0	
550	98	19	08:54:51.933	488EL6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,310,958:72:0	
551	98	19	08:55:22.600	488EL6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,310,959:27:0	
552	98	19	09:57:26.600	488EL6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,311,020:62:0	
553	98	19	10:48:49.266	488EL6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,311,071:45:0	
554	98	19	11:25:53.266	488EM6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,311,108:14:0	
555	98	19	11:47:39.933	488EM6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,311,129:63:0	
556	98	19	15:08:11.933	488EM6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,311,328:02:0	
557	98	19	16:20:21.266	488EM6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,311,399:35:0	
558	98	19	16:31:23.933	488EM6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,311,410:28:0	
559	98	20	05:14:16.600	488EN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,312,164:73:0	
560	98	20	07:38:03.933	488EN6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,312,307:01:0	
561	98	20	08:48:27.933	488EN6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,312,376:58:0	
562	98	20	08:59:07.933	488EN6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,312,387:17:0	
563	98	20	09:41:47.933	488EN6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,312,429:35:0	
564	98	20	10:43:52.600	488EO6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,312,490:71:0	
565	98	20	11:20:56.600	488EO6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,312,527:40:0	
566	98	20	11:32:43.933	488EO6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,312,539:09:0	
567	98	20	15:23:07.866	488EO6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,312,766:88:0	
568	98	20	16:25:18.533	488EO6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,312,828:42:0	
569	98	20	21:32:21.866	488EP6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,313,132:13:0	
570	98	20	21:40:43.866	488EP6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,313,140:38:0	
571	98	20	22:42:35.866	488EP6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,313,201:55:0	
572	98	21	07:38:03.866	488EQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,313,731:17:0	
573	98	21	08:43:51.200	488EQ6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,313,796:23:0	
574	98	21	08:48:27.866	488EQ6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,313,800:74:0	
575	98	21	09:24:43.866	488EQ6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,313,836:62:0	
576	98	21	16:16:19.866	488ER6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,314,243:69:0	
577	98	21	16:20:43.866	488ER6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,314,248:10:0	
578	98	21	16:46:19.866	488ER6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,314,273:39:0	
579	98	21	21:19:23.866	488ER6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,314,543:45:0	
580	98	21	21:42:51.866	488ER6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,314,566:64:0	
581	98	21	22:31:55.800	488ES6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,314,615:21:0	
582	98	21	22:56:02.466	488ES6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,314,639:07:0	
583	98	21	23:29:41.133	488ES6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,314,672:32:0	
584	98	22	07:44:27.800	488ET6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,315,161:63:0	
585	98	22	08:33:31.800	488ET6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,315,210:20:0	
586	98	22	08:40:44.466	488ET6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,315,217:32:0	
587	98	22	08:54:51.800	488ET6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,315,231:29:0	
588	98	22	09:31:07.800	488ET6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,315,267:17:0	
589	98	22	21:31:17.133	488EU6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,315,979:39:0	
590	98	22	21:36:27.800	488EU6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,315,984:50:0	
591	98	22	22:31:55.800	488EU6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,316,039:37:0	
592	98	22	22:56:05.133	488EU6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,316,063:27:0	
593	98	22	23:29:44.466	488EU6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,316,096:53:0	
594	98	23	00:35:53.133	176UA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,316,162:00:0	
595	98	23	00:37:59.800	20UC6A	6TMSED	NORM,BA4	Sci, Eng, and D/L Chan	2O0	4	0	4,316,164:08:0	
596	98	23	01:04:59.800	474BA416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,316,190:72:0	
597	98	23	01:06:59.800	474BA416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,316,192:70:0	
598	98	23	01:07:59.800	20UD4C	7STAT	17.45,73.1854,-4	Stator inertial point	2O0	4	0	4,316,193:69:0	
599	98	23	01:11:13.800	474BA416A4E	7BURN	,73.185399,-45.1	ALERT -- Thruster fire	2O0	4	0	4,316,196:87:0	
600	98	23	01:18:59.800	20UD4E	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,316,204:58:0	
601	98	23	01:35:07.800	474BA416A4H	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,316,220:54:0	
602	98	23	02:50:03.800	20UY4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,316,294:64:0	
603	98	23	02:50:53.800	20UY4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,316,295:48:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	98	23	02:51:22.466	176UB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,316,296:00:0	
605	98	23	02:52:59.800	20UC6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,316,297:55:0	
606	98	23	07:38:03.733	488EV6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,316,579:49:0	
607	98	23	08:33:31.733	488EV6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,316,634:36:0	
608	98	23	08:34:53.066	488EV6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,316,635:67:0	
609	98	23	08:48:27.733	488EV6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,316,649:15:0	
610	98	23	09:24:43.733	488EV6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,316,685:03:0	
611	98	23	21:22:13.733	488EW6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,317,394:59:0	
612	98	23	21:32:11.733	488EW6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,317,404:46:0	
613	98	23	22:31:55.733	488EW6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,317,463:53:0	
614	98	24	07:29:31.733	488EX6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,317,995:25:0	
615	98	24	08:35:44.400	488EX6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,318,060:69:0	
616	98	24	08:37:47.733	488EX6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,318,062:72:0	
617	98	24	09:37:12.400	488EX6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,318,121:50:0	
618	98	24	10:29:03.733	488EX6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,318,172:76:0	
619	98	24	11:06:07.733	488EY6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,318,209:45:0	
620	98	24	11:15:39.733	488EY6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,318,218:84:0	
621	98	24	15:08:11.666	488EY6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,318,448:82:0	
622	98	24	17:26:51.666	488EZ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,318,586:04:0	
623	98	24	17:56:09.000	488EZ6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,318,615:01:0	
624	98	24	18:34:48.333	488EZ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,318,653:22:0	
625	98	24	23:59:23.666	488FA6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,318,974:24:0	
626	98	25	00:52:43.666	488FA6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,319,027:01:0	
627	98	25	01:03:52.333	488FA6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,319,038:03:0	
628	98	25	01:22:35.666	488FA6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,319,056:50:0	
629	98	25	16:12:09.666	488FB6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,319,936:31:0	
630	98	25	16:35:39.666	488FB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,319,959:53:0	
631	98	25	21:11:46.933	488FB6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,320,232:61:0	
632	98	25	21:19:23.600	488FB6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,320,240:18:0	
633	98	26	09:16:07.600	488FC6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,320,949:05:0	
634	98	26	09:41:47.600	488FC6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,320,974:40:0	
635	98	26	10:24:08.266	488FC6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,321,016:29:0	
636	98	26	11:01:12.266	488FC6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,321,052:89:0	
637	98	26	11:30:35.600	488FC6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,321,082:04:0	
638	98	26	14:44:43.600	488FD6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,321,274:04:0	
639	98	26	16:29:15.600	488FD6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,321,377:39:0	
640	98	26	16:59:46.933	488FD6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,321,407:56:0	
641	98	26	17:03:23.600	488FD6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,321,411:17:0	
642	98	26	17:39:39.600	488FD6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,321,447:05:0	
643	98	27	16:21:05.533	488FE6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,322,793:48:0	
644	98	27	16:31:23.533	488FE6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,322,803:65:0	
645	98	27	17:26:51.533	488FE6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,322,858:52:0	
646	98	27	17:41:16.200	488FE6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,322,872:75:0	
647	98	27	18:14:55.533	488FE6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,322,906:10:0	
648	98	27	18:57:16.866	176SX6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,322,948:00:0	
649	98	27	19:02:00.200	20US4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,322,952:61:0	
650	98	27	19:03:00.200	20US4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2O0	4	0	4,322,953:60:0	
651	98	27	19:05:00.200	20US4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,322,955:58:0	
652	98	27	19:10:30.200	20US4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2O0	4	0	4,322,961:07:0	
653	98	27	19:10:30.866	20US4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2O0	4	0	4,322,961:08:0	
654	98	27	19:10:50.866	20US4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2O0	4	0	4,322,961:38:0	
655	98	27	19:10:51.533	20US4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2O0	4	0	4,322,961:39:0	
656	98	27	19:11:11.533	20US4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,322,961:69:0	
657	98	27	19:11:12.200	20US4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,322,961:70:0	
658	98	27	19:11:22.200	20US4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,322,961:85:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	98	27	19:11:22.866	20US4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,322,961	86:0
660	98	27	19:11:32.866	20US4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2O0	4	0	4,322,962	10:0
661	98	27	19:11:33.533	20US4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2O0	4	0	4,322,962	11:0
662	98	27	19:13:20.200	20US4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2O0	4	0	4,322,963	80:0
663	98	27	19:13:20.866	20US4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2O0	4	0	4,322,963	81:0
664	98	27	19:13:40.866	20US4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2O0	4	0	4,322,964	20:0
665	98	27	19:13:41.533	20US4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2O0	4	0	4,322,964	21:0
666	98	27	19:14:01.533	20US4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,322,964	51:0
667	98	27	19:14:02.200	20US4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,322,964	52:0
668	98	27	19:14:12.200	20US4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,322,964	67:0
669	98	27	19:14:12.866	20US4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,322,964	68:0
670	98	27	19:14:22.866	20US4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2O0	4	0	4,322,964	83:0
671	98	27	19:14:23.533	20US4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2O0	4	0	4,322,964	84:0
672	98	27	19:15:20.200	20US4Z	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,322,965	78:0
673	98	27	19:40:04.200	20UL4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,322,990	29:0
674	98	27	19:40:54.200	20UL4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,322,991	13:0
675	98	27	19:42:46.866	176SY6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,322,993	00:0
676	98	27	23:38:03.533	488FF6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,323,225	63:0
677	98	28	00:33:31.533	488FF6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,323,280	50:0
678	98	28	00:45:12.200	488FF6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,323,292	09:0
679	98	28	00:59:07.533	488FF6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,323,305	79:0
680	98	28	01:35:23.533	488FF6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,323,341	67:0
681	**98**	**28**	**10:00:00.000**	**12NNRCTRLT01-**		**-----START------**		**2O0**	**4**	**0**	:	:
682	98	28	16:16:04.133	488FG6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,324,212	67:0
683	98	28	16:31:23.466	488FG6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,324,227	81:0
684	98	28	17:26:51.466	488FG6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,324,282	68:0
685	98	28	17:36:17.466	488FG6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,324,292	07:0
686	98	28	18:09:56.133	488FG6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,324,325	32:0
687	98	28	22:25:31.466	488FH6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,324,578	12:0
688	98	28	22:49:04.800	488FH6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,324,601	39:0
689	98	28	23:18:10.800	488FH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,324,630	19:0
690	**98**	**28**	**23:21:48.666**	**12NNRCTRLT01-**		**-----STOP-------**		**2O0**	**4**	**0**	:	:
691	98	29	01:46:03.466	488FH6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	4,324,776	42:0
692	98	29	03:43:23.466	488FH6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,324,892	46:0
693	98	29	07:03:55.466	488FI6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,325,090	76:0
694	98	29	08:18:35.466	488FI6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,325,164	62:0
695	98	29	08:20:38.800	488FI6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,325,166	65:0
696	98	29	08:29:15.466	488FI6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,325,175	21:0
697	98	29	09:05:31.466	488FI6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,325,211	09:0
698	98	29	21:07:01.400	488FJ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,325,924	61:0
699	98	29	21:17:15.400	488FJ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,325,934	72:0
700	98	29	22:25:31.400	488FJ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,326,002	28:0
701	98	30	02:07:23.400	488FJ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	4,326,221	67:0
702	98	30	03:17:47.400	488FK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,326,291	33:0
703	98	30	06:59:39.400	488FK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,326,510	72:0
704	98	30	08:14:19.400	488FK6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,326,584	58:0
705	98	30	08:15:15.400	488FK6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,326,585	51:0
706	98	30	08:29:15.400	488FK6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,326,599	37:0
707	98	30	09:05:31.400	488FL6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,326,635	25:0
708	98	30	16:11:00.733	488FM6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,327,056	08:0
709	98	30	16:27:07.400	488FM6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,327,072	02:0
710	98	30	17:20:27.400	488FM6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,327,124	70:0
711	98	30	17:31:21.400	488FM6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,327,135	50:0
712	98	30	18:05:00.733	488FM6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,327,168	76:0
713	98	30	22:25:31.400	488FN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,327,426	44:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	98	30	23:24:07.400	488FN6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,327,484:40:0	
715	98	30	23:53:13.333	488FN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,327,513:20:0	
716	98	31	06:48:59.333	488FO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,327,924:38:0	
717	98	31	07:54:04.000	488FO6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,327,988:71:0	
718	98	31	07:57:15.333	488FO6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,327,991:85:0	
719	98	31	08:08:05.333	476AA6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,328,002:59:0	
720	98	31	08:18:35.333	488FO6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,328,013:03:0	
721	98	31	08:26:19.333	488FO6E	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,328,020:62:0	
722	98	31	09:26:51.333	488FP6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,328,080:50:0	
723	98	31	09:58:03.333	488FP6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,328,111:37:0	
724	98	31	10:45:22.000	488FP6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,328,158:18:0	
725	98	31	15:33:41.333	488FQ6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,328,443:32:0	
726	98	31	16:06:00.000	488FQ6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,328,475:28:0	
727	98	31	17:11:55.333	488FQ6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,328,540:46:0	
728	98	31	17:19:17.333	488FQ6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,328,547:72:0	
729	98	31	17:56:21.333	488FQ6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,328,584:41:0	
730	98	31	23:29:31.333	488FR6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,328,913:87:0	
731	98	32	00:28:40.666	488FR6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,328,972:42:0	
732	98	32	00:46:19.333	488FR6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,328,989:83:0	
733	98	32	00:55:38.666	488FR6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,328,999:12:0	
734	98	32	06:57:31.266	488FS6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,329,357:03:0	
735	98	32	07:44:27.266	488FS6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,329,403:41:0	
736	98	32	08:18:35.266	488FS6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,329,437:19:0	
737	98	32	09:31:07.266	488FS6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,329,508:86:0	
738	98	32	09:58:04.600	488FS6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,329,535:55:0	
739	98	32	10:45:22.600	488FT6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,329,582:35:0	
740	98	32	15:28:39.266	488FT6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,329,862:50:0	
741	98	32	16:05:57.933	488FT6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,329,899:41:0	
742	98	32	17:12:58.600	488FU6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,329,965:66:0	
743	98	32	17:16:11.266	488FU6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,329,968:82:0	
744	98	32	17:51:22.600	488FU6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,330,003:64:0	
745	98	32	20:48:27.933	488FU6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,330,178:77:0	
746	98	32	20:58:03.266	488FU6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,330,188:30:0	
747	98	33	08:41:59.266	488FV6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,330,884:48:0	
748	98	33	09:35:23.266	488FV6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,330,937:31:0	
749	98	33	09:53:05.266	488FV6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,330,954:77:0	
750	98	33	10:40:23.933	488FV6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,331,001:58:0	
751	98	33	15:23:38.533	488FW6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,331,281:70:0	
752	98	34	05:20:56.533	488FX6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,332,109:79:0	
753	98	34	06:43:05.200	488FX6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,332,191:10:0	
754	98	34	07:29:31.200	488FX6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,332,237:03:0	
755	98	34	07:31:13.200	488FX6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,332,238:65:0	
756	98	34	07:33:41.866	488FX6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,332,241:15:0	
757	98	34	15:51:57.866	488FY6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,332,733:87:0	
758	98	34	16:27:07.200	488FY6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,332,768:66:0	
759	98	34	17:08:06.533	488FY6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,332,809:24:0	
760	98	34	17:55:25.200	488FY6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,332,856:05:0	
761	98	34	21:32:11.133	488FY6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,333,070:40:0	
762	98	34	22:25:31.133	488FZ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,333,123:17:0	
763	98	34	22:26:25.133	488FZ6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,333,124:07:0	
764	98	34	23:00:04.466	488FZ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,333,157:33:0	
765	98	34	23:01:43.800	176RA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,333,159:00:0	
766	98	34	23:02:59.800	20RA6A	6TMSED	NORM,BA4	Sci, Eng, and D/L Chan	2O0	4	0	4,333,160:23:0	
767	98	34	23:27:01.800	490RA412A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,333,184:02:0	
768	98	34	23:31:59.800	490RA412A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,333,188:85:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	98	34	23:32:19.800	20RC4C	7STAT	17.45,153.42,11.	Stator inertial point	2O0	4	0	4,333,189	24:0
770	98	34	23:36:09.800	490RA412A4E	7VECT		Inert vect update UTC	2O0	4	0	4,333,193	05:0
771	98	34	23:36:13.800	490RA412A4F	7TURN	2,RTH	ALERT Thruster	2O0	4	0	4,333,193	11:0
772	98	34	23:40:01.800	490RA412A406A4A	7STAR	1,3000,95.710999	Star catalog update	2O0	4	0	4,333,196	80:0
773	98	34	23:40:03.800	490RA412A406A4B	7STAR	2,1785,78.033,-8	Star catalog update	2O0	4	0	4,333,196	83:0
774	98	34	23:40:05.800	490RA412A406A4C	7STAR	3,159,27.238,89.	Star catalog update	2O0	4	0	4,333,196	86:0
775	98	34	23:40:07.800	490RA412A406A4D	7STAR	4,184,228.577,-9	Star catalog update	2O0	4	0	4,333,196	89:0
776	98	34	23:40:09.800	490RA412A406A4E	7STAR	5,0,0.0,0.0	Star catalog update	2O0	4	0	4,333,197	01:0
777	98	34	23:40:11.800	490RA412A406A4F	7STAR	6,0,0.0,0.0	Star catalog update	2O0	4	0	4,333,197	04:0
778	98	34	23:46:05.800	20RC4E	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,333,202	80:0
779	98	34	23:54:09.800	490RA412A4G	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,333,210	78:0
780	**98**	**35**	**00:00:00.000**	**12NNPCTRLT01-**		**-----START------**		**2O0**	**4**	**0**	**:**	**:**
781	98	35	01:02:03.800	20RE4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,333,278	01:0
782	98	35	01:02:53.800	20RE4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,333,278	76:0
783	98	35	01:04:04.466	176RE6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,333,280	00:0
784	98	35	01:04:59.800	20RA6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,333,280	83:0
785	98	35	06:27:39.133	488OA6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,333,600	02:0
786	98	35	07:18:51.133	488OA6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,333,650	60:0
787	**98**	**35**	**07:50:10.000**	**12NNPCTRLT01-**		**-----STOP-------**		**2O0**	**4**	**0**	**:**	**:**
788	98	35	07:54:25.133	488OA6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,333,685	76:0
789	98	35	08:07:55.133	488OA6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,333,699	17:0
790	98	35	15:51:57.133	488OB6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,334,158	11:0
791	98	35	16:27:07.133	488OB6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,334,192	82:0
792	98	35	17:03:06.466	488OB6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,334,228	45:0
793	98	35	17:50:25.133	488OB6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,334,275	26:0
794	98	35	21:36:27.133	488OB6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,334,498	76:0
795	98	35	22:24:57.800	488OC6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,334,546	74:0
796	98	35	22:31:55.133	488OC6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,334,553	63:0
797	98	35	23:00:04.466	488OC6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,334,581	49:0
798	98	36	06:12:43.066	488OD6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,335,009	39:0
799	98	36	07:12:27.066	488OD6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,335,068	46:0
800	98	36	07:49:51.733	488OD6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,335,105	46:0
801	98	36	08:03:39.066	488OD6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,335,119	13:0
802	98	36	08:39:55.066	488OD6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,335,155	01:0
803	98	36	20:55:55.733	488OE6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,335,882	85:0
804	98	36	21:36:27.066	488OE6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,335,923	01:0
805	98	36	22:40:27.066	488OE6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,335,986	28:0
806	98	37	05:57:47.066	488OF6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,336,418	76:0
807	98	37	07:00:00.400	481UC4A	7VECT		Inert vect update UTC	2O0	4	0	4,336,480	34:0
808	98	37	07:03:55.066	488OF6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,336,484	22:0
809	98	37	07:45:18.400	488OF6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,336,525	16:0
810	98	37	07:59:23.066	488OF6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,336,539	09:0
811	98	37	15:41:57.000	488OG6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,336,996	53:0
812	98	37	15:50:51.000	488OG6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,337,005	35:0
813	98	37	18:11:39.000	488OG6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,337,144	58:0
814	98	37	21:49:15.000	488OH6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,337,359	77:0
815	98	37	22:03:06.333	488OH6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,337,373	50:0
816	98	37	22:50:25.000	488OH6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,337,420	31:0
817	98	38	00:00:00.333	481UB4A	7VECT		Inert vect update UTC	2O0	4	0	4,337,489	15:0
818	98	38	06:28:37.666	488OI6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,337,873	47:0
819	98	38	10:01:24.333	488OI6E	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,338,083	87:0
820	98	38	15:14:51.666	488OJ6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,338,393	88:0
821	98	38	17:36:24.333	488OJ6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,338,533	87:0
822	98	38	22:14:20.266	488OK6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,338,808	76:0
823	98	38	22:51:24.266	488OK6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,338,845	45:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	98	39	00:26:57.600	176CA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,338,940	00:0
825	98	39	00:27:06.933	488OK6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,338,940	14:0
826	98	39	00:27:10.266	20CD6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	2O0	4	0	4,338,940	19:0
827	98	39	00:36:00.266	20CC4C	7STAT	17.45,75.0696,-4	Stator inertial point	2O0	4	0	4,338,948	86:0
828	98	39	00:57:00.266	474CA416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,338,969	65:0
829	98	39	00:59:00.266	474CA416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,338,971	63:0
830	98	39	01:00:00.266	20CC4D	7STAT	17.45,75.0696,-4	Stator inertial point	2O0	4	0	4,338,972	62:0
831	98	39	01:03:14.266	474CA416A4E	7BURN	,75.069599,-43.7	ALERT -- Thruster fire	2O0	4	0	4,338,975	80:0
832	98	39	01:10:02.266	20CC4F	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,338,982	55:0
833	98	39	01:26:10.266	474CA416A4H	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,338,998	51:0
834	98	39	02:53:04.266	20CE4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,339,084	46:0
835	98	39	02:53:54.266	20CE4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,339,085	30:0
836	98	39	02:54:34.933	176CB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,339,086	00:0
837	98	39	03:04:00.266	20CD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,339,095	29:0
838	98	39	03:43:22.933	488OK6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,339,134	24:0
839	98	39	06:19:06.933	488OL6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,339,288	26:0
840	98	39	07:34:20.933	488OL6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,339,362	63:0
841	98	39	07:44:26.933	488OL6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,339,372	62:0
842	98	39	08:36:58.266	488OL6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,339,424	57:0
843	98	39	09:18:10.266	488OL6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,339,465	34:0
844	98	39	11:05:34.266	488OM6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,339,571	54:0
845	98	39	11:56:10.933	488OM6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,339,621	59:0
846	98	39	12:49:30.933	488OM6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,339,674	36:0
847	98	39	16:23:08.933	488OM6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,339,885	62:0
848	98	39	17:39:38.933	488ON6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,339,961	31:0
849	98	39	17:54:12.933	488ON6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,339,975	68:0
850	98	39	22:34:02.933	488ON6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,340,252	46:0
851	98	39	23:53:42.266	488OO6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,340,331	26:0
852	98	40	00:35:38.933	488OO6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,340,372	70:0
853	98	40	05:16:56.866	488OO6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,340,650	89:0
854	98	40	05:49:14.866	488OO6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,340,682	84:0
855	98	40	05:56:24.200	176SZ6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,340,690	00:0
856	**98**	**40**	**06:00:00.000**	**20A3FB**	**37F2PR**	**Final Condition**	**Shield Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
857	**98**	**40**	**06:00:00.000**	**20A3FA**	**37F1PR**	**Final Condition**	**Radiator Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
858	**98**	**40**	**06:00:00.000**	**20A3EZ**	**37C2PR**	**Final Condition**	**Optics Heater 2 OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
859	**98**	**40**	**06:00:00.000**	**20A3EY**	**37C1PR**	**Final Condition**	**Optics Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
860	**98**	**40**	**06:00:00.000**	**20A3EX**	**37HR**	**Final Condition**	**Replacement Heaters OFF**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
861	**98**	**40**	**06:00:00.000**	**20A3EW**	**37A**	**Final Condition**	**NIMS Power ON**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
862	**98**	**40**	**06:00:00.000**	**20A3FD**	**40HRPR**	**Final Condition**	**RCT Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
863	**98**	**40**	**06:00:00.000**	**20A3FE**	**40T1P**	**Final Condition**	**PCT Heater 1 ON (primary relay)**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
864	**98**	**40**	**06:00:00.000**	**20A3FF**	**40T2**	**Final Condition**	**PCT Heater 2 ON**	**2O0**	**4**	**0**	**4,340,693**	**50:7**
865	98	40	06:00:00.200		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,340,693	51:0

			Sequence:	E12C-AR		Created: 5/5/98	Begin: 98-040/06:00:00 Finish: 98-087/13:00:00				
Line	**YR**	**DOY**	**SCET - GMT**	**PSID**	**Command**	**Parameters**	**Description**	**GCM**	**GO**	**GS**	**RIM MF I**
1	**98**	**40**	**06:00:00.000**	**20A3FF**	**40T2**	**Initial Condition**	**PCT Heater 2 ON**	**2O0**	**4**	**0**	**4,340,693:50:7**
2	**98**	**40**	**06:00:00.000**	**20A3EZ**	**37C2PR**	**Initial Condition**	**Optics Heater 2 OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693:50:7**
3	**98**	**40**	**06:00:00.000**	**20A3EW**	**37A**	**Initial Condition**	**NIMS Power ON**	**2O0**	**4**	**0**	**4,340,693:50:7**
4	**98**	**40**	**06:00:00.000**	**20A3EX**	**37HR**	**Initial Condition**	**Replacement Heaters OFF**	**2O0**	**4**	**0**	**4,340,693:50:7**
5	**98**	**40**	**06:00:00.000**	**20A3EY**	**37C1PR**	**Initial Condition**	**Optics Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693:50:7**
6	**98**	**40**	**06:00:00.000**	**20A3FA**	**37F1PR**	**Initial Condition**	**Radiator Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693:50:7**
7	**98**	**40**	**06:00:00.000**	**20A3FB**	**37F2PR**	**Initial Condition**	**Shield Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693:50:7**
8	**98**	**40**	**06:00:00.000**	**20A3FD**	**40HRPR**	**Initial Condition**	**RCT Heater OFF (primary relay)**	**2O0**	**4**	**0**	**4,340,693:50:7**
9	**98**	**40**	**06:00:00.000**	**20A3FE**	**40T1P**	**Initial Condition**	**PCT Heater 1 ON (primary relay)**	**2O0**	**4**	**0**	**4,340,693:50:7**
10	98	40	06:00:00.200		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,340,693:51:0
11	**98**	**40**	**06:01:26.200**	**432NB6B**	**6RTDS2**	**NIMDSL,AACDSL,RT**	**NIMS R/T DESELECTAACS DESELECT**	**2O0**	**4**	**0**	**4,340,694:89:0**
12	98	40	06:02:02.866	488AA6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,340,695:53:0
13	98	40	06:03:04.200	20VP4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,340,696:54:0
14	98	40	06:03:54.200	20VP4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,340,697:38:0
15	98	40	06:04:29.533	176TR6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,340,698:00:0
16	98	40	06:26:44.200	176SP6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,340,720:00:0
17	98	40	06:32:48.200	465TA6A	6DMST	5000	DMS Slew to TIC	2O0	4	0	4,340,726:00:0
18	98	40	06:32:48.200		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,340,726:00:0
19	98	40	06:32:48.200		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,340,726:00:0
20	98	40	06:32:48.200		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,340,726:00:0
21	98	40	06:32:54.866		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,340,726:10:0
22	98	40	06:32:56.266		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	2O0	4	0	4,340,726:12:1
23	98	40	06:39:24.200	488AA6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,340,732:48:0
24	98	40	06:53:14.866	488AA6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,340,746:20:0
25	98	40	08:05:32.866	488AA6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,340,817:66:0
26	98	40	08:42:02.866	488AA6E	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,340,853:75:0
27	98	40	09:08:05.533	488AB6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,340,879:53:0
28	98	40	09:55:23.533	488AB6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,340,926:33:0
29	98	40	12:13:57.000		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *4997.94 +/-	2O0	4	0	4,341,063:36:2
30	98	40	12:13:58.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	2O0	4	0	4,341,063:38:0
31	98	40	12:26:29.533	465TB6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,341,075:73:0
32	98	40	12:26:29.533		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	2O0	4	0	4,341,075:73:0
33	98	40	12:26:30.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	2O0	4	0	4,341,075:75:1
34	98	40	12:26:36.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	2O0	4	0	4,341,075:83:0
35	98	40	12:26:37.400		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	2O0	4	0	4,341,075:84:8
36	98	40	12:26:41.266		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	2O0	4	0	4,341,075:90:6
37	98	40	12:26:41.266		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	2O0	4	0	4,341,075:90:6
38	98	40	12:52:21.533	465TB6B	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	4,341,101:35:0
39	98	40	12:52:21.533		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 255.79 +/-	2O0	4	0	4,341,101:35:0
40	98	40	12:52:22.733		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	2O0	4	0	4,341,101:36:8
41	98	40	14:50:09.533	465TC6A	6DTRN	CMD,6DTRN,465TC6	DMS TRACK TURNAROUND	2O0	4	0	4,341,217:81:0
42	98	40	14:50:09.533		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	2O0	4	0	4,341,217:81:0
43	98	40	14:50:09.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	2O0	4	0	4,341,217:81:0
44	98	40	14:50:10.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	2O0	4	0	4,341,217:83:1
45	98	40	14:50:16.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	2O0	4	0	4,341,218:00:0
46	98	40	14:50:17.400		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	2O0	4	0	4,341,218:01:8
47	98	40	14:50:18.800		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	2O0	4	0	4,341,218:03:9
48	98	40	14:54:19.466		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	4,341,222:00:9
49	98	40	14:54:20.666		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	4,341,222:02:7
50	98	40	14:54:20.666		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	4,341,222:02:7
51	98	40	14:54:22.066		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	4,341,222:04:8
52	98	40	14:54:34.066		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	4,341,222:22:8
53	98	40	14:54:35.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	4,341,222:24:6

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	98	40	15:00:12.200	465TD6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,341,227:75:0	
55	98	40	15:00:12.200		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,341,227:75:0	
56	98	40	15:00:18.866		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,341,227:85:0	
57	98	40	15:00:22.733		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	2O0	4	0	4,341,227:90:8	
58	98	40	15:00:22.733		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	2O0	4	0	4,341,227:90:8	
59	98	40	15:03:39.533	488AB6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,341,231:22:0	
60	98	40	15:32:06.200		DMS:	: *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	2O0	4	0	4,341,259:34:0	
61	98	40	15:32:06.200	465TD6B	6DMSC	RDY,1	DMS Control Tape stop	2O0	4	0	4,341,259:34:0	
62	98	40	15:32:07.400		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	2O0	4	0	4,341,259:35:8	
63	98	40	15:47:42.200	465TE6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,341,274:73:0	
64	98	40	15:47:42.200		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	2O0	4	0	4,341,274:73:0	
65	98	40	15:47:43.600		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	2O0	4	0	4,341,274:75:1	
66	98	40	15:47:48.866		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	2O0	4	0	4,341,274:83:0	
67	98	40	15:47:50.066		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	2O0	4	0	4,341,274:84:8	
68	98	40	15:47:53.933		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	2O0	4	0	4,341,274:90:6	
69	98	40	15:47:53.933		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	2O0	4	0	4,341,274:90:6	
70	98	40	16:19:50.200	465TF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,341,306:53:0	
71	98	40	16:19:50.200		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC * 164.96 +/-	2O0	4	0	4,341,306:53:0	
72	98	40	16:19:51.400		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	2O0	4	0	4,341,306:54:8	
73	98	40	16:19:55.266		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	2O0	4	0	4,341,306:60:6	
74	98	40	16:19:55.266		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	2O0	4	0	4,341,306:60:6	
75	98	40	16:35:57.533	488AC6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,341,322:48:0	
76	98	40	16:48:04.200	488AC6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,341,334:46:0	
77	98	40	16:51:50.866	465TF6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	4,341,338:22:0	
78	98	40	16:51:50.866		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	2O0	4	0	4,341,338:22:0	
79	98	40	16:51:52.066		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	2O0	4	0	4,341,338:23:8	
80	98	40	17:06:34.200	465TG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,341,352:73:0	
81	98	40	17:06:34.200		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	2O0	4	0	4,341,352:73:0	
82	98	40	17:06:35.600		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	2O0	4	0	4,341,352:75:1	
83	98	40	17:06:40.866		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	2O0	4	0	4,341,352:83:0	
84	98	40	17:06:42.066		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	2O0	4	0	4,341,352:84:8	
85	98	40	17:06:45.933		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	2O0	4	0	4,341,352:90:6	
86	98	40	17:06:45.933		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	2O0	4	0	4,341,352:90:6	
87	98	40	17:35:22.866	488AC6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,341,381:27:0	
88	98	40	17:38:41.533	465TH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,341,384:52:0	
89	98	40	17:38:41.533		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	2O0	4	0	4,341,384:52:0	
90	98	40	17:38:42.733		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	2O0	4	0	4,341,384:53:8	
91	98	40	17:38:46.600		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	2O0	4	0	4,341,384:59:6	
92	98	40	17:38:46.600		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	2O0	4	0	4,341,384:59:6	
93	98	40	17:39:47.533	465TH6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	4,341,385:60:0	
94	98	40	17:39:47.533		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	2O0	4	0	4,341,385:60:0	
95	98	40	17:39:48.733		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	2O0	4	0	4,341,385:61:8	
96	98	40	17:54:17.533		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	2O0	4	0	4,341,400:00:0	
97	98	40	17:54:17.533	465TI6A	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	4,341,400:00:0	
98	98	40	17:55:11.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	2O0	4	0	4,341,400:81:0	
99	98	40	17:55:11.533		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	2O0	4	0	4,341,400:81:0	
100	98	40	17:55:11.533	465TJ6A	6DTRN	CMD,6DTRN,465TJ6	DMS TRACK TURNAROUND	2O0	4	0	4,341,400:81:0	
101	98	40	17:55:12.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	2O0	4	0	4,341,400:83:1	
102	98	40	17:55:18.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	2O0	4	0	4,341,401:00:0	
103	98	40	17:55:19.400		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	2O0	4	0	4,341,401:01:8	
104	98	40	17:55:20.800		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	2O0	4	0	4,341,401:03:9	
105	98	40	18:06:46.600		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	4,341,412:31:6	
106	98	40	18:06:47.800		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	4,341,412:33:4	
107	98	40	18:06:47.800		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	4,341,412:33:4	
108	98	40	18:06:49.200		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	4,341,412:35:5	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	98	40	18:07:01.200		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	4,341,412:53:5	
110	98	40	18:07:02.400		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	4,341,412:55:3	
111	98	40	18:42:00.200	20TX4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,341,447:17:0	
112	98	40	18:43:00.200	20TX4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2O0	4	0	4,341,448:16:0	
113	98	40	18:45:00.200	20TX4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,341,450:14:0	
114	98	40	18:50:30.200	20TX4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2O0	4	0	4,341,455:54:0	
115	98	40	18:50:30.866	20TX4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2O0	4	0	4,341,455:55:0	
116	98	40	18:50:50.866	20TX4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2O0	4	0	4,341,455:85:0	
117	98	40	18:50:51.533	20TX4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2O0	4	0	4,341,455:86:0	
118	98	40	18:51:11.533	20TX4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,341,456:25:0	
119	98	40	18:51:12.200	20TX4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,341,456:26:0	
120	98	40	18:51:22.200	20TX4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,341,456:41:0	
121	98	40	18:51:22.866	20TX4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,341,456:42:0	
122	98	40	18:51:32.866	20TX4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2O0	4	0	4,341,456:57:0	
123	98	40	18:51:33.533	20TX4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2O0	4	0	4,341,456:58:0	
124	98	40	18:53:20.200	20TX4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2O0	4	0	4,341,458:36:0	
125	98	40	18:53:20.866	20TX4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2O0	4	0	4,341,458:37:0	
126	98	40	18:53:40.866	20TX4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2O0	4	0	4,341,458:67:0	
127	98	40	18:53:41.533	20TX4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2O0	4	0	4,341,458:68:0	
128	98	40	18:54:01.533	20TX4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,341,459:07:0	
129	98	40	18:54:02.200	20TX4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,341,459:08:0	
130	98	40	18:54:12.200	20TX4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,341,459:23:0	
131	98	40	18:54:12.866	20TX4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,341,459:24:0	
132	98	40	18:54:22.866	20TX4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2O0	4	0	4,341,459:39:0	
133	98	40	18:54:23.533	20TX4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2O0	4	0	4,341,459:40:0	
134	98	40	18:55:20.200	20TX4Z	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,341,460:34:0	
135	98	40	20:25:04.866	20UH4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,341,549:12:0	
136	98	40	20:25:54.866	20UH4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,341,549:87:0	
137	98	40	20:27:58.866	176SQ6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,341,552:00:0	
138	98	40	22:53:39.533	488AD6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,341,696:07:0	
139	98	41	00:00:00.200	481UE4A	7VECT		Inert vect update UTC	2O0	4	0	4,341,761:63:0	
140	98	41	00:35:57.533	488AD6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,341,797:23:0	
141	98	41	01:38:04.200	488AD6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,341,858:62:0	
142	98	41	02:45:22.866	488AD6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,341,925:23:0	
143	98	41	06:23:22.866	488AE6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,342,140:78:0	
144	98	41	07:08:44.200	488AE6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,342,185:65:0	
145	98	41	08:22:00.133	488AE6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,342,258:16:0	
146	98	41	08:43:08.133	488AE6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,342,279:07:0	
147	98	41	10:50:32.133	488AE6E	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,342,405:07:0	
148	98	41	11:22:02.800	488AF6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,342,436:22:0	
149	98	41	12:58:02.800	488AF6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,342,531:17:0	
150	98	41	16:13:08.133	488AF6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,342,724:12:0	
151	98	41	17:28:58.800	488AG6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,342,799:13:0	
152	98	41	17:43:48.133	488AG6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,342,813:73:0	
153	98	41	18:00:00.133	481UD4A	7VECT	BB1	Inert vect update UTC	2O0	4	0	4,342,829:75:0	
154	98	41	21:48:04.133	488AG6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,343,055:35:0	
155	98	41	22:40:22.800	488AG6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,343,107:11:0	
156	98	42	05:53:30.800	488AH6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,343,535:45:0	
157	98	42	07:03:42.133	488AH6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,343,604:83:0	
158	98	42	08:26:58.133	488AH6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,343,687:24:0	
159	98	42	08:38:08.800	488AH6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,343,698:29:0	
160	98	42	10:45:32.800	488AH6E	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,343,824:29:0	
161	98	42	14:08:18.133	488AI6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,344,024:77:0	
162	98	42	14:51:16.800	476AB6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,344,067:32:0	
163	98	42	15:26:57.400	488AI6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,344,102:58:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	98	42	16:13:10.733	488AI6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,344,148	32:0
165	98	42	18:05:35.400	488AI6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,344,259	48:0
166	98	42	21:48:52.733	488AJ6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,344,480	33:0
167	98	42	21:55:38.733	488AJ6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,344,487	05:0
168	98	42	22:40:26.733	488AJ6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,344,531	33:0
169	98	43	06:04:10.733	488AK6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,344,970	20:0
170	98	43	07:03:38.066	488AK6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,345,029	02:0
171	98	43	09:09:42.733	20MZ6A	6CKSUM	MAG,4040,46F0		2O0	4	0	4,345,153	65:0
172	98	43	20:46:52.066	488AL6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,345,843	19:0
173	98	43	21:23:16.066	488AL6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,345,879	19:0
174	98	43	23:10:40.000	488AL6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,345,985	39:0
175	98	44	06:53:34.000	488AM6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,346,443	22:0
176	98	44	08:31:50.000	488AM6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,346,540	39:0
177	98	44	08:33:18.000	488AM6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,346,541	80:0
178	98	44	10:40:42.000	488AM6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,346,667	80:0
179	98	44	11:40:16.000	20AD6A	6TMSED	NORM,AH1	Sci, Eng, and D/L Chan	2O0	4	0	4,346,726	72:0
180	98	44	11:40:28.666	176AA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,346,727	00:0
181	98	44	11:49:00.000	20AB4C	7STAT	17.45,254.1092,4	Stator inertial point	2O0	4	0	4,346,735	39:0
182	98	44	12:10:00.000	474AA416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,346,756	18:0
183	98	44	12:12:00.000	474AA416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,346,758	16:0
184	98	44	12:12:20.000	20AB4D	7STAT	17.45,78.4479,-5	Stator inertial point	2O0	4	0	4,346,758	46:0
185	98	44	12:16:14.000	474AA416A4E	7BURN	Z,78.4479,-50.84	ALERT -- Thruster fire	2O0	4	0	4,346,762	33:0
186	98	44	12:26:35.333	20AB4F	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,346,772	55:0
187	98	44	12:42:43.333	474AA416A4H	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,346,788	51:0
188	98	44	14:09:03.333	20AE4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,346,873	86:0
189	98	44	14:09:53.333	20AE4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,346,874	70:0
190	98	44	14:10:07.333	176AB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,346,875	00:0
191	98	44	14:16:33.333	20AD6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,346,881	33:0
192	98	44	16:03:18.666	488AN6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,346,986	86:0
193	98	44	17:50:43.333	488AN6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,347,093	16:0
194	98	44	19:43:32.000	488AN6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,347,204	68:0
195	98	44	20:56:48.000	488AN6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,347,277	19:0
196	98	44	21:18:20.000	488AN6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,347,298	46:0
197	98	44	23:05:44.000	488AO6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,347,404	66:0
198	98	45	00:57:14.000	176SH6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,347,515	00:0
199	98	45	00:59:15.333		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,347,517	00:0
200	98	45	00:59:15.333		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,347,517	00:0
201	98	45	00:59:15.333		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,347,517	00:0
202	98	45	00:59:15.333	465SA6A	6DMST	3114	DMS Slew to TIC	2O0	4	0	4,347,517	00:0
203	98	45	00:59:22.000		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,347,517	10:0
204	98	45	00:59:23.400		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	2O0	4	0	4,347,517	12:1
205	98	45	04:26:17.466		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *3111.94 +/-	2O0	4	0	4,347,721	69:2
206	98	45	04:26:18.666		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3112.00 +/-	2O0	4	0	4,347,721	71:0
207	98	45	08:28:21.266	488AP6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,347,961	15:0
208	98	45	10:50:45.266	488AP6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,348,102	00:0
209	98	45	17:13:21.933	488AQ6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,348,480	37:0
210	98	45	19:00:45.933	488AQ6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,348,586	57:0
211	98	46	09:03:23.933	488AR6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,349,420	00:0
212	98	46	10:50:47.933	488AR6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,349,526	20:0
213	98	46	17:13:25.200	488AS6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,349,904	58:0
214	98	46	19:00:49.200	488AS6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,350,010	78:0
215	98	47	08:58:27.200	488AT6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,350,839	26:0
216	98	47	10:45:51.200	488AT6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,350,945	46:0
217	98	47	17:03:27.200	488AU6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,351,318	87:0
218	98	47	18:50:51.200	488AU6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,351,425	16:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	98	48	15:58:29.133	488AV6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,352,678:80:0	
220	98	48	17:45:53.133	488AV6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,352,785:09:0	
221	98	48	21:08:29.800	488AV6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,352,985:44:0	
222	98	48	23:00:53.800	488AW6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,353,096:59:0	
223	98	48	23:59:59.800	481UA4A	7VECT		Inert vect update UTC	2O0	4	0	4,353,155:09:0	
224	98	49	01:58:29.800	488AW6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,353,272:27:0	
225	98	49	03:45:54.400	488AW6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,353,378:48:0	
226	98	51	08:28:33.666	488AX6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,356,506:39:0	
227	98	51	10:15:58.333	488AX6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,356,612:60:0	
228	98	51	14:18:33.666	488AX6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,356,852:53:0	
229	98	51	17:35:58.266	488AY6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,357,047:75:0	
230	98	52	00:43:34.933	488AZ6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,357,470:67:0	
231	98	52	02:30:58.933	488AZ6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,357,576:87:0	
232	98	52	08:23:34.933	488BA6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,357,925:62:0	
233	98	52	10:10:58.933	488BA6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,358,031:82:0	
234	98	52	15:48:36.266	488BB6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,358,365:74:0	
235	98	52	17:36:00.266	488BB6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,358,472:03:0	
236	98	53	08:18:36.200	488BC6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,359,344:85:0	
237	98	53	10:06:00.200	488BC6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,359,451:14:0	
238	98	53	16:58:36.866	488BD6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,359,859:21:0	
239	98	53	18:46:00.866	488BD6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,359,965:41:0	
240	98	57	20:43:38.000	488BE6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,365,778:44:0	
241	98	57	22:31:02.000	488BE6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,365,884:64:0	
242	98	58	02:48:38.000	488BF6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,366,139:43:0	
243	98	58	04:36:01.933	488BF6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,366,245:63:0	
244	98	58	20:38:37.933	488BG6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,367,197:65:0	
245	98	58	22:26:01.933	488BG6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,367,303:85:0	
246	98	59	07:43:37.933	488BH6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,367,855:37:0	
247	98	59	09:31:01.933	488BH6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,367,961:57:0	
248	98	59	15:18:37.866	488BI6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,368,305:37:0	
249	98	59	17:06:01.866	488BI6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,368,411:57:0	
250	98	59	22:38:37.866	488BJ6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,368,740:52:0	
251	98	60	00:26:01.866	488BJ6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,368,846:72:0	
252	98	61	08:18:37.800	488BK6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,370,738:34:0	
253	98	61	10:06:01.800	488BK6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,370,844:54:0	
254	98	61	15:48:37.133	488BL6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,371,183:38:0	
255	98	61	17:36:01.133	488BL6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,371,289:58:0	
256	98	62	20:33:37.066	488BM6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,372,889:42:0	
257	98	62	22:21:01.066	488BM6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,372,995:62:0	
258	98	63	03:13:35.733	488BN6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,373,285:04:0	
259	98	63	05:01:00.400	488BN6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,373,391:25:0	
260	98	63	10:56:25.666	488BO6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,373,742:72:0	
261	98	63	11:55:04.333	20VD4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,373,800:72:0	
262	98	63	11:55:54.333	20VD4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,373,801:56:0	
263	98	63	11:59:19.666	176TZ6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,373,805:00:0	
264	98	63	22:16:00.333	488BP6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,374,414:82:0	
265	98	64	04:38:15.666	488BQ6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,374,792:87:0	
266	98	64	09:11:32.333	488BQ6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,375,063:21:0	
267	98	64	09:48:35.000	488BQ6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,375,099:79:0	
268	98	64	11:35:59.000	488BR6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,375,206:08:0	
269	98	64	11:37:55.000	176TB6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,375,208:00:0	
270	98	64	11:42:00.333	20UX4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,375,212:04:0	
271	98	64	11:43:00.333	20UX4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2O0	4	0	4,375,213:03:0	
272	98	64	11:45:00.333	20UX4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,375,215:01:0	
273	98	64	11:50:30.333	20UX4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2O0	4	0	4,375,220:41:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	98	64	11:50:31.000	20UX4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2O0	4	0	4,375,220	42:0
275	98	64	11:50:51.000	20UX4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2O0	4	0	4,375,220	72:0
276	98	64	11:50:51.666	20UX4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2O0	4	0	4,375,220	73:0
277	98	64	11:51:11.666	20UX4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,375,221	12:0
278	98	64	11:51:12.333	20UX4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,375,221	13:0
279	98	64	11:51:22.333	20UX4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,375,221	28:0
280	98	64	11:51:23.000	20UX4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,375,221	29:0
281	98	64	11:51:33.000	20UX4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2O0	4	0	4,375,221	44:0
282	98	64	11:51:33.666	20UX4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2O0	4	0	4,375,221	45:0
283	98	64	11:53:20.333	20UX4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2O0	4	0	4,375,223	23:0
284	98	64	11:53:21.000	20UX4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2O0	4	0	4,375,223	24:0
285	98	64	11:53:41.000	20UX4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2O0	4	0	4,375,223	54:0
286	98	64	11:53:41.666	20UX4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2O0	4	0	4,375,223	55:0
287	98	64	11:54:01.666	20UX4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,375,223	85:0
288	98	64	11:54:02.333	20UX4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,375,223	86:0
289	98	64	11:54:12.333	20UX4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,375,224	10:0
290	98	64	11:54:13.000	20UX4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,375,224	11:0
291	98	64	11:54:23.000	20UX4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2O0	4	0	4,375,224	26:0
292	98	64	11:54:23.666	20UX4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2O0	4	0	4,375,224	27:0
293	98	64	11:55:20.333	20UX4Z	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,375,225	21:0
294	98	64	12:20:04.333	20UN4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,375,249	63:0
295	98	64	12:20:54.333	20UN4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,375,250	47:0
296	98	64	12:22:24.333	176TC6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,375,252	00:0
297	98	64	13:08:15.666	488BR6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,375,297	32:0
298	98	64	22:10:58.933	488BS6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,375,834	10:0
299	98	65	04:58:16.933	488BT6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,376,236	85:0
300	98	65	22:05:58.200	488BU6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,377,253	30:0
301	98	66	05:08:18.200	488BV6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,377,671	02:0
302	98	66	06:40:35.533	476AC6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,377,762	27:0
303	98	66	20:16:34.866	488BW6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,378,569	29:0
304	98	66	20:18:32.200	488BW6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,378,571	23:0
305	98	66	22:05:56.200	488BW6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,378,677	43:0
306	98	66	22:23:18.866	488BW6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,378,694	60:0
307	98	67	07:16:36.133	488BX6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,379,222	08:0
308	98	67	09:01:40.133	176YA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,379,326	00:0
309	98	67	09:02:00.133	20YA6A	6TMSED	NORM,AH1	Sci, Eng, and D/L Chan	2O0	4	0	4,379,326	30:0
310	98	67	09:08:00.133	20YC4O	7STAT	17.45,160.17,9.3	Stator inertial point	2O0	4	0	4,379,332	24:0
311	98	67	09:27:02.133	490YE412A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,379,351	08:0
312	98	67	09:32:00.133	490YE412A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,379,356	00:0
313	98	67	09:32:20.133	20YC4C	7STAT	17.45,160.17,9.3	Stator inertial point	2O0	4	0	4,379,356	30:0
314	98	67	09:36:10.133	490YE412A4E	7VECT		Inert vect update UTC	2O0	4	0	4,379,360	11:0
315	98	67	09:36:14.133	490YE412A4F	7TURN	2,RTH	ALERT Thruster	2O0	4	0	4,379,360	17:0
316	98	67	09:40:02.133	490YE412A406A4A	7STAR	1,3000,95.710999	Star catalog update	2O0	4	0	4,379,363	86:0
317	98	67	09:40:04.133	490YE412A406A4B	7STAR	2,553,80.612,6.3	Star catalog update	2O0	4	0	4,379,363	89:0
318	98	67	09:40:06.133	490YE412A406A4C	7STAR	3,809,78.249,45.	Star catalog update	2O0	4	0	4,379,364	01:0
319	98	67	09:40:08.133	490YE412A406A4D	7STAR	4,159,27.239,89.	Star catalog update	2O0	4	0	4,379,364	04:0
320	98	67	09:40:10.133	490YE412A406A4E	7STAR	5,0,0.0,0.0	Star catalog update	2O0	4	0	4,379,364	07:0
321	98	67	09:40:12.133	490YE412A406A4F	7STAR	6,0,0.0,0.0	Star catalog update	2O0	4	0	4,379,364	10:0
322	98	67	09:50:06.133	20YC4E	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,379,373	82:0
323	98	67	09:58:10.133	490YE412A4G	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,379,381	80:0
324	98	67	11:20:04.133	20YE4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,379,462	80:0
325	98	67	11:20:54.133	20YE4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,379,463	64:0
326	98	67	11:22:12.800	176YE6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,379,465	00:0
327	98	67	11:25:00.133	20YA6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,379,467	69:0
328	98	67	14:33:20.133	488BY6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,379,654	02:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	98	67	15:16:41.466	488BY6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,379,696:82:0	
330	98	68	02:31:35.466	488BZ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,380,364:35:0	
331	98	68	04:38:49.466	488BZ6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,380,490:20:0	
332	**98**	**68**	**05:02:57.466**	**20EA6A**	**6CKSUM**	**NIMS**	**NIMS,1000,14BC**	**2O0**	**4**	**0**	**4,380,514:08:0**	
333	**98**	**68**	**05:03:58.133**	**20EA5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**260**	**4**	**0**	**4,380,515:08:0**	
334	**98**	**68**	**05:04:58.800**	**20EA5B**	**37MRL**		**Memory Realocate (software operates from R**	**260**	**4**	**0**	**4,380,516:08:0**	
335	**98**	**68**	**05:05:59.466**	**20EA6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**260**	**4**	**0**	**4,380,517:08:0**	
336	**98**	**68**	**05:07:00.133**	**20EA6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**260**	**4**	**0**	**4,380,518:08:0**	
337	**98**	**68**	**05:08:00.800**	**20EA5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**4,380,519:08:0**	
338	**98**	**68**	**05:09:01.466**	**20EA5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**4,380,520:08:0**	
339	**98**	**68**	**05:10:02.133**	**20EA4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**4,380,521:08:0**	
340	**98**	**68**	**05:11:02.800**	**20EA4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**4,380,522:08:0**	
341	98	68	05:12:54.133	127EI	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	4,380,523:84:0	
342	**98**	**68**	**05:12:54.133**	**127EI4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**2R0**	**4**	**0**	**4,380,523:84:0**	
343	**98**	**68**	**05:12:54.800**	**127EI4B**	**37ETB**	**04,C4,2,0,00**	**Loads wavelength edit table**	**2R0**	**4**	**0**	**4,380,523:85:0**	
344	98	68	05:13:04.133	127EI11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R0	4	0	4,380,524:08:0	
345	98	68	05:15:56.133	125EI	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	4,380,526:84:0	
346	**98**	**68**	**05:15:56.133**	**125EI4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**260**	**4**	**0**	**4,380,526:84:0**	
347	**98**	**68**	**05:16:56.800**	**125EI4B**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**2O0**	**4**	**0**	**4,380,527:84:0**	
348	**98**	**68**	**05:17:57.466**	**125EI4C**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2O0**	**4**	**0**	**4,380,528:84:0**	
349	98	68	05:17:57.466	125EI11A	NIMSINIT	GE	##### GROUP END INIT	2O0	4	0	4,380,528:84:0	
350	98	68	05:58:35.466	488BZ6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,380,569:10:0	
351	98	68	06:08:25.466	488BZ6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,380,578:76:0	
352	98	68	06:51:37.466	488BZ6E	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,380,621:51:0	
353	98	68	07:28:30.133	488CA6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,380,658:03:0	
354	98	68	07:56:46.800	176TF6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,380,686:00:0	
355	98	68	08:02:50.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3112.00 +/-	2O0	4	0	4,380,692:00:0	
356	98	68	08:02:50.800		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 3112.00 +/-	2O0	4	0	4,380,692:00:0	
357	98	68	08:02:50.800	465WK6A	6DMST	5000	DMS Slew to TIC	2O0	4	0	4,380,692:00:0	
358	98	68	08:02:57.466		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 3112.00 +/-	2O0	4	0	4,380,692:10:0	
359	98	68	08:02:58.866		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *3112.12 +/-	2O0	4	0	4,380,692:12:1	
360	98	68	09:01:13.466	488CA6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,380,749:67:0	
361	98	68	09:07:17.466	488CA6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,380,755:67:0	
362	98	68	10:17:04.266		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *4997.94 +/-	2O0	4	0	4,380,824:68:2	
363	98	68	10:17:05.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	2O0	4	0	4,380,824:70:0	
364	98	68	13:04:25.400	488CA6D	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,380,990:24:0	
365	98	68	13:56:32.066	465WL6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,381,041:73:0	
366	98	68	13:56:32.066		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	2O0	4	0	4,381,041:73:0	
367	98	68	13:56:33.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	2O0	4	0	4,381,041:75:1	
368	98	68	13:56:38.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	2O0	4	0	4,381,041:83:0	
369	98	68	13:56:39.933		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	2O0	4	0	4,381,041:84:8	
370	98	68	13:56:43.800		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	2O0	4	0	4,381,041:90:6	
371	98	68	13:56:43.800		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	2O0	4	0	4,381,041:90:6	
372	98	68	14:22:24.066	465WL6B	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	4,381,067:35:0	
373	98	68	14:22:24.066		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 255.79 +/-	2O0	4	0	4,381,067:35:0	
374	98	68	14:22:25.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	2O0	4	0	4,381,067:36:8	
375	98	68	14:58:22.066	488CB6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,381,102:87:0	
376	98	68	16:21:12.733	465WM6A	6DTRN	CMD,6DTRN,465WM6	DMS TRACK TURNAROUND	2O0	4	0	4,381,184:81:0	
377	98	68	16:21:12.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	2O0	4	0	4,381,184:81:0	
378	98	68	16:21:12.733		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	2O0	4	0	4,381,184:81:0	
379	98	68	16:21:14.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	2O0	4	0	4,381,184:83:1	
380	98	68	16:21:19.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	2O0	4	0	4,381,185:00:0	
381	98	68	16:21:20.600		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	2O0	4	0	4,381,185:01:8	
382	98	68	16:21:22.000		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	2O0	4	0	4,381,185:03:9	
383	98	68	16:25:22.666		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	4,381,189:00:9	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	98	68	16:25:23.866		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	4,381,189:02:7	
385	98	68	16:25:23.866		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	4,381,189:02:7	
386	98	68	16:25:25.266		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	4,381,189:04:8	
387	98	68	16:25:37.266		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	4,381,189:22:8	
388	98	68	16:25:38.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	4,381,189:24:6	
389	98	68	16:31:15.400		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,381,194:75:0	
390	98	68	16:31:15.400	465WN6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,381,194:75:0	
391	98	68	16:31:22.066		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,381,194:85:0	
392	98	68	16:31:25.933		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	2O0	4	0	4,381,194:90:8	
393	98	68	16:31:25.933		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	2O0	4	0	4,381,194:90:8	
394	98	68	17:03:09.400		DMS:	: *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	2O0	4	0	4,381,226:34:0	
395	98	68	17:03:09.400	465WN6B	6DMSC	RDY,1	DMS Control Tape stop	2O0	4	0	4,381,226:34:0	
396	98	68	17:03:10.600		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	2O0	4	0	4,381,226:35:8	
397	98	68	17:18:45.400		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	2O0	4	0	4,381,241:73:0	
398	98	68	17:18:45.400	465WO6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,381,241:73:0	
399	98	68	17:18:46.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	2O0	4	0	4,381,241:75:1	
400	98	68	17:18:52.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	2O0	4	0	4,381,241:83:0	
401	98	68	17:18:53.266		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	2O0	4	0	4,381,241:84:8	
402	98	68	17:18:57.133		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	2O0	4	0	4,381,241:90:6	
403	98	68	17:18:57.133		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	2O0	4	0	4,381,241:90:6	
404	98	68	17:50:53.400		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC * 164.96 +/-	2O0	4	0	4,381,273:53:0	
405	98	68	17:50:53.400	465WP6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,381,273:53:0	
406	98	68	17:50:54.600		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	2O0	4	0	4,381,273:54:8	
407	98	68	17:50:58.466		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	2O0	4	0	4,381,273:60:6	
408	98	68	17:50:58.466		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	2O0	4	0	4,381,273:60:6	
409	98	68	18:22:54.066		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	2O0	4	0	4,381,305:22:0	
410	98	68	18:22:54.066	465WP6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	4,381,305:22:0	
411	98	68	18:22:55.266		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	2O0	4	0	4,381,305:23:8	
412	98	68	18:37:37.400		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	2O0	4	0	4,381,319:73:0	
413	98	68	18:37:37.400	465WQ6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,381,319:73:0	
414	98	68	18:37:38.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	2O0	4	0	4,381,319:75:1	
415	98	68	18:37:44.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	2O0	4	0	4,381,319:83:0	
416	98	68	18:37:45.266		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	2O0	4	0	4,381,319:84:8	
417	98	68	18:37:49.133		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	2O0	4	0	4,381,319:90:6	
418	98	68	18:37:49.133		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	2O0	4	0	4,381,319:90:6	
419	98	68	19:09:44.733	465WR6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,381,351:52:0	
420	98	68	19:09:44.733		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	2O0	4	0	4,381,351:52:0	
421	98	68	19:09:45.933		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	2O0	4	0	4,381,351:53:8	
422	98	68	19:09:49.800		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	2O0	4	0	4,381,351:59:6	
423	98	68	19:09:49.800		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	2O0	4	0	4,381,351:59:6	
424	98	68	19:10:50.733	465WR6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	4,381,352:60:0	
425	98	68	19:10:50.733		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	2O0	4	0	4,381,352:60:0	
426	98	68	19:10:51.933		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	2O0	4	0	4,381,352:61:8	
427	98	68	19:25:20.733	465WS6A	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	4,381,367:00:0	
428	98	68	19:25:20.733		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	2O0	4	0	4,381,367:00:0	
429	98	68	19:26:14.733	465WT6A	6DTRN	CMD,6DTRN,465WT6	DMS TRACK TURNAROUND	2O0	4	0	4,381,367:81:0	
430	98	68	19:26:14.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	2O0	4	0	4,381,367:81:0	
431	98	68	19:26:14.733		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	2O0	4	0	4,381,367:81:0	
432	98	68	19:26:16.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	2O0	4	0	4,381,367:83:1	
433	98	68	19:26:21.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	2O0	4	0	4,381,368:00:0	
434	98	68	19:26:22.600		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	2O0	4	0	4,381,368:01:8	
435	98	68	19:26:24.000		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	2O0	4	0	4,381,368:03:9	
436	98	68	19:37:49.800		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	4,381,379:31:6	
437	98	68	19:37:51.000		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	4,381,379:33:4	
438	98	68	19:37:51.000		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	4,381,379:33:4	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	98	68	19:37:52.400		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	4,381,379:35:5	
440	98	68	19:38:04.400		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	4,381,379:53:5	
441	98	68	19:38:05.600		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	4,381,379:55:3	
442	98	68	19:56:04.066	20UI4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,381,397:35:0	
443	98	68	19:56:54.066	20UI4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,381,398:19:0	
444	98	68	19:58:42.733	176TG6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,381,400:00:0	
445	98	69	06:46:39.400	488CC6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,382,040:75:0	
446	98	69	07:20:47.400	488CC6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,382,074:53:0	
447	98	69	13:42:49.400	488CD6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,382,452:38:0	
448	98	69	14:16:57.400	488CD6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,382,486:16:0	
449	98	69	15:05:04.066	20NV6A	6TMSED	NORM,AH2	Sci, Eng, and D/L Chan	2O0	4	0	4,382,533:69:0	
450	98	69	15:09:46.066	176VA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,382,538:37:0	
451	98	69	15:12:12.066	20NV6BA	6MROH	7,6CE0,1,A10	read from AACSA7,6CE0,1,A10	2O0	4	0	4,382,540:74:0	
452	98	69	15:18:56.066	20NV6F	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	2O0	4	0	4,382,547:43:0	
453	98	69	15:32:30.066	20NV6K	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	2O0	4	0	4,382,560:81:0	
454	98	69	15:46:38.066	20NV4I	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,382,574:79:0	
455	98	69	16:01:38.066	20NV4K	7SLEW	INIT,POS,17.45	Stator movement	2O0	4	0	4,382,589:64:0	
456	98	69	16:13:38.066	20NV4L	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,382,601:52:0	
457	98	69	16:20:38.066	20NV4M	7SLEW	INIT,NEG,17.45	Stator movement	2O0	4	0	4,382,608:45:0	
458	98	69	16:32:38.066	20NV4N	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,382,620:33:0	
459	98	69	16:39:38.066	20NV4O	7SLEW	INIT,POS,4.36	Stator movement	2O0	4	0	4,382,627:26:0	
460	98	69	16:51:38.066	20NV4P	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,382,639:14:0	
461	98	69	16:58:38.066	20NV4Q	7SLEW	INIT,NEG,4.36	Stator movement	2O0	4	0	4,382,646:07:0	
462	98	69	17:10:38.066	20NV4R	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,382,657:86:0	
463	98	69	17:17:38.066	20NV4S	**7CONE**	17.45,0.0	Check S/P Position	2O0	4	0	4,382,664:79:0	
464	98	69	17:23:38.066	20NV4T	**7CONE**	17.45,180.0	Check S/P Position	2O0	4	0	4,382,670:73:0	
465	98	69	17:29:38.066	20NV4U	**7CONE**	4.36,0.0	Check S/P Position	2O0	4	0	4,382,676:67:0	
466	98	69	17:44:38.066	20NV4V	**7CONE**	4.36,153.0	Check S/P Position	2O0	4	0	4,382,691:52:0	
467	98	69	18:21:42.066	20NV4AA	7SLEW	INIT,POS,17.45	Stator movement	2O0	4	0	4,382,728:21:0	
468	98	69	18:33:42.000	20NV4AB	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,382,740:09:0	
469	98	69	18:40:42.000	20NV4AC	7SLEW	INIT,NEG,17.45	Stator movement	2O0	4	0	4,382,747:02:0	
470	98	69	18:52:42.000	20NV4AD	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,382,758:81:0	
471	98	69	18:59:42.000	20NV4AE	**7CONE**	17.45,0.0	Check S/P Position	2O0	4	0	4,382,765:74:0	
472	98	69	19:05:42.000	20NV4AF	**7CONE**	17.45,180.0	Check S/P Position	2O0	4	0	4,382,771:68:0	
473	98	69	19:11:42.000	20NV4AG	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,382,777:62:0	
474	98	69	19:15:42.000	20NV4AH	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,382,781:58:0	
475	98	69	19:24:22.000	20NV6U	6MROH	7,6F96,2,A10	read from AACSA7,6F96,2,A10	2O0	4	0	4,382,790:19:0	
476	98	69	19:28:22.000	20NV4AL	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,382,794:15:0	
477	98	69	19:29:22.000	20NV4AM	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,382,795:14:0	
478	98	69	19:38:12.666	176VB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,382,803:82:0	
479	98	69	19:38:30.000	20NV6BB	6MROH	7,6CE0,1,A10	read from AACSA7,6CE0,1,A10	2O0	4	0	4,382,804:17:0	
480	98	69	19:41:10.000	20NV6Y	6MROH	12,2095,2,A10	read from LLM1A12,2095,2,A1	2O0	4	0	4,382,806:75:0	
481	98	69	19:45:40.000	20NV6AA	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,382,811:25:0	
482	98	69	20:36:41.333	488CE6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,382,861:67:0	
483	98	69	22:51:05.333	488CE6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,382,994:60:0	
484	98	70	01:40:28.666	488CE6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,383,162:17:0	
485	98	70	01:48:09.333	488CE6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,383,169:71:0	
486	98	70	06:46:41.333	488CF6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,383,465:03:0	
487	98	70	07:23:26.000	488CF6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,383,501:34:0	
488	98	70	08:39:53.333	488CF6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,383,576:90:0	
489	98	70	08:52:28.000	488CF6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,383,589:39:0	
490	98	70	10:48:22.666	488CF6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,383,704:06:0	
491	98	70	14:10:40.666	488CG6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,383,904:13:0	
492	98	70	16:16:25.333	488CG6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,384,028:46:0	
493	98	70	18:59:36.666	488CG6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,384,189:82:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	98	70	19:11:21.333	488CG6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,384,201	47:0
495	98	71	02:20:21.266	488CH6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,384,625	73:0
496	98	71	03:54:01.266	488CH6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,384,718	40:0
497	98	71	05:08:41.266	488CH6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,384,792	26:0
498	98	71	05:54:37.933	488CH6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,384,837	66:0
499	98	71	06:08:25.266	488CH6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,384,851	33:0
500	98	71	19:36:43.933	488CI6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,385,650	72:0
501	98	71	19:56:09.266	488CI6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,385,670	00:0
502	98	71	20:43:19.266	488CI6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,385,716	59:0
503	98	71	21:30:37.933	488CI6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,385,763	40:0
504	98	71	23:37:29.933	31OB6B	6MROH		12 read from LLM1A12,2282,0,A2	2O0	4	0	4,385,888	83:0
505	98	72	00:04:59.933	31OB6E	6MROH		12 read from LLM1A12,2282,0,A2	2O0	4	0	4,385,916	10:0
506	98	72	05:19:21.266	488CJ6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,386,227	01:0
507	98	72	05:28:29.933	488CJ6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,386,236	05:0
508	98	72	06:51:45.933	488CJ6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,386,318	37:0
509	98	72	06:58:21.933	488CJ6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,386,324	85:0
510	98	72	08:14:17.266	488CJ6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,386,400	02:0
511	98	72	08:45:37.200	488CK6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,386,431	01:0
512	98	72	13:18:26.533	488CK6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,386,700	76:0
513	98	72	19:10:45.866	488CL6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,387,049	26:0
514	98	72	19:56:09.200	488CL6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,387,094	16:0
515	98	72	21:00:09.200	488CL6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,387,157	43:0
516	98	72	21:00:29.866	20BD6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	2O0	4	0	4,387,157	74:0
517	98	72	21:04:43.866	176BA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,387,162	00:0
518	98	72	21:13:59.866	20BB4C	7STAT	17.45,281.9366,7	Stator inertial point	2O0	4	0	4,387,171	15:0
519	98	72	21:34:59.866	474BA416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,387,191	85:0
520	98	72	21:36:59.866	474BA416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,387,193	83:0
521	98	72	21:37:19.866	20BB4D	7STAT	17.45,281.9366,7	Stator inertial point	2O0	4	0	4,387,194	22:0
522	98	72	21:41:13.866	474BA416A4E	7BURN	OSZ,281.9366,72.	ALERT -- Thruster fire	2O0	4	0	4,387,198	09:0
523	98	72	21:54:47.866	20BB4F	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,387,211	47:0
524	98	72	22:00:49.866	20BB4I	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,387,217	44:0
525	98	72	22:16:21.866	20BB4J	7STAT	17.45,281.9366,7	Stator inertial point	2O0	4	0	4,387,232	77:0
526	98	72	22:25:49.866	20BB4K	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,387,242	19:0
527	98	72	22:29:55.866	474BA416A4G	7BURN	AT,281.9366,72.6	ALERT -- Thruster fire	2O0	4	0	4,387,246	24:0
528	98	72	22:36:11.866	20BB4M	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,387,252	42:0
529	98	72	23:03:37.866	20BB4P	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,387,279	54:0
530	98	73	00:09:05.866	20BE4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,387,344	31:0
531	98	73	00:09:55.866	20BE4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,387,345	15:0
532	98	73	00:10:46.533	176BB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,387,346	00:0
533	98	73	00:15:35.866	20BD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,387,350	70:0
534	98	73	04:08:57.200	488CM6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,387,581	51:0
535	98	73	05:12:57.200	488CM6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,387,644	78:0
536	98	73	05:50:06.533	488CM6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,387,681	55:0
537	98	73	06:04:09.200	488CM6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,387,695	45:0
538	98	73	13:46:49.200	488CN6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,388,153	07:0
539	98	73	14:16:57.200	488CN6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,388,182	80:0
540	98	73	14:58:15.200	488CN6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,388,223	66:0
541	98	73	15:45:33.800	488CN6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,388,270	47:0
542	98	73	19:45:29.133	488CN6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,388,507	73:0
543	98	73	20:34:28.466	488CO6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,388,556	23:0
544	98	73	21:00:09.133	488CO6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,388,581	59:0
545	98	73	21:09:19.800	488CO6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,388,590	66:0
546	98	74	04:13:13.133	488CP6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,389,009	87:0
547	98	74	05:12:57.133	488CP6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,389,069	03:0
548	98	74	05:46:17.133	488CP6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,389,102	00:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	98	74	05:57:45.133	488CP6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,389,113:31:0	
550	98	74	06:34:01.133	488CP6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,389,149:19:0	
551	98	74	13:50:49.800	488CQ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,389,581:20:0	
552	98	74	15:16:41.133	488CQ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,389,666:12:0	
553	98	74	18:54:17.133	488CQ6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,389,881:31:0	
554	98	74	19:41:13.133	488CQ6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,389,927:69:0	
555	98	74	20:40:57.133	488CR6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,389,986:76:0	
556	98	75	04:13:13.066	488CS6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,390,434:12:0	
557	98	75	05:12:57.066	488CS6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,390,493:19:0	
558	98	75	05:53:29.066	488CS6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,390,533:27:0	
559	98	75	07:10:17.066	488CS6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,390,609:23:0	
560	98	75	07:33:10.400	488CS6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,390,631:81:0	
561	98	75	08:20:29.066	488CT6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,390,678:62:0	
562	98	75	14:04:09.066	488CT6B	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,391,018:52:0	
563	98	75	14:38:37.733	488CU6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,391,052:61:0	
564	98	75	15:20:57.066	488CU6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,391,094:48:0	
565	98	76	13:40:55.666	488CV6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,392,419:71:0	
566	98	76	14:55:21.000	488CV6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,392,493:35:0	
567	98	76	18:47:53.000	488CV6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,392,723:33:0	
568	98	76	19:30:33.000	488CV6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,392,765:51:0	
569	98	76	20:26:01.000	488CW6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,392,820:38:0	
570	98	77	04:13:13.000	488CX6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,393,282:44:0	
571	98	77	05:08:41.000	488CX6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,393,337:31:0	
572	98	77	05:37:13.000	488CX6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,393,365:51:0	
573	98	77	05:49:13.000	488CX6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,393,377:39:0	
574	98	77	13:32:00.266	488CY6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,393,835:12:0	
575	98	77	13:55:36.933	488CY6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,393,858:44:0	
576	98	77	14:43:03.600	488CY6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,393,905:37:0	
577	98	77	15:30:21.600	488CY6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,393,952:17:0	
578	98	77	18:38:41.600	488CY6E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,394,138:41:0	
579	98	77	19:35:59.600	488CZ6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,394,195:11:0	
580	98	77	20:08:02.266	488CZ6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,394,226:74:0	
581	98	77	21:00:20.933	488CZ6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,394,278:50:0	
582	98	78	05:08:40.933	488DA6A	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,394,761:47:0	
583	98	78	05:08:55.600	488DA6B	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,394,761:69:0	
584	98	78	05:51:20.933	488DA6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,394,803:65:0	
585	98	78	06:06:26.933	476AD6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,394,818:59:0	
586	98	78	18:52:03.600	488DB6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,395,575:77:0	
587	98	78	19:00:40.933	488DB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,395,584:34:0	
588	98	78	20:47:20.866	488DB6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,395,689:79:0	
589	98	78	21:01:38.200	176WA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,395,704:00:0	
590	98	78	21:02:00.200	20WA6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	4,395,704:33:0	
591	98	78	21:08:00.200	20WC4O	7STAT	17.45,163.94,7.8	Stator inertial point	2O0	4	0	4,395,710:27:0	
592	98	78	21:27:02.200	490WF412A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,395,729:11:0	
593	98	78	21:32:00.200	490WF412A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,395,734:03:0	
594	98	78	21:32:20.200	20WC4C	7STAT	17.45,163.94,7.8	Stator inertial point	2O0	4	0	4,395,734:33:0	
595	98	78	21:36:10.200	490WF412A4E	7VECT		Inert vect update UTC	2O0	4	0	4,395,738:14:0	
596	98	78	21:36:14.200	490WF412A4F	7TURN	2,RTH	ALERT Thruster	2O0	4	0	4,395,738:20:0	
597	98	78	21:40:02.200	490WF412A406A4A	7STAR	1,3000,95.710999	Star catalog update	2O0	4	0	4,395,741:89:0	
598	98	78	21:40:04.200	490WF412A406A4B	7STAR	2,809,78.249,45.	Star catalog update	2O0	4	0	4,395,742:01:0	
599	98	78	21:40:06.200	490WF412A406A4C	7STAR	3,159,27.239,89.	Star catalog update	2O0	4	0	4,395,742:04:0	
600	98	78	21:40:08.200	490WF412A406A4D	7STAR	4,0,0.0,0.0	Star catalog update	2O0	4	0	4,395,742:07:0	
601	98	78	21:40:10.200	490WF412A406A4E	7STAR	5,0,0.0,0.0	Star catalog update	2O0	4	0	4,395,742:10:0	
602	98	78	21:40:12.200	490WF412A406A4F	7STAR	6,0,0.0,0.0	Star catalog update	2O0	4	0	4,395,742:13:0	
603	98	78	21:50:06.200	20WC4E	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,395,751:85:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	98	78	21:58:10.200	490WF412A4G	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,395,759	83:0
605	98	78	23:20:04.200	20WE4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,395,840	83:0
606	98	78	23:20:54.200	20WE4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,395,841	67:0
607	98	78	23:22:10.866	176WE6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,395,843	00:0
608	98	78	23:25:00.200	20WA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,395,845	72:0
609	98	79	03:43:20.866	488DC6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,396,101	27:0
610	98	79	03:57:12.200	176TD6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,396,115	00:0
611	98	79	04:02:00.200	20UY4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,396,119	68:0
612	98	79	04:03:00.200	20UY4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2O0	4	0	4,396,120	67:0
613	98	79	04:05:00.200	20UY4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,396,122	65:0
614	98	79	04:10:30.200	20UY4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2O0	4	0	4,396,128	14:0
615	98	79	04:10:30.866	20UY4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2O0	4	0	4,396,128	15:0
616	98	79	04:10:50.866	20UY4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2O0	4	0	4,396,128	45:0
617	98	79	04:10:51.533	20UY4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2O0	4	0	4,396,128	46:0
618	98	79	04:11:11.533	20UY4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,396,128	76:0
619	98	79	04:11:12.200	20UY4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,396,128	77:0
620	98	79	04:11:22.200	20UY4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	4,396,129	01:0
621	98	79	04:11:22.866	20UY4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	4,396,129	02:0
622	98	79	04:11:32.866	20UY4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2O0	4	0	4,396,129	17:0
623	98	79	04:11:33.533	20UY4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2O0	4	0	4,396,129	18:0
624	98	79	04:13:20.200	20UY4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2O0	4	0	4,396,130	87:0
625	98	79	04:13:20.866	20UY4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2O0	4	0	4,396,130	88:0
626	98	79	04:13:40.866	20UY4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2O0	4	0	4,396,131	27:0
627	98	79	04:13:41.533	20UY4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2O0	4	0	4,396,131	28:0
628	98	79	04:14:01.533	20UY4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,396,131	58:0
629	98	79	04:14:02.200	20UY4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,396,131	59:0
630	98	79	04:14:12.200	20UY4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	4,396,131	74:0
631	98	79	04:14:12.866	20UY4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	4,396,131	75:0
632	98	79	04:14:22.866	20UY4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2O0	4	0	4,396,131	90:0
633	98	79	04:14:23.533	20UY4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2O0	4	0	4,396,132	00:0
634	98	79	04:15:20.200	20UY4Z	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,396,132	85:0
635	98	79	04:40:04.200	20UO4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,396,157	36:0
636	98	79	04:40:54.200	20UO4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,396,158	20:0
637	98	79	04:42:42.200	176TE6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,396,160	00:0
638	98	79	05:27:52.866	488DC6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,396,204	62:0
639	98	79	05:42:48.866	488DC6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,396,219	41:0
640	98	79	06:21:12.866	488DC6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,396,257	39:0
641	98	79	07:12:24.866	488DC6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,396,308	06:0
642	98	79	07:24:11.533	488DD6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,396,319	65:0
643	98	79	08:01:15.533	488DD6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,396,356	34:0
644	98	79	13:04:24.866	488DD6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,396,656	18:0
645	98	79	13:25:44.866	488DE6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,396,677	27:0
646	98	79	13:55:36.866	488DE6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,396,706	76:0
647	98	79	14:41:15.533	488DE6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,396,751	89:0
648	98	79	15:14:54.200	488DE6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,396,785	23:0
649	98	79	18:39:20.866	488DE6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,396,987	41:0
650	98	79	19:00:40.866	488DF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,397,008	50:0
651	98	79	20:51:36.866	488DF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,397,118	24:0
652	98	80	03:32:40.800	488DG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,397,514	84:0
653	98	80	05:23:36.800	488DG6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,397,624	58:0
654	98	80	05:34:16.800	488DG6C	6TMSED	NORM,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,397,635	17:0
655	98	80	06:10:32.800	488DG6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,397,671	05:0
656	98	80	06:25:28.800	488DG6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,397,685	75:0
657	98	80	07:06:00.800	488DH6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,397,725	83:0
658	98	80	13:42:48.800	488DI6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,398,118	32:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	98	80	14:29:44.800	488DI6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,398,164:70:0	
660	98	80	14:41:42.133	488DI6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,398,176:54:0	
661	98	80	14:53:12.800	488DI6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,398,187:89:0	
662	98	80	15:29:28.800	488DI6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,398,223:77:0	
663	98	80	18:42:10.800	488DJ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,398,414:39:0	
664	98	80	18:56:24.800	488DJ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,398,428:46:0	
665	98	80	20:36:40.800	488DJ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,398,527:61:0	
666	98	81	03:43:20.800	488DK6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,398,949:59:0	
667	98	81	05:23:36.800	488DK6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,399,048:74:0	
668	98	81	05:30:08.800	488DK6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,399,055:25:0	
669	98	81	05:38:32.800	488DK6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,399,063:53:0	
670	98	81	06:14:48.800	488DK6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,399,099:41:0	
671	98	81	18:42:14.733	488DL6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,399,838:61:0	
672	98	81	18:52:08.733	488DL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,399,848:42:0	
673	98	81	20:26:00.733	488DL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,399,941:27:0	
674	98	82	03:49:44.733	488DM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,400,380:14:0	
675	98	82	05:19:20.733	488DM6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,400,468:70:0	
676	98	82	05:27:57.400	488DM6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,400,477:26:0	
677	98	82	05:34:16.733	488DM6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,400,483:49:0	
678	98	82	06:16:16.733	488DM6E	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,400,525:07:0	
679	98	82	06:46:48.733	488DN6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,400,555:25:0	
680	98	82	07:13:59.400	488DN6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,400,582:14:0	
681	98	82	07:51:03.400	488DN6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,400,618:74:0	
682	98	82	09:16:08.733	488DN6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,400,702:88:0	
683	98	82	11:24:08.733	488DN6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,400,829:51:0	
684	98	82	12:49:22.733	488DO6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,400,913:78:0	
685	98	82	12:58:00.733	488DO6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,400,922:36:0	
686	98	83	12:51:22.666	488DP6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,402,340:01:0	
687	98	83	12:55:52.666	488DP6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,402,344:42:0	
688	98	83	13:25:44.666	488DP6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,402,374:00:0	
689	98	83	13:59:06.000	432MC431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	2O0	4	0	4,402,406:90:0	
690	98	83	13:59:06.666	432MC6A	6RTSL1		R/T Select of DDS and	2O0	4	0	4,402,407:00:0	
691	98	83	18:27:24.000	488DP6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,402,672:31:0	
692	98	83	18:37:12.666	488DP6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,402,682:04:0	
693	98	84	02:44:18.600	488DQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,403,163:72:0	
694	98	84	03:58:16.600	488DQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,403,236:86:0	
695	98	84	05:19:20.600	488DQ6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,403,317:11:0	
696	98	84	05:22:33.266	488DQ6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,403,320:27:0	
697	98	84	05:30:00.600	488DQ6E	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2O0	4	0	4,403,327:61:0	
698	98	84	06:06:16.600	488DR6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,403,363:49:0	
699	98	84	12:51:27.933	488DS6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,403,764:25:0	
700	98	84	12:55:52.600	488DS6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,403,768:58:0	
701	98	84	13:21:28.600	488DS6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,403,793:87:0	
702	98	84	18:24:24.600	488DS6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,404,093:51:0	
703	98	84	18:43:36.600	488DS6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,404,112:50:0	
704	98	84	19:56:08.600	488DT6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,404,184:26:0	
705	98	84	23:59:59.933	481UB4A	7VECT		Inert vect update UTC	2O0	4	0	4,404,425:42:0	
706	98	85	00:49:49.933	488DT6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,404,474:68:0	
707	98	85	00:54:48.600	488DT6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,404,479:61:0	
708	98	85	05:36:31.933	488DU6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,404,758:27:0	
709	98	85	06:06:16.600	488DU6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,404,787:65:0	
710	98	85	07:03:45.200	488DU6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,404,844:51:0	
711	98	85	07:40:49.866	488DU6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,404,881:21:0	
712	98	85	07:57:12.533	488DU6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,404,897:39:0	
713	98	85	09:08:48.533	488DV6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,404,968:22:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	98	85	10:20:08.533	488DV6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,405,038:72:0	
715	98	85	13:10:47.866	488DV6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,405,207:52:0	
716	98	85	13:12:56.533	488DV6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,405,209:63:0	
717	98	85	14:12:40.533	488DV6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,405,268:70:0	
718	98	85	14:25:48.533	488DW6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,405,281:69:0	
719	98	85	14:59:27.200	488DW6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,405,315:03:0	
720	98	85	18:00:59.866	481UC4A	7VECT		Inert vect update UTC	2O0	4	0	4,405,494:53:0	
721	98	85	18:24:24.533	488DW6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,405,517:67:0	
722	98	85	18:41:28.533	488DW6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,405,534:56:0	
723	98	85	19:56:08.533	488DW6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,405,608:42:0	
724	98	85	20:03:33.200	488DX6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,405,615:72:0	
725	98	85	20:32:39.866	488DX6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,405,644:53:0	
726	98	85	20:32:41.200	20CD6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	4,405,644:55:0	
727	98	85	20:34:05.866	176CA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	4,405,646:00:0	
728	98	85	20:43:59.866	20CB4C	7STAT	17.45,70.3290,24	Stator inertial point	2O0	4	0	4,405,655:72:0	
729	98	85	21:04:59.866	474CA416A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,405,676:51:0	
730	98	85	21:06:59.866	474CA416A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	4,405,678:49:0	
731	98	85	21:07:19.866	20CB4D	7STAT	17.45,70.3290,24	Stator inertial point	2O0	4	0	4,405,678:79:0	
732	98	85	21:11:13.866	474CA416A4E	7BURN	PULZ,70.329,24.5	ALERT -- Thruster fire	2O0	4	0	4,405,682:66:0	
733	98	85	21:18:21.200	20CB4F	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,405,689:70:0	
734	98	85	21:24:23.200	20CB4I	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,405,695:67:0	
735	98	85	21:39:55.200	20CB4J	7STAT	17.45,70.3290,24	Stator inertial point	2O0	4	0	4,405,711:09:0	
736	98	85	21:49:23.200	20CB4K	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	4,405,720:42:0	
737	98	85	21:53:29.200	474CA416A4G	7BURN	LAT,70.329,24.52	ALERT -- Thruster fire	2O0	4	0	4,405,724:47:0	
738	98	85	22:02:19.866	20CB4M	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,405,733:24:0	
739	98	85	22:09:45.866	20CB4P	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	4,405,740:56:0	
740	98	85	23:14:43.866	20CE4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	4,405,804:79:0	
741	98	85	23:15:33.866	20CE4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	4,405,805:63:0	
742	98	85	23:16:53.200	176CB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	4,405,807:00:0	
743	98	85	23:22:13.866	20CD6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	4,405,812:26:0	
744	98	86	03:49:44.533	488DY6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,406,076:78:0	
745	98	86	05:15:04.533	488DY6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,406,161:23:0	
746	98	86	06:02:00.533	488DY6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,406,207:61:0	
747	98	86	06:58:39.200	488DY6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,406,263:63:0	
748	98	86	07:35:43.866	488DY6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,406,300:33:0	
749	98	86	08:01:28.533	488DZ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,406,325:75:0	
750	98	86	12:08:56.533	488DZ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,406,570:52:0	
751	98	86	13:17:12.533	488DZ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,406,638:08:0	
752	98	86	13:49:28.533	176TV6A	6TMREC	**TPB**	TERMINATE PLAYBACK (PB CONTROL) Record Mo	2O0	4	0	4,406,670:00:0	
753	98	86	14:02:37.133		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,406,683:00:0	
754	98	86	14:02:37.133		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,406,683:00:0	
755	98	86	14:02:37.133		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,406,683:00:0	
756	98	86	14:02:37.133	465WA6A	6DMST	5000	DMS Slew to TIC	2O0	4	0	4,406,683:00:0	
757	98	86	14:02:43.800		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,406,683:10:0	
758	98	86	14:02:45.200		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	2O0	4	0	4,406,683:12:1	
759	98	86	14:20:42.466	488EA6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,406,700:81:0	
760	98	86	14:54:21.133	488EA6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,406,734:15:0	
761	98	86	18:20:08.466	488EA6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,406,937:63:0	
762	98	86	18:41:28.466	488EA6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,406,958:72:0	
763	98	86	19:43:45.933		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *4997.94 +/-	2O0	4	0	4,407,020:36:2	
764	98	86	19:43:47.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	2O0	4	0	4,407,020:38:0	
765	98	86	19:47:36.466	488EA6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,407,024:18:0	
766	98	86	19:55:41.133	488EB6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,407,032:17:0	
767	98	86	19:56:18.466		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	2O0	4	0	4,407,032:73:0	
768	98	86	19:56:18.466	465WB6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,407,032:73:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	98	86	19:56:19.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	2O0	4	0	4,407,032:75:1	
770	98	86	19:56:25.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	2O0	4	0	4,407,032:83:0	
771	98	86	19:56:26.333		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	2O0	4	0	4,407,032:84:8	
772	98	86	19:56:30.200		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	2O0	4	0	4,407,032:90:6	
773	98	86	19:56:30.200		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	2O0	4	0	4,407,032:90:6	
774	98	86	20:22:10.466		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 255.79 +/-	2O0	4	0	4,407,058:35:0	
775	98	86	20:22:10.466	465WB6B	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	4,407,058:35:0	
776	98	86	20:22:11.666		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	2O0	4	0	4,407,058:36:8	
777	98	86	20:29:20.466	488EB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,407,065:43:0	
778	98	86	22:19:58.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	2O0	4	0	4,407,174:81:0	
779	98	86	22:19:58.466		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	2O0	4	0	4,407,174:81:0	
780	98	86	22:19:58.466	465WC6A	6DTRN	CMD,6DTRN,465WC6	DMS TRACK TURNAROUND	2O0	4	0	4,407,174:81:0	
781	98	86	22:19:59.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	2O0	4	0	4,407,174:83:1	
782	98	86	22:20:05.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	2O0	4	0	4,407,175:00:0	
783	98	86	22:20:06.333		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	2O0	4	0	4,407,175:01:8	
784	98	86	22:20:07.733		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	2O0	4	0	4,407,175:03:9	
785	98	86	22:24:08.400		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	4,407,179:00:9	
786	98	86	22:24:09.600		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	4,407,179:02:7	
787	98	86	22:24:09.600		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	4,407,179:02:7	
788	98	86	22:24:11.000		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	4,407,179:04:8	
789	98	86	22:24:23.000		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	4,407,179:22:8	
790	98	86	22:24:24.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	4,407,179:24:6	
791	98	86	22:31:01.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,407,185:75:0	
792	98	86	22:31:01.800	465WD6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,407,185:75:0	
793	98	86	22:31:08.466		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,407,185:85:0	
794	98	86	22:31:12.333		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	2O0	4	0	4,407,185:90:8	
795	98	86	22:31:12.333		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	2O0	4	0	4,407,185:90:8	
796	98	86	23:02:55.800		DMS:	: *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	2O0	4	0	4,407,217:34:0	
797	98	86	23:02:55.800	465WD6B	6DMSC	RDY,1	DMS Control Tape stop	2O0	4	0	4,407,217:34:0	
798	98	86	23:02:57.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	2O0	4	0	4,407,217:35:8	
799	98	86	23:18:31.800	465WE6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,407,232:73:0	
800	98	86	23:18:31.800		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	2O0	4	0	4,407,232:73:0	
801	98	86	23:18:33.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	2O0	4	0	4,407,232:75:1	
802	98	86	23:18:38.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	2O0	4	0	4,407,232:83:0	
803	98	86	23:18:39.666		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	2O0	4	0	4,407,232:84:8	
804	98	86	23:18:43.533		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	2O0	4	0	4,407,232:90:6	
805	98	86	23:18:43.533		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	2O0	4	0	4,407,232:90:6	
806	98	86	23:50:39.800	465WF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,407,264:53:0	
807	98	86	23:50:39.800		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC * 164.96 +/-	2O0	4	0	4,407,264:53:0	
808	98	86	23:50:41.000		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	2O0	4	0	4,407,264:54:8	
809	98	86	23:50:44.866		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	2O0	4	0	4,407,264:60:6	
810	98	86	23:50:44.866		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	2O0	4	0	4,407,264:60:6	
811	98	87	00:22:40.466	465WF6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	4,407,296:22:0	
812	98	87	00:22:40.466		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	2O0	4	0	4,407,296:22:0	
813	98	87	00:22:41.666		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	2O0	4	0	4,407,296:23:8	
814	98	87	00:37:23.800		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	2O0	4	0	4,407,310:73:0	
815	98	87	00:37:23.800	465WG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,407,310:73:0	
816	98	87	00:37:25.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	2O0	4	0	4,407,310:75:1	
817	98	87	00:37:30.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	2O0	4	0	4,407,310:83:0	
818	98	87	00:37:31.666		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	2O0	4	0	4,407,310:84:8	
819	98	87	00:37:35.533		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	2O0	4	0	4,407,310:90:6	
820	98	87	00:37:35.533		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	2O0	4	0	4,407,310:90:6	
821	98	87	01:09:31.133	465WH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	4,407,342:52:0	
822	98	87	01:09:31.133		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	2O0	4	0	4,407,342:52:0	
823	98	87	01:09:32.333		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	2O0	4	0	4,407,342:53:8	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	98	87	01:09:36.200		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	2O0	4	0	4,407,342:59:6	
825	98	87	01:09:36.200		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	2O0	4	0	4,407,342:59:6	
826	98	87	01:10:37.133		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	2O0	4	0	4,407,343:60:0	
827	98	87	01:10:37.133	465WH6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	4,407,343:60:0	
828	98	87	01:10:38.333		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	2O0	4	0	4,407,343:61:8	
829	98	87	01:25:07.133		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	2O0	4	0	4,407,358:00:0	
830	98	87	01:25:07.133	465WI6A	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	4,407,358:00:0	
831	98	87	01:26:01.133		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	2O0	4	0	4,407,358:81:0	
832	98	87	01:26:01.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	2O0	4	0	4,407,358:81:0	
833	98	87	01:26:01.133	465WJ6A	6DTRN	CMD,6DTRN,465WJ6	DMS TRACK TURNAROUND	2O0	4	0	4,407,358:81:0	
834	98	87	01:26:02.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	2O0	4	0	4,407,358:83:1	
835	98	87	01:26:07.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	2O0	4	0	4,407,359:00:0	
836	98	87	01:26:09.000		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	2O0	4	0	4,407,359:01:8	
837	98	87	01:26:10.400		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	2O0	4	0	4,407,359:03:9	
838	98	87	01:37:36.200		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	4,407,370:31:6	
839	98	87	01:37:37.400		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	4,407,370:33:4	
840	98	87	01:37:37.400		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	4,407,370:33:4	
841	98	87	01:37:38.800		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	4,407,370:35:5	
842	98	87	01:37:50.800		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	4,407,370:53:5	
843	98	87	01:37:52.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	4,407,370:55:3	
844	98	87	03:49:44.466	488EC6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,407,501:03:0	
845	98	87	04:45:38.466	488EC6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,407,556:29:0	
846	98	87	06:12:42.466	488EC6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,407,642:39:0	
847	98	87	06:38:33.800	488EC6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,407,668:00:0	
848	98	87	07:35:37.800	488EC6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,407,724:40:0	
849	98	87	08:27:04.466	488ED6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	4,407,775:29:0	
850	98	87	11:24:08.466	488ED6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	4,407,950:40:0	
851	98	87	12:34:32.466	488ED6C	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	4,408,020:06:0	
852	98	87	12:59:59.800		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	4,408,045:22:0	
853	**98**	**87**	**13:00:00.000**	**20A3EW**	**37A**	**Final Condition**	**NIMS Power ON**	**260**	**4**	**0**	**4,408,045:22:3**	
854	**98**	**87**	**13:00:00.000**	**20A3EX**	**37HR**	**Final Condition**	**Replacement Heaters OFF**	**260**	**4**	**0**	**4,408,045:22:3**	
855	**98**	**87**	**13:00:00.000**	**20A3EY**	**37C1PR**	**Final Condition**	**Optics Heater 1 OFF (primary relay)**	**260**	**4**	**0**	**4,408,045:22:3**	
856	**98**	**87**	**13:00:00.000**	**20A3EZ**	**37C2PR**	**Final Condition**	**Optics Heater 2 OFF (primary relay)**	**260**	**4**	**0**	**4,408,045:22:3**	
857	**98**	**87**	**13:00:00.000**	**20A3FA**	**37F1PR**	**Final Condition**	**Radiator Flash Heater OFF (primary relay)**	**260**	**4**	**0**	**4,408,045:22:3**	
858	**98**	**87**	**13:00:00.000**	**20A3FB**	**37F2PR**	**Final Condition**	**Shield Flash Heater OFF (primary relay)**	**260**	**4**	**0**	**4,408,045:22:3**	
859	**98**	**87**	**13:00:00.000**	**20A3FD**	**40HRPR**	**Final Condition**	**RCT Heater OFF (primary relay)**	**260**	**4**	**0**	**4,408,045:22:3**	
860	**98**	**87**	**13:00:00.000**	**20A3FE**	**40T1P**	**Final Condition**	**PCT Heater 1 ON (primary relay)**	**260**	**4**	**0**	**4,408,045:22:3**	
861	**98**	**87**	**13:00:00.000**	**20A3FF**	**40T2**	**Final Condition**	**PCT Heater 2 ON**	**260**	**4**	**0**	**4,408,045:22:3**	

12JNJUPRTS01

OAPEL: 12JNJUPRTS01 ALIAS: 12JNJUPRTS01
EXT: R PSID: DA
SCLK1: 04261649:00:0 SCLK2: 04261658:12:0
SCET1: 1997-349/17:57:13.066 SCET2: 1997-349/18:06:27.066
TARGET: JUPITER PARTITION: 1

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

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

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

WETGID: 0302408000 03 02 408 000
WTGRP_SIZ: 2

EDIT TABLE

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

12JNJUPRTS02

```
OAPEL:  12JNJUPRTS02            ALIAS:  12JNJUPRTS02
EXT:    R                       PSID:   DB
SCLK1:  04262002:00:0           SCLK2:  04262021:12:0
SCET1:  1997-349/23:54:08.400   SCET2:  1997-350/00:13:29.066
TARGET: JUPITER                 PARTITION: 1

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

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

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

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

EDIT TABLE

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

12JNJUPRTS03

OAPEL: 12JNJUPRTS03 ALIAS: 12JNJUPRTS03
EXT: R PSID: DC
SCLK1: 04262391:00:0 SCLK2: 04262400:12:0
SCET1: 1997-350/06:27:27.733 SCET2: 1997-350/06:36:41.733
TARGET: JUPITER PARTITION: 1

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

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

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

WETGID: 0302408000 03 02 408 000
WTGRP_SIZ: 2

EDIT TABLE

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

12ENGLOBAL01

```
OAPEL:  12ENGLOBAL01              ALIAS:  12ENGLOBAL01
EXT:    A                         PSID:   DD
SCLK1:  04262435:05:0             SCLK2:  04262439:04:0
SCET1:    97-350/07:12:00.400     SCET2:    97-350/07:16:03.066
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:   228                   TLMFMT:     MPW

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

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

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	03C00	0,0011,1100,0000,0000
1	1BDFF	1,1011,1101,1111,1111
2	03C00	0,0011,1100,0000,0000
3	1BDFF	1,1011,1101,1111,1111
4	03C00	0,0011,1100,0000,0000
5	1BDFF	1,1011,1101,1111,1111
6	03C00	0,0011,1100,0000,0000
7	1BDFF	1,1011,1101,1111,1111
8	03C00	0,0011,1100,0000,0000
9	1BDFF	1,1011,1101,1111,1111
10	03C00	0,0011,1100,0000,0000
11	1BDFF	1,1011,1101,1111,1111
12	03C00	0,0011,1100,0000,0000
13	1BDFF	1,1011,1101,1111,1111
14	03C00	0,0011,1100,0000,0000
15	1BDFF	1,1011,1101,1111,1111
16	03C00	0,0011,1100,0000,0000
17	1BDFF	1,1011,1101,1111,1111
18	03C00	0,0011,1100,0000,0000
19	1BDFF	1,1011,1101,1111,1111
20	03C00	0,0011,1100,0000,0000
21	1BDFF	1,1011,1101,1111,1111
22	03C00	0,0011,1100,0000,0000
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

12ENGLOBAL01

OAPEL: 12ENGLOBAL01 ALIAS: 12ENGLOBAL01
EXT: B PSID: DD
SCLK1: 04262437:85:0 SCLK2: 04262442:85:0
SCET1: 97-350/07:14:55.066 SCET2: 97-350/07:19:58.400
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: 168 TLMFMT: MPW

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

WETGID: 0326168001 03 26 168 001
WTGRP_SIZ: 26

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BD00	1,1011,1101,0000,0000
1	1BD00	1,1011,1101,0000,0000
2	1BD00	1,1011,1101,0000,0000
3	1BD00	1,1011,1101,0000,0000
4	1BD00	1,1011,1101,0000,0000
5	1BD00	1,1011,1101,0000,0000
6	1BD00	1,1011,1101,0000,0000
7	1BD00	1,1011,1101,0000,0000
8	1BD00	1,1011,1101,0000,0000
9	1BD00	1,1011,1101,0000,0000
10	1BD00	1,1011,1101,0000,0000
11	1BD00	1,1011,1101,0000,0000
12	1BD00	1,1011,1101,0000,0000
13	1BD00	1,1011,1101,0000,0000
14	1BD00	1,1011,1101,0000,0000
15	1BD00	1,1011,1101,0000,0000
16	1BD00	1,1011,1101,0000,0000
17	1BD00	1,1011,1101,0000,0000
18	1BD00	1,1011,1101,0000,0000
19	1BD00	1,1011,1101,0000,0000
20	1BD00	1,1011,1101,0000,0000
21	1BD00	1,1011,1101,0000,0000
22	1BD00	1,1011,1101,0000,0000
23	1BD00	1,1011,1101,0000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

12ENGLOBAL01

```
OAPEL:  12ENGLOBAL01              ALIAS:  12ENGLOBAL01
EXT:    C                         PSID:   DD
SCLK1:  04262445:87:0             SCLK2:  04262450:86:0
SCET1:    97-350/07:23:01.733     SCET2:    97-350/07:28:05.066
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:   168                   TLMFMT:     MPW

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

WETGID:     0326168001          03  26  168  001
WTGRP_SIZ:  26
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1BD00	1,1011,1101,0000,0000
1	1BD00	1,1011,1101,0000,0000
2	1BD00	1,1011,1101,0000,0000
3	1BD00	1,1011,1101,0000,0000
4	1BD00	1,1011,1101,0000,0000
5	1BD00	1,1011,1101,0000,0000
6	1BD00	1,1011,1101,0000,0000
7	1BD00	1,1011,1101,0000,0000
8	1BD00	1,1011,1101,0000,0000
9	1BD00	1,1011,1101,0000,0000
10	1BD00	1,1011,1101,0000,0000
11	1BD00	1,1011,1101,0000,0000
12	1BD00	1,1011,1101,0000,0000
13	1BD00	1,1011,1101,0000,0000
14	1BD00	1,1011,1101,0000,0000
15	1BD00	1,1011,1101,0000,0000
16	1BD00	1,1011,1101,0000,0000
17	1BD00	1,1011,1101,0000,0000
18	1BD00	1,1011,1101,0000,0000
19	1BD00	1,1011,1101,0000,0000
20	1BD00	1,1011,1101,0000,0000
21	1BD00	1,1011,1101,0000,0000
22	1BD00	1,1011,1101,0000,0000
23	1BD00	1,1011,1101,0000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

12ENDLINEA01

OAPEL: 12ENDLINEA01 ALIAS: 12ENDLINEA01
EXT: A PSID: DE
SCLK1: 04262678:00:0 SCLK2: 04262681:43:0
SCET1: 97-350/11:17:39.066 SCET2: 97-350/11:21:09.733
TARGET: EUROPA PARTITION: 1

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

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

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

12ENCPWYLL01

```
OAPEL:  12ENCPWYLL01              ALIAS:  12ENCPWYLL01
EXT:    A                         PSID:   DF
SCLK1:  04262704:00:0             SCLK2:  04262711:18:0
SCET1:    97-350/11:43:56.400     SCET2:    97-350/11:51:13.733
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

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

12ENICEBRG01

```
OAPEL:  12ENICEBRG01              ALIAS:  12ENICEBRG01
EXT:    A                         PSID:   DG
SCLK1:  04262767:00:0             SCLK2:  04262777:86:0
SCET1:    97-350/12:47:38.400     SCET2:    97-350/12:58:43.066
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

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

12INHRSPEC01

```
OAPEL:  12INHRSPEC01              ALIAS:  12INHRSPEC01
EXT:    A                         PSID:   DH
SCLK1:  04262853:00:0             SCLK2:  04262857:39:0
SCET1:    97-350/14:14:35.733     SCET2:    97-350/14:19:05.066
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

12INHRSPEC01

```
OAPEL:  12INHRSPEC01              ALIAS:  12INHRSPEC01
EXT:    B                         PSID:   DH
SCLK1:  04262857:50:0             SCLK2:  04262861:29:0
SCET1:    97-350/14:19:11.733     SCET2:    97-350/14:23:01.066
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

NIMS E12 OBSTAB

This is a time-ordered ASCII TABLE (listing) of GALILEO NIMS observation parameters for use by downlink data processing of the NIMS E12 data. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry. Included items come from NIMS commands in (1) the Standard Sequence Data File (SSDF) and (2) the Playback Table Update Process (PTUP), plus some items from (3) the NIMS/CDS software load.

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

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

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

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

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

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

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

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------------------------------------------------------------------------------------------------------------------------
12JNJUPRTS0112JNJUPRTS01RDA04261649:00:004261658:12:01         JUPITER  3214 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  408RT 1997-349/17:57:13.0661997-349/18:06:27.066
          000000000000000000000000000000000000000000000000000302408000 2241FFFF0200000

12JNJUPRTS0212JNJUPRTS02RDB04262002:00:004262021:12:01         JUPITER  3214 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  408RT 1997-349/23:54:08.4001997-350/00:13:29.066
          000000000000000000000000000000000000000000000000000302408000 2241FFFF0200000

12JNJUPRTS0312JNJUPRTS03RDC04262391:00:004262400:12:01         JUPITER  3214 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  408RT 1997-350/06:27:27.7331997-350/06:36:41.733
          000000000000000000000000000000000000000000000000000302408000 2241FFFF0200000

12ENGLOBAL0112ENGLOBAL01ADD04262435:05:004262439:04:01         EUROPA   3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  228MPW  97-350/07:12:00.400  97-350/07:16:03.066
          000000000000000000000000000000000000000000000000000032622800126010 3C00011BDFF0103C00011BDFF0103C00011BDFF0103C00011BD
FF0103C00011BDFF0103C00011BDFF0103C00011BDFF0103C00011BDFF0103C00011BDFF0103C00011BDFF01000000100000
12ENGLOBAL0112ENGLOBAL01BDD04262437:85:004262442:85:01         EUROPA   3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  168MPW  97-350/07:14:55.066  97-350/07:19:58.400
          000000000000000000000000000000000000000000000000000032616800126011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD
00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD0001000000100000
12ENGLOBAL0112ENGLOBAL01CDD04262445:87:004262450:86:01         EUROPA   3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  168MPW  97-350/07:23:01.733  97-350/07:28:05.066
          000000000000000000000000000000000000000000000000000032616800126011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD
00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD00011BD0001000000100000
12ENDLINEA0112ENDLINEA01ADE04262678:00:004262681:43:01         EUROPA   3314 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  360MPW  97-350/11:17:39.066  97-350/11:21:09.733
          000000000000000000000000000000000000000000000000000032636000126011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
12ENCPWYLL0112ENCPWYLL01ADF04262704:00:004262711:18:01         EUROPA   3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  360MPW  97-350/11:43:56.400  97-350/11:51:13.733
          000000000000000000000000000000000000000000000000000032636000126011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
12ENICEBRG0112ENICEBRG01ADG04262767:00:004262777:86:01         EUROPA   3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525                  360MPW  97-350/12:47:38.400  97-350/12:58:43.066
          000000000000000000000000000000000000000000000000000032636000126011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
12INHRSPEC0112INHRSPEC01ADH04262853:00:004262857:39:01         IO       3214 1 1 0 0 124 1 1 0 0 12400012 0000000000 1 2.00.3000
0065525                  360MPW  97-350/14:14:35.733  97-350/14:19:05.066
          030030030000030029028028029028032034031031032030029032636000126011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
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12INHRSPEC0112INHRSPEC01BDH04262857:50:004262861:29:01         IO       3214 1 1 0 0 124 1 1 0 0 12400012 0000000000 1 2.00.3000
0065525                  360MPW  97-350/14:19:11.733  97-350/14:23:01.066
          03003003000003002902802802902803203403103103203002903263600012601 1BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
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Chapter 5 - Detailed Observation Designs

Contents

Introduction to Chapter 5

Detailed Observation Designs

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

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

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

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

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

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

NIMS Real-Time Software Reload ACTIVITY ID: 12NNJUPRTS01-
START TIME: 97-349/17:45:09.067

Activity ID: Orbit 12 Target N Inst N OAPEL JUPRTS SeqNo 01 -

Title	NIMS Real-Time Software Reload	Instrument	NIMS
Requestor	NIMS-AWG/M. SEGURA	Team NIMS	Working Group AWG

Time System	CDS	Load ID	Calendar Date 12/15/97 Week 50
Start	JEE-CDS 00000761:00:0	97-349/17:45:09.067	JEE-000/12:49:27.333
End	JEE-CDS 00000751:00:0	97-349/17:55:15.734	JEE-000/12:39:20.666
Duration	00000010:00:0	000/00:10:06.667	000/00:10:06.667

Top Label 12NNJUPRTS01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

NIMS real-time software reload

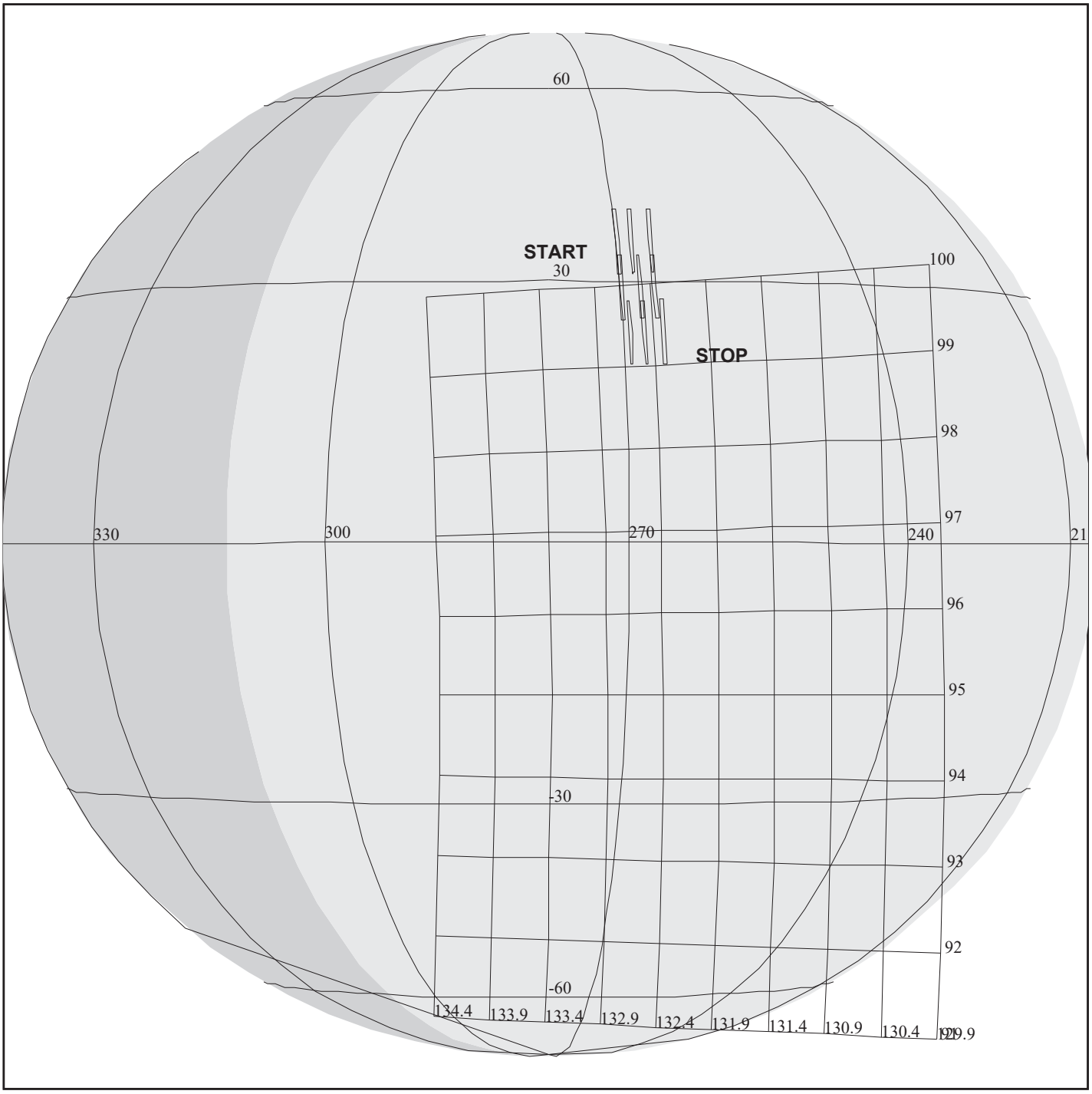
Each NIMS GEM observation will have an instrument reload before the start of each observation. Each reload has its own OAPEL form, but only this first form is included in the NIMSGUIDE.

The NIMS E12 reload OAPELS are:
12NNJUPRTS01, 12NNJUPRTS02, 12NNJUPRTS03, 12NNGLOBAL01
12NNDLINEA01, 12NNCPWYLL01, 12NNICEBRG01

Design Detail

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

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



165DA:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/9099 TC= 1(35 270)
A= 182 pD= 1638 SR=17.450 RA50=270.19 DEC50=-22.58 cone=132.69 clock=100.53
117DA:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/9099
1:#s= 3 Cs= -4.90 XCs= 0.00 Cr= 6.90 XCr= -7.00 sD= 498 rD= 36

12JNJUPRTS01

TARGET G3.2 lisac:10/24/1997 15:11:39

FILE:P.12JNJUPRTS01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/971016-tour.NS

PERIAPSIS: **THINNING:NIM 7**

START:JEE 97-350/06:34:36.400 -CDS 749:00:0 **BODY PLOT TIME:TARGET-TIME D= 1638 S= 1.000**

OBSERVATION:12JNJUPRTS01 **DESCRIP:Jupiter_Realtime_Observation**

Jupiter Realtime Observation

ACTIVITY ID: 12JNJUPRTS01*
START TIME: 97-349/17:55:15.734

Activity ID: Orbit 12 Target J Inst N OAPEL JUPRTS SeqNo 01 *

Title	Jupiter Realtime Observation			Instrument	NIMS
Requestor	NIMS-AWG/M. SEGURA	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID		Calendar Date	12/15/97 Week 50
Start	JEE-CDS 00000751:00:0	97-349/17:55:15.734		JEE-000/12:39:20.666	
End	JEE-CDS 00000736:00:0	97-349/18:10:25.734		JEE-000/12:24:10.666	
Duration	00000015:00:0	000/00:15:10.000		000/00:15:10.000	

Top Label	12JNJUPRTS01*				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Search for Jupiter atmospheric composition and thermal variations over time.

FREE_RTS=0.16

Data Returned

Design Detail

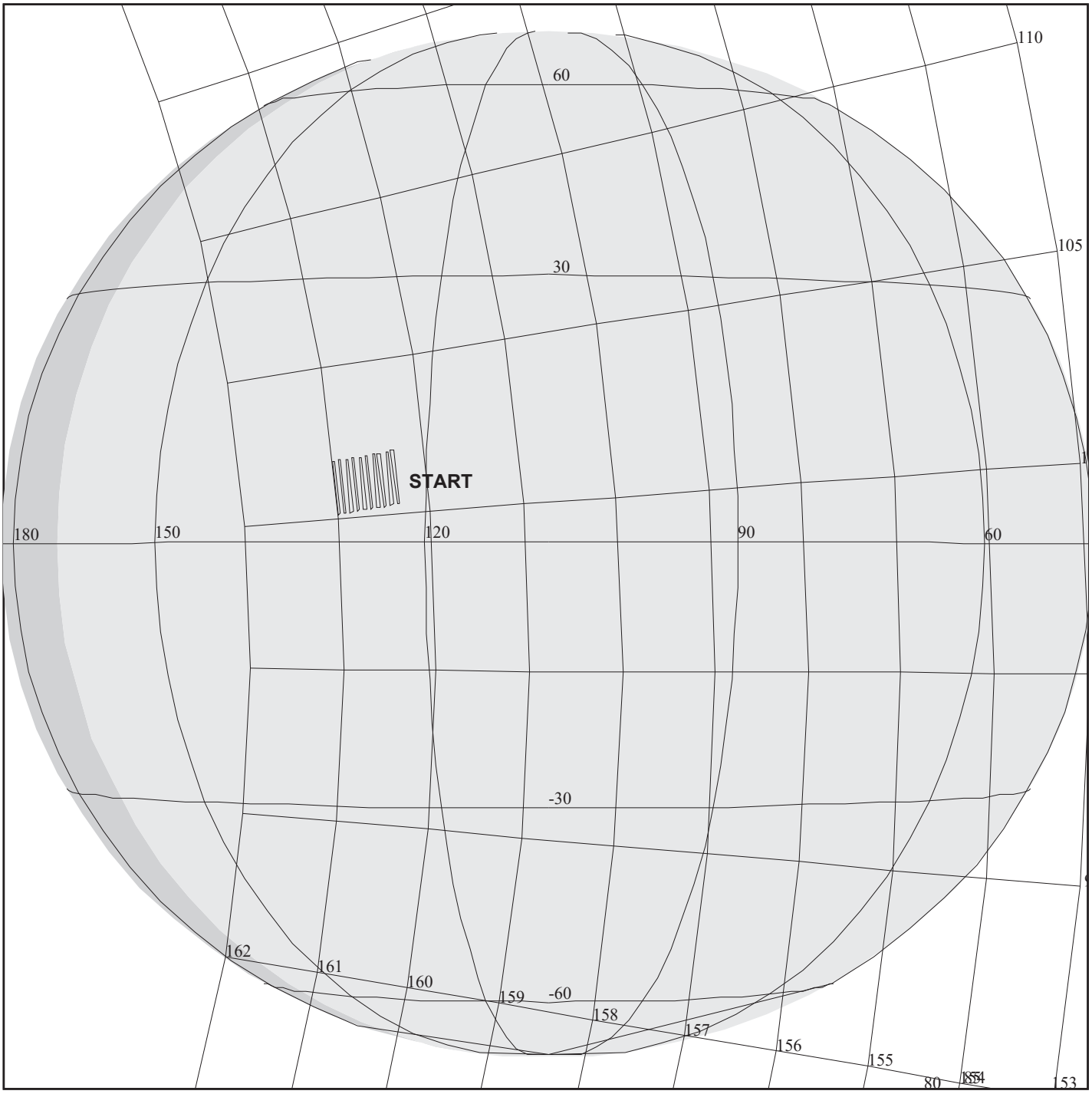
Long map. Three scans each 3 RIMS long.
NIMS selected in RealTime for 10 Rims.
Target to 35 degrees north latitude for Scan one. No scan overlap,
First scan at +35 degrees latitude (3 Rims, 3 FOVs).
Second scan at +29 degrees latitude (3 Rims, 3 FOVs).
Third scan at +23 degrees latitude (4 Rims, 4 FOVs).
Nyquist sampling not necessary - lit surface only.
West Longitudes 245-255.
NIMS R/T only returns every seventh FOV.

A NIMS software reload from CDS is performed just before the start of this observation.

Mirror Blocked (1B,1B) (11011,11011)

Long Map (LM), Gain 2, Grating Start 0, R/T, RT408

Galileo Activity Plan Form 12/08/97 15:43:19 rev 6/95



165DB:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/3345 TC= 1(7 123)
A= 728 pD= 1812 SR=17.450 RA50=299.98 DEC50=-21.03 cone=160.35 clock=101.18
117DB:#SB= 1 OR= 0.040 RR=12.000 BM=F RC= 1 BS= 0/3345
1:#s= 1 Cs= 24.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1820 rD= 2

12JNJUPRTS02

DESIGN G3.2 lisac:10/27/1997 15:50: 5

FILE:P.12JNJUPRTS02

CENTRAL BODY:JUPITER III

MINI:m.12JNJUPRTS02

S/C EPH:/DATA/NAVIO/971016-tour.NS

PERIAPSIS:

THINNING:NIM 7

START:JEE 97-350/06:34:36.400 -CDS 396:00:0

BODY PLOT TIME:TARGET-TIME D= 1812 S= 1.000

OBSERVATION:12JNJUPRTS02

DESCRIP:Jupiter_Realtime_Observation

Jupiter Realtime Observation

ACTIVITY ID: 12JNJUPRTS02*
START TIME: 97-349/23:49:09.067

Activity ID: Orbit 12 Target J Inst N OAPEL JUPRTS SeqNo 02 *

Title	Jupiter Realtime Observation			Instrument	NIMS
Requestor	NIMS-AWG/M. SEGURA	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID		Calendar Date	12/15/97 Week 50
Start	JEE-CDS 00000401:00:0	97-349/23:49:09.067		JEE-000/06:45:27.333	
End	JEE-CDS 00000376:00:0	97-350/00:14:25.734		JEE-000/06:20:10.666	
Duration	00000025:00:0	000/00:25:16.667		000/00:25:16.667	

Top Label 12JNJUPRTS02*
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Search for Jupiter atmospheric composition and thermal variations over time.

FREE_RTS=0.16

Data Returned

Design Detail

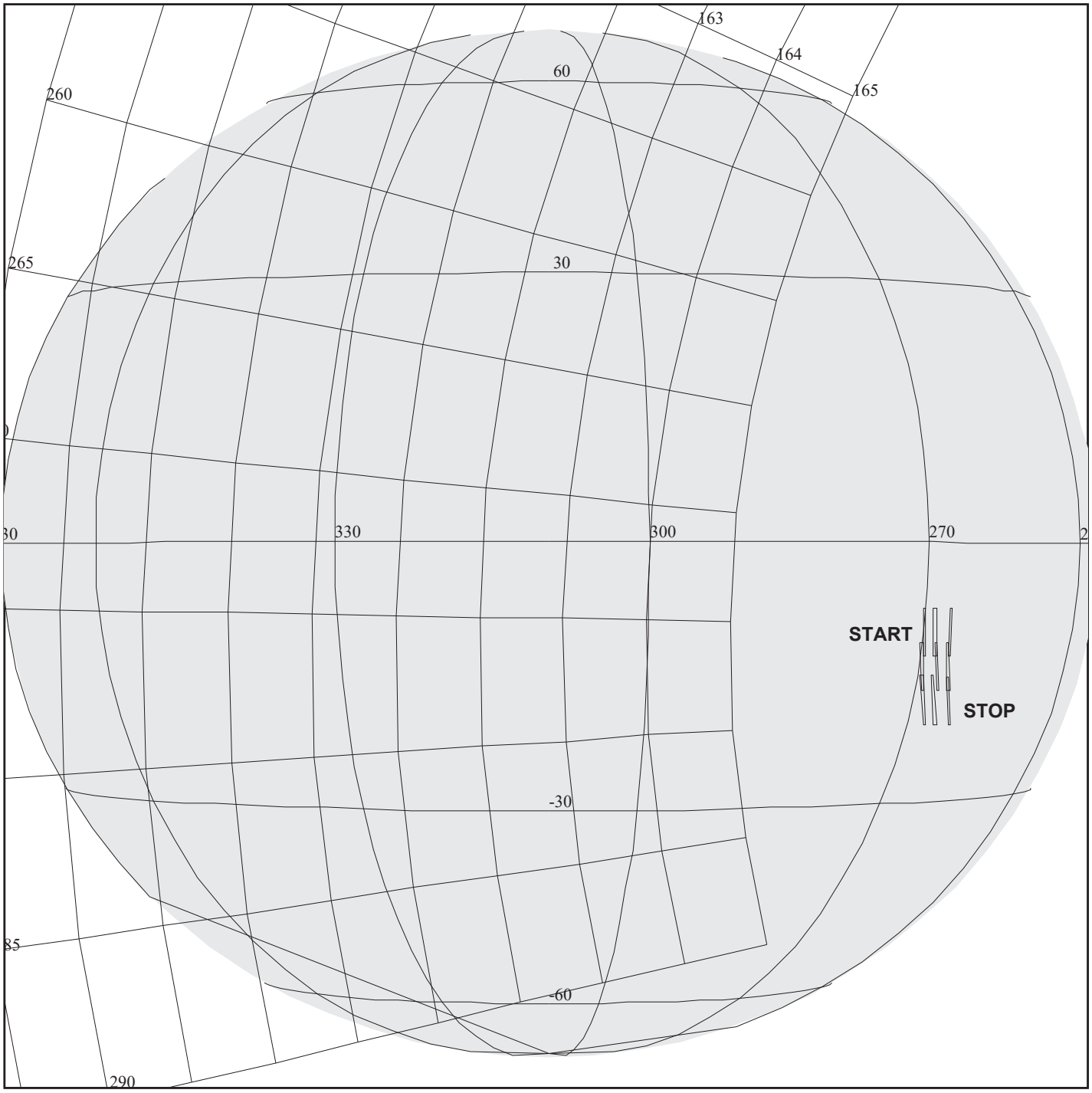
Long map. One scan 20 RIMS long.
NIMS selected in RealTime for 20 Rims.
Target to 7 degrees north latitude for Scan one.
First scan at +7 degrees latitude (20 Rims, 20 FOVs).
Equator - Nyquist sampling not necessary.
West Longitudes 123-163.
NIMS R/T only returns every seventh FOV.

A NIMS software reload from CDS is performed just before the start of this observation.

Mirror Blocked (1B,1B) (11011,11011)

Long Map (LM), Gain 2, Grating Start 0, R/T, RT408

Galileo Activity Plan Form 12/08/97 15:43:19 rev 6/95



165DC:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/4689 TC= 1(-10 270)
A= 728 pD= 1812 SR=17.450 RA50=332.60 DEC50=-12.46 cone=167.30 clock=275.44
117DC:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/4689
1:#s= 3 Cs= 5.00 XCs= 0.00 Cr= -7.80 XCr= 7.00 sD= 506 rD= 36

12JNJUPRTS03

DESIGN G3.2 lisac:10/27/1997 16: 2:16

FILE:P.12JNJUPRTS03

CENTRAL BODY:JUPITER III

MINI:m.12JNJUPRTS03

S/C EPH:/DATA/NAVIO/971016-tour.NS

PERIAPSIS:

THINNING:NIM 7

START:JEE 97-350/06:34:36.400 -CDS 04:00:0

BODY PLOT TIME:TARGET-TIME D= 1812 S= 1.000

OBSERVATION:12JNJUPRTS03

DESCRIP:Jupiter_Realtime_Observation

Jupiter Realtime Observation

ACTIVITY ID: 12JNJUPRTS03*
START TIME: 97-350/06:22:28.400

Activity ID: Orbit 12 Target J Inst N OAPEL JUPRTS SeqNo 03 *

Title	Jupiter Realtime Observation	Instrument	NIMS
Requestor	NIMS-AWG/M. SEGURA	Team NIMS	Working Group AWG

Time System	CDS	Load ID	Calendar Date 12/16/97 Week 51
Start	JEE-CDS 00000012:00:0	97-350/06:22:28.400	JEE-000/00:12:08.000
End	JEE+CDS 00000003:00:0	97-350/06:37:38.400	JEE+000/00:03:02.000
Duration	00000015:00:0	000/00:15:10.000	000/00:15:10.000

Top Label 12JNJUPRTS03*
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Search for Jupiter atmospheric composition and thermal variations over time.

FREE_RTS=0.16

Data Returned

Design Detail

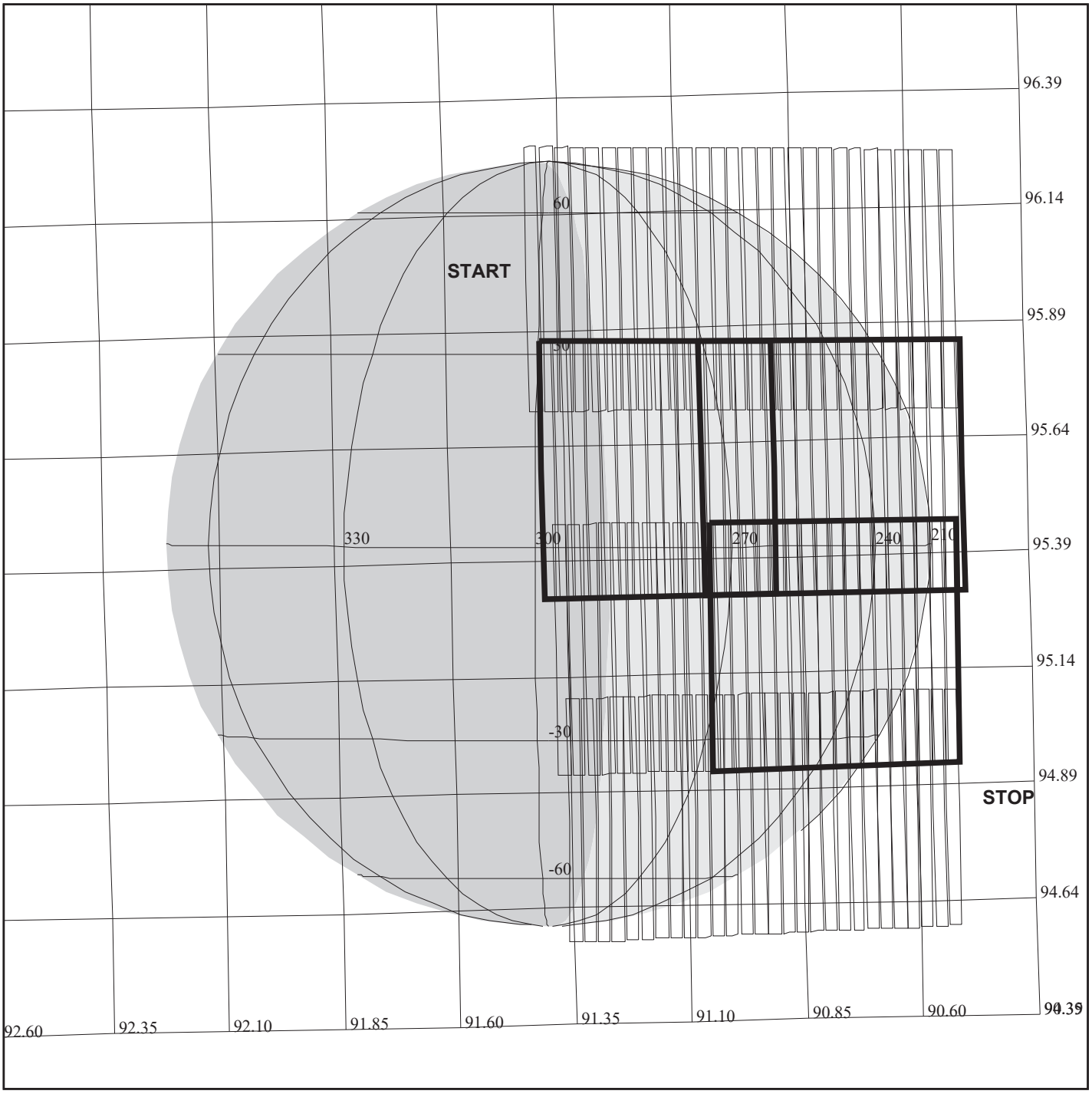
Long map. Three scans each 3 RIMS long.
NIMS selected in RealTime for 10 Rims.
Target to 10 degrees south latitude for Scan one. No scan overlap,
First scan at -10 degrees latitude (3 Rims, 3 FOVs).
Second scan at -14 degrees latitude (3 Rims, 3 FOVs).
Third scan at -17 degrees latitude (4 Rims, 4 FOVs).
Nyquist sampling not necessary - lit surface only.
West Longitudes 309-315.
NIMS R/T only returns every seventh FOV.

A NIMS software reload from CDS is performed just before the start of this observation.

Mirror Blocked (1B,1B) (11011,11011)

Long Map (LM), Gain 2, Grating Start 0, R/T, RT408

Galileo Activity Plan Form 12/08/97 15:43:19 rev 6/95



165DD:TT= 0 TMC= 1 C= 0.50 XC= 10.00 BS= 0/0695 TC= 3
A= 728 pD= 0 SR=17.450 RA50=225.78 DEC50=-19.20 cone= 91.41 clock= 96.00
117DD:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0695
1:#s= 4 Cs= -14.30 XCs= 0.00 Cr= 16.00 XCr= -7.00 sD= 1440 rD= 20

12ENGLOBAL01

TARGET G3.2 lisac:10/24/1997 15:11:39

FILE:P.12ENGLOBAL01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/971016-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:EEE 97-350/12:03:13.066 -CDS 296:00:0

BODY PLOT TIME:TARGET-TIME D= 0 S= 0.700

OBSERVATION:12ENGLOBAL01

DESCRIP:Europa_Global

Europa Global

ACTIVITY ID: 12ENGLOBAL01-
START TIME: 97-350/06:58:52.400

Activity ID: Orbit 12 Target E Inst N OAPEL GLOBAL SeqNo 01 -

Title	Europa Global			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date	12/16/97	Week 51
Start	EEE-CDS 00000301:00:0	97-350/06:58:52.400		EEE-000/05:04:20.666	
End	EEE-CDS 00000262:00:0	97-350/07:38:18.400		EEE-000/04:24:54.666	
Duration	00000039:00:0	000/00:39:26.000		000/00:39:26.000	

Top Label 12ENGLOBAL01-
Bottom Label

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

Observation Objective

Europa global mosaic covering West longitudes 210-300.
Covering Asterius Linea lost in the Prime Mission.
Resolution =

TICS= 1585, FMT= MPW, MBTG=5.107, PPR_RA= 0.299

Data Returned

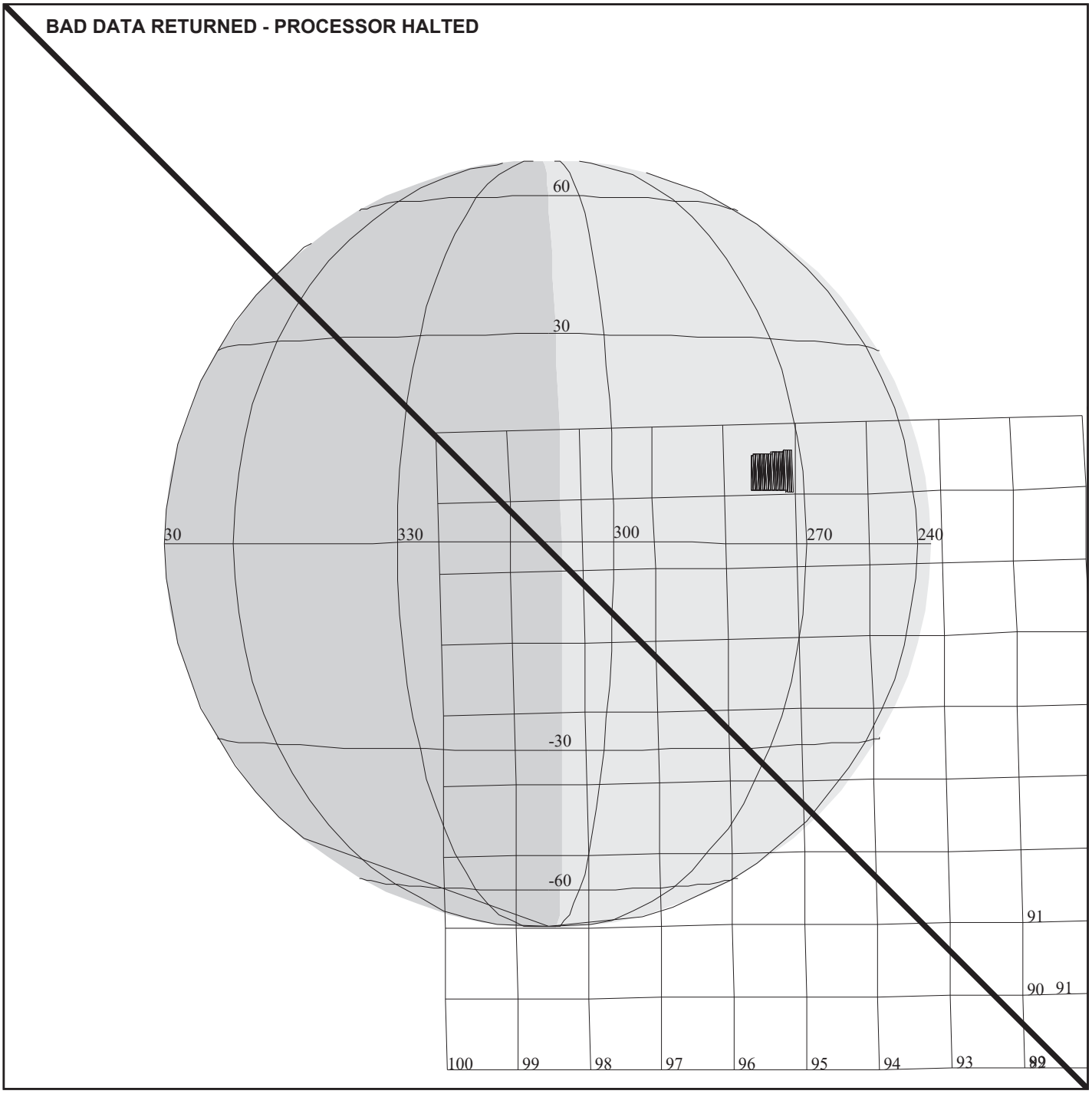
Design Detail

NIMS mode = LM. Record mode = MPW Gain State = 2. Grating Position = 0
Entire lit hemisphere of Europa covered in a single scan, scanning from terminator to limb. Europa is half-lit in this observation.
West Longitudes 210 to 300 degrees.
First scan at +44 degrees latitude (8 Rims). Not Returned
Second scan at +12 degrees latitude (8 Rims). A and B
Third scan at -15 degrees latitude (8 Rims). C
Fourth scan at -45 degrees latitude (8 Rims). Not Returned

A NIMS software reload from CDS is performed just before the start of this observation.

Long Map (LM), Gain 2, Grating Start 0, MPW, E12ELM442, E12ELM228
Long Map (LM), Gain 2, Grating Start 0, MPW, E12ELM442, E12ELM168

Galileo Activity Plan Form 12/08/97 15:43:19 rev 6/95



165DE:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/6377 TC= 1(10 272)
A= 182 pD= 1266 SR=17.450 RA50=229.87 DEC50=-19.00 cone= 95.05 clock= 97.33
117DE:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/6377
1:#s= 1 Cs= 12.50 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1274 rD= 20

12ENDLINEA01

DESIGN G3.2 lisac:10/27/1997 14: 0:20

FILE:P.12ENDLINEA01

TARGET BODY : EUROPA

MINI:m.12ENDLINEA01

S/C EPH:/DATA/NAVIO/971016-tour.NS

PERIAPSIS:

THINNING:NIM 1

START:EEE 97-350/12:03:13.066 -CDS 45:00:0

BODY PLOT TIME:TARGET-TIME D= 1266 S= 0.700

OBSERVATION:12ENDLINEA01

DESCRIP:Europa_Global

Surface Comp. and Minos Linea — ACTIVITY ID: 12ENDLINEA01-
START TIME: 97-350/11:15:41.733

Activity ID: Orbit 12 Target E Inst N OAPEL DLINEA SeqNo 01 -

Title	Surface Comp. and Minos Linea			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	12/16/97 Week 51
Start	EEE-CDS 00000047:00:0	97-350/11:15:41.733		EEE-000/00:47:31.333	
End	EEE-CDS 00000038:00:0	97-350/11:24:47.733		EEE-000/00:38:25.333	
Duration	00000009:00:0	000/00:09:06.000		000/00:09:06.000	

Top Label 12ENDLINEA01-
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

Observation will focus on a dark linea region (Minos Linea).
latitude +10 degrees and West longitude 272-280 degrees coverage.

TICS= 442, FMT= MPW, MBTG= 1.52, PPR_RA= 0.083

Processor Halted, Bad Data Returned

Design Detail

NIMS mode = LM. Record mode = MPW Gain State = 3. Grating Position = 0
Single scan at +10 degrees latitude (7 Rims).
West Longitudes 272 to 280 degrees.

A NIMS software reload from CDS is performed just before the start
of this observation.

Long Map (LM), Gain 3, Grating Start 0, MPW, E12ELM442, E12ELM360

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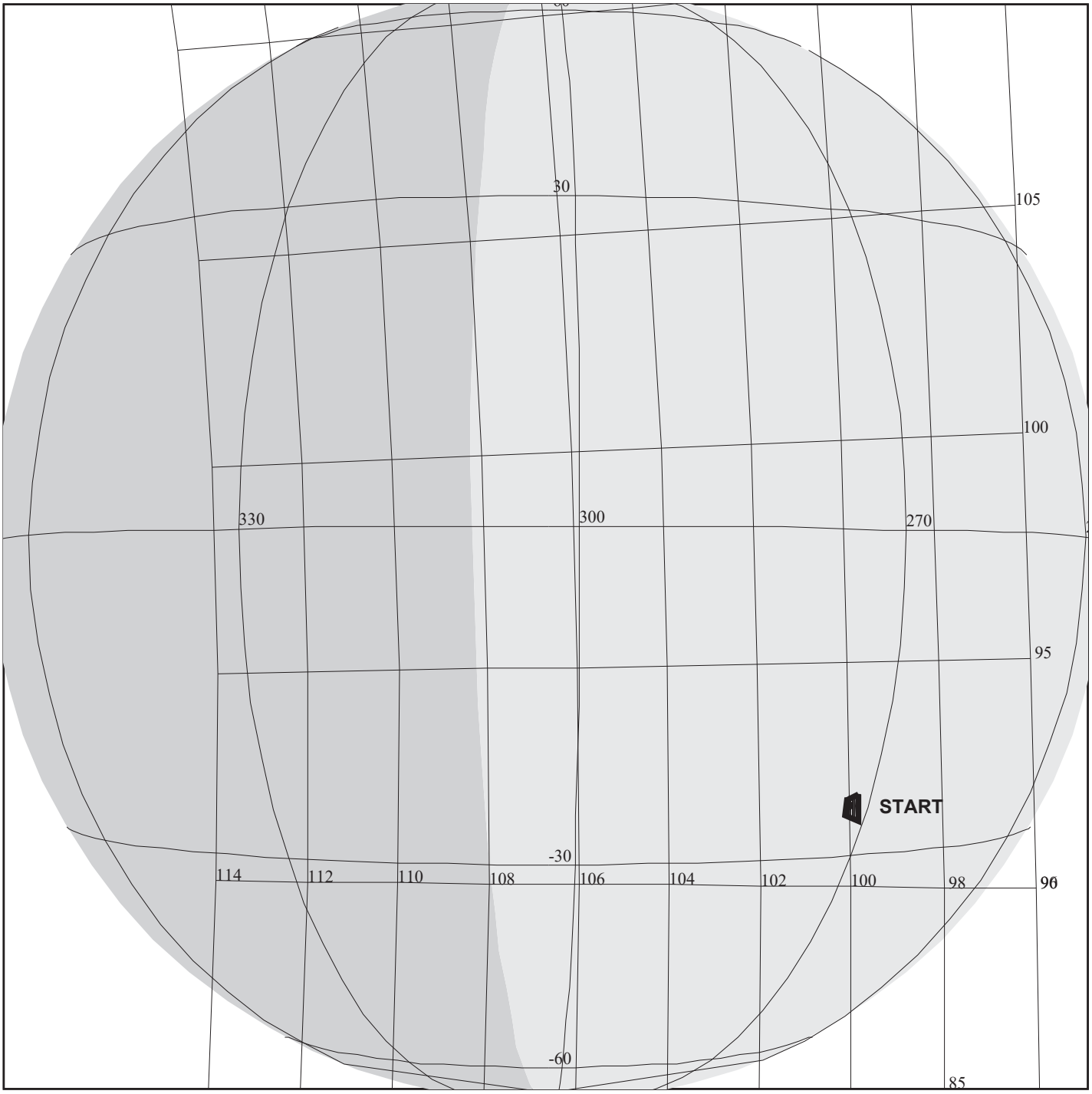


165DF:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/1109 TC= 1(-25 271)
A= 182 pD= 2176 SR=17.450 RA50=233.23 DEC50=-25.61 cone= 99.80 clock= 91.75
117DF:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/1109
1:#s= 1 Cs= 21.70 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 2176 rD= 2

12ENCPWYLL01

DESIGN G3.2 lisac:10/27/1997 16: 3:54

FILE:P.12ENCPWYLL01

TARGET BODY : EUROPA

MINI:m.12ENCPWYLL01

S/C EPH:/DATA/NAVIO/971016-tour.NS

PERIAPSIS:

THINNING:NIM 1

START:EEE 97-350/12:03:13.066 -CDS 19:00:0

BODY PLOT TIME:TARGET-TIME D= 2176 S= 1.000

OBSERVATION:12ENCPWYLL01

DESCRIP:Europa_Surf.comp._and_Mineos_Lin

Europa Surf. Comp. and Mineos Linea ACTIVITY ID: 12ENCPWYLL01-
START TIME: 97-350/11:41:59.066

Activity ID: Orbit 12 Target E Inst N OAPEL CPWYLL SeqNo 01 -

Title	Europa Surf. Comp. and Mineos Linea		Instrument		NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date	12/16/97	Week 51
Start	EEE-CDS 00000021:00:0	97-350/11:41:59.066		EEE-000/00:21:14.000	
End	EEE-CDS 00000007:00:0	97-350/11:56:08.400		EEE-000/00:07:04.666	
Duration	00000014:00:0	000/00:14:09.334		000/00:14:09.334	

Top Label	12ENCPWYLL01-				
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 the Pwyll
impact crater region.
Latitude = -25 degrees, West Longitude = 271 degrees

TICS= 389, FMT= MPW MBTG= 2.309, PPR_RA= 0.073

Data Returned

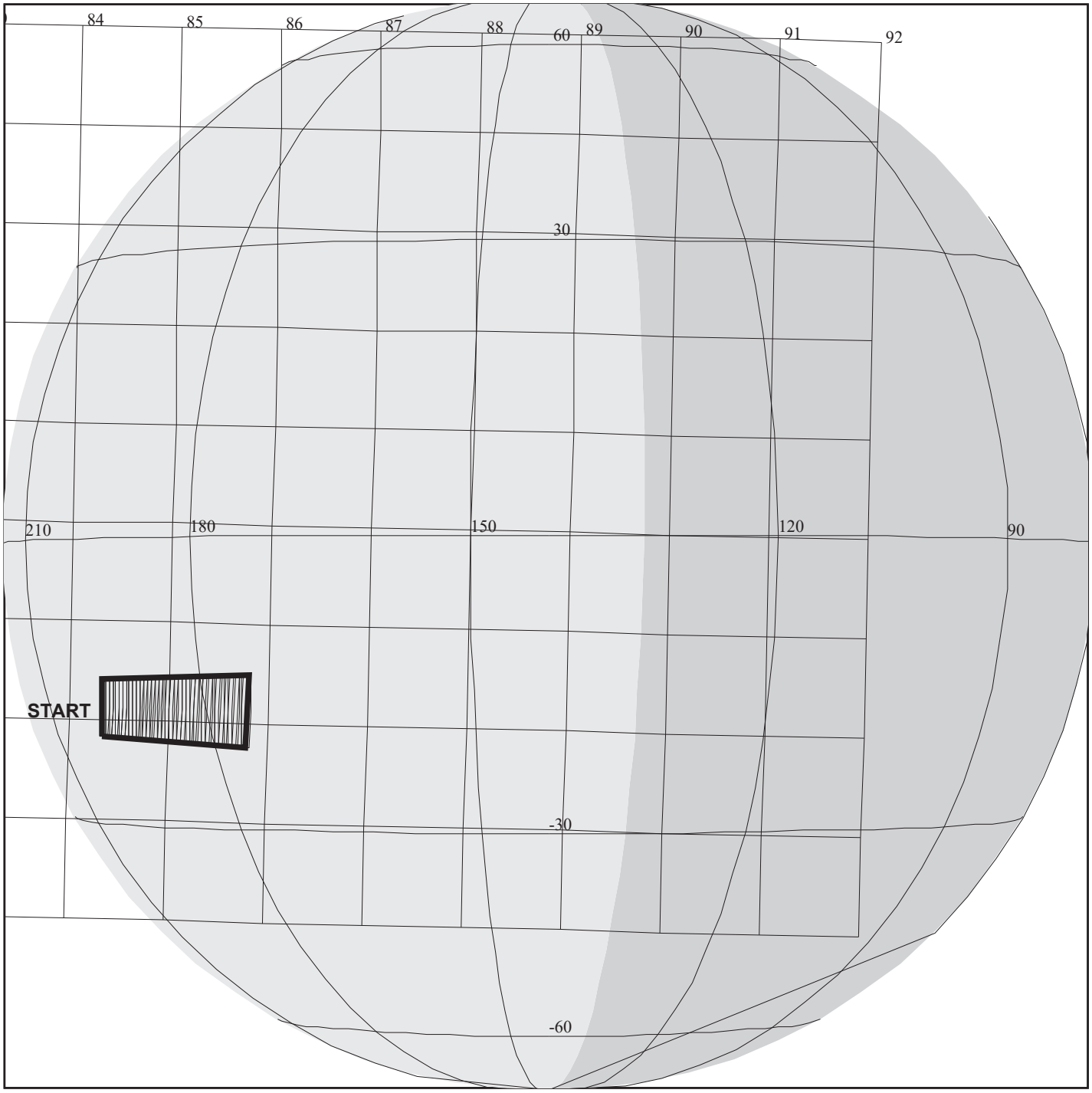
Design Detail

NIMS mode = LM. Record mode = MPW. Gain State = 2 Grating Position = 0
Single scan at -25 degrees latitude (7 Rims).
West Longitudes 271 to 273 degrees.

A NIMS software reload from CDS is performed just before the start
of this observation.

Long Map (LM), Gain 2, Grating Start 0, MPW, E12ELM442, E12ELM360

Galileo Activity Plan Form 12/08/97 15:43:20 rev 6/95



165DG:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/2575 TC= 1(-17 197)
A= 728 pD= 2176 SR=17.450 RA50= 50.38 DEC50= 19.62 cone= 84.32 clock=276.87
117DG:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/2575
1:#s= 1 Cs= 19.90 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 2002 rD= 2

12ENICEBRG01

TARGET G3.2 lisac:10/24/1997 15:11:39

FILE:P.12ENICEBRG01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/971016-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:EEE 97-350/12:03:13.066 +CDS 44:00:0

BODY PLOT TIME:TARGET-TIME D= 2176 S= 1.000

OBSERVATION:12ENICEBRG01

DESCRIP:Europa_Surface_Composition

Europa Surface Composition

ACTIVITY ID: 12ENICEBRG01-
START TIME: 97-350/12:42:39.066

Activity ID: Orbit 12 Target E Inst N OAPEL ICEBRG SeqNo 01 -

Title	Europa Surface Composition			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	12/16/97 Week 51
Start	EEE+CDS 00000039:00:0	97-350/12:42:39.066		EEE+000/00:39:26.000	
End	EEE+CDS 00000056:00:0	97-350/12:59:50.399		EEE+000/00:56:37.333	
Duration	00000017:00:0	000/00:17:11.333		000/00:17:11.333	

Top Label	12ENICEBRG01-				
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 on wedge (ice rift) terrain.
Latitude = -17 degrees and West Longitude = 173-197 degrees coverage.

TICS= 741, FMT= MPW MBTG= 3.064, PPR_RA= 0.140

Data Returned

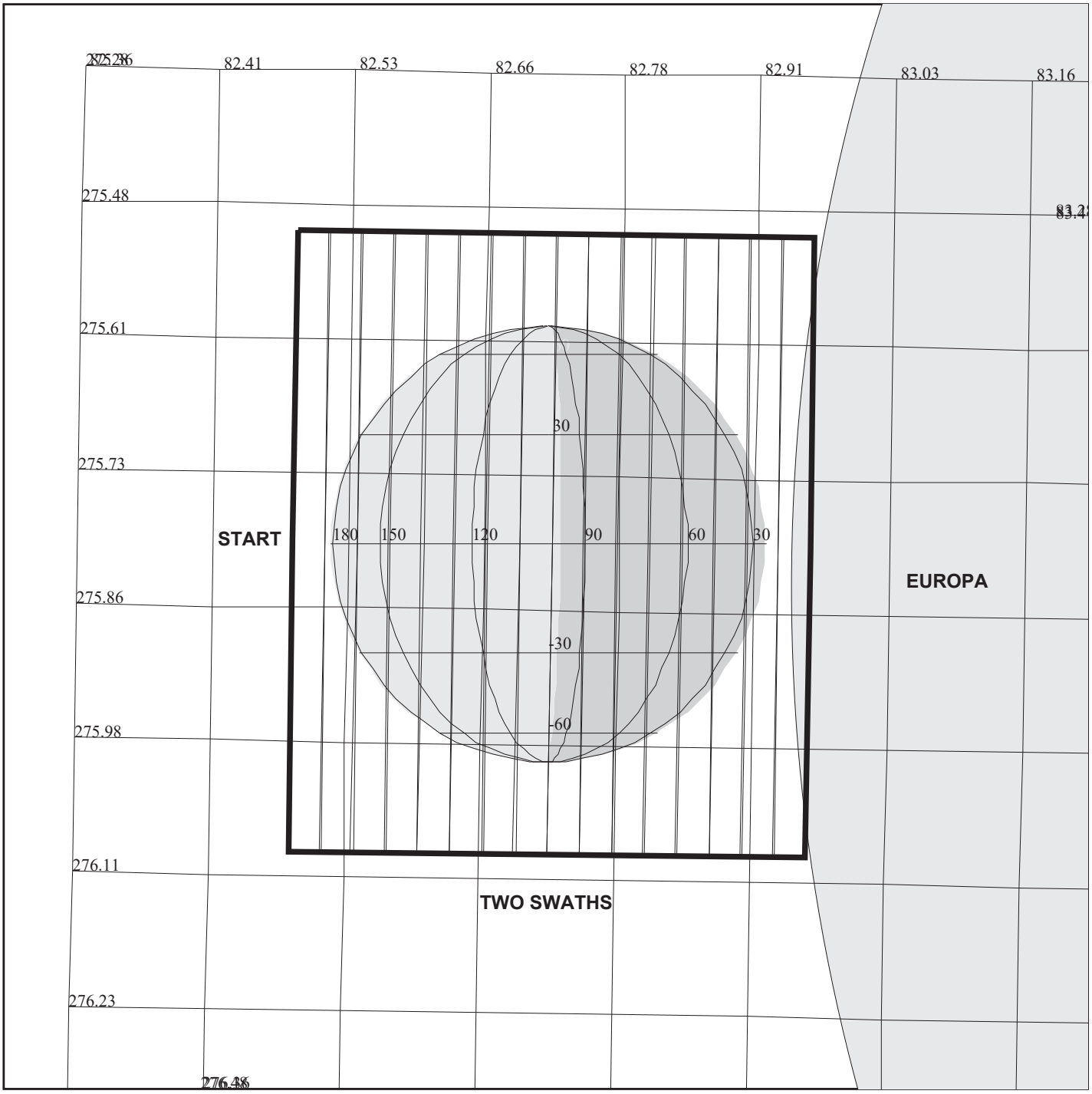
Design Detail

NIMS mode = LM. Record mode = MPW. Gain state = 2. Grating position = 0
Single scan at -17 degrees latitude (11 Rims).
West Longitudes 173 to 197 degrees.

A NIMS software reload from CDS is performed just before the start
of this observation.

Long Map (LM), Gain 2, Grating Start 0, MPW, E12ELM442, E12ELM360

Galileo Activity Plan Form 12/08/97 15:43:20 rev 6/95



165DH:TT= 0 TMC= 1 C= -4.00 XC= 0.00 BS= 0/8227 TC= 3
A= 728 pD= 1636 SR=17.450 RA50= 51.94 DEC50= 21.15 cone= 82.49 clock=275.79
117DH:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/8227
1:#s= 2 Cs= 8.00 XCs= 0.00 Cr= -8.00 XCr= 0.00 sD= 808 rD= 20

12INHRSPEC01

TARGET G3.2 lisac:10/24/1997 15:11:39

FILE:P.12INHRSPEC01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/971016-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:IEE 97-350/19:10:55.000 -CDS 293:00:0

BODY PLOT TIME:TARGET-TIME D= 1636 S= 0.400

OBSERVATION:12INHRSPEC01

DESCRIP:12INHRSPEC01

Io Monitoring at High Spectral Resolutio ACTIVITY ID: 12INHRSPEC01-
START TIME: 97-350/14:09:36.334

Activity ID: Orbit 12 Target I Inst N OAPEL HRSPEC SeqNo 01 -

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

Time System	CDS	Load ID	Calendar Date 12/16/97 Week 51
Start	IEE-CDS 00000298:00:0	97-350/14:09:36.334	IEE-000/05:01:18.666
End	IEE-CDS 00000284:00:0	97-350/14:23:45.667	IEE-000/04:47:09.333
Duration	00000014:00:0	000/00:14:09.333	000/00:14:09.333

Top Label 12INNHRSPE01-
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

Monitoring Io's Volcanic activity at Io closest approach during this orbit. This observation is important because some of the longitudes covered will not be available again during the E and C orbits of GEM, except during C21. This is an important context observation for C21.

TICS= 450, FMT= MPW MBTG= 2.333, PPR_RA=0.09

Data Returned

Design Detail

Global mosaic in Long Map, 408 wavelengths (MPW).
NIMS resolution is about 250 km/pixel.
Central longitude is 100 degrees West.
Observation will cover from about 10 degrees West to 190 West.
Cost about 450 tics, 2.5 Mbits.

Entire disk of Io covered in a single scan, scanning from dayside to nightside. Io is half-lit in this observation.
Two identical equatorial scans (4.5 Rims each).

A NIMS software reload from CDS is performed just before the start of this observation.

Both full-disk scans returned.

Long Map (LM), Gain 3, Grating Start 0, MPW, E12ILM442, E12ILM360

Galileo Activity Plan Form 12/08/97 15:43:20 rev 6/95

Chopper off

ACTIVITY ID: 12NNCHOPOF01-
START TIME: 97-350/14:23:45.667

Activity ID: Orbit 12 Target N Inst N OAPEL CHOPOF SeqNo 01 -

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

Time System	CDS	Load ID		Calendar Date	12/16/97 Week 51
Start	IEE-CDS 00000284:00:0	97-350/14:23:45.667		IEE-000/04:47:09.333	
End	IEE-CDS 00000274:00:0	97-350/14:33:52.334		IEE-000/04:37:02.666	
Duration	00000010:00:0	000/00:10:06.667		000/00:10:06.667	

Top Label	12NNCHOPOF01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	50	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	ALL	DMS	No

Observation Objective

NIMS chopper turned off after encounter period.

Design Detail

Use two NIMS 37IST commands, the first to set chopper 63Hz the second to turn off the chopper:

37IST,1,0,0,OFF,0,0,0
37IST,1,1,0,OFF,0,0,0

Galileo Activity Plan Form 12/08/97 15:43:20 rev 6/95

NIMS Real-Time Software Reload ACTIVITY ID: 12NNRELOAD01-
START TIME: 97-351/17:29:37.732

Activity ID: Orbit 12 Target N Inst N OAPEL RELOAD SeqNo 01 -

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

Time System	CDS	Load ID	Calendar Date 12/17/97 Week 51
Start	EEE+CDS 00001747:00:0	97-351/17:29:37.732	EEE+001/05:26:24.666
End	EEE+CDS 00001757:00:0	97-351/17:39:44.399	EEE+001/05:36:31.333
Duration	00000010:00:0	000/00:10:06.667	000/00:10:06.667

Top Label 12NNHRSPEC01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

NIMS real-time software reload to insure that NIMS is in a known state after encounter.

Design Detail

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

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

Chopper off

ACTIVITY ID: 12NNCHOPOF02-
START TIME: 97-351/17:39:44.399

Activity ID: Orbit 12 Target N Inst N OAPEL CHOPOF SeqNo 02 -

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

Time System	CDS	Load ID		Calendar Date	12/17/97 Week 51
Start	EEE+CDS 00001757:00:0	97-351/17:39:44.399		EEE+001/05:36:31.333	
End	EEE+CDS 00001767:00:0	97-351/17:49:51.066		EEE+001/05:46:38.000	
Duration	00000010:00:0	000/00:10:06.667		000/00:10:06.667	

Top Label	12NNCHOPOF02-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	50	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	ALL	DMS	No

Observation Objective

Turn off NIMS chopper after instrument reload.

Design Detail

Use two NIMS 37IST commands, the first to set chopper 63Hz the second to turn off the chopper:

37IST,1,0,0,OFF,0,0,0
37IST,1,1,0,OFF,0,0,0

Galileo Activity Plan Form 12/08/97 15:43:21 rev 6/95

NIMS RCT Real-Time Calibration

ACTIVITY ID: 12NNRCTRLT01-
START TIME: 98-028/10:00:00.000

Activity ID: Orbit 12 Target N Inst N OAPEL RCTRLT SeqNo 01 -

Title	NIMS RCT Real-Time Calibration			Instrument	NIMS
Requestor	NIMS-AWG/M. SEGURA	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID		Calendar Date	01/28/98 Week 4
Start	RTA+CDS 00000000:00:0	98-028/10:00:00.000		RTA+000/00:00:00.000	
End	RTA+CDS 00000793:00:0	98-028/23:21:48.666		RTA+000/13:21:48.666	
Duration	00000793:00:0	000/13:21:48.666		000/13:21:48.666	

Top Label	12NNRCTRLT01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	450	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

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

This calibration was deleted from the load due to spacecraft
safety issues.

No Data Returned

Design Detail

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

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

Galileo Activity Plan Form 12/08/97 15:43:21 rev 6/95

NIMS Real-Time PCT Calibration — ACTIVITY ID: 12NNPCTRLT01-
START TIME: 98-035/00:00:00.000

Activity ID: Orbit 12 Target N Inst N OAPEL PCTRLT SeqNo 01 -

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

Time System	CDS	Load ID		Calendar Date	02/04/98 Week 5
Start	PCT+CDS 0:00:0	98-035/00:00:00.000		PCT+000/00:00:00.000	
End	PCT+CDS 00000465:00:0	98-035/07:50:10.000		PCT+000/07:50:10.000	
Duration	00000465:00:0	000/07:50:10.000		000/07:50:10.000	

Top Label	12NNPCTRLT01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	275	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

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

This calibration was deleted from the load due to spacecraft
safety issues.

No Data Returned

Design Detail

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

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

Galileo Activity Plan Form 12/08/97 15:43:21 rev 6/95

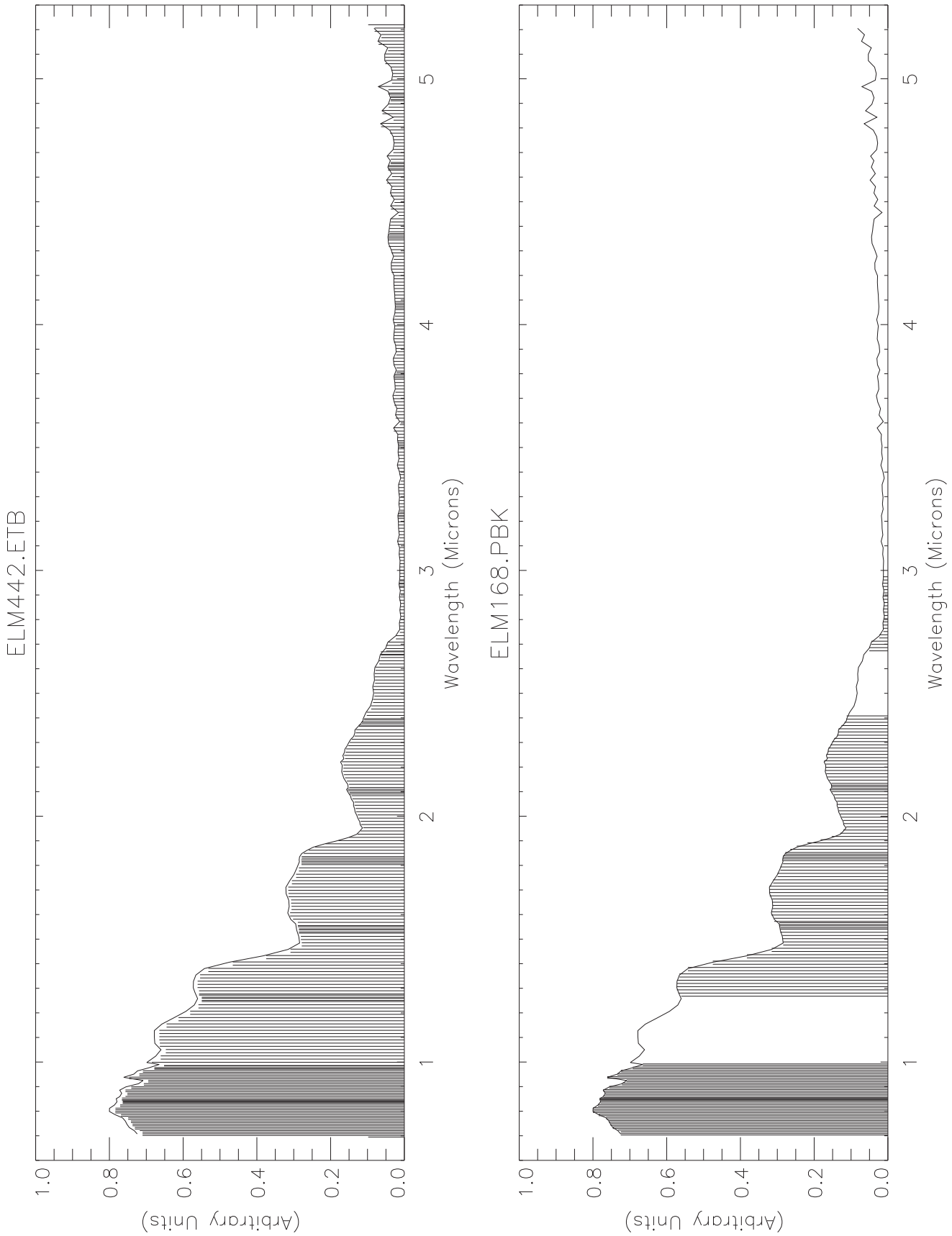
Chapter 6 - Edit Tables

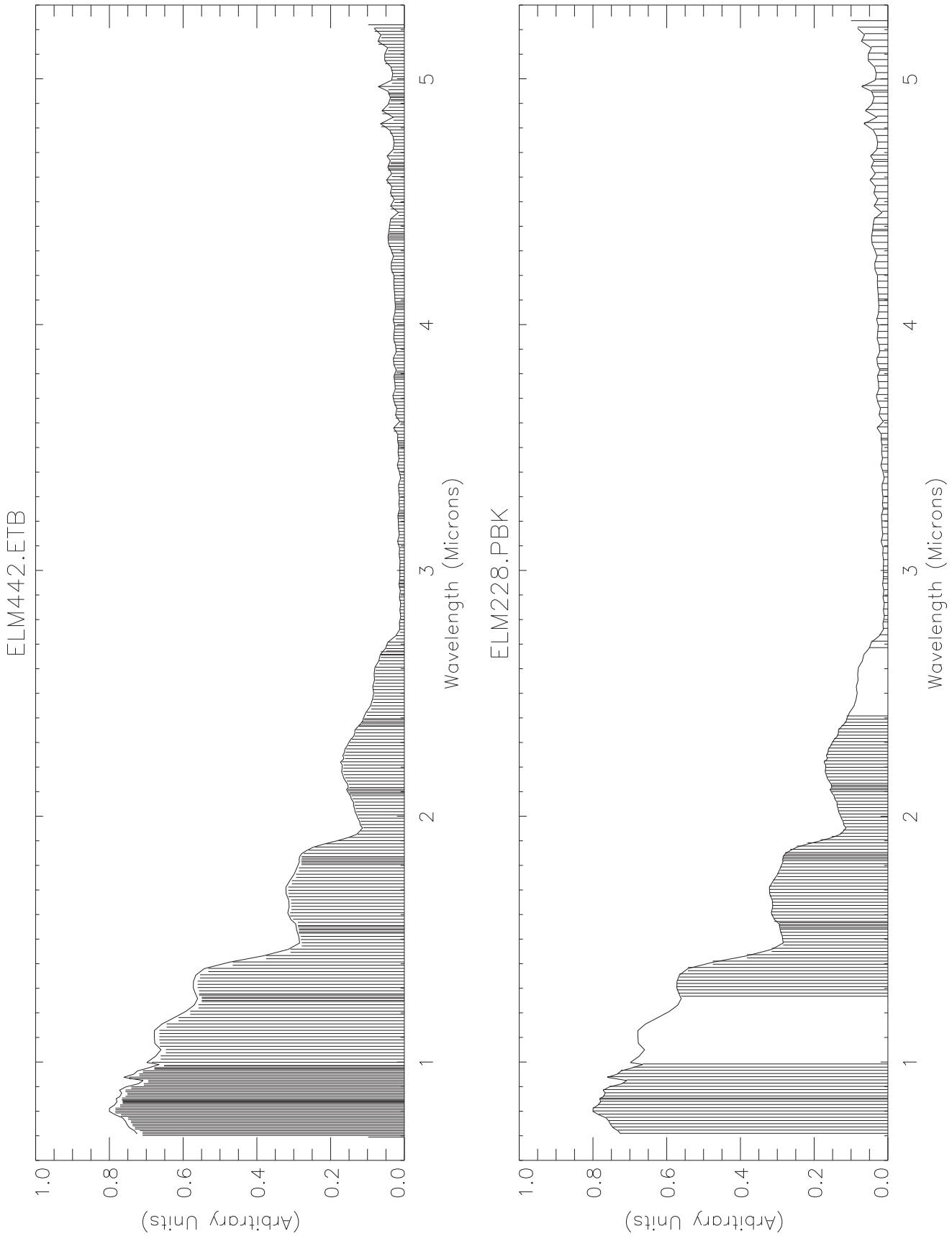
Contents

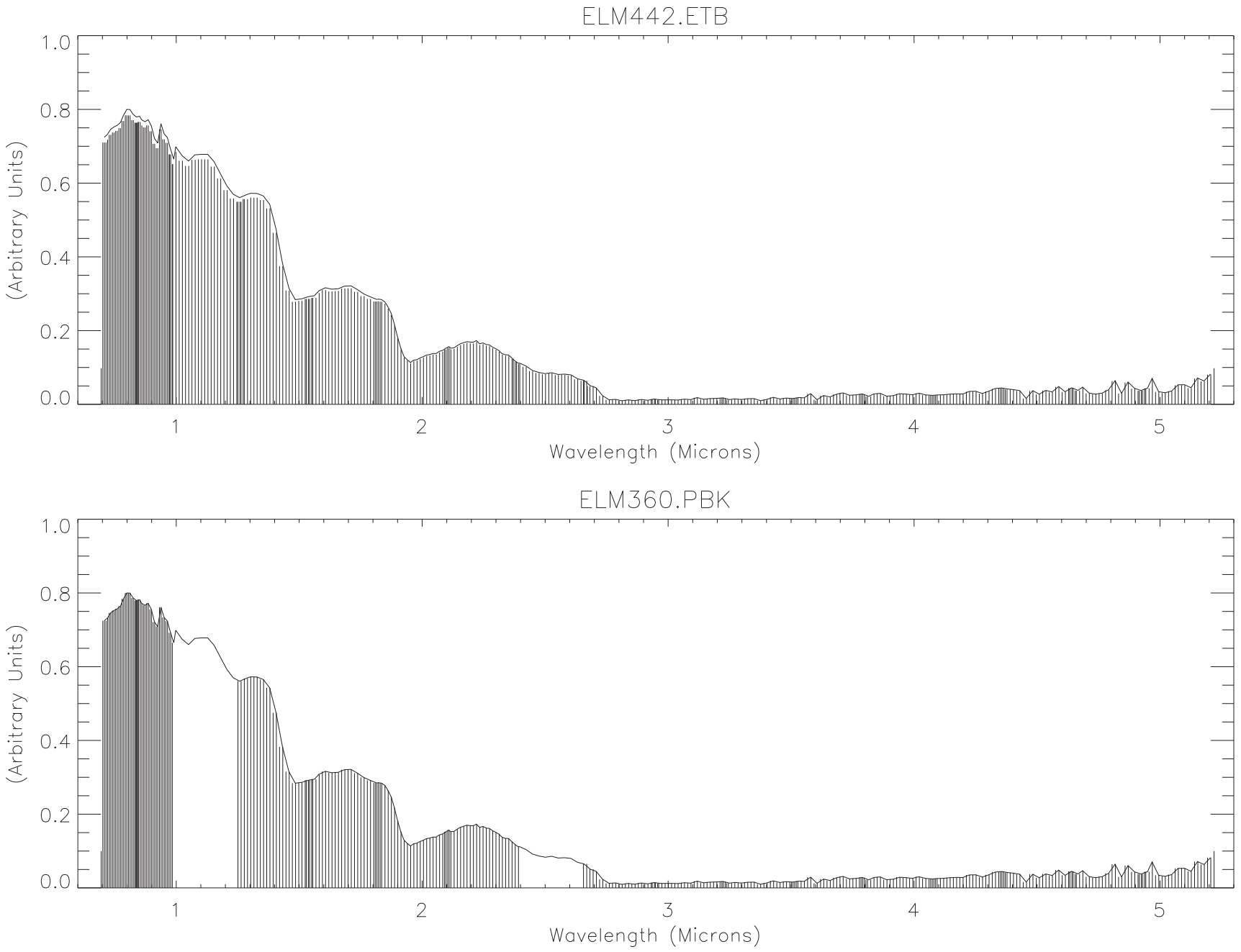
Introduction to Chapter 6

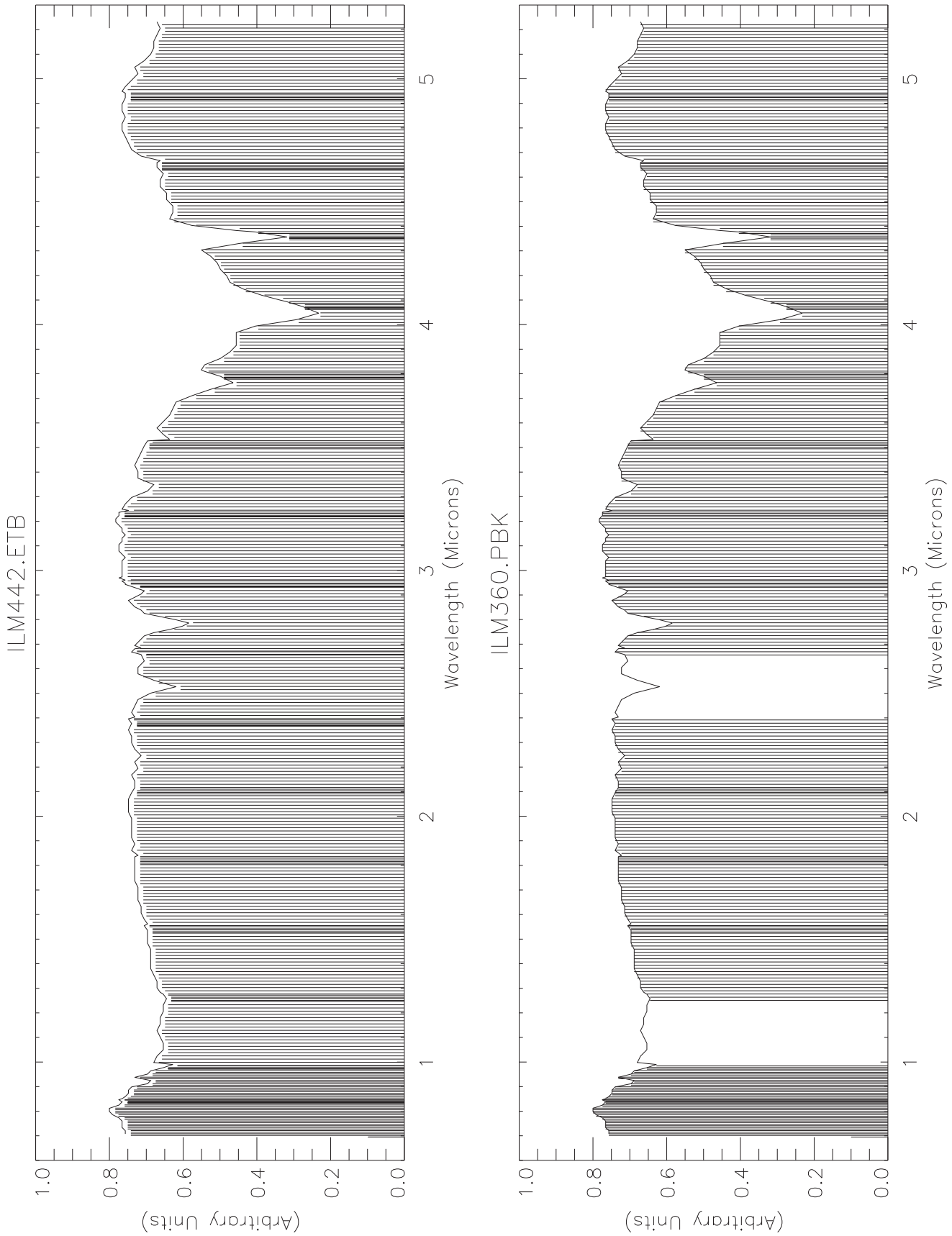
NIMS Edit Table Plots

This chapter contains plots of the NIMS Edit Tables used in E12. 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.


ELM442.ETB
ELM168.PBK
(Arbitrary Units)
Wavelength (Microns)
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5


ELM442.ETB
ELM228.PBK
(Arbitrary Units)
Wavelength (Microns)
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5


ELM442.ETB
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)
ELM360.PBK
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)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0.4
0.2
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1
2
3
4
5
Wavelength (Microns)
ILM360.PBK
(Arbitrary Units)
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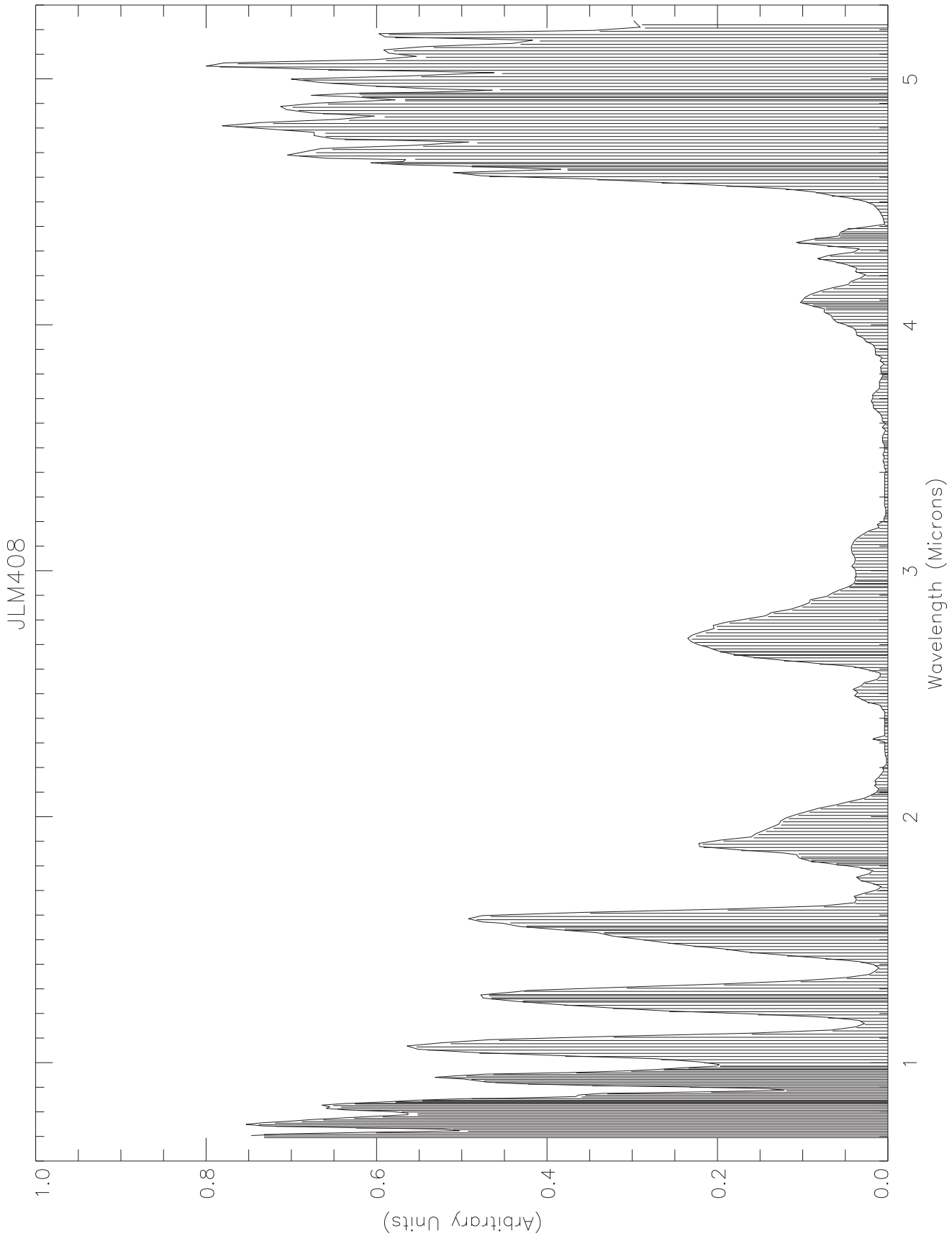
0.2
0.0
1
2
3
4
5
Wavelength (Microns)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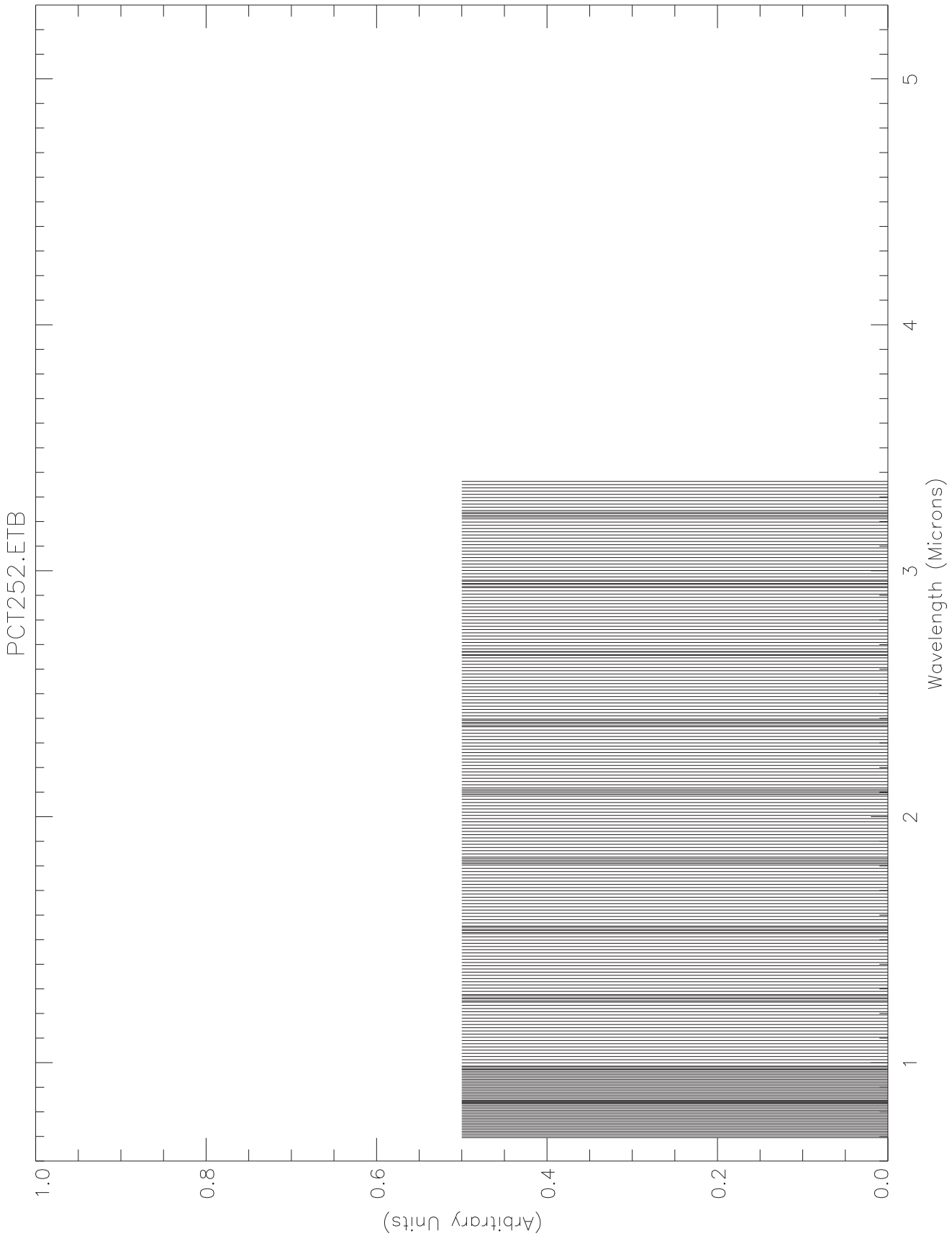
5
Wavelength (Microns)


PCT252.ETB
(Arbitrary Units)
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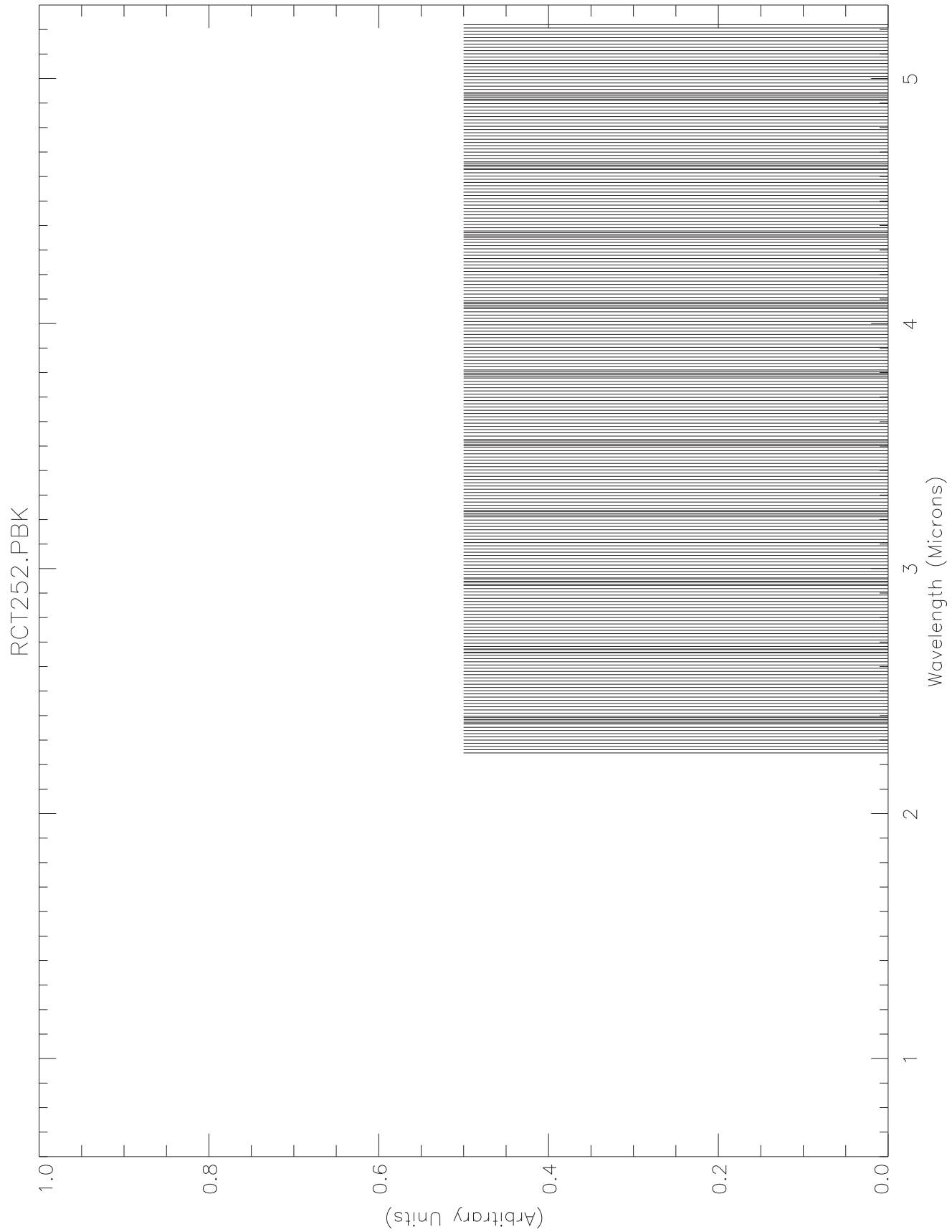
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


RCT252.PBK
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)

Chapter 7 - Data Return

Contents

Introduction to Chapter 7

This chapter is a report on the NIMS data return for the E12 orbit. Due to the low downlink data rates available for Galileo Jupiter Operations and other unforeseen and unpredictable events during the E12 Encounter and Cruise, not all NIMS data recorded on the tape recorder or selected in real-time were returned. The previous 6 chapters nominally describe the planning and intention of the NIMS observations for this orbit, except the obstab section in chapter 4 which was updated to give the latest parameters for the data that were actually returned.

There were nine autonomous reloads of the NIMS RAM code from CDS during the E12 encounter, one just before each science observation. Only 1 observation (12ENDLINEA01) was lost due to a halt, and this was due to a miscommanded NIMS reload. 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 had a gyro anomaly (ISA 11036) during E12 in which the gryos gave incorrect attitude error estimates, causing the spacecraft to loose its celestial reference. New AACS flight software was loaded to compensate for the gyro problems.

The plots on the pages 3, 4 and 5 show the geometry of the NIMS E12 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 6 and 7 summarize the 'final' playback model for the 'returned' data.

The text on page 8 gives a 'recap' of the E12 playback events which affected which observations were returned.

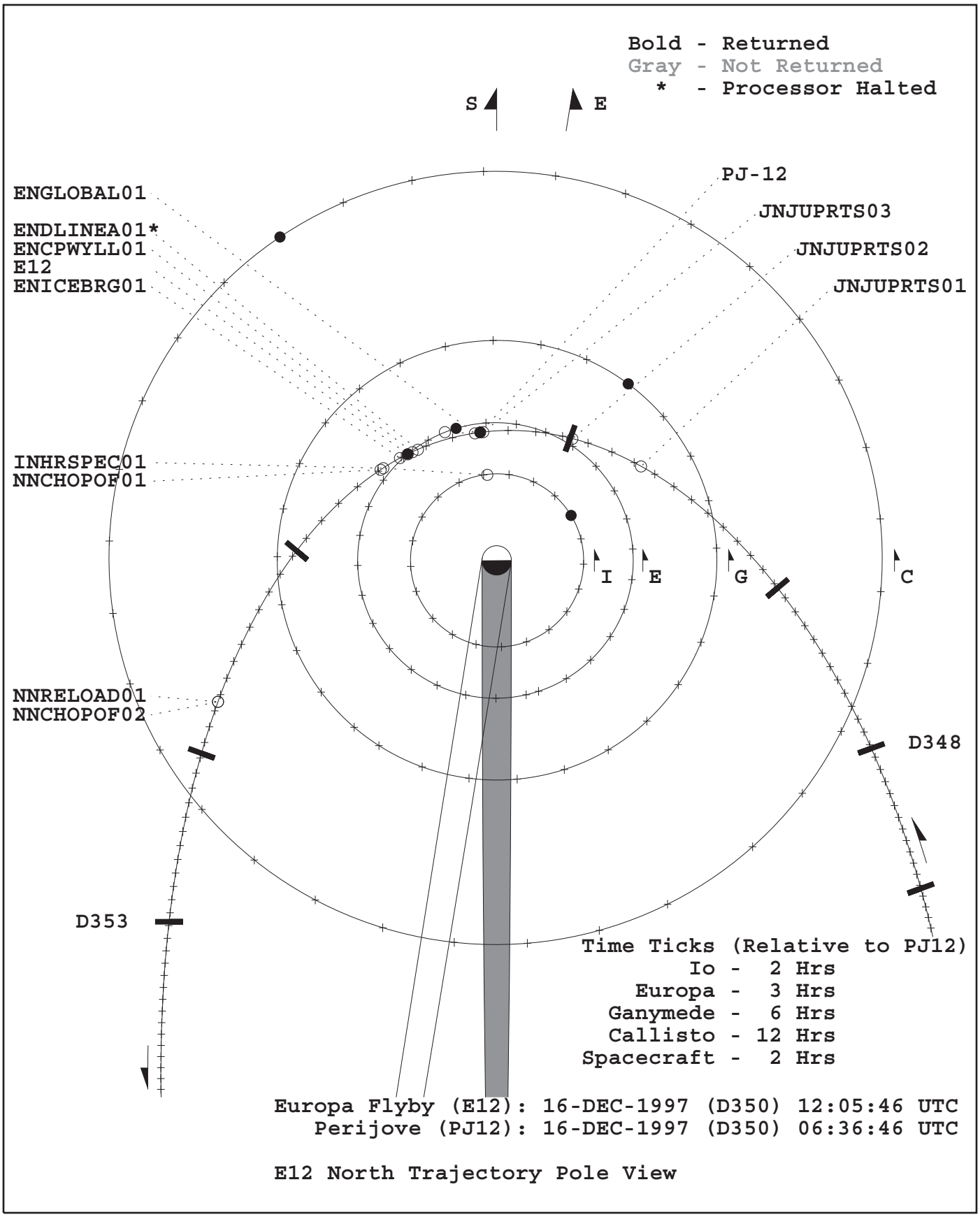
A Timeline of E12 playback events is on pages 8 through 13.

The text on pages 14, 15 and 16 describes the E12 NIMS and AACS Anomalies.

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

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

NIMS E12 OBSERVATIONS



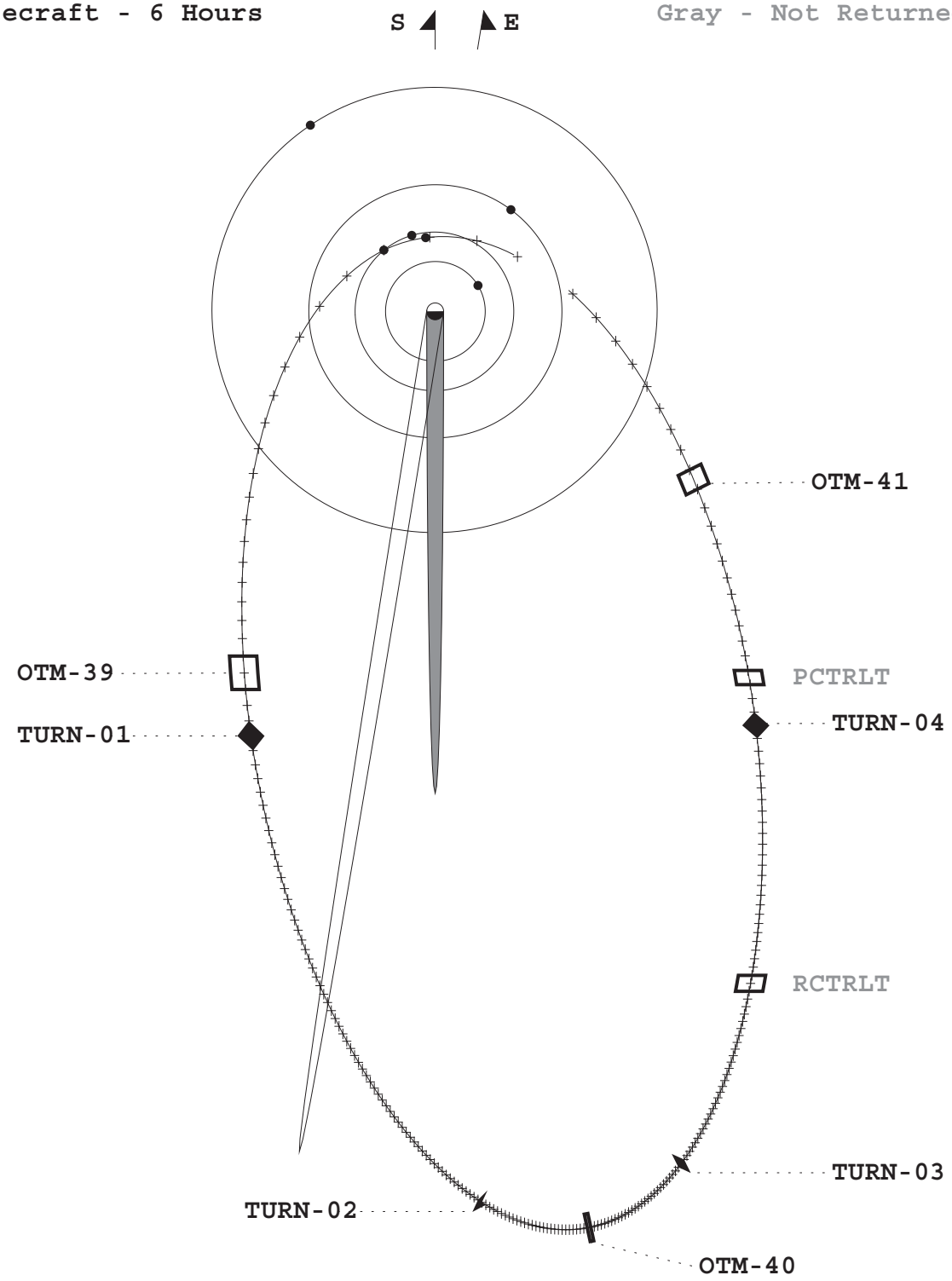
NIMS - FEL - 06/03/99

NIMS E12 CRUISE CALIBRATIONS

Europa Flyby (E12): 16-DEC-1997 (D350) 12:05:46 UTC
Perijove (PJ12): 16-DEC-1997 (D350) 06:36:46 UTC
Apojove (AJ12): 13-JAN-1998 (D013) 17:00:00 UTC

Time Ticks (Relative to E12)
Spacecraft - 6 Hours

Bold - Returned
Gray - Not Returned

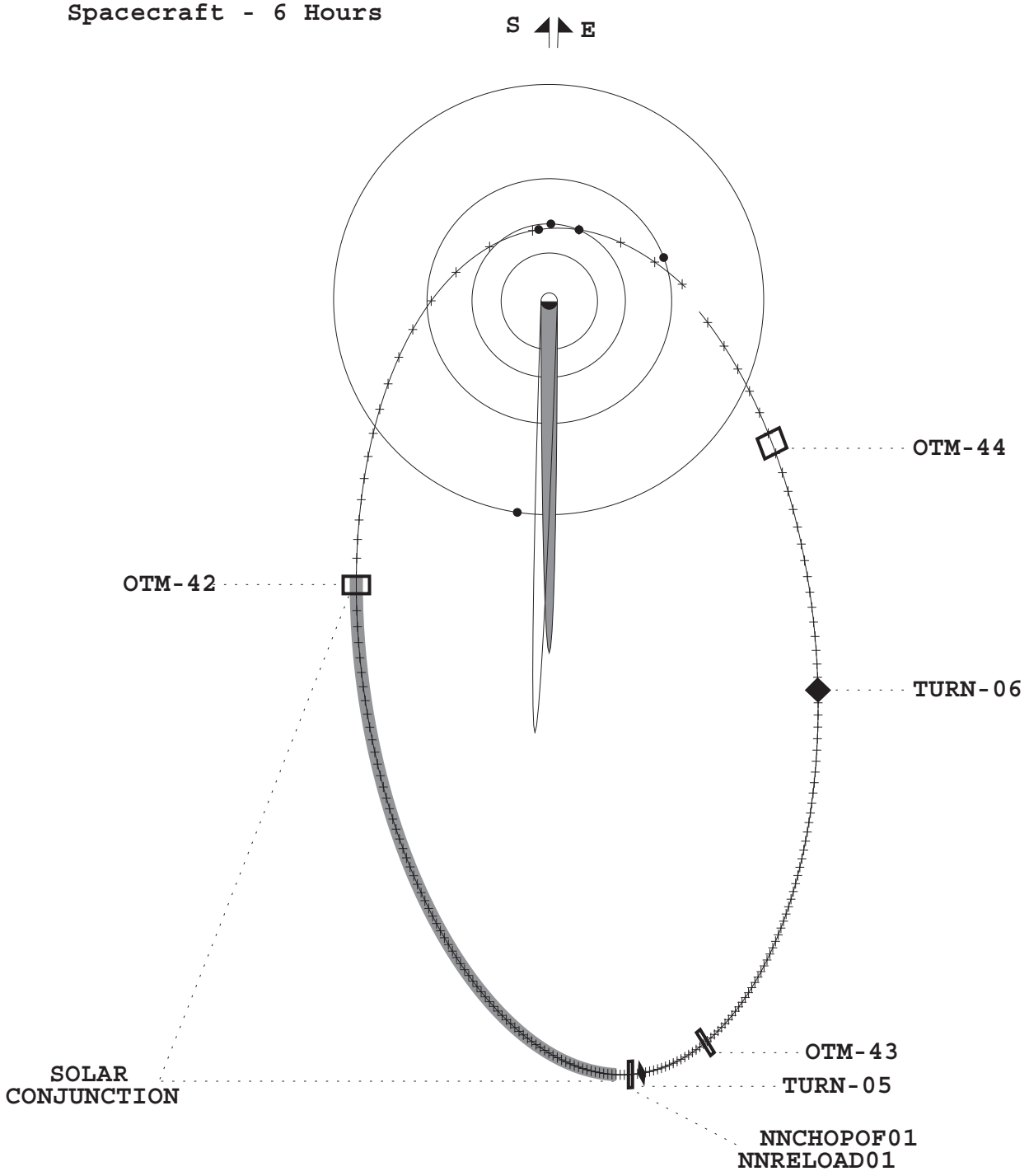


E12 North Trajectory Pole View, Perijove to Perijove

NIMS E13 CRUISE ACTIVITIES

Europa Flyby (E13): 10-FEB-1998 (D041) 17:57:48 UTC
Perijove (PJ13): 10-FEB-1998 (D041) 23:10:21 UTC
Apojove (AJ13): 05-MAR-1998 (D064) 17:00:00 UTC

Time Ticks (Relative to PJ-13)
Spacecraft - 6 Hours



E13 North Trajectory Pole View, Perijove to Perijove

NIMS E12 DATA RETURN

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
12JNJUPRTS01*	Jupiter Realtime Observation	E12JLM442/MB	R/T	LM	2	0	4	R/T	DA
12JNJUPRTS02*	Jupiter Realtime Observation	E12JLM442/MB	R/T	LM	2	0	4	R/T	DB
12JNJUPRTS03*	Jupiter Realtime Observation	E12JLM442/MB	R/T	LM	2	0	4	R/T	DC
12ENGLOBAL01-	Europa Global	E12ELM442	E12ELM228C	LM	2	0	4	MPW	DD
12ENCPWYLL01-	Europa Surf. Comp. and Mineos Linea	E12ELM442	E12ELM360	LM	2	0	4	MPW	DF
12ENICEBRG01-	Europa Surface Composition	E12ELM442	E12ELM360	LM	2	0	4	MPW	DG
12INHRSPEC01-	Io Monitoring at High Spectral Resolution	E12ILM442	E12ILM360	LM	2	0	4	MPW	DH
12ENGLBAL01B-	Europa Global	E12ELM442	E12B_ELM168	LM	2	0	4	MPW	DD
12ENGLBAL01C-	Europa Global	E12ELM442	E12B_ELM168	LM	2	0	4	MPW	DD
12ENCPWYLL01-	Europa Surf. Comp. and Mineos Linea	E12ELM442	E12ELM360	LM	2	0	4	MPW	DF
12ENICEBRG01-	Europa Surface Composition	E12ELM442	E12ELM360	LM	2	0	4	MPW	DG
12INHRSPEC01-	Io Monitoring at High Spectral Resolution	E12ILM442	E12ILM360	LM	2	0	4	MPW	DH

NIMS E12 DATA RETURN

ACTIVITY ID	Mode	Record Format	Wave-lengths ret.	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% ohead)	Data Reduct Factor (sBOT/BTG)	Pass
12JNJUPRTS01	LM	R/T	360										
12JNJUPRTS02	LM	R/T	360										
12JNJUPRTS03	LM	R/T											
12ENGLOBAL01	LM	MPW	228	2030.7	243	2.80	23.39	8.667	0	1.38	0.96	2.91	1
12ENCPWYLL01	LM	MPW	360	442	122	1.41	5.09	8.667	0	1.34	0.79	1.79	1
12ENICEBRG01	LM	MPW	360	667.3	122	1.41	7.69	8.667	0	1.36	0.78	1.81	1
12INHRSPEC01	LM	MPW	360	509	269	3.10	5.86	8.667	2	1.68	1.38	2.24	1
12ENGLOBAL01	LM	MPW	168	2030.7	303	3.49	23.39	8.667	0	1.46	0.84	4.17	2
12ENGLOBAL01	LM	MPW	168	2030.7	303	3.49	23.39	8.667	0	1.49	0.82	4.26	2
12ENCPWYLL01	LM	MPW	360	442	333	3.84	5.09	8.667	0	1.35	2.13	1.80	2
12ENICEBRG01	LM	MPW	360	667.3	624	7.19	7.69	8.667	0	1.36	3.96	1.81	2
12INHRSPEC01	LM	MPW	360	509	316	3.64	5.86	8.667	2	1.61	1.70	2.15	2
							70.32				13.432	Total	
Allocation											12.797	Allocation	
											0.635	Over/Under	

RECAP OF E12 PLAYBACK EVENTS

The first orbit of the Galileo Europa Mission (GEM) included both a new type of spacecraft hardware anomaly, and one instance of a radiation-induced NIMS software crash. The spacecraft hardware problem involved one of the gyros that are components of the AACS. Galileo's two gyros are mounted on the scan platform. One gyro began reporting ~ 10% greater motion than was actually occurring during positive sign clock and cone slews. The software when given this erroneous information attempted to correct the pointing by making adjustment slews, some of which occurred while remote sensing data was being obtained. There were two anomalous occurrences, one during the encounter, and another during a trajectory correction manuever a few days later.

Due to downlink bits constraints only 5 NIMS recorded observations were planned (with 3 realtime Jupiter observations). Due to a NIMS software crash, 12ENDLINEA01 was not successfully recorded. However, the two accompanying Europa high-resolution observations were returned at full spectral resolution of 360 wavelengths, as was 12INHRSPEC01. We also received a significant portion of 12ENGLOBAL01.

The E12 playback period was eventful, with a number of adaptations required to deal with changing conditions. The following timeline details the most significant events of this period. Most of the text is taken directly from reports generated at the time.

E12 Playback Events Timeline (11-04-97 to 04-02-98)

11-04-97: NIMS E12 downlink allocation is 14.333 Mbits.

11-24-97: E12 will begin on 15 December. E12 playback will encompass solar conjunction, and so will last until sometime in March.

The playback table delivered today has realistic compression estimates and correct wavelength table selections for all observations. The situation is not good. Since NIMS received a measly 14% of total downlink in the GEM OPG negotiations, we have only 16.82 Mb to cover all our observations, whereas if we want to bring down our 5 recorded observations with all wavelengths and full spatial coverage we need about 28 Mb. If we bring back the Europa GLOBAL01 with 228 wavelengths, we still need about 5 Mb to get the high resolution Europa observations down.

12-04-97: The E12 playback plan was modified to fit within the current allocation of downlink bits as follows:

12ENGLOBAL01: Spatial coverage cut 50%. 40% of the observation area nearest the limb will be lost; the other 10% area cut is at or beyond the terminator, on the body. The remainder is a contiguous, complete, north to south strip, spanning longitudes 255-290 at the equator. 228 wavelengths will be returned.

12ENDLINEA01: To be returned with 360 wavelengths and with full recorded spatial area coverage.

12ENCPWYLL01: To be returned with 360 wavelengths and with full recorded spatial area coverage.

12ENICEBRG01: 7 of 11 Rims recorded to be played back with 360 wavelengths centered near longitude 180).

12INHRSPEC01: Unchanged, full observation returned at 360 wavelengths.

12-15-97: E12 encounter begins at 10:45 on Monday 15 December.

12-16-97: First AACS-GYRO anomaly occurs at 00:21 GMT.
Perijove occurs at 06:36.
NIMS software reload error causes loss of 12ENDLINEA01.
This is not known until early January.
A software reload at 11:31 enables recording of subsequent observations.
Europa close approach occurs at 12:05.

12-19-97: Due to the AACS anomaly and the delay in initiating playback, Galileo lost 4.958 MB of capability. Worst case, that will be deducted by percentage from all teams before the first PBT update cycle.

12-22-97: There was an AACS anomaly last week during E12 encounter near perijove. Apparently the star scanner was affected by unusually high levels of radiation noise, causing a 'star dropout problem'. This caused CDS to command a total of 7 "mis-slews" in addition to one case in which the scan platform was safed (to 153 cone). The first of the mis-slews took place during the second Jupiter realtime observation. Although we have data from the third, which looks good, we do not know precisely where we were pointed at the time. The sequence continued to execute after these events and observations were recorded to tape as planned. However, all of our Europa observations were taken during periods when the mis-slews were occurring. The effects are unknown at present. Since playback was not started on schedule, 4.95 Mb of down-link was lost. This will result in a 14% cut to our allocation.
Nominal operations were restored early last Thursday morning. However, on Saturday, additional AACS "incidents" occurred. During the OTM the AACS initiated 2 attitude corrections, and then followed them up later with 4 more. The spacecraft was commanded out of inertial mode, stopping further corrections. As a result the spacecraft is pointed about 8 degrees away from the Earth-s/c direction. Work to understand this second anomaly and to get things back to normal is underway.
As one consequence we are sure to lose more of our playback allocation. Numbers as high as 40% have been mentioned.

E12 Playback Events Timeline (11-04-97 to 04-02-98)

12-23-97: The Galileo AACS system has locked on to a new set of stars. The spacecraft is presently pointed about 10 degrees off the Earth direction. Work to understand the anomaly and bring the orientation back to nominal continues. However, there is no estimated time for the re-orientation of the spacecraft as yet. New telemetry files have been generated with the current orientation modeled. Capability between now and 13 January is meager, about 2.5 Mb. Playback will be resumed tomorrow at about 3 pm. The first NIMS observation, 12ENGLOBAL01, will not be reached before 13 January. It is possible that activities to correct the misorientation of the spacecraft will begin before that time, but at present we cannot assume so. As a result the SPOT team estimates that we will be losing about 40% of our downlink allocation. This presently stands at 16.6 Mb; it will drop to about 10 Mb. The current allocation is distributed as follows:

Observation	Wavelengths	Spatial Cov	Megabits
12ENGLOBAL01	228	50%	4.42
12ENDLINEA01	360	100%	2.84
12ENCPWYLL01	360	100%	2.95
12ENICEBRG01	360	65%	2.74
12INHRSPEC01	360	100%	3.56

The 40% reduction overall can be accomplished through cutting wavelengths or spatial coverage, or by deleting observations entirely.

12-29-97: No progress on the AACS anomaly has been reported so far. We are proceeding as if the spacecraft will continue to be mis-oriented until the next OTM on 14 January. The estimated total loss of downlink capability is 32.9 Mb, slightly less than expected. The NIMS allocation dropped to 11.76 Mb from 16.6. Early data returned by SSI undercompressed by a factor of 2, and in addition the SSI team decided that their global color Europa observation was not of the highest priority. This one has been coming down for a few days now. They requested that playback be terminated so that they could move their bits to other observations. This decision benefits us because we can now modify playback commands for the first observation in the table, 12ENGLOBAL01. We were formerly locked in to bringing down 2.2 Mb of this in pass 1. Although the cuts needed to bring us in at our allocation were serious they are not disastrous. For the Io HRSPEC01 we reduced wavelength coverage from 360 to 228 colors. The Europa global spatial coverage was further reduced by dropping the top and bottom scans from this 4-scan observation. We are now returning only 25% of the recorded area, but what we will get covers about 30 degrees of longitude (260-290) and +/- 30 degrees of latitude about the equator. We also needed to cut 1.5 Rims (of 3.5) out of our pass 1 playback of both 12ENCPWYLL01 and 12ENICEBRG01. We will still see enough of these in pass 1 to prioritize our bits spending in pass 2. 12ENDLINEA01 was not cut.

01-07-98: Playback allocations were reduced again this week in anticipation that the misalignment of the spacecraft (off-Earth pointing) will not be corrected immediately. The cost to NIMS was about 1 Mb, bringing us down to a total of 10.887. The first part of 12ENGLOBAL01 came down with a slightly better than expected compression ratio of 1.38 (predict was 1.2). This gives us about .2 Mb more to work with. No changes to the Europa observations were incorporated in this update.
It was remembered/recognized that the Io 12INHRSPEC01 was comprised of two overlapping scans across the body. It was originally planned to record these with different gain states, but this was not implemented in the record sequence, leaving us with redundant coverage. We will now return the first scan at 228 wavelengths as decided in Tuesday's meeting. We have about .44 Mb of "unused" capability which is presently sitting on the second scan of 12INHRSPEC01 (pass 2). This may be used later to increase spatial coverage of Europa, or to bring down more wavelengths for Io, or to get redundant spatial coverage for Io (that will help identify noise). It is possible, however, that we will face further cuts in our allocation in this orbit that will consume these bits before we can use them. SSI has deselected considerable data from their plan, and as a result we have slewed most of the way to our next observation, 12ENDLINEA01. This is likely to come down later this week. The pass 1 portion is about 50% of the spatial area, at 360 wavelengths.

01-12-98: A new sequence based on the new attitude is expected to be on-board the spacecraft by ~4 pm on Thursday.

01-17-98: Data received from playback of 12ENDLINEA01 indicates a software crash. A minimal amount of data is received, leaving much of the allocation for this observation available for use on other observations.

01-21-98: Investigation of the "AACS anomaly" now centers on one of the gyros. It appears that scan platform slews of 180 degrees may generate pointing errors of several degrees. AACS may be capable of correcting the pointing over a period of 200 seconds following the scan platform motion. No conclusions or decisions have been announced so far.
E12 playback continues. The next NIMS observations, 12ENICEBRG01 and 12INHRSPEC01, should be on the ground or in process next Thursday. We will see 2 Rims of the former, with 360 wavelengths, and all* of the latter, likewise with 360 wavelengths. There is no pass 2 playback of HRSPEC in the current plan. However, if there are gaps in the pass 1 data, we could fill them in pass 2. We will return all of the remaining 12ENCPWYLL01 data in pass 2, and nearly all of 12ENICEBRG01, with 360 wavelengths. Since the pass 1 portion of 12ENGLOBAL01 was very noisy beyond 3 microns, we decided to play back a larger spatial area with fewer wavelengths in pass 2. The new wavelength table selects all wavelengths for detectors 1, 2, 4, 5, 6, 7, and 9 (168 bands). Of the four

8-Rim scans across the body, we will receive 5 Rims each from the 2 central scans, on the brightest part of the body, extending to the limb. Since the wavelength selection differs from pass 1, and since there is a small overlap in the spatial coverage, this portion is renamed 12ENGLBAL01B.

01-28-98: There has been no NIMS data playback since the last update, but we received about 0.3 Mb of new allocation due to release of 2.3 Mb from the playback slewing uncertainty bucket. After several discussions we decided to use this to bring down 2 additional Rims of data from 12ENGLOBAL01. This newest addition is from the 4th scan where we have coverage of high southern latitudes (which have not been sampled previously). The range of longitudes seen is from about 240 to about 290 degrees W. Our first data from 12ENICEBRG01 will come down overnight tomorrow and Friday morning; 12INHRSPEC should be down by noon on Saturday. Playback of 12ENGLOBAL01 (with modifications as noted above) will also begin on Saturday; this should continue until the following Thursday (5 February). Solar conjunction "begins" on Friday the 13th and "ends" on 4 March. Thus we will not see any more NIMS data until then.

01-30-98: Sometime yesterday, following Wednesday's delivery of the playback table, it was discovered that the software used to predict the playback schedule showed significantly less downlink remaining than was previously thought. Initially they drew back the .3 Mb we had gained (which we were using to get south polar coverage of Europa). Subsequently they found that the problem was significantly worse, and reduced our allocation by an additional 0.8 Mb.
The 8th segment of the PBT containing 12ENGLOBAL01 commands went up this morning, without the south polar coverage select/deselect pair. This observation will start coming down over the weekend, and drag on for most of a week.
Two observations remain in our plan that may be modified; these are 12ENCPWYLL01 and 12ENICEBRG01. We will still return all of the former and are trimming the latter to come in at our allocation. Inspection of the largescale photomosaic shows interesting bright and dark areas in the western part and a diffuse dark region in the eastern part. This area is also covered in E14 (14ENSUCOMP02). Thus this time we are choosing the westernmost area and trimming that to the east. In another development it appears that we may be able to reinstate the two realtime calibrations in the period after solar conjunction. If so then we will need to find a few more (.2 Mb) bits. These will come either from small additional cuts to the 12ENICEBRG01, or from release of office margin later on.

02-13-98: Start of Solar conjunction, no data returned.
03-02-98: End of Solar conjunction

E12 Playback Events Timeline (11-04-97 to 04-02-98)

03-02-98 E12 playback will resume on Wednesday of this week, 3/4, early (4 AM local time). We are currently paused at the very end of Segment 9, and should be very close to finishing 12ESDKLNCL01 (SSI). Once we start playing back, we will be about 12 hours behind the schedule you recieved, titled E12PFH - Update (dated Feb. 23). The last observation was undercompressing when we entered conjunction, and the schedule could not represent this accurately. Some numbers of interest - we have recieved ~57 MB of data so far. We have lost ~ 2.4 MB. We have received about 1.4 MB of inefficiency so far. We have 22.5 MB of capability remaining post-conjunction.

03-09-98: A new playback table was delivered yesterday. It contains singles to play back data gaps in 12INHRSPEC01 and 12ENICEBRG01. These are the only differences from the playback table delivered previously. Also, playback of the remainder of 12ENCPWYLL01 starts today.

03-12-98: The project released all remaining margin this afternoon. 2.0 Mb was given to NIMS, 1.5 Mb to SSI. This is a better outcome than would have been predicted yesterday. We will return the balance of 12ENICERAF01 (about 3.5 Mb), all of the gap fills required for 12INHRSPEC01, and in addition we should receive a large portion of the second (redundant) scan over Io that was also recorded with 12INHRSPEC01.

03-17-98: A new E12 playback table was delivered today. It contains singles to play back the balance of 12ENICEBRG01 and most of the second (redundant) scan of 12INHRSPEC01. These are the only differences from the playback table that was delivered on March 9.

04-02-98: The E12 Playback was completed on Friday, March 27. We completed the return of data from the Europa ICEBRG observation at 360 wavelengths and from the Io HRSPEC observation including all of the second scan (except for the last ~13 minor frames) of HRSPEC.

04-02-98: E12 Playback recap:
We finished playback with 0.36 MB of capability unused. NIMS selected and received as much of their last observation (INHRSPEC) as they could, which returned data above and beyond their allocation. Since the only thing left on the tape without starting a third pass was the PPR Cooldown (which PPR did not need a second time) we got as much as we could get at the very end with only doing 2 passes through the tape. Our model predicted we would barely finish, but we did slightly better than that for one(or both) of two reasons - someone compressed better, or we didn't lose as much capability during the pause for OTM-44 as predicted, and got lucky.

Total PB data received: 75.63 MB
Total PB lost bits: 3.36 MB (radiated but not recieved)
Total Inefficient Fill received: 1.5 MB

NIMS Anomaly Report - E12 Sequence

The NIMS processor halted once during the E12 Encounter. Detectors 3 and 8 are still not functioning and are expected to be lost for the rest of the mission.

Also, the spacecraft suffered some AACS anomalies during E12

Processor Halts

Facts:

0. Between the start of the E12 Encounter and the single Halt NIMS returned 3 realtime observations and successfully reloaded NIMS from CDS 4 times. The NIMS SCLK engineering channels were continuously monitored for detecting a NIMS processor halt.

1. A NIMS processor halt was detected at SCLK 04262556 from the analysis of the NIMS SCLK engineering telemetry channels S-1931 and S-1932. This occurred about 2 hours and 40 minutes after E12 perijove. A fifth NIMS reload was planned before the next NIMS observation 1 hour and 50 minutes later, but an error in the timing of the reload caused NIMS to remain in a halted state and the NIMS observation 12ENDLINEA01 was lost. The subsequent NIMS observation (12ENCPWYLL01) had a reload that restarted the NIMS processor.

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
04261960	04261962.58	1997-349T23:14:20.339	1997-350T00:01:14.354
04262556	04262562.58	1997-350T09:21:00.317	1997-350T10:14:42.214
04262725	04262727.43	1997-350T12:07:40.311	1997-350T14:05:51.438

2. 1 NIMS observation was lost due to this Halt: 12ENDLINEA01.

Timing:

SCLK	Comments
04262556.00	NIMS HALTED
04262667.08	Start Reload 12NNDLINEA01 - BAD RELOAD
04262678.00	Start NIMS Observation 12ENDLINEA01 - HALTED
04262694.06	Start Reload 12NNCPWYLL01 - GOOD RELOAD
04262704.00	Start NIMS Observation 12ENCPWYLL01
04262725.00	Good SCLK reported.

E12 AACS Anomaly

Two AACS anomalies occurred during E12: one near E12 perijove and another during the execution of OTM-39 5 days after perijove. The first anomaly had little effect on NIMS data taking during E12. The second anomaly resulted in poor data return conditions. The response of the spacecraft flight team to these anomalies caused the NIMS E12 PCT and RCT calibrations to be cancelled. The E12 AACS anomalies are described in detail in ISA 11036.

Extract from ISA 11036 (Shadan Ardalan, 7 pages of text plus 4 plots)

Background:

The AACS Gyro Anomaly officially began on 97-350/00:21:00, about seven hours prior to perijove during the E12 encounter, the first encounter of GEM. The indications of the anomaly in E12 were two fault monitor (FM) trips resulting in swapping to the redundant Spin Bearing Assembly (SBA) and AACS Despun Electronics (DEUCE). Five days later, during the execution of Orbit Trim Maneuver-39 (OTM-39), another fault monitor tripped resulting in swapping again to the redundant SBA; also six autonomous vernier maneuvers were executed, which moved the spacecraft away from its nominal attitude

The term "officially" is used because two scan platform science instruments, SSI and NIMS, have reported anomalous pointing in the last three encounters of the prime Galileo mission: C9, C10 and E11. The C10 and E11 cases were reported by SSI about a week before the E12 anomaly, and the C9 case was reported by the NIMS team about six months after the E12 anomaly. We believe that the seeds of the gyro anomaly are in these three instances because all display a signature consistent with what we understand to be the effects of the gyro anomaly on scan platform pointing. However, the anomalous pointing during these encounters did not result in fault monitor trips.

The gyro anomaly manifests itself in the gyro output producing a higher than nominal signal when slewing the scan platform (SBA) in specific directions. When processed by the flight software, this gyro error results in a faulty attitude estimate. But with a valid star set (at least two stars), the inertial observer (INOB) software takes out a percentage of the attitude estimate error with each spacecraft revolution. Without a valid star set, the attitude estimate error can continue to accumulate.

Testing and analysis indicates that the problem with the gyro output seems to reside in the DG181 switch, which gives the signature as if the gyro scale factors have changed. Total radiation dosage throughout the Galileo mission is the primary theory for the failure mechanism of the DG181 switch. In May 1998 (E15), additional flight software was loaded on board the spacecraft to compensate for the asymmetric changes in the gyro scale factors before the flight software determines an attitude estimate. The software has performed nominally, however the gyro scale factors continue to change per perijove pass and need to be monitored indefinitely.

NIMS Anomaly Report - E12 Sequence

Summary:

The first AACS anomaly at perijove caused the scan platform to "safe itself" at 153 degrees cone. The gyros remained on and the spacecraft remained in inertial mode. The rest of the E12 encounter executed without any major problems.

The second anomaly at OTM-39 caused the spacecraft to lose its inertial reference. OTM-39 was performed with a 7Burn which required closing the star scanner shutter. Attitude information during OTM-39 was maintained with gyros only, which accumulated a false attitude estimate. After the maneuver, the star scanner shutter was opened, but the Sequential Star Identifier (SEQID) could not acquire the star set. Even though the spacecraft was physically at the same attitude as it was before the closure of the star scanner shutter, the error in the attitude estimate caused SEQID to search for the star set in a different part of the sky, resulting in its inability to locate the loaded stars and determine a proper attitude.

Due to the erroneous output of the gyros, the attitude estimate error at this time was about 7.7 degrees - greater than the 5.7 degrees 'background deadband' above which the spacecraft performs autonomous atttitude corrections. Up until this point, the spacecraft's physical orientation had not changed despite the telemetry indications. After this time six autonomous and anomalous pointing corrections were executed. After the sixth pointing correction, the attitude error estimate had reached 20.5 degrees. Shortly after the sixth autonomous pointing correction, the background sequence commanded the spacecraft to cruise mode and one minute later the gyros were turned off. Throughout this period, celestial reference was never achieved, making the gyros the only source for the spacecraft's attitude. Now, with the spacecraft in cruise mode, SEQID is the only data source used to calculate an attitude, but SEQID was still unable to identify the star set. Therefore, the attitude estimate was frozen at the last position as determined based on the suspicious gyro output.

A few days after OTM-39, the AACS SSSRE buffers were read out. They contained the intensities of star pulses and the times the pulses crossed the two slits of the star scanner. From this data, the spacecraft's attitude was calculated on the ground. Real-time commands were then sent to load the actual attitude into the software and a new star set for SEQID to identify. The convergence of SEQID confirmed that the AACS team had successfully determined the spacecraft's attitude, which was 5.7 degrees away from where it started via the six autonomous vernier maneuvers.

Direct effects on NIMS:

In response to the E12 AACS anomaly, the project deleted all scan platform activities from the E12 cruise period. NIMS had planned to perform both PCT and RCT calibrations during E12 cruise. After the initial crisis was over, the sequence team decided that they had too much work on their hands to include the PCT and RCT calibrations into the new E12 cruise load.

NIMS Archived EDRs and CUBEs

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

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

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

Data Format

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

Data Types

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

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

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

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

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

Data Labels

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

Data Access

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

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

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

Understanding the NIMS Mask

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

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

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

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

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

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

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