NIMS GUIDE TO THE C21 ORBIT

Original: June 1999

Revised: May 2000

C21 Encounter starts 06/29/99, **C21 Playback starts 07/03/99**

VERSION DATE: 000501

Foreword to the Revised Edition

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

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

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

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

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

Acknowledgements

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

Foreword

This document serves as a guide to the C21 Orbit for the NIMS Team. The aim of this guide is to provide detailed information on the various NIMS C21 observations and calibrations. Also included in this document is background information on the C21 orbit. This guide was produced before the start of the C21 orbit. After analysis of the NIMS C21 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 C21 orbit. Chapter 2 gives an overview of the C21 orbit and summarizes the NIMS science objectives for the C21 orbit using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry for the C21 orbit. Chapter 4 summarizes the NIMS C21 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 C21 orbit.

For more information on the C21 orbit, please refer to the Galileo Orbit Planning guide and the Galileo Orbit Activity Plan for the C21 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

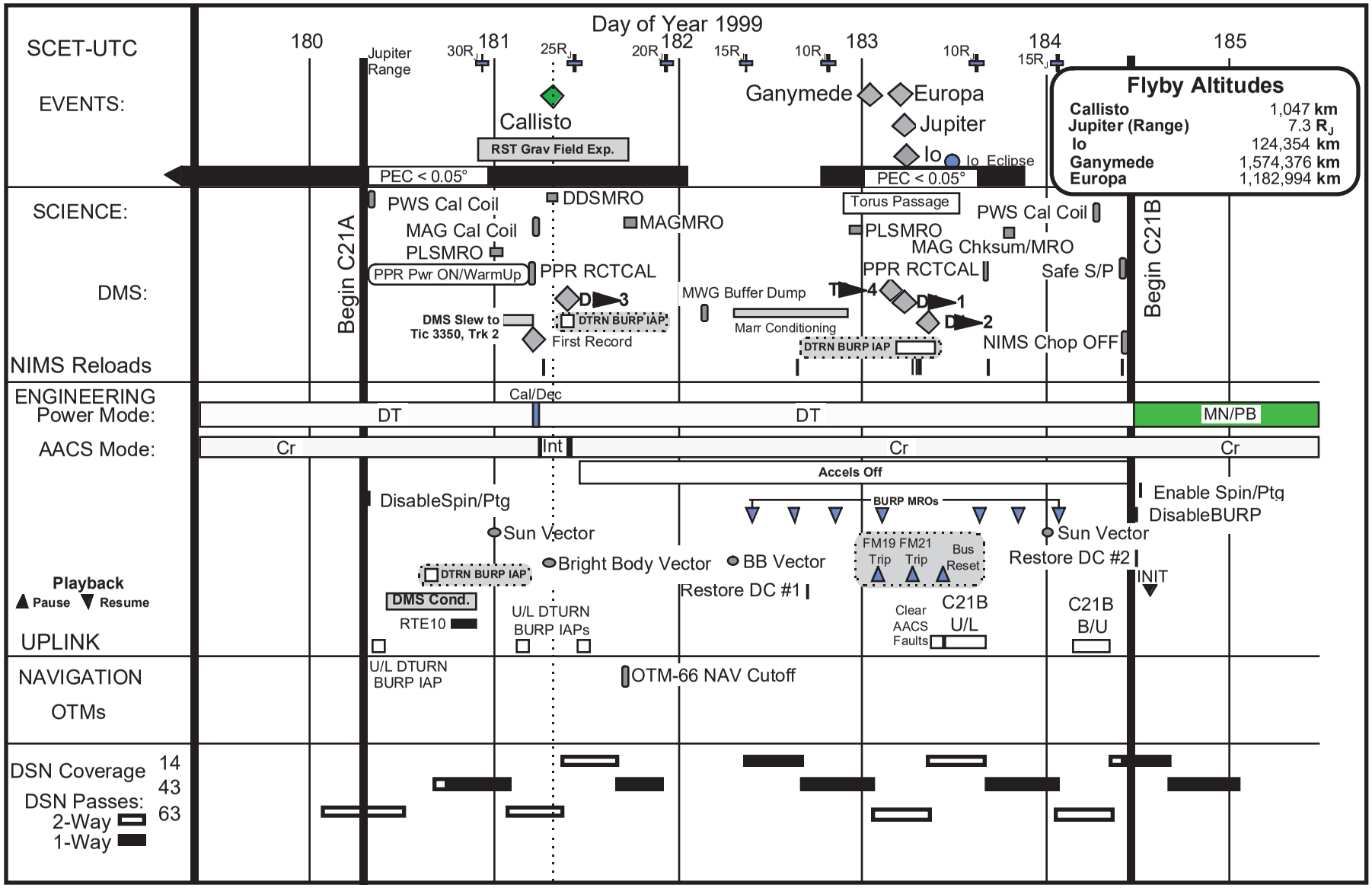
This C21 orbit is the twenty-first of twenty-five orbits in Galileo's Tour of the Jovian system and the tenth orbit in the Galileo Europa Mission (GEM). C21 continues the perijove reduction part of the GEM. This orbit has a targetted satellite flyby of Callisto. NIMS will also make observations of Jupiter and Io in this orbit.

There are 8 autonomous reloads of the NIMS RAM code from CDS planned during the C21A 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.

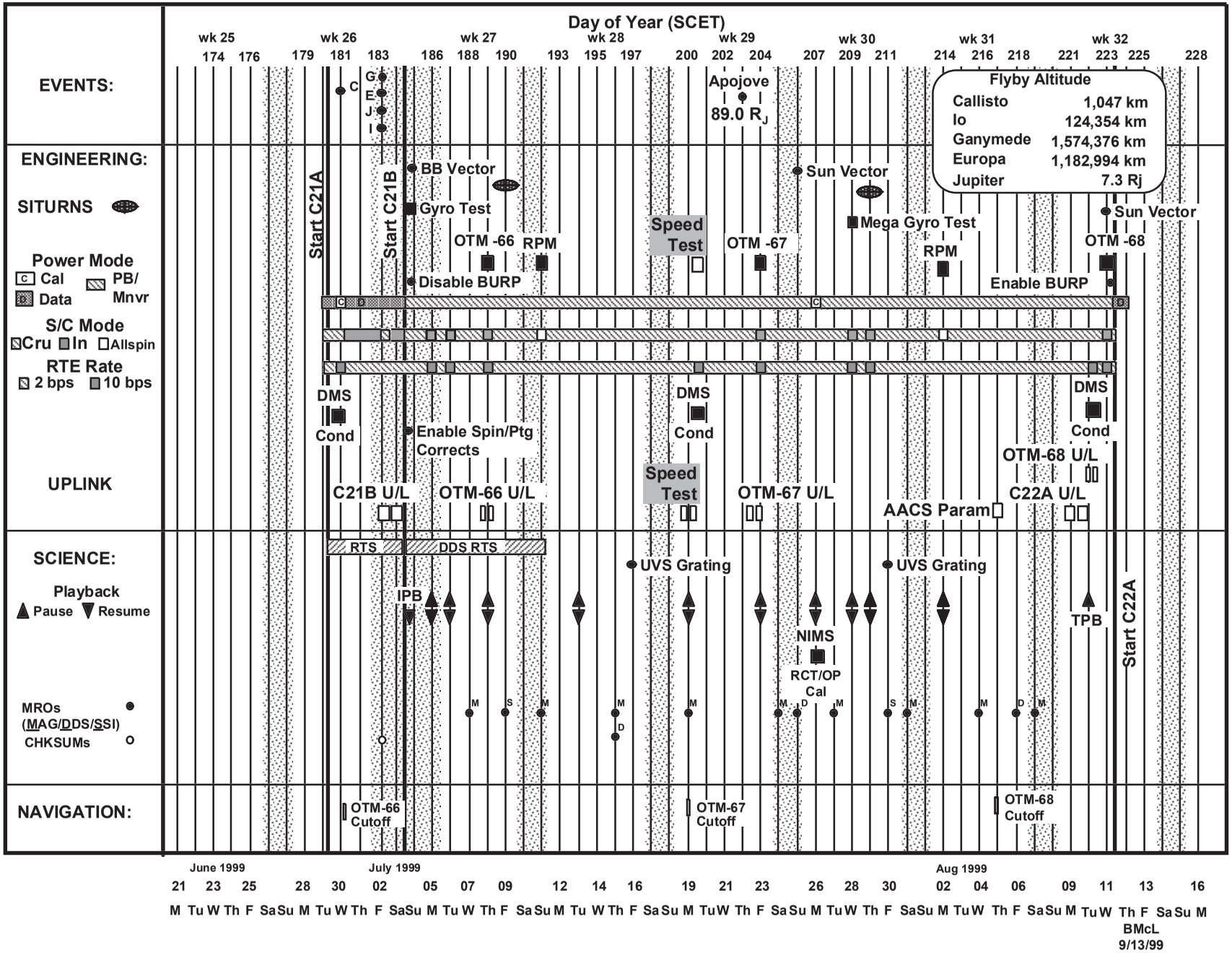
To protect the highest resolution Io observation to date, four autonomous reloads were fitted into the Io mosaic, one before the start of the observation and one between each reposition slew in the mosaic. This was done to avert the loss of the entire mosaic in the high radiation environment close to Jupiter.

The C21 orbit is divided into 2 sequence loads: one Encounter Load (C21A) and one Orbital Cruise Load (C21B). The C21A load begins on D180 (06/29/99) and ends on D184 (07/03/99). This load contains the flybys of Jupiter and Callisto. The Cruise Load C21B runs from D184 to D223. Playback of the recorded data takes place during the Cruise phase, C21B. A high-level overview timeline of the C21 orbit can be found on the following two pages.

C21A Sequence Overview



C-21 Overview



Introduction

The following table lists the major events during C21, including NIMS Real Time observations, in UTC.

06/29/99	99-180/07:00:00	C21 Encounter Start
06/30/99	99-181/06:42:34	NIMS RAM Reload 01
06/30/99	99-181/07:47:01	C21 Callisto Closest Approach
07/01/99	99-182/16:28:50	NIMS RAM Reload 02
07/01/99	99-182/16:36:11	NIMS R/T Jupiter 01
07/02/99	99-183/05:03:38	PJ-21 Jupiter Closest Approach
07/02/99	99-183/05:07:10	I21 Io Closest Approach
07/02/99	99-183/06:31:05	NIMS RAM Reload 03
07/02/99	99-183/06:56:22	NIMS RAM Reload 04
07/02/99	99-183/07:17:36	NIMS RAM Reload 05
07/02/99	99-183/07:39:51	NIMS RAM Reload 06
07/02/99	99-183/16:23:36	NIMS RAM Reload 07
07/02/99	99-183/16:31:57	NIMS R/T Jupiter 02
07/03/99	99-184/10:42:41	NIMS RAM Reload 08
07/03/99	99-184/11:23:03	Start C21 Playback
07/26/99	99-207/09:03:47	NIMS R/T RCT CAL
08/10/99	99-222/10:26:43	End C21 Playback

Chapter 2 - Orbit Overview

Contents

Introduction to Chapter 2

This chapter gives an overview of the NIMS observations in the C21 Orbit.

The text on page 3 summarizes the NIMS science objectives for C21. The NIMS calibrations are discussed on page 3. Early data return and C21 playback are also discussed on page 3.

The table on page 4 is a time-ordered listing of the NIMS Oapels for C21.

The plot on page 5 shows the geometry of the NIMS C21 observations using a north trajectory pole view projection. The plot on page 6 shows the geometry of the NIMS C21 calibrations.

The spreadsheet on page 7 summarizes the various inputs for the NIMS C21 Observations. The spreadsheet on pages 8 and 9 summarizes the resource usage for the NIMS C21 observations.

The table on page 10 lists various NIMS C21 observing parameters: target latitude/longitude, range, cone angle, incidence angle light), emission angle view) and phase angle.

The timeline on page 11 shows the placement of the C21 observations for all intruments during the C21 Encounter Period.

The tapemap on page 12 shows the placement of the C21 observations on the spacecraft's tape recorder.

The timeline on pages 13 through 17 shows the preliminary C21 playback schedule.

The NIMS C21 mosaic designs are summarized on page 18 in time-order.

NIMS C21 SCIENCE OVERVIEW

Jupiter Science

There are two realtime Jupiter observations in C21. The first realtime observation looks at the North Equatorial Belt Region. The second looks at the same longitude at 36 degrees North latitude, the equator and 36 degrees South latitiude.

Io Science

INHRSPEC01 maps the daylit disk in four swaths. This observation is the highest resolution global mosaic of Io during Galileo and GEM to date. The objective is to obtain a high spatial and spectral map of one hemisphere of Io.

Europa Science

Europa was not observed in C21.

Ganymede Science

Ganymede was not observed in C21.

Callisto Science

There are five observations of Callisto in C21. CNDRKMAT01 is a ride-along with SSI to investigate dark terrain. CNFEATRE01, 02, 03 and 04 are high resolution spectral and spatial maps of Callisto's surface to further the on-going compositional studies started in Galileo's main mission.

Calibration

There are two NIMS calibration observations planned for C21: one RCT cal and one OPCAL.

Early Data Return

There are four realtime observations in C21: Two 408 wavelength Jupiter observations (JUPRTS), one RCT calibration and one OPCAL.

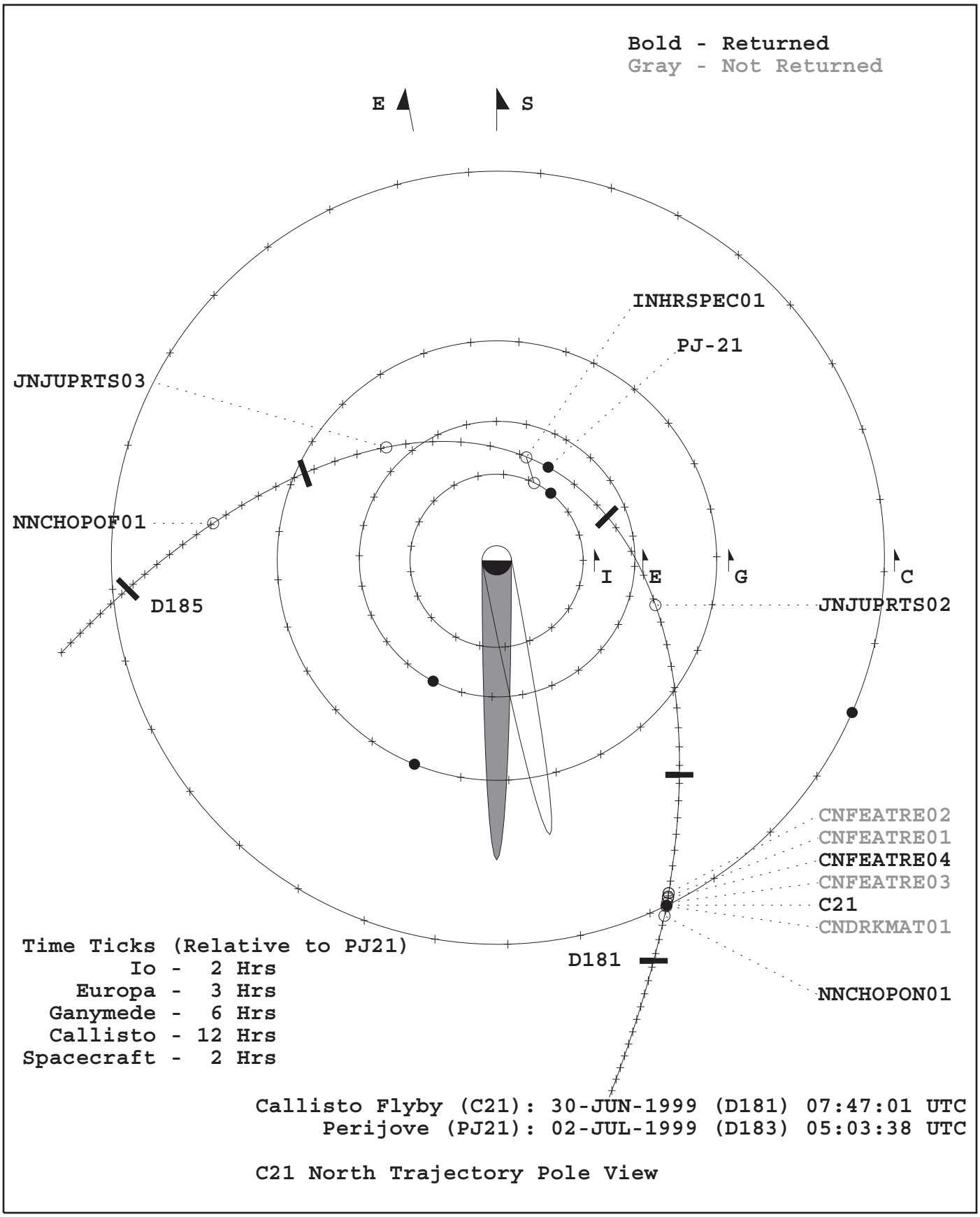
C21 Playback

C21 playback is split into two passes through the tape.

C21 Time-Ordered Listing

OAPEL	Start (UTC)	End (UTC)	Duration
21NNCHOPON01-	99-181/06:21:20	99-181/06:31:27	000/00:10:06
21NNRELOAD01-	99-181/06:42:33	99-181/06:45:36	000/00:03:03
21CNDRKMAT01+	99-181/07:39:11	99-181/07:44:15	000/00:05:03
21CNFEATRE03-	99-181/08:07:30	99-181/08:32:47	000/00:25:16
21CNFEATRE04-	99-181/08:44:55	99-181/08:55:01	000/00:10:06
21CNFEATRE01-	99-181/08:56:15	99-181/09:24:47	000/00:28:32
21CNFEATRE02-	99-181/09:25:21	99-181/09:48:37	000/00:23:15
21NNRELOAD02-	99-182/16:28:50	99-182/16:31:52	000/00:03:02
21JNJUPRTS02*	99-182/16:31:52	99-182/16:47:02	000/00:15:10
21NNRELOAD04-	99-183/06:30:05	99-183/06:34:07	000/00:04:02
21INHRSPEC01-	99-183/06:35:08	99-183/08:00:04	000/01:24:56
21NNRELOAD05-	99-183/16:32:42	99-183/16:36:45	000/00:04:02
21JNJUPRTS03*	99-183/16:36:45	99-183/16:51:55	000/00:15:10
21NNRELOAD06-	99-184/10:41:40	99-184/10:45:43	000/00:04:02
21NNCHOPOF01-	99-184/10:45:43	99-184/10:55:49	000/00:10:06
21NNRCTRLT01-	99-206/20:30:00	99-207/09:51:48	000/13:21:48

NIMS C21 OBSERVATIONS

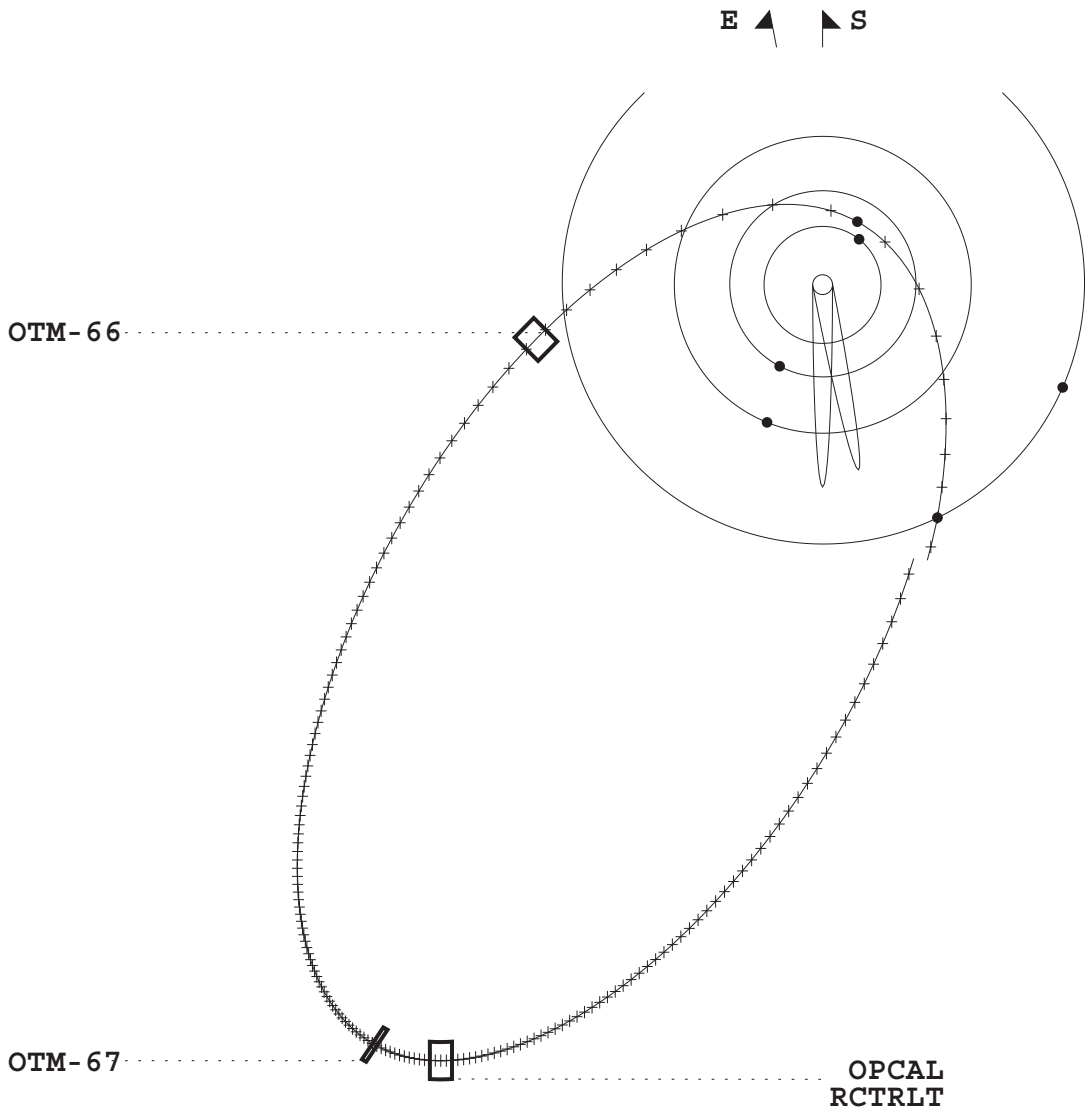


NIMS - FEL - 05/01/00

NIMS C21 CRUISE CALIBRATIONS

Callisto Flyby (C21): 30-JUN-1999 (D181) 07:47:01 UTC
Perijove (PJ21): 02-JUL-1999 (D183) 05:03:38 UTC
Apojove (AJ21): 22-JUl-1999 (D203) 16:00:00 UTC

Time Ticks (Relative to C21)
Spacecraft - 6 Hours



C21 North Trajectory Pole View, Perijove to Perijove

C21 NIMS INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Ofset	Record Format	PSID
21NNCHOPON01	NIMS Chopper On								
21NNRELOAD01	NIMS Real-TIme Software Reload								
21CNDRKMAT01+	Callisto Ride-along	21CLM442	21CLM360	LM	4	0	4	IM8	EB
21CNFEATRE03	Callisto Feature Observation	21CLM442	21CLM180D_1	LM	4	0	4	MPW	DC
21CNFEATRE04	Callisto Feature Observation	21CLM243D_0	21CLM180D_0	LM	4	0	4	LPU	DD
21CNFEATRE01	Callisto Feature Observation	21CLM243D_0	21CLM180D_0	LM	4	0	4	LPU	DA
21CNFEATRE02	Callisto Feature Observation	21CLM243D_0	21CLM180D_0	LM	4	0	4	LPU	DB
21NNRELOAD02	NIMS Real-TIme Software Reload					0	4		
21JNJUPRTS02*	Jupiter Real-Time Observation	21JLM442/MB	R/T	LM	2	0	4	R/T	DF
21NNRELOAD04	NIMS Real-TIme Software Reload					0	4		
21INHRSPEC01	Mapping Io at High Resolution	21ILM442	21ILM360	LM	2	0	4	MPW	DG
21NNRELOAD05	NIMS Real-TIme Software Reload					0	4		
21JNJUPRTS03*	Jupiter Real-Time Observation	21JLM442/MB	R/T	LM	2	0	4	R/T	DH
21NNRELOAD06	NIMS Real-TIme Software Reload					0	4		
21NNCHOPOF01	NIMS Chopper Off					0	4		
21NNRCTRLT01	NIMS Real-Time RCT Calibration	21RCT252	R/T	LM	1	0	4	R/T	XE
21NNROPCAL01	NIMS OPCAL	21OPCAL48	R/T	LM	4	0	4	R/T	DE

C21 RESOURCES

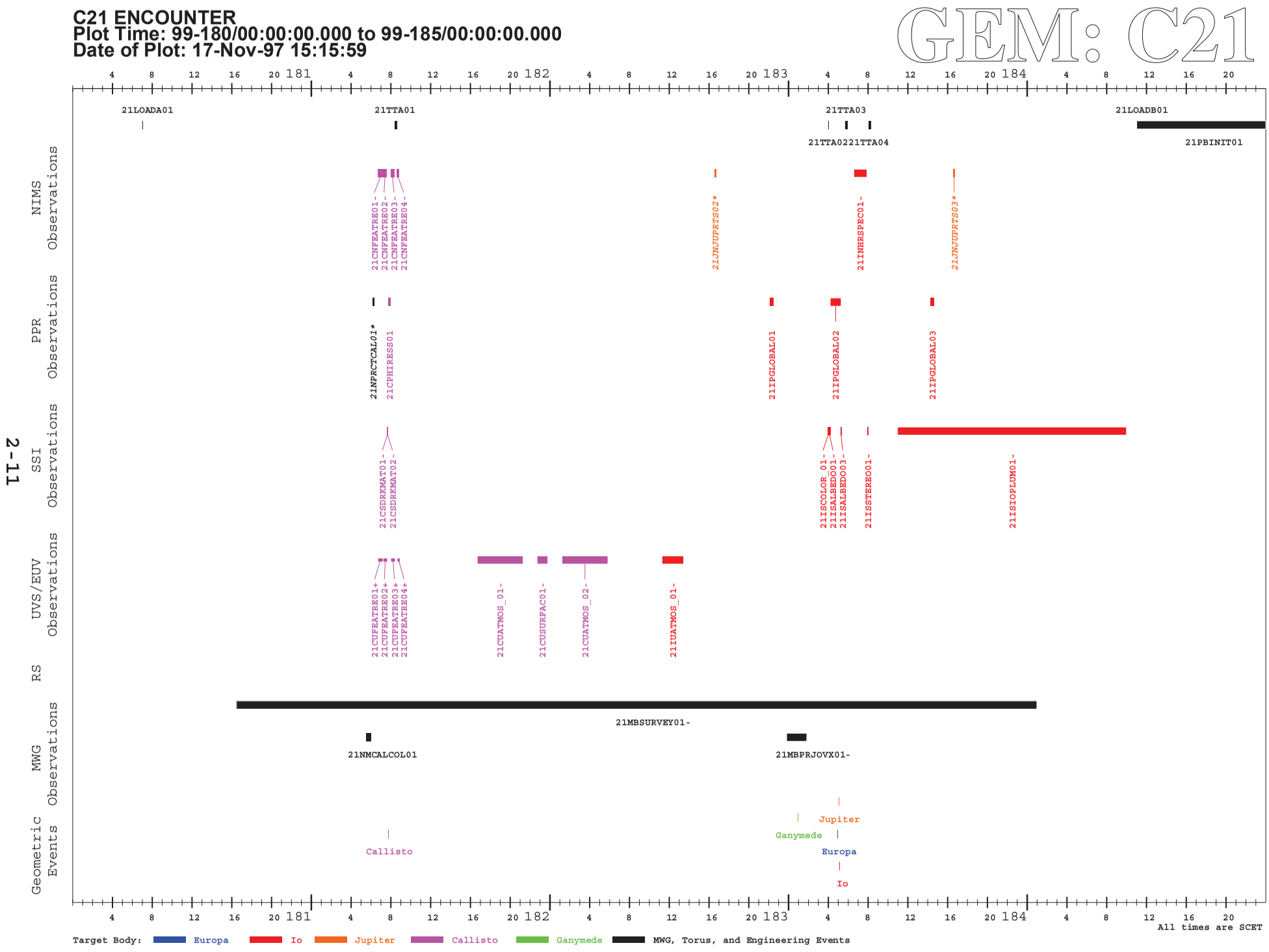
Activity ID	Mode	Record Format	Obs. Cost (tracks)	Obs. Cost (ticks)	Number Wavelengths Returned	Obs Record (sec.)	Obs PB (sec.)	Selected Bits to Tape sBOT (MBITS)	Bits to Tape BOT (Mbit)	Mode Cycle time (sec)
21CNDRKMAT01+	LM	IM8			360	41.54	41.54	0.00	0.00	8.667
21CNFEATRE03-	LM	MPW	0.1995	1163	180	1320.00	900.00	10.37	15.21	8.667
21CNFEATRE04-	LM	LPU	0.0245	143	180	600.00	600.00	3.70	3.70	8.667
21CNFEATRE01-	LM	LPU	0.0631	368	180	1560.00	1000.00	6.17	9.62	8.667
21CNFEATRE02-	LM	LPU	0.0486	283	180	1200.00	900.00	5.55	7.40	8.667
21JNJUPRTS02*	LM	R/T			408					8.667
21INHRSPEC01-	LM	MPW	0.5434	3167	360	3600.00	3600.00	41.47	41.47	8.667
21JNJUPRTS03*	LM	R/T								8.667
21NNRCTRLT01-	LM	R/T								8.667
Total										
Allocation										
Oversubscribed										

C21 RESOURCES

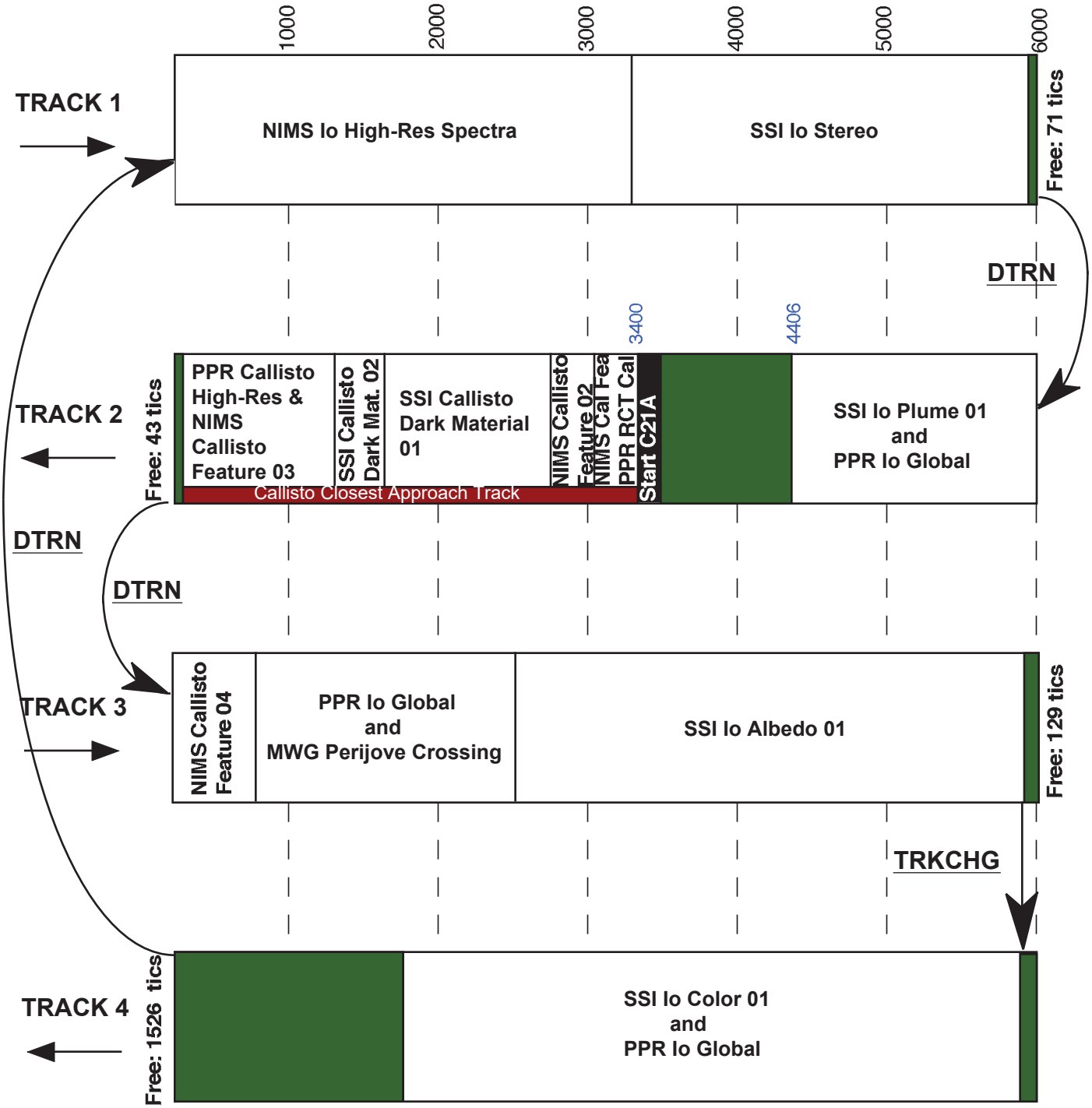
Activity ID	AACS Mbits Comp 2.5	RT BTG Mbits	Thold	Comp	Total BTG Mbits (4% ohead)	Data Reduction Factor (sBOT/BTG)	Pass
21CNDRKMAT01+	0.00		0	1.9	0.1889	0.00	2
21CNFEATRE03-	0.05		0	1.9	2.0462	5.07	1
21CNFEATRE04-	0.03		0	1.9	1.3642	2.71	2
21CNFEATRE01-	0.06		0	1.9	2.2736	2.71	1
21CNFEATRE02-	0.05		0	1.9	2.0462	2.71	2
21JNJUPRTS02*		0.160	0				
21INHRSPEC01-	0.21	0.160	0	1.8	17.2793	2.40	1,2
21JNJUPRTS03*			0				
21NNRCTRLT01-		0.080					
Total					25.1985		
Allocation							
Oversubscribed							

NIMS C21 OBSERVING GEOMETRY

OAPEL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
21CSDRKMAT01	+1 to +2	106 to 107	1500	97	81	10	73
21CNFEATRE03	-40 to -25	345 to 357	15K	156 to 168	33 to 53	13 to 38	21 to 33
21CNFEATRE04	-5 to +10	312 to 321	29K	156	64 to 73	30 to 40	34
21CNFEATRE01	+20 to +40	340 to 10	40K	151	30 to 54	27 to 39	18
21CNFEATRE02	-10 to +20	301 to 332	58K	151	54 to 86	16 to 48	38
21JNJUPRTS02	+6 to +8	341 to 355	740K	63	62 to 82	25 to 46	108
21INHRSPEC01	-90 to +90	51 to 233	135K	167 to 173	0 to 108	5 to 90	16
21JNJUPRTS03	+36	15 to 21	700K	145	42 to 62	0 to 40	44
21JNJUPRTS03	+0	15 to 21	700K	145	42 to 62	0 to 40	44
21JNJUPRTS03	-36	15 to 21	700K	145	42 to 62	0 to 40	44

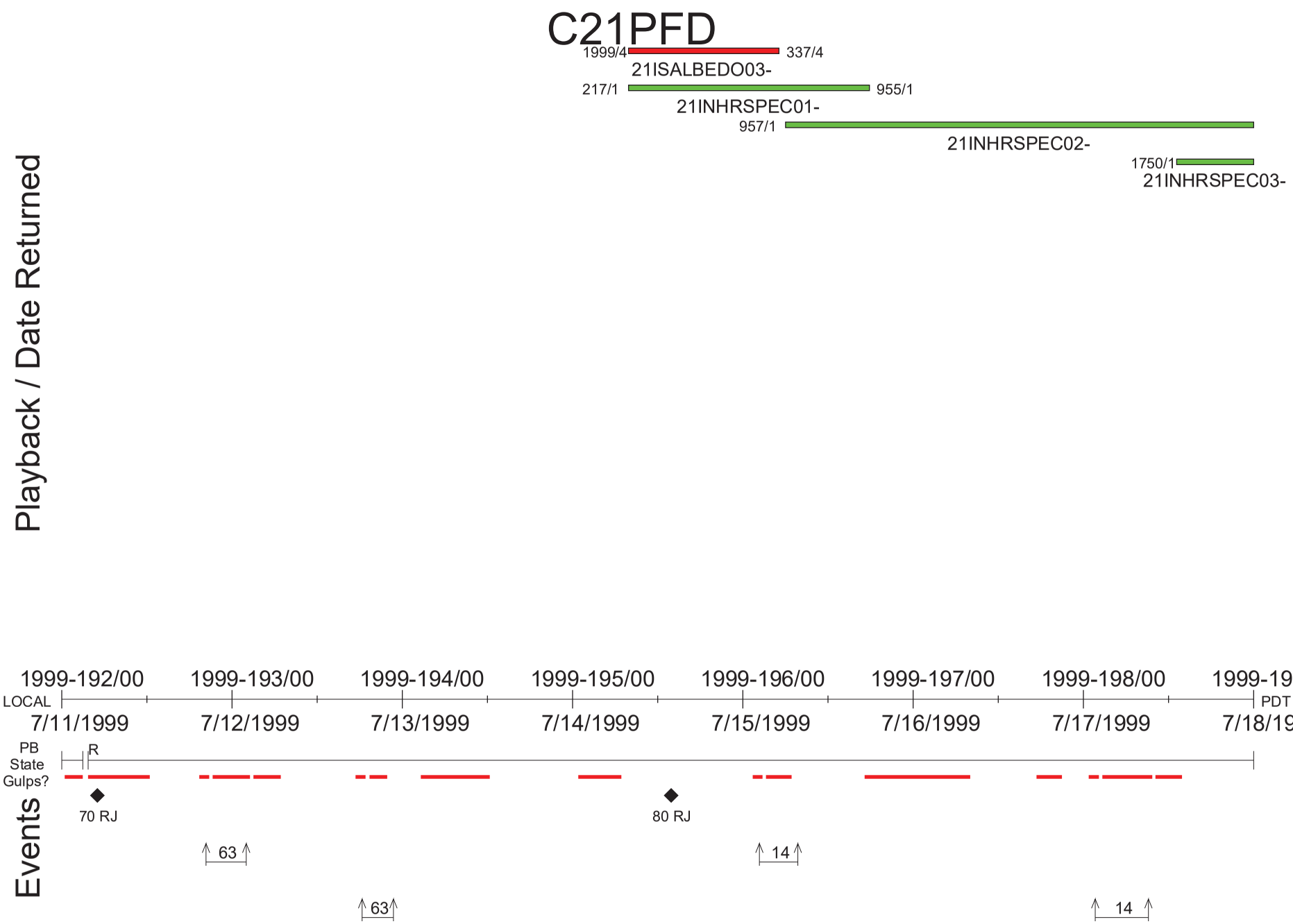

C21 ENCOUNTER
Plot Time: 99-180/00:00:00.000 to 99-185/00:00:00.000
Date of Plot: 17-Nov-97 15:15:59
GEM: C21
4 8 12 16 20 181 4 8 12 16 20 182 4 8 12 16 20 183 4 8 12 16 20 184 4 8 12 16 20
21LOADA01
21TTA01
21TTA03
21LOADB01
21TTA0221TTA04
21PBINIT01
NIMS Observations
21CNFEATRE01-
21CNFEATRE02-
21CNFEATRE03-
21CNFEATRE04-
21JNJUPRTS02*
21INHRSPEC01-
21JNJUPRTS03*
PPR Observations
21NPRCTCAL01*
21CPHIRESS01
21IPGLOBAL01
21IPGLOBAL02
21IPGLOBAL03
SSI Observations
21CSDRKMAT01-
21CSDRKMAT02-
21ISCOLOR_01-
21ISALBEDO01-
21ISALBEDO03-
21ISSTERE001-
21ISIOPLUM01-
UVS/EUV Observations
21CUFEATRE01+
21CUFEATRE02+
21CUFEATRE03+
21CUFEATRE04+
21CUATMOS_01-
21CUSURFAC01-
21CUATMOS_02-
21IUATMOS_01-
RS
21MBSURVEY01-
MWG Observations
21NMCALCOL01
21MBPRJOVX01-
Geometric Events
Callisto
Jupiter
Ganymede
Europa
Io
All times are SCET
Target Body: Europa Io Jupiter Callisto Ganymede MWG, Torus, and Engineering Events

C21 HIGH-LEVEL TAPEMAP

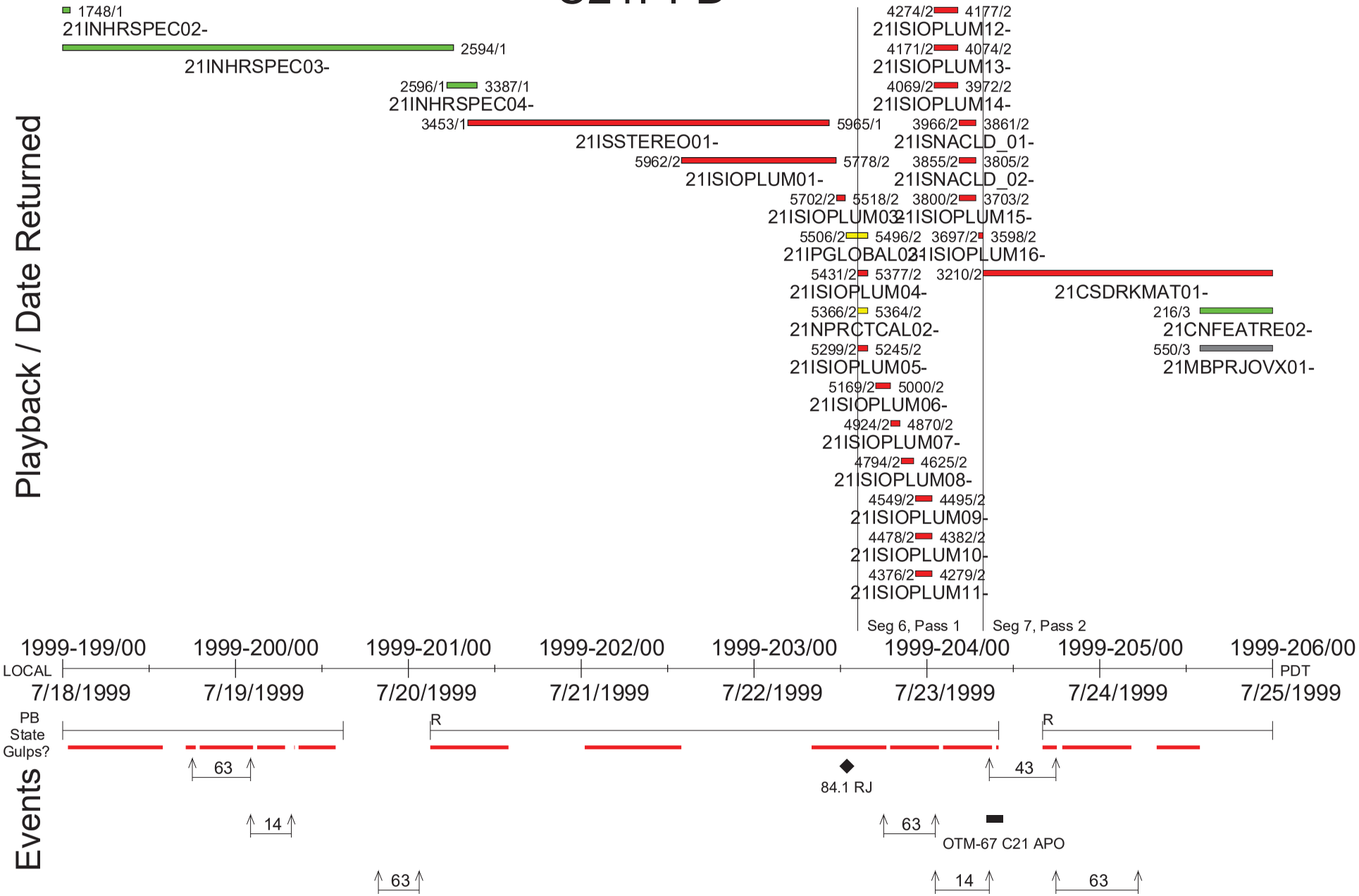


J. Gross, 8/13/97

Playback / Date Returned



C21PFD


Playback / Date Returned
1748/1
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2594/1
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2596/1
3387/1
21INHRSPEC04-
3453/1
5965/1
21ISSTEREO01-
5962/2
5778/2
21ISIOPLUM01-
5702/2
5518/2
21ISIOPLUM03-
5506/2
5496/2
21IPGLOBAL02-
5431/2
5377/2
21ISIOPLUM04-
5366/2
5364/2
21NPRCTCAL02-
5299/2
5245/2
21ISIOPLUM05-
5169/2
5000/2
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4924/2
4870/2
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4794/2
4625/2
21ISIOPLUM08-
4549/2
4495/2
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4478/2
4382/2
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4177/2
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4074/2
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3972/2
21ISIOPLUM14-
3966/2
3861/2
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3855/2
3805/2
21ISNACLD_02-
3800/2
3703/2
21ISIOPLUM15-
3697/2
3598/2
21ISIOPLUM16-
3210/2
21CSDRKMAT01-
216/3
21CNFEATRE02-
550/3
21MBPRJOVX01-
Seg 6, Pass 1
Seg 7, Pass 2
1999-199/00
1999-200/00
1999-201/00
1999-202/00
1999-203/00
1999-204/00
1999-205/00
1999-206/00
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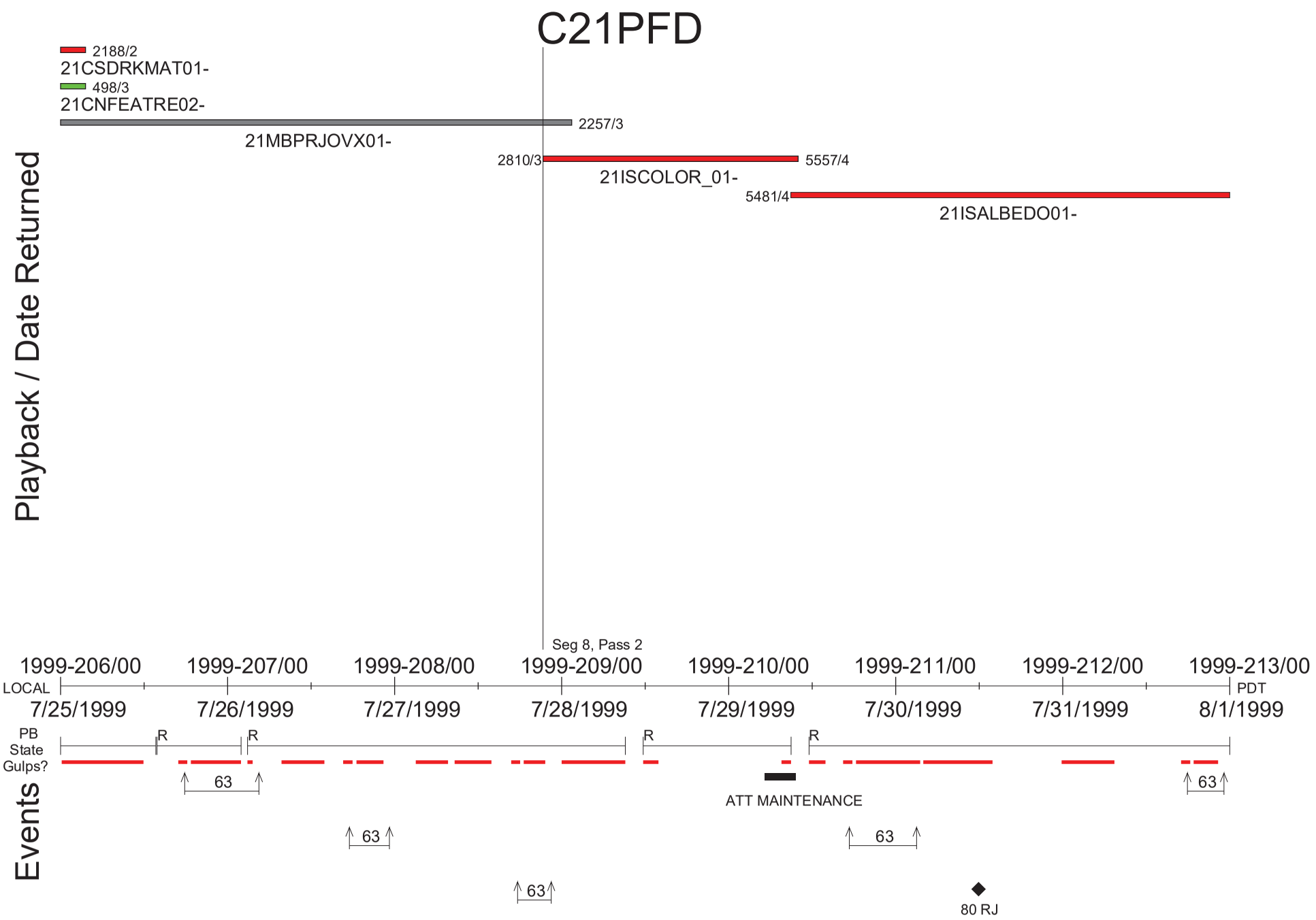
PDT
7/18/1999
7/19/1999
7/20/1999
7/21/1999
7/22/1999
7/23/1999
7/24/1999
7/25/1999
PB State Gulps?
R
R
Events
63
14
63
84.1 RJ
63
14
OTM-67 C21 APO
43
14
63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2188/2
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498/3
21CNFEATRE02-
2257/3
21MBPRJOVX01-
2810/3
5557/4
21ISCOLOR_01-
5481/4
21ISALBEDO01-
Playback / Date Returned
Seg 8, Pass 2
1999-206/00
1999-207/00
1999-208/00
1999-209/00
1999-210/00
1999-211/00
1999-212/00
1999-213/00
LOCAL
PDT
7/25/1999
7/26/1999
7/27/1999
7/28/1999
7/29/1999
7/30/1999
7/31/1999
8/1/1999
PB State Gulps?
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63
ATT MAINTENANCE
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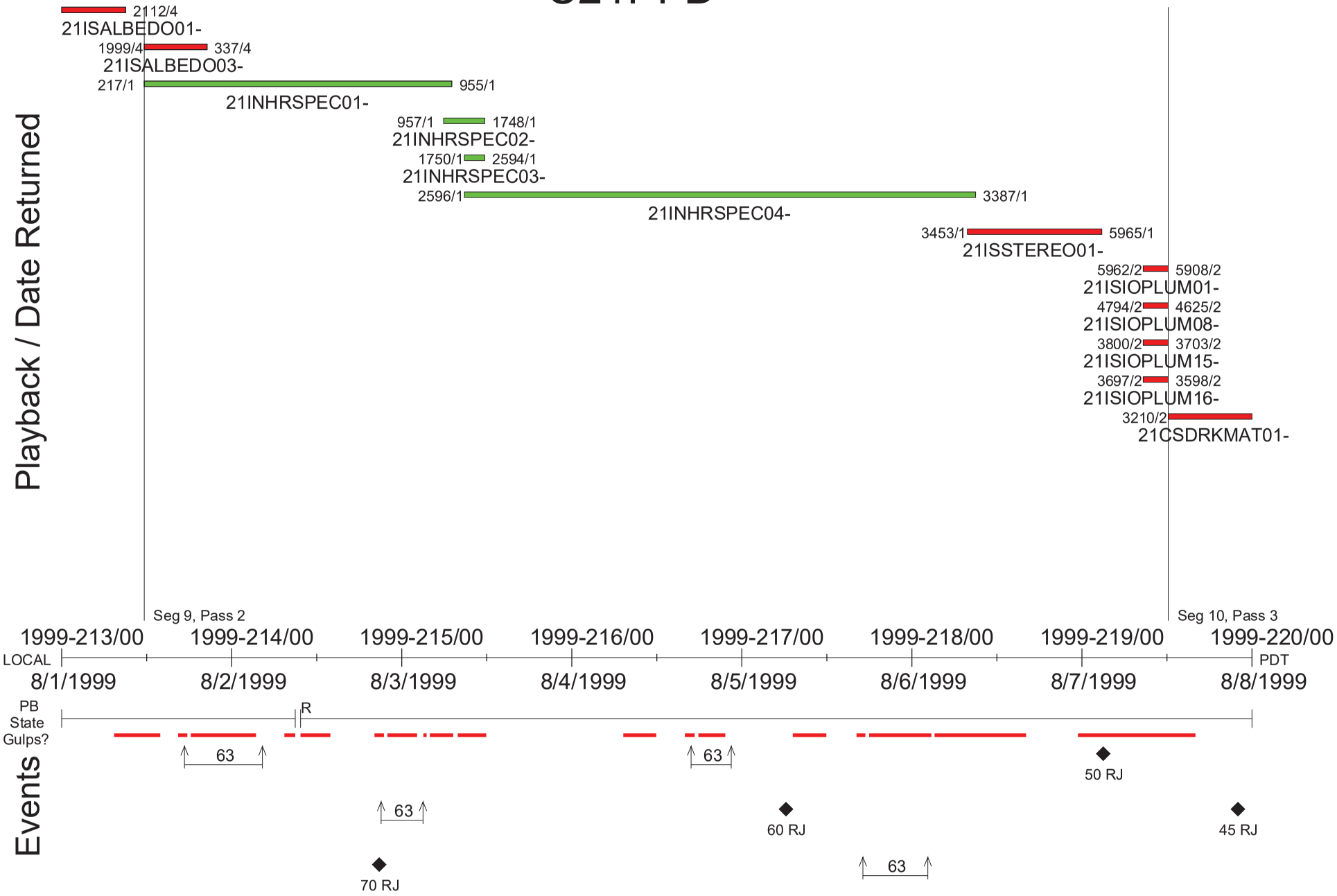
Events

C21PFD



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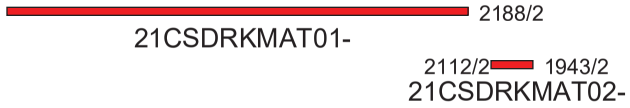
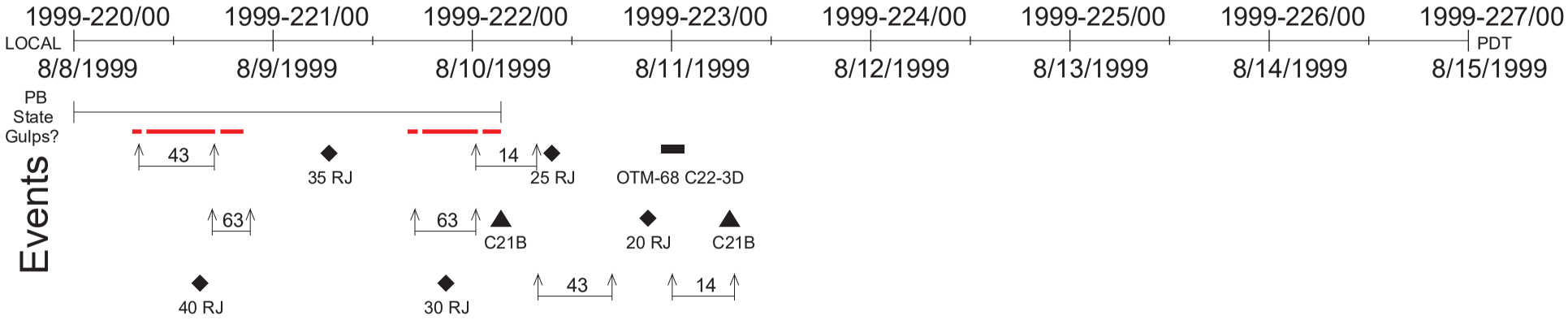
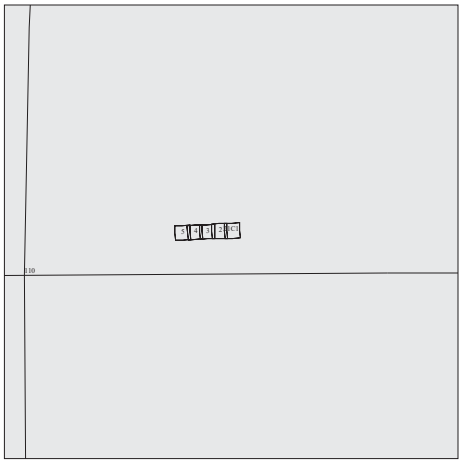
C21PFD



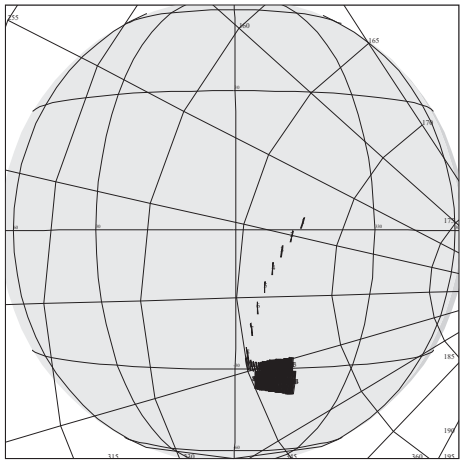
Playback / Date Returned



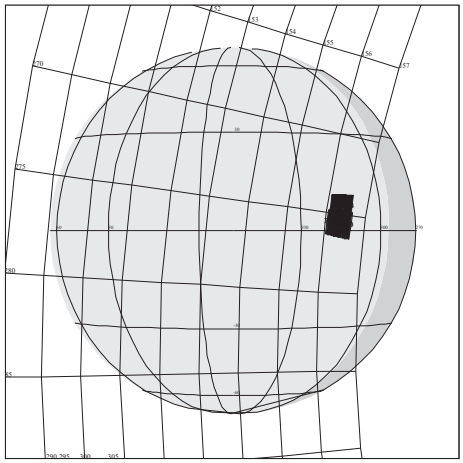
C21 NIMS A



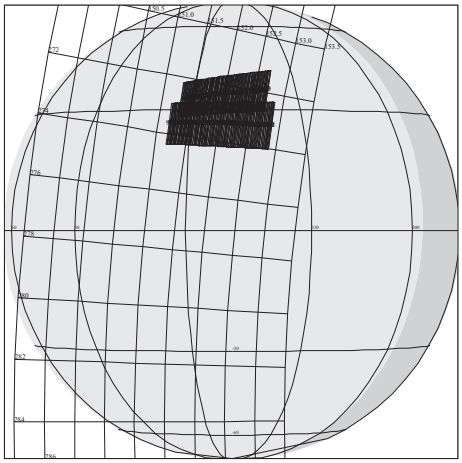
21CSDRKMAT01
99-181/07:39:11



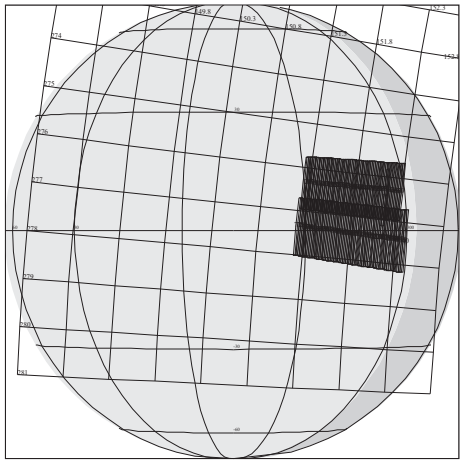
21CNFEATRE03
99-181/08:07:30



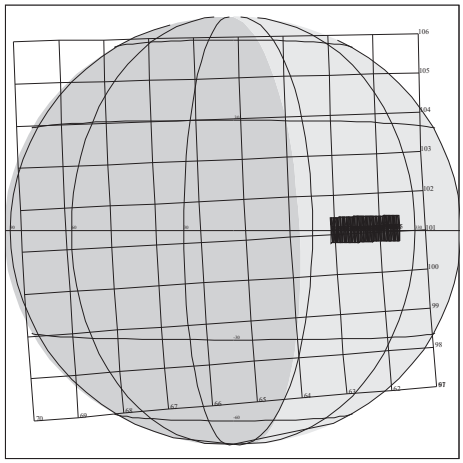
21CNFEATRE04
99-181/08:44:55



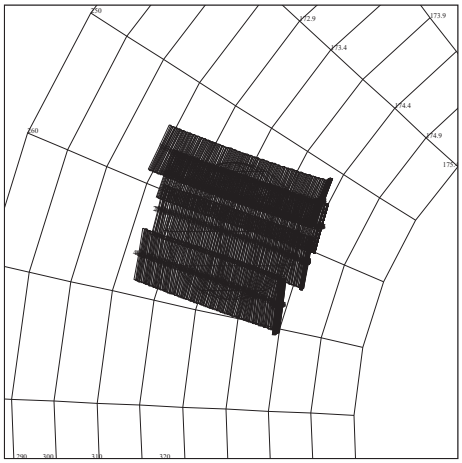
21CNFEATRE01
99-181/08:56:15



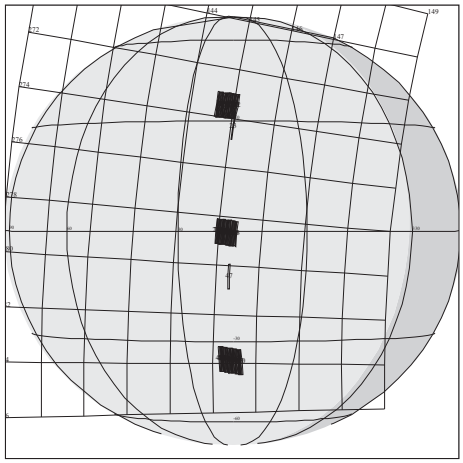
21CNFEATRE02
99-181/09:25:21



21JNJUPRTS02
99-182/16:31:52



21INHRSPEC01
99-183/06:35:08



21JNJUPRTS03
99-183/16:36:45

Chapter 3 - Orbit Geometries

Contents

Introduction to Chapter 3

This chapter contains diagrams of various aspects of geometry for the C21 Orbit.

The figure on page 3 is a North Trajectory Pole View of the C21 Orbit from apoapsis to apoapsis.

The figure on page 4 is a North Trajectory Pole View of the C21 Orbit from +/- 5 days of Callisto closest approach.

The figure on page 5 is a North Trajectory Pole View of the C21 Orbit from +/- 2 days of Callisto closest approach.

The figure on page 6 is a North Trajectory Pole View of the C21 Orbit from +/- 1 day of Callisto closest approach.

The figure on page 7 is a North Trajectory Pole View of the C21 Orbit from +/- 6 hours of Callisto closest approach.

The figure on page 8 is a North Trajectory Pole View of the C21 Orbit from +/- 1 hour of Callisto closest approach.

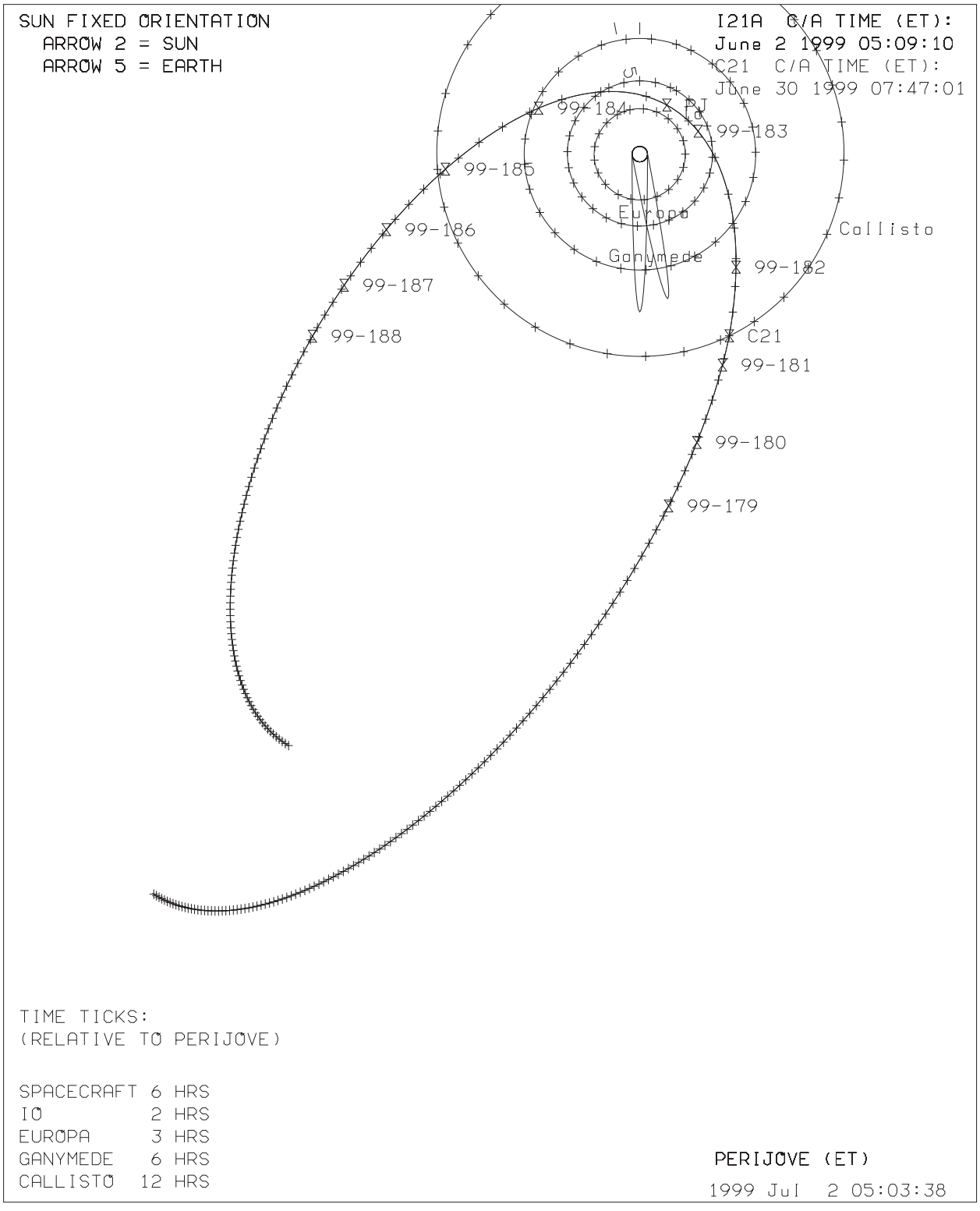
The figure on page 9 is a North Trajectory Pole View of the C21 Orbit from +/- 6 hours of Io closest approach.

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

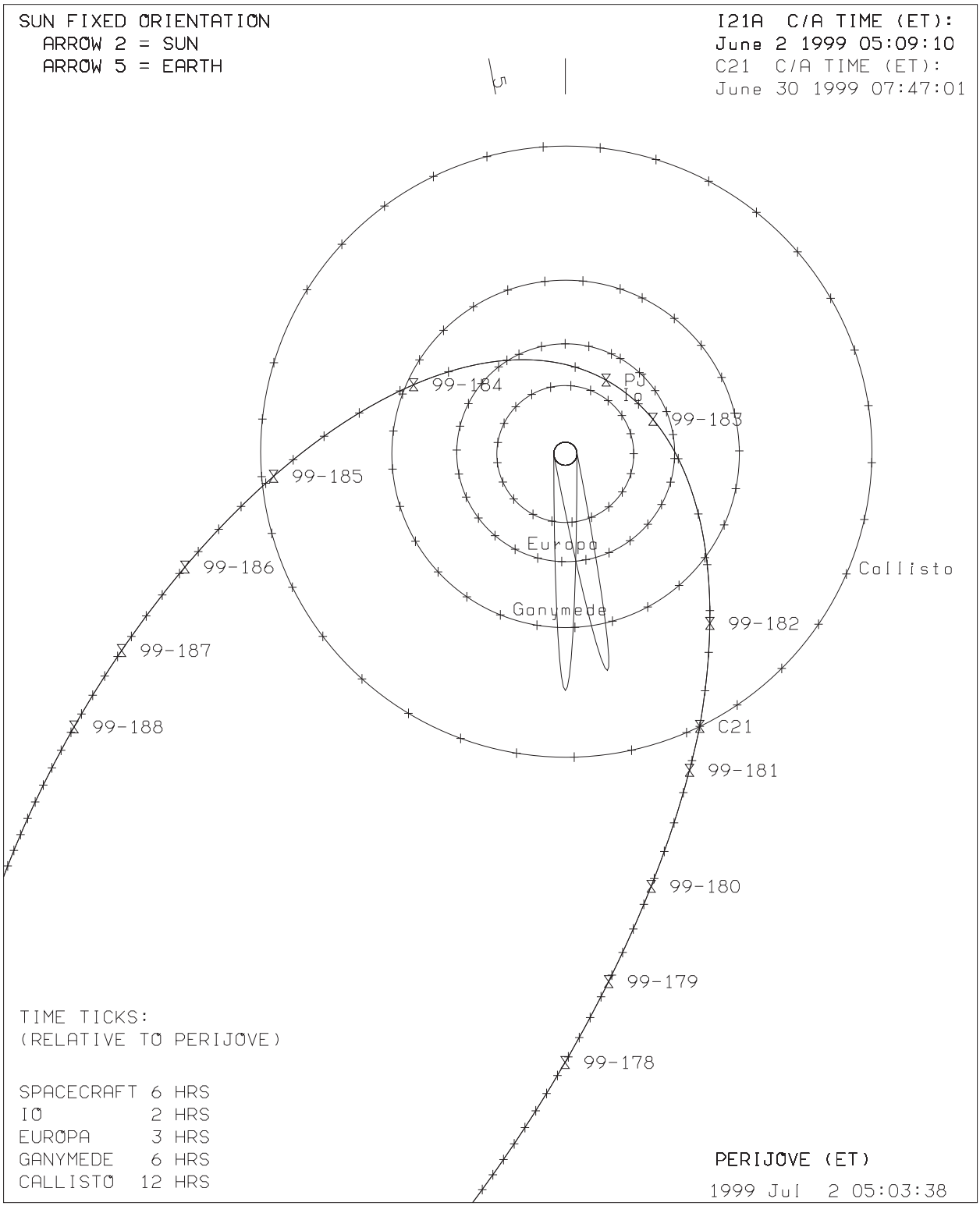
The figure on page 11 shows the spacecraft's groundtrack on Jupiter at Jupiter closest approach.

The figure on page 12 shows the spacecraft's groundtrack on Io at Io closest approach.

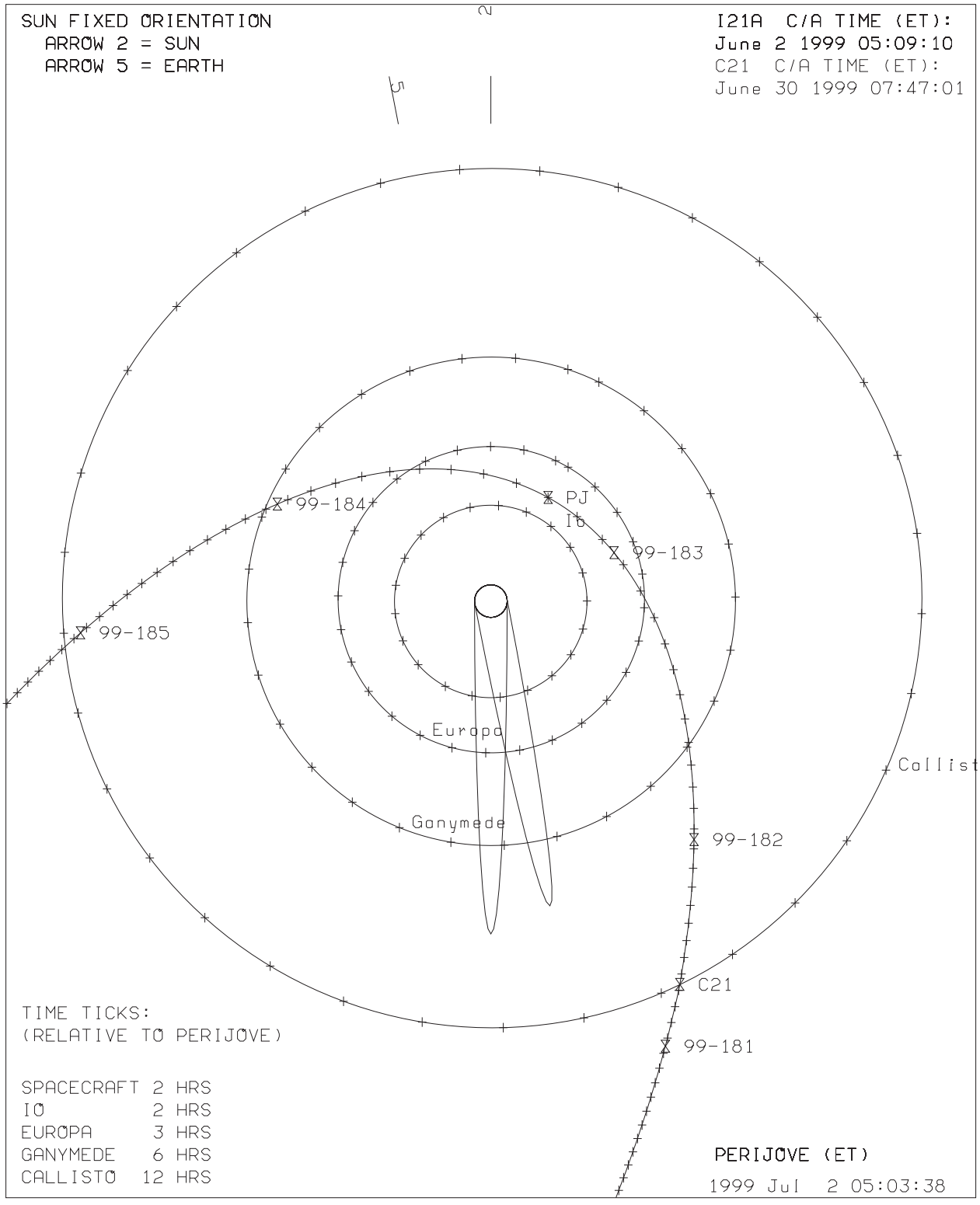
JUPITER 21: N. TRAJ. POLE VIEW (APO TO APO)



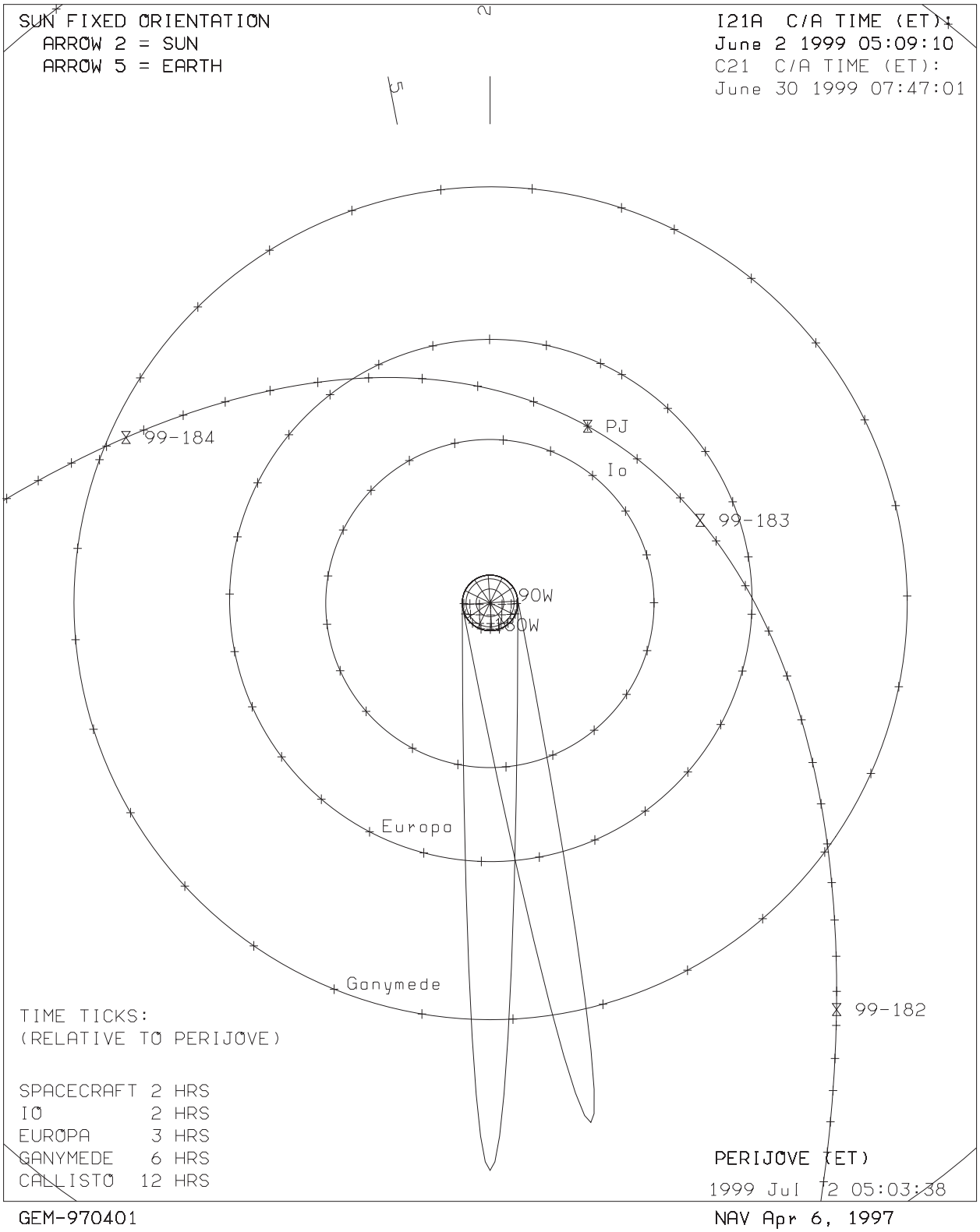
JUPITER 21: N. TRAJ. POLE VIEW (+/- 5 DAYS)



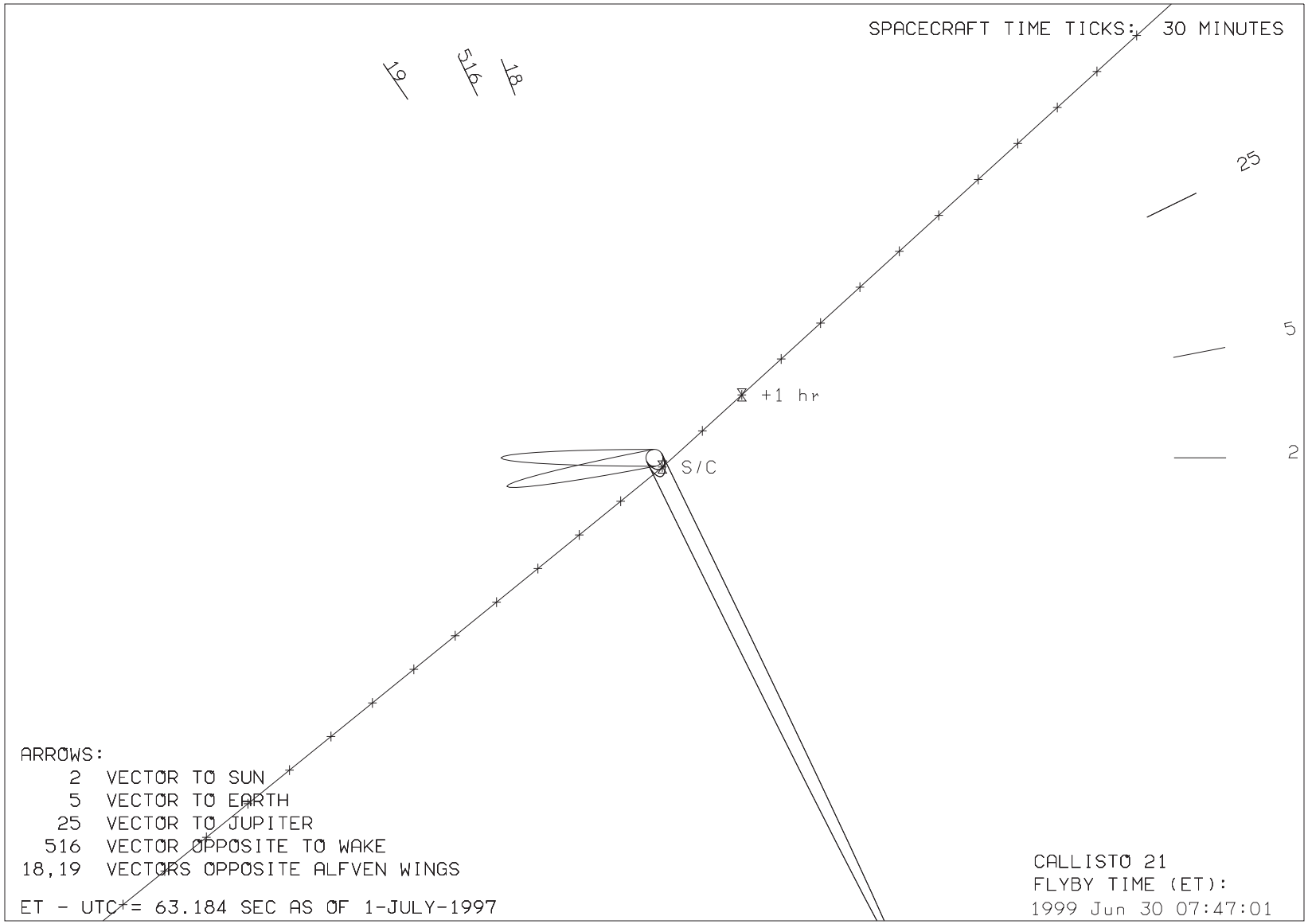
JUPITER 21: N. TRAJ. POLE VIEW (+/- 2 DAYS)



JUPITER 21: N. TRAJ. POLE VIEW (+/- 1 DAY)

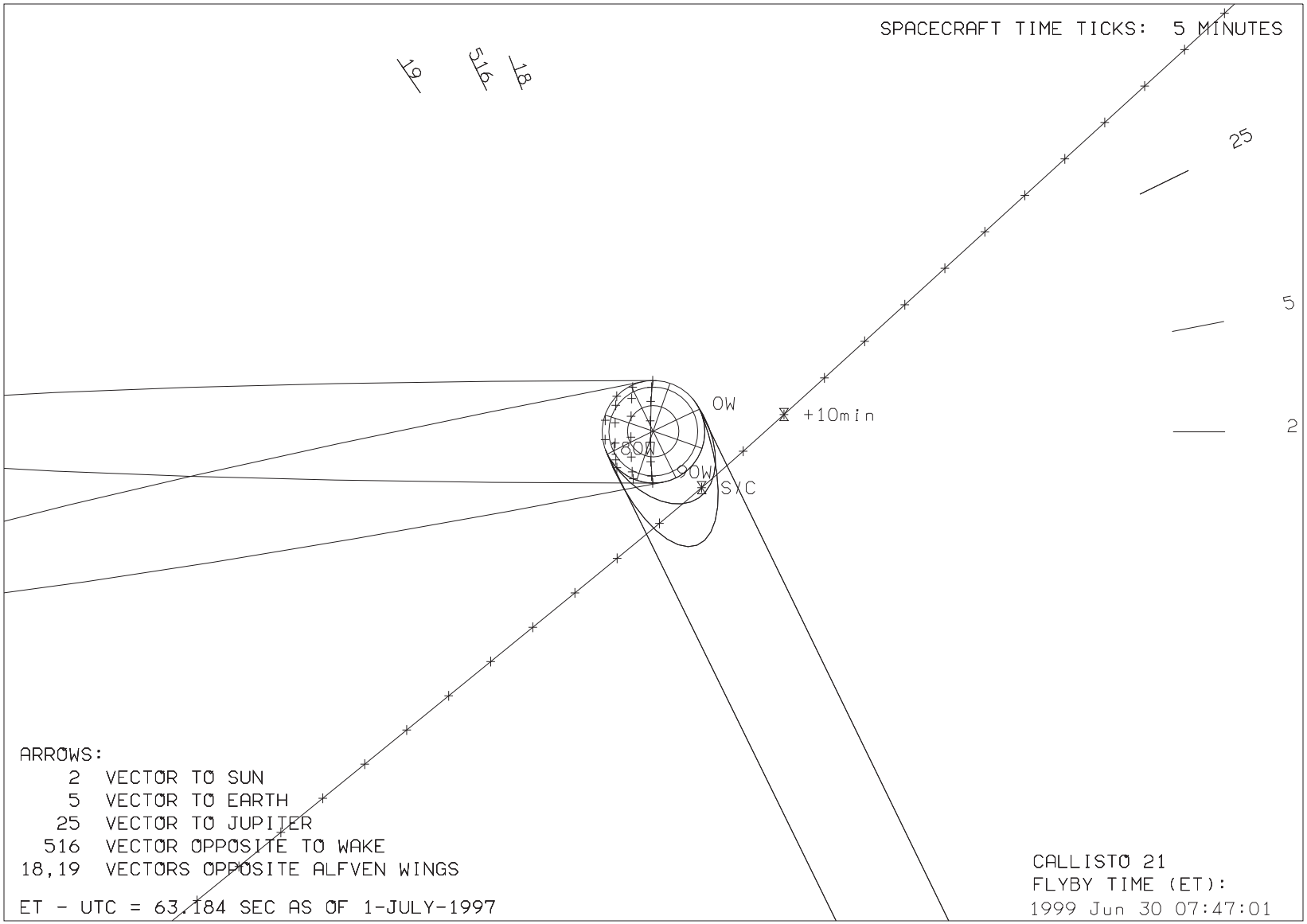


CALLISTO 21: N. TRAJ POLE VIEW (+/- 6 HRS)



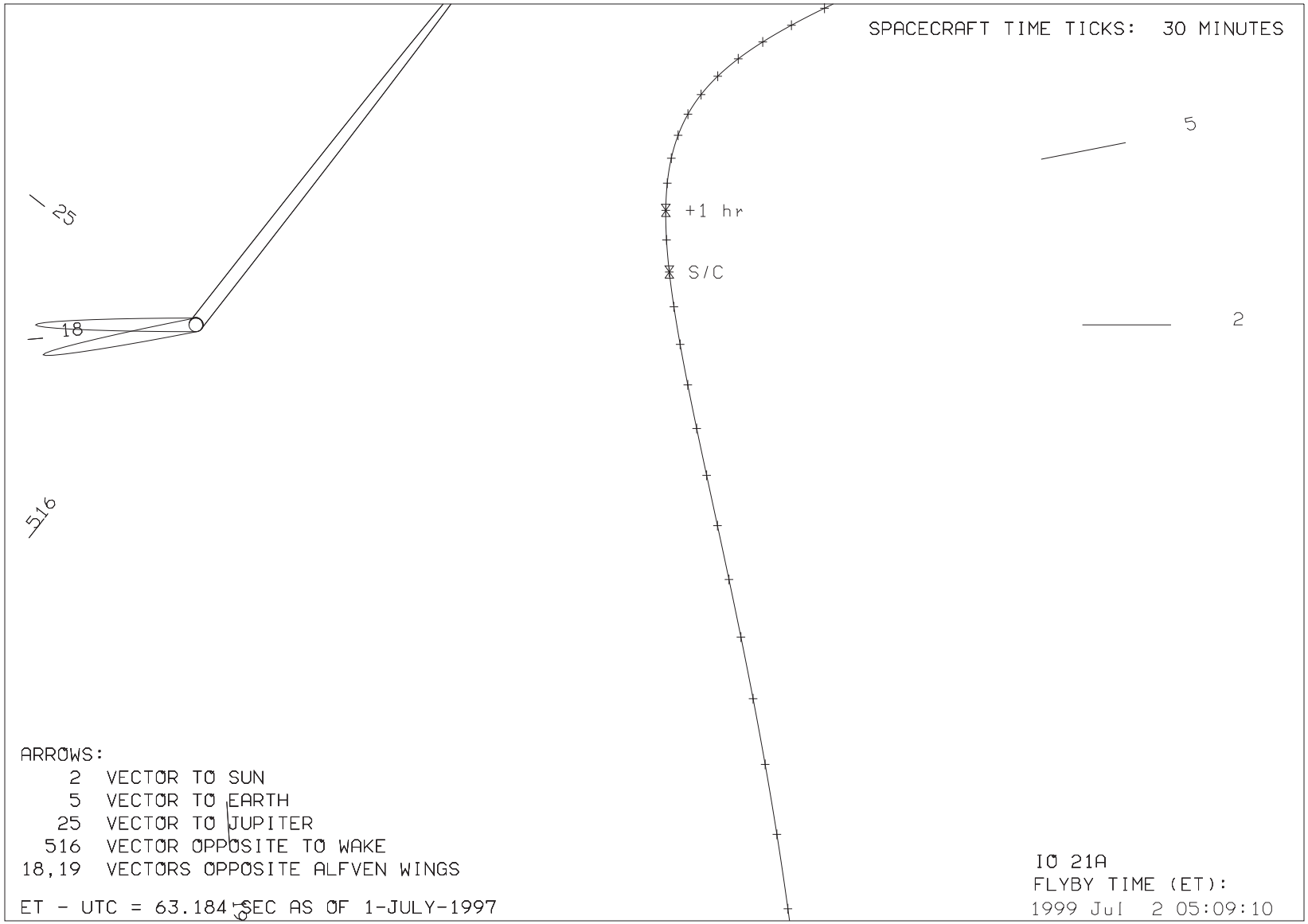
NAV 4/30/97

CALLISTO 21: N. TRAJ POLE VIEW (+/- 1 HR)



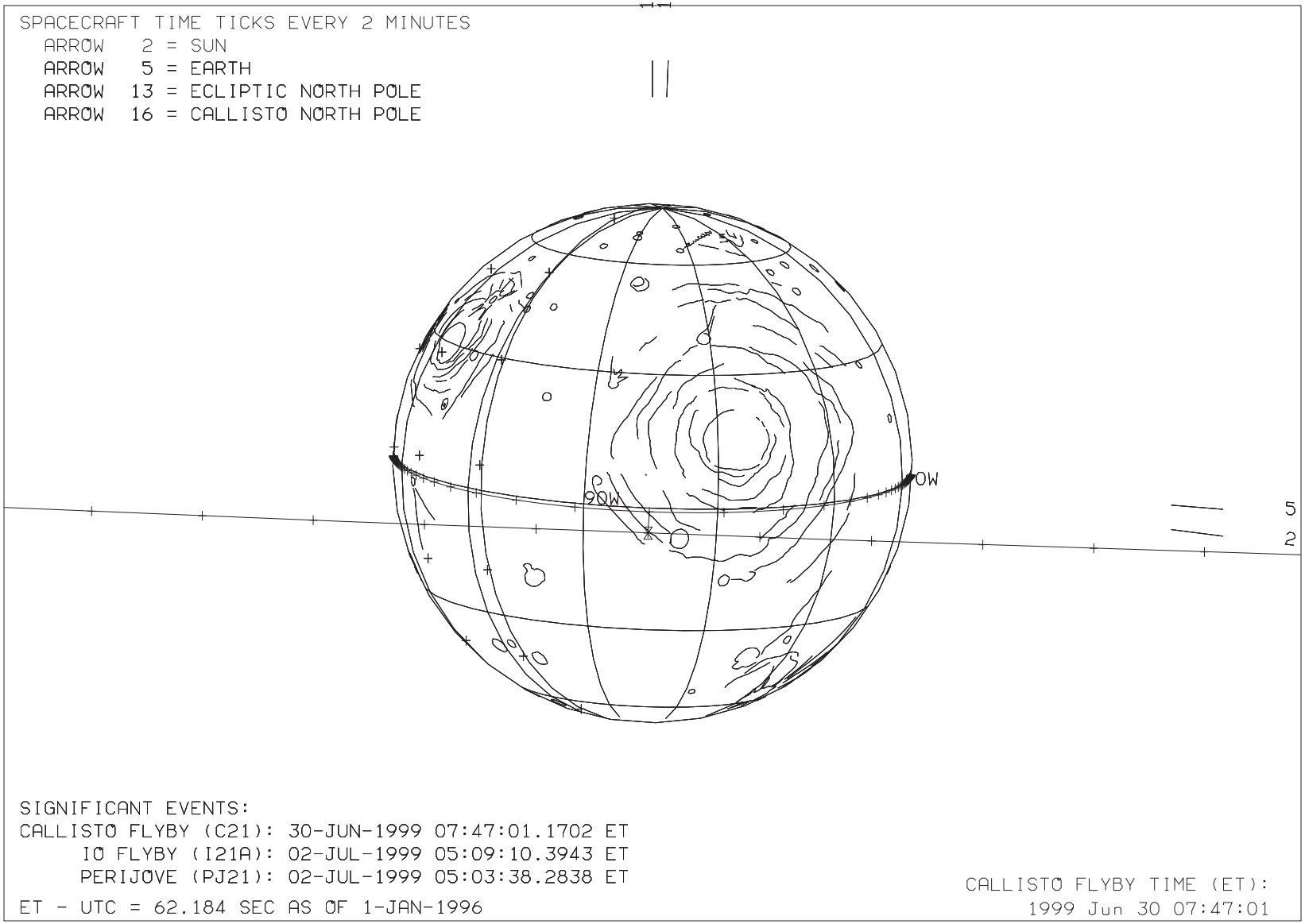
NAV 4/30/97

IO 21A: N. TRAJ POLE VIEW (+/- 6 HRS)



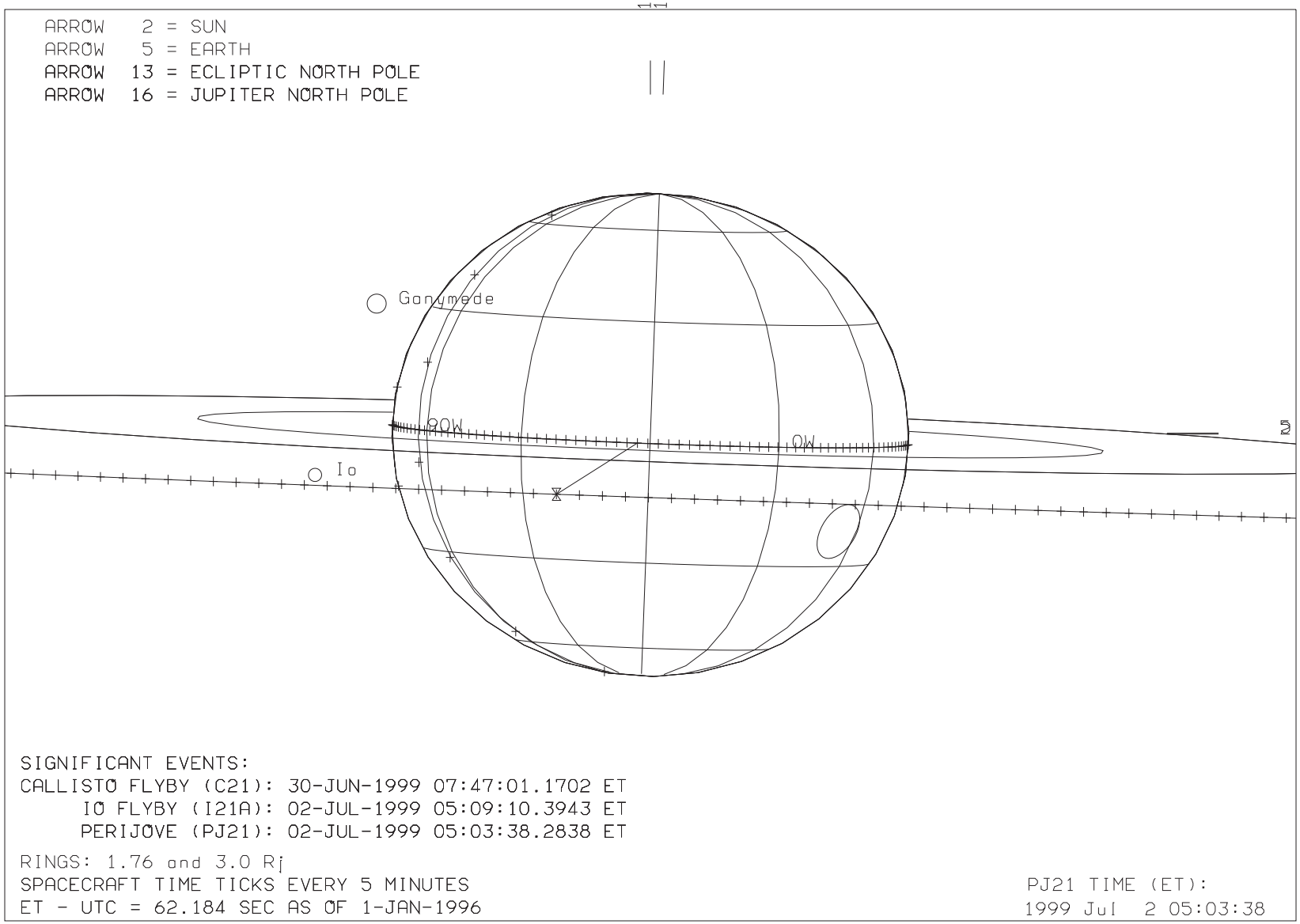
NAV 4/30/97

CALLISTO 21: GROUNDTRACK AT CLOSEST APPROACH



NAV Apr 6, 1997

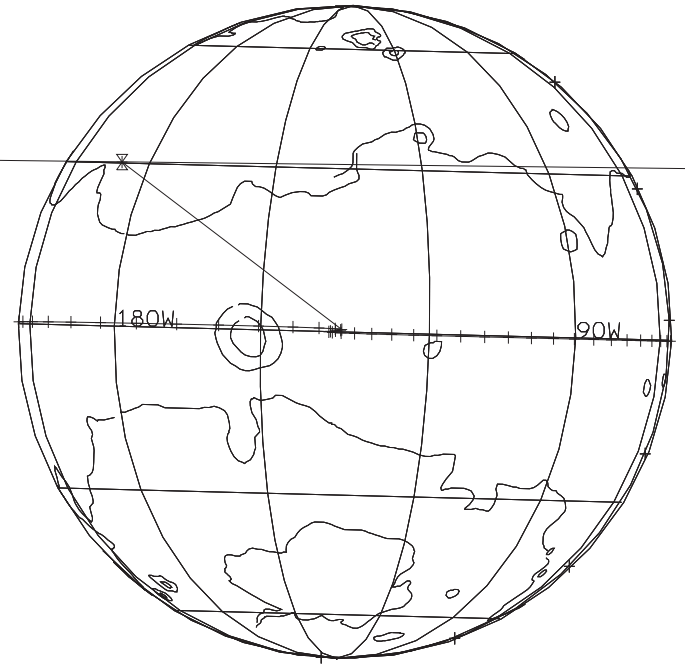
JUPITER 21: GROUNDTRACK AT CLOSEST APPROACH



NAV Apr 6, 1997

IO 21: GROUNDTRACK AT CLOSEST APPROACH

SPACECRAFT TIME TICKS EVERY 1 HOUR
ARROW 2 = SUN
ARROW 5 = EARTH
ARROW 13 = ECLIPTIC NORTH POLE
ARROW 16 = IO NORTH POLE



SIGNIFICANT EVENTS:
CALLISTO FLYBY (C21): 30-JUN-1999 07:47:01.1702 ET
IO FLYBY (I21A): 02-JUL-1999 05:09:10.3943 ET
PERIJOVE (PJ21): 02-JUL-1999 05:03:38.2838 ET
ET - UTC = 62.184 SEC AS OF 1-JAN-1996

IO FLYBY TIME (ET):
1999 Jul 2 05:09:10

NAV Apr 6, 1997

Chapter 4 - NIMS Observation Summaries

Contents

Introduction to Chapter 4

This chapter summarizes the NIMS C21 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 C21 Sequence. The information in this summary is derived from the C21 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 C21 data. It is also derived from the C21 SEFs and PBTs. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry.

Sequence:	C21A-AR	Created: 11/24/99	Begin: 99-180/07:00:00 Finish: 99-184/11:00:00

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
1	99	180	06:59:59.933		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,059,962:11:0
2	**99**	**180**	**07:00:00.000**	**20A3EW**	**37A**	**Initial Condition**	**NIMS Power ON**	**4O0**	**4**	**0**	**5,059,962:11:1**
3	**99**	**180**	**07:00:00.000**	**20A3EX**	**37HR**	**Initial Condition**	**Replacement Heaters OFF**	**4O0**	**4**	**0**	**5,059,962:11:1**
4	**99**	**180**	**07:00:00.000**	**20A3EY**	**37C1PR**	**Initial Condition**	**Optics Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**5,059,962:11:1**
5	**99**	**180**	**07:00:00.000**	**20A3EZ**	**37C2PR**	**Initial Condition**	**Optics Heater 2 OFF (primary relay)**	**4O0**	**4**	**0**	**5,059,962:11:1**
6	**99**	**180**	**07:00:00.000**	**20A3FA**	**37F1PR**	**Initial Condition**	**Radiator Flash Heater OFF (primary relay)**	**4O0**	**4**	**0**	**5,059,962:11:1**
7	**99**	**180**	**07:00:00.000**	**20A3FB**	**37F2PR**	**Initial Condition**	**Shield Flash Heater OFF (primary relay)**	**4O0**	**4**	**0**	**5,059,962:11:1**
8	**99**	**180**	**07:00:00.000**	**20A3FD**	**40HRPR**	**Initial Condition**	**RCT Heater OFF (primary relay)**	**4O0**	**4**	**0**	**5,059,962:11:1**
9	**99**	**180**	**07:00:00.000**	**20A3FE**	**40T1PR**	**Initial Condition**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**5,059,962:11:1**
10	**99**	**180**	**07:00:00.000**	**20A3FF**	**40T2R**	**Initial Condition**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**5,059,962:11:1**
11	99	180	07:00:59.933	20OA6A	6HICON			4O0	4	0	5,059,963:10:0
12	99	180	07:01:20.600	488AA6A	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4O0	4	0	5,059,963:41:0
13	**99**	**180**	**07:01:52.600**	**432JA6B**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**4O0**	**4**	**0**	**5,059,963:89:0**
14	99	180	07:01:53.266	432JA431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	4O0	4	0	5,059,963:90:0
15	99	180	07:01:53.933	432JA6C	6RTSL1		R/T Select of DDS and	4O0	4	0	5,059,964:00:0
16	**99**	**180**	**07:01:53.933**	**432JA6D**	**6RTSL2**	**NIMNCG,AACSEL,RT**	**AACS SELECT**	**4O0**	**4**	**0**	**5,059,964:00:0**
17	99	180	10:02:53.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,143:00:0
18	99	180	10:02:53.266		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,143:00:0
19	99	180	10:02:53.266		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,143:00:0
20	99	180	10:02:53.266	465WA6A	6DMST	5000	DMS Slew to TIC	4O0	4	0	5,060,143:00:0
21	99	180	10:02:59.933		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,143:10:0
22	99	180	10:03:01.333		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	4O0	4	0	5,060,143:12:1
23	99	180	11:45:04.600	488AA6B	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	4O0	4	0	5,060,244:06:0
24	99	180	12:34:08.600	488AA6C	6TMSED	NORM,DL2	Sci, Eng, and D/L Chan	4O0	4	0	5,060,292:54:0
25	99	180	12:34:32.600	488AA6D	6TMSED	FILL,DL2	Sci, Eng, and D/L Chan	4O0	4	0	5,060,292:90:0
26	99	180	12:51:12.600	488AA6E	6TMSED	FILL,DL3	Sci, Eng, and D/L Chan	4O0	4	0	5,060,309:43:0
27	99	180	15:44:02.066		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *4997.94 +/-	4O0	4	0	5,060,480:36:2
28	99	180	15:44:03.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	4O0	4	0	5,060,480:38:0
29	99	180	15:56:34.600	465WB6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,060,492:73:0
30	99	180	15:56:34.600		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	4O0	4	0	5,060,492:73:0
31	99	180	15:56:36.000		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	4O0	4	0	5,060,492:75:1
32	99	180	15:56:41.266		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	4O0	4	0	5,060,492:83:0
33	99	180	15:56:42.466		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	4O0	4	0	5,060,492:84:8
34	99	180	15:56:46.333		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	4O0	4	0	5,060,492:90:6
35	99	180	15:56:46.333		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	4O0	4	0	5,060,492:90:6
36	99	180	16:17:51.266	488AB6A	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	4O0	4	0	5,060,513:77:0
37	99	180	16:22:26.600		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 255.79 +/-	4O0	4	0	5,060,518:35:0
38	99	180	16:22:26.600	465WB6B	6DMSC	RDY,4	DMS Control Tape stop	4O0	4	0	5,060,518:35:0
39	99	180	16:22:27.800		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	4O0	4	0	5,060,518:36:8
40	99	180	16:48:00.600	488AB6B	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4O0	4	0	5,060,543:61:0
41	99	180	17:30:29.266	488AB6C	6TMSED	FILL,DL4	Sci, Eng, and D/L Chan	4O0	4	0	5,060,585:62:0
42	99	180	18:04:08.600	488AB6D	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4O0	4	0	5,060,618:88:0
43	99	180	18:20:14.600		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	4O0	4	0	5,060,634:81:0
44	99	180	18:20:14.600	465WC6A	6DTRN	CMD,6DTRN,465WC6	DMS TRACK TURNAROUND	4O0	4	0	5,060,634:81:0
45	99	180	18:20:14.600		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	4O0	4	0	5,060,634:81:0
46	99	180	18:20:16.000		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	4O0	4	0	5,060,634:83:1
47	99	180	18:20:21.266		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	4O0	4	0	5,060,635:00:0
48	99	180	18:20:22.466		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	4O0	4	0	5,060,635:01:8
49	99	180	18:20:23.866		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	4O0	4	0	5,060,635:03:9
50	99	180	18:24:09.933	488AB6E	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	4O0	4	0	5,060,638:70:0
51	99	180	18:24:24.533		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	4O0	4	0	5,060,639:00:9
52	99	180	18:24:25.733		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	4O0	4	0	5,060,639:02:7
53	99	180	18:24:25.733		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	4O0	4	0	5,060,639:02:7

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	99	180	18:24:27.133		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	4O0	4	0	5,060,639:04:8	
55	99	180	18:24:39.133		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	4O0	4	0	5,060,639:22:8	
56	99	180	18:24:40.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	4O0	4	0	5,060,639:24:6	
57	99	180	18:30:17.266	465WD6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,060,644:75:0	
58	99	180	18:30:17.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,644:75:0	
59	99	180	18:30:23.933		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,644:85:0	
60	99	180	18:30:27.800		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	4O0	4	0	5,060,644:90:8	
61	99	180	18:30:27.800		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	4O0	4	0	5,060,644:90:8	
62	99	180	19:02:11.266	465WD6B	6DMSC	RDY,1	DMS Control Tape stop	4O0	4	0	5,060,676:34:0	
63	99	180	19:02:11.266		DMS:	**: *RUNDOWN**	P100, TRACK 1, FWD, TIC *6063.01 +/-	4O0	4	0	5,060,676:34:0	
64	99	180	19:02:12.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	4O0	4	0	5,060,676:35:8	
65	99	180	19:17:47.266	465WE6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,060,691:73:0	
66	99	180	19:17:47.266		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	4O0	4	0	5,060,691:73:0	
67	99	180	19:17:48.666		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	4O0	4	0	5,060,691:75:1	
68	99	180	19:17:53.933		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	4O0	4	0	5,060,691:83:0	
69	99	180	19:17:55.133		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	4O0	4	0	5,060,691:84:8	
70	99	180	19:17:59.000		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	4O0	4	0	5,060,691:90:6	
71	99	180	19:17:59.000		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	4O0	4	0	5,060,691:90:6	
72	99	180	19:49:55.266		DMS:	**: *RUNDOWN**	P100, TRACK 2, REV, TIC * 164.96 +/-	4O0	4	0	5,060,723:53:0	
73	99	180	19:49:55.266	465WF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,060,723:53:0	
74	99	180	19:49:56.466		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	4O0	4	0	5,060,723:54:8	
75	99	180	19:50:00.333		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	4O0	4	0	5,060,723:60:6	
76	99	180	19:50:00.333		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	4O0	4	0	5,060,723:60:6	
77	99	180	20:21:55.933	465WF6B	6DMSC	RDY,3	DMS Control Tape stop	4O0	4	0	5,060,755:22:0	
78	99	180	20:21:55.933		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC *6062.38 +/-	4O0	4	0	5,060,755:22:0	
79	99	180	20:21:57.133		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	4O0	4	0	5,060,755:23:8	
80	99	180	20:36:39.266	465WG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,060,769:73:0	
81	99	180	20:36:39.266		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	4O0	4	0	5,060,769:73:0	
82	99	180	20:36:40.666		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	4O0	4	0	5,060,769:75:1	
83	99	180	20:36:45.933		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	4O0	4	0	5,060,769:83:0	
84	99	180	20:36:47.133		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	4O0	4	0	5,060,769:84:8	
85	99	180	20:36:51.000		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	4O0	4	0	5,060,769:90:6	
86	99	180	20:36:51.000		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	4O0	4	0	5,060,769:90:6	
87	99	180	21:08:46.600		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 166.38 +/-	4O0	4	0	5,060,801:52:0	
88	99	180	21:08:46.600	465WH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,060,801:52:0	
89	99	180	21:08:47.800		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	4O0	4	0	5,060,801:53:8	
90	99	180	21:08:51.666		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	4O0	4	0	5,060,801:59:6	
91	99	180	21:08:51.666		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	4O0	4	0	5,060,801:59:6	
92	99	180	21:09:52.600	465WH6B	6DMSC	RDY,3	DMS Control Tape stop	4O0	4	0	5,060,802:60:0	
93	99	180	21:09:52.600		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC * 358.52 +/-	4O0	4	0	5,060,802:60:0	
94	99	180	21:09:53.800		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	4O0	4	0	5,060,802:61:8	
95	99	180	21:10:59.933	488AC6B	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4O0	4	0	5,060,803:70:0	
96	99	180	21:24:22.600	465WI6A	6DMSC	RDY,4	DMS Control Tape stop	4O0	4	0	5,060,817:00:0	
97	99	180	21:24:22.600		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	4O0	4	0	5,060,817:00:0	
98	99	180	21:25:16.600	465WJ6A	6DTRN	CMD,6DTRN,465WJ6	DMS TRACK TURNAROUND	4O0	4	0	5,060,817:81:0	
99	99	180	21:25:16.600		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	4O0	4	0	5,060,817:81:0	
100	99	180	21:25:16.600		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	4O0	4	0	5,060,817:81:0	
101	99	180	21:25:18.000		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	4O0	4	0	5,060,817:83:1	
102	99	180	21:25:23.266		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	4O0	4	0	5,060,818:00:0	
103	99	180	21:25:24.466		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	4O0	4	0	5,060,818:01:8	
104	99	180	21:25:25.866		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	4O0	4	0	5,060,818:03:9	
105	99	180	21:36:51.666		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	4O0	4	0	5,060,829:31:6	
106	99	180	21:36:52.866		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	4O0	4	0	5,060,829:33:4	
107	99	180	21:36:52.866		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	4O0	4	0	5,060,829:33:4	
108	99	180	21:36:54.266		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	4O0	4	0	5,060,829:35:5	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	99	180	21:37:06.266		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	4O0	4	0	5,060,829:53:5	
110	99	180	21:37:07.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	4O0	4	0	5,060,829:55:3	
111	99	180	23:59:04.600		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,970:00:0	
112	99	180	23:59:04.600	465KA6A	6DMST	3350	DMS Slew to TIC	4O0	4	0	5,060,970:00:0	
113	99	180	23:59:04.600		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,970:00:0	
114	99	180	23:59:04.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,970:00:0	
115	99	180	23:59:11.266		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,060,970:10:0	
116	99	180	23:59:12.666		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	4O0	4	0	5,060,970:12:1	
117	99	180	23:59:59.933	481UA4A	7VECT		Inert vect update UTC	4O0	4	0	5,060,970:83:0	
118	99	181	00:39:28.600	488AC6C	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	4O0	4	0	5,061,009:87:0	
119	99	181	01:13:36.600	488AC6D	6TMSED	NORM,DL2	Sci, Eng, and D/L Chan	4O0	4	0	5,061,043:65:0	
120	99	181	01:32:48.600	488AC6E	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	4O0	4	0	5,061,062:64:0	
121	99	181	02:06:56.600	488AD6A	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4O0	4	0	5,061,096:42:0	
122	99	181	02:30:25.933	488AD6B	6TMSED	FILL,DL4	Sci, Eng, and D/L Chan	4O0	4	0	5,061,119:63:0	
123	99	181	03:19:05.266	488AD6C	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4O0	4	0	5,061,167:74:0	
124	99	181	03:42:53.400		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *3347.94 +/-	4O0	4	0	5,061,191:32:2	
125	99	181	03:42:54.600		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3348.00 +/-	4O0	4	0	5,061,191:34:0	
126	99	181	04:04:46.600		DMS:	: READY	RDY, TRACK *2, *REV, TIC 3348.00 +/-	4O0	4	0	5,061,213:00:0	
127	99	181	04:04:46.600	465KB6A	6DMSC	RDY,2	DMS Control Tape stop	4O0	4	0	5,061,213:00:0	
128	99	181	04:39:59.866	20UP4A	7SCAN	NORM,17.753,6.14	Check S/P Position	4O0	4	0	5,061,247:76:0	
129	99	181	04:45:13.200	192GF4A	**7CONE**	**9.0,0.0**	Check S/P Position	4O0	4	0	5,061,253:00:0	
130	99	181	04:51:17.200	176GA6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	4O0	4	0	5,061,259:00:0	
131	99	181	04:58:35.200	176GA6B	6TMREC	**NRC**	NO RECORD Record Mode Change	4O0	4	0	5,061,266:20:0	
132	99	181	04:58:37.200	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	4O0	4	0	5,061,266:23:0	
133	99	181	04:58:37.200		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3348.00 +/-	4O0	4	0	5,061,266:23:0	
134	99	181	04:58:38.600		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3348.12 +/-	4O0	4	0	5,061,266:25:1	
135	99	181	04:58:43.866		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3349.35 +/-	4O0	4	0	5,061,266:33:0	
136	99	181	04:58:45.066		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *3349.41 +/-	4O0	4	0	5,061,266:34:8	
137	99	181	04:58:46.466		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *3349.29 +/-	4O0	4	0	5,061,266:36:9	
138	99	181	04:58:47.200		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *3349.12 +/-	4O0	4	0	5,061,266:38:0	
139	99	181	04:59:03.200	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	4O0	4	0	5,061,266:62:0	
140	99	181	04:59:03.200		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *3345.37 +/-	4O0	4	0	5,061,266:62:0	
141	99	181	04:59:04.400		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3345.31 +/-	4O0	4	0	5,061,266:63:8	
142	99	181	05:00:27.200	41AB99A	**POWER**	**PWR MODE change**	Change to Calib/Decon Mode	4O0	4	0	5,061,268:06:0	
143	**99**	**181**	**05:00:31.200**	**41AB3I**	**40T1PR**	**1**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**5,061,268:12:0**	
144	**99**	**181**	**05:00:41.200**	**41AB3J**	**40T1PR**	**2**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**5,061,268:27:0**	
145	**99**	**181**	**05:00:51.200**	**41AB3K**	**40T2R**	**1**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**5,061,268:42:0**	
146	**99**	**181**	**05:01:01.200**	**41AB3L**	**40T2R**	**2**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**5,061,268:57:0**	
147	99	181	05:12:21.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3345.31 +/-	4O0	4	0	5,061,279:77:0	
148	99	181	05:12:21.866	175ZQ422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	4O0	4	0	5,061,279:77:0	
149	99	181	05:12:23.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3345.43 +/-	4O0	4	0	5,061,279:79:1	
150	99	181	05:12:28.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3346.67 +/-	4O0	4	0	5,061,279:87:0	
151	99	181	05:12:29.733		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *3346.73 +/-	4O0	4	0	5,061,279:88:8	
152	99	181	05:12:30.533	175ZQ176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	4O0	4	0	5,061,279:90:0	
153	99	181	05:12:31.133		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC 3346.61 +/-	4O0	4	0	5,061,279:90:9	
154	99	181	05:12:31.133		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *3346.61 +/-	4O0	4	0	5,061,279:90:9	
155	99	181	05:17:37.866	175ZQ422A6B	6DMSC	RDY,0	DMS Control Tape stop	4O0	4	0	5,061,285:05:0	
156	99	181	05:17:37.866		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *3274.72 +/-	4O0	4	0	5,061,285:05:0	
157	99	181	05:17:39.066		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3274.66 +/-	4O0	4	0	5,061,285:06:8	
158	99	181	05:20:40.533	41AC99A	**POWER**	**PWR MODE change**	Change to Data Taking Mode	4O0	4	0	5,061,288:06:0	
159	**99**	**181**	**05:20:44.533**	**41AC3A**	**40T1PR**	**1**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**5,061,288:12:0**	
160	**99**	**181**	**05:20:54.533**	**41AC3B**	**40T1PR**	**2**	**PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**5,061,288:27:0**	
161	**99**	**181**	**05:21:04.533**	**41AC3C**	**40T2R**	**1**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**5,061,288:42:0**	
162	**99**	**181**	**05:21:14.533**	**41AC3D**	**40T2R**	**2**	**PCT Heater 2 OFF**	**4O0**	**4**	**0**	**5,061,288:57:0**	
163	99	181	06:01:02.533	165UK4A	7SCAN	NORM,307.132999,	Check S/P Position	4O0	4	0	5,061,327:90:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	99	181	06:15:59.866	444UA443A4B	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	5,061,342:71:0	
165	**99**	**181**	**06:21:20.534**	**21NNCHOPON01-**		**-----START------**		**4O0**	**4**	**0**	**: :**	
166	99	181	06:24:13.866	125KA	NIMSINIT	GS	##### GROUP START INIT	4O0	4	0	5,061,350:84:0	
167	**99**	**181**	**06:24:13.866**	**125KA4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**460**	**4**	**0**	**5,061,350:84:0**	
168	**99**	**181**	**06:25:14.533**	**125KA4B**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**4R0**	**4**	**0**	**5,061,351:84:0**	
169	99	181	06:26:15.200	125KA11A	NIMSINIT	GE	##### GROUP END INIT	4R0	4	0	5,061,352:84:0	
170	**99**	**181**	**06:26:15.200**	**125KA4C**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**4R0**	**4**	**0**	**5,061,352:84:0**	
171	**99**	**181**	**06:31:27.200**	**21NNCHOPON01-**		**-----STOP-------**		**4R0**	**4**	**0**	**: :**	
172	**99**	**181**	**06:42:33.200**	**21NNRELOAD01-**		**-----START------**		**4R0**	**4**	**0**	**: :**	
173	**99**	**181**	**06:42:34.533**	**20EA5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**260**	**4**	**0**	**5,061,369:06:0**	
174	**99**	**181**	**06:42:35.866**	**20EA5B**	**37MRL**		**Memory Realocate (software operates from R**	**260**	**4**	**0**	**5,061,369:08:0**	
175	**99**	**181**	**06:42:37.200**	**20EA6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**260**	**4**	**0**	**5,061,369:10:0**	
176	**99**	**181**	**06:42:47.200**	**20EA6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**260**	**4**	**0**	**5,061,369:25:0**	
177	**99**	**181**	**06:42:57.200**	**20EA5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**5,061,369:40:0**	
178	**99**	**181**	**06:43:17.200**	**20EA5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**5,061,369:70:0**	
179	**99**	**181**	**06:43:39.866**	**20EA4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,061,370:13:0**	
180	99	181	06:44:29.200	176DA6A	6TMREC	**NRC**	NO RECORD Record Mode Change	2R0	4	0	5,061,370:87:0	
181	**99**	**181**	**06:44:40.533**	**20EA4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,061,371:13:0**	
182	**99**	**181**	**06:45:36.534**	**21NNRELOAD01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
183	99	181	06:46:28.533	125DA	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	5,061,372:84:0	
184	99	181	06:46:28.533	125DA11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	5,061,372:84:0	
185	**99**	**181**	**06:46:28.533**	**125DA4A**	**37IST**	**0,2,0,OFF,0,1,1**	**Gain State 4**	**4R3**	**4**	**0**	**5,061,372:84:0**	
186	99	181	07:29:59.866	481UH4A	7VECT		Inert vect update UTC	4R3	4	0	5,061,415:88:0	
187	99	181	07:39:03.200	127EB	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	5,061,424:84:0	
188	**99**	**181**	**07:39:03.866**	**127EB4A**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**4R3**	**4**	**0**	**5,061,424:85:0**	
189	99	181	07:39:07.200	165IA4A	7SCAN	NORM,307.133999,	Check S/P Position	4R3	4	0	5,061,424:90:0	
190	99	181	07:39:11.866	127EB11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	5,061,425:06:0	
191	**99**	**181**	**07:39:11.867**	**21CNDRKMAT01+**		**-----START------**		**4R3**	**4**	**0**	**: :**	
192	99	181	07:42:59.200		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3274.66 +/-	4R3	4	0	5,061,428:74:0	
193	99	181	07:42:59.200	175JM422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	4R3	4	0	5,061,428:74:0	
194	99	181	07:43:00.600		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3274.78 +/-	4R3	4	0	5,061,428:76:1	
195	99	181	07:43:02.533	118IA	**SMOS**	GS		4R3	4	0	5,061,428:79:0	
196	99	181	07:43:05.866		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3276.01 +/-	4R3	4	0	5,061,428:84:0	
197	99	181	07:43:07.066		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *3276.07 +/-	4R3	4	0	5,061,428:85:8	
198	99	181	07:43:09.200	165IA4B	7VECT		Inert vect update UTC	4R3	4	0	5,061,428:89:0	
199	99	181	07:43:11.866	175JM176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	4R3	4	0	5,061,429:02:0	
200	99	181	07:43:12.333		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 3210.07 +/-	4R3	4	0	5,061,429:02:7	
201	99	181	07:43:12.333		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *3210.07 +/-	4R3	4	0	5,061,429:02:7	
202	99	181	07:43:12.533	118IA110A111A4A	7STRP	0.0067,0.0001,26	Slew =,3.01	4R3	4	0	5,061,429:03:0	
203	99	181	07:43:47.200	118IA11A	**SMOS**	GE		4R3	4	0	5,061,429:55:0	
204	99	181	07:43:53.866	175JM422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,061,429:65:0	
205	99	181	07:43:53.866		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *2187.96 +/-	4R3	4	0	5,061,429:65:0	
206	99	181	07:43:56.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC *2176.46 +/-	4R3	4	0	5,061,429:69:1	
207	99	181	07:44:10.533	165IB4A	7SCAN	NORM,338.737999,	Check S/P Position	4R3	4	0	5,061,429:90:0	
208	**99**	**181**	**07:44:15.200**	**21CNDRKMAT01+**		**-----STOP-------**		**4R3**	**4**	**0**	**: :**	
209	99	181	07:45:00.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2176.46 +/-	4R3	4	0	5,061,430:74:0	
210	99	181	07:45:00.533	175IA422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	4R3	4	0	5,061,430:74:0	
211	99	181	07:45:01.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2176.58 +/-	4R3	4	0	5,061,430:76:1	
212	99	181	07:45:07.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2177.82 +/-	4R3	4	0	5,061,430:84:0	
213	99	181	07:45:08.400		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *2177.88 +/-	4R3	4	0	5,061,430:85:8	
214	99	181	07:45:10.533	165IB4B	7VECT		Inert vect update UTC	4R3	4	0	5,061,430:89:0	
215	99	181	07:45:13.200	175IA176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	4R3	4	0	5,061,431:02:0	
216	99	181	07:45:13.666		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *2111.88 +/-	4R3	4	0	5,061,431:02:7	
217	99	181	07:45:13.666		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 2111.88 +/-	4R3	4	0	5,061,431:02:7	
218	99	181	07:45:20.533	175IA422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,061,431:13:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	99	181	07:45:20.533		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *1942.89 +/-	4R3	4	0	5,061,431:13:0	
220	99	181	07:45:23.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC *1931.39 +/-	4R3	4	0	5,061,431:17:1	
221	99	181	07:45:25.200	165GZ4A	7SCAN	NORM,41.168,20.9	Check S/P Position	4R3	4	0	5,061,431:20:0	
222	99	181	07:52:16.533	176GB6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	4R3	4	0	5,061,438:00:0	
223	99	181	07:52:35.866	165GB4A	7SCAN	NORM,40.772,18.4	Check S/P Position	4R3	4	0	5,061,438:29:0	
224	99	181	07:53:07.866	117GB	**CSMOS**	GS	***** GROUP START CSMOS	4R3	4	0	5,061,438:77:0	
225	99	181	07:53:17.200	117GB105A106A4A	7STRP	0.008,0.005001,0	Slew =,0.08	4R3	4	0	5,061,439:00:0	
226	99	181	08:03:23.866	117GB11A	**CSMOS**	GE	***** GROUP END CSMOS	4R3	4	0	5,061,449:00:0	
227	99	181	08:03:53.866	176GB6B	6TMREC	**NRC**	NO RECORD Record Mode Change	4R3	4	0	5,061,449:45:0	
228	99	181	08:03:55.866	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	4R3	4	0	5,061,449:48:0	
229	99	181	08:03:55.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1931.39 +/-	4R3	4	0	5,061,449:48:0	
230	99	181	08:03:57.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1931.51 +/-	4R3	4	0	5,061,449:50:1	
231	99	181	08:04:02.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1932.75 +/-	4R3	4	0	5,061,449:58:0	
232	99	181	08:04:03.733		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *1932.81 +/-	4R3	4	0	5,061,449:59:8	
233	99	181	08:04:05.133		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *1932.69 +/-	4R3	4	0	5,061,449:61:9	
234	99	181	08:04:05.866		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *1932.51 +/-	4R3	4	0	5,061,449:63:0	
235	99	181	08:04:26.533	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,061,450:03:0	
236	99	181	08:04:26.533		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *1927.67 +/-	4R3	4	0	5,061,450:03:0	
237	99	181	08:04:27.733		DMS:	: *READY	RDY, TRACK 2, REV, TIC *1927.61 +/-	4R3	4	0	5,061,450:04:8	
238	**99**	**181**	**08:07:30.533**	**21CNFEATRE03-**		**-----START------**		**4R3**	**4**	**0**	**: :**	
239	99	181	08:08:27.866	165DC4A	**7SCAN**	**NORM,42.64,11.67**	**Check S/P Position**	4R3	4	0	5,061,454:01:0	
240	99	181	08:10:13.866	175DC422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	4R3	4	0	5,061,455:69:0	
241	99	181	08:10:13.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1927.61 +/-	4R3	4	0	5,061,455:69:0	
242	99	181	08:10:15.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1927.73 +/-	4R3	4	0	5,061,455:71:1	
243	99	181	08:10:19.200	117DC	**CSMOS**	GS	***** GROUP START CSMOS	4R3	4	0	5,061,455:77:0	
244	99	181	08:10:20.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1928.96 +/-	4R3	4	0	5,061,455:79:0	
245	99	181	08:10:21.733		DMS:	: *RUNUP	R28, TRACK *2, *REV, TIC *1929.02 +/-	4R3	4	0	5,061,455:80:8	
246	99	181	08:10:25.200	175DC176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	4R3	4	0	5,061,455:86:0	
247	99	181	08:10:25.733		DMS:	: *AT_SPD	R28, TRACK 2, REV, TIC 1927.52 +/- 1	4R3	4	0	5,061,455:86:8	
248	99	181	08:10:25.733		DMS:	**: *RECORD**	R28, TRACK 2, REV, TIC *1927.52 +/-	4R3	4	0	5,061,455:86:8	
249	99	181	08:10:27.200	165DC4B	7VECT		Inert vect update UTC	4R3	4	0	5,061,455:89:0	
250	99	181	08:10:28.533	117DC105A106A4A	**7STRP**	**0.017852,0.0,0,0**	**Slew =,0.03**	4R3	4	0	5,061,456:00:0	
251	99	181	08:10:28.533	431MB6A	6RCSEL	DDSSEL,PLSNCG,EP	Record Select (DDS onl	4R3	4	0	5,061,456:00:0	
252	99	181	08:20:27.866	117DC105A106A4B	**7STRP**	**-0.021003,0.0060**	**Slew =,4.01**	4R3	4	0	5,061,465:80:0	
253	99	181	08:20:40.533	117DC105A106A4C	**7STRP**	**0.017852,0.0,0,0**	**Slew =,0.03**	4R3	4	0	5,061,466:08:0	
254	99	181	08:30:39.866	117DC11A	**CSMOS**	GE	***** GROUP END CSMOS	4R3	4	0	5,061,475:88:0	
255	99	181	08:31:40.533	432NC431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	4R3	4	0	5,061,476:88:0	
256	99	181	08:31:41.200	432NC6A	6RTSL1		R/T Select of DDS and	4R3	4	0	5,061,476:89:0	
257	99	181	08:32:31.866	175DC422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,061,477:74:0	
258	99	181	08:32:31.866		DMS:	**: *RUNDOWN**	R28, TRACK 2, REV, TIC * 761.98 +/- 1	4R3	4	0	5,061,477:74:0	
259	99	181	08:32:33.066		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 761.68 +/- 1	4R3	4	0	5,061,477:75:8	
260	**99**	**181**	**08:32:47.200**	**21CNFEATRE03-**		**-----STOP-------**		**4R3**	**4**	**0**	**: :**	
261	99	181	08:39:28.533	488AE6A	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	4R3	4	0	5,061,484:62:0	
262	99	181	08:40:47.866	165DD4A	**7SCAN**	**NORM,48.546,20.7**	**Check S/P Position**	4R3	4	0	5,061,485:90:0	
263	99	181	08:43:45.866	127DD	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	5,061,488:84:0	
264	**99**	**181**	**08:43:46.533**	**127DD4A**	**37ETB**	**07,C7,02,30,18,0**	**Loads wavelength edit table**	**4R3**	**4**	**0**	**5,061,488:85:0**	
265	99	181	08:43:54.533	127DD11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	5,061,489:06:0	
266	99	181	08:44:39.200	175DD422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	4R3	4	0	5,061,489:73:0	
267	99	181	08:44:39.200		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 761.68 +/- 1	4R3	4	0	5,061,489:73:0	
268	99	181	08:44:40.600		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 761.80 +/- 1	4R3	4	0	5,061,489:75:1	
269	99	181	08:44:41.866	117DD	**CSMOS**	GS	***** GROUP START CSMOS	4R3	4	0	5,061,489:77:0	
270	99	181	08:44:45.866		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 763.03 +/- 1	4R3	4	0	5,061,489:83:0	
271	99	181	08:44:47.066		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 763.09 +/- 1	4R3	4	0	5,061,489:84:8	
272	99	181	08:44:47.866	175DD176A6A	6TMREC	**LPU**	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	4R3	4	0	5,061,489:86:0	
273	99	181	08:44:48.466		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC 762.97 +/- 1	4R3	4	0	5,061,489:86:9	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	99	181	08:44:48.466		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 762.97 +/- 1	4R3	4	0	5,061,489:86:9	
275	99	181	08:44:49.866	165DD4B	7VECT		Inert vect update UTC	4R3	4	0	5,061,489:89:0	
276	99	181	08:44:51.200	117DD105A106A4A	**7STRP**	**0.00885,0.0,0,0,**	**Slew =,0.03**	4R3	4	0	5,061,490:00:0	
277	**99**	**181**	**08:44:51.200**	**21CNFEATRE04-**	**NIMPBK**	**301DE**	**CALLISTO FEATURE OBSERVATION**	**4R3**	**4**	**0**	**: :**	
278	**99**	**181**	**08:44:55.200**	**21CNFEATRE04-**		**-----START------**		**4R3**	**4**	**0**	**: :**	
279	**99**	**181**	**08:48:26.333**	**21CNFEATRE04-**	**NIMPBK**	**301DC**	**CALLISTO FEATURE OBSERVATION**	**4R3**	**4**	**0**	**: :**	
280	**99**	**181**	**08:48:31.200**	**21CNFEATRE04-**	**DESELC**	**300DE**	**CALLISTO FEATURE OBSERVATION**	**4R3**	**4**	**0**	**: :**	
281	**99**	**181**	**08:49:47.000**	**21CNFEATRE04-**	**DESELC**	**300DC**	**CALLISTO FEATURE OBSERVATION**	**4R3**	**4**	**0**	**: :**	
282	99	181	08:49:47.200	117DD105A106A4B	**7STRP**	**-0.00885,0.00700**	**Slew =12.01**	4R3	4	0	5,061,494:80:0	
283	99	181	08:49:59.200	117DD105A106A4C	**7STRP**	**0.00885,0.0,0,0,**	**Slew =,0.03**	4R3	4	0	5,061,495:07:0	
284	99	181	08:54:55.200	117DD11A	**CSMOS**	GE	***** GROUP END CSMOS	4R3	4	0	5,061,499:87:0	
285	99	181	08:54:57.200	165DA4A	**7SCAN**	**NORM,52.904,23.4**	**Check S/P Position**	4R3	4	0	5,061,499:90:0	
286	**99**	**181**	**08:55:01.866**	**21CNFEATRE04-**		**-----STOP-------**		**4R3**	**4**	**0**	**: :**	
287	99	181	08:55:01.866		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 619.21 +/- 1	4R3	4	0	5,061,500:06:0	
288	99	181	08:55:01.866	175DD6A	6TMREC	**NRC**	NO RECORD Record Mode Change	4R3	4	0	5,061,500:06:0	
289	99	181	08:55:01.866	175DD422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,061,500:06:0	
290	99	181	08:55:03.066		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 619.15 +/- 1	4R3	4	0	5,061,500:07:8	
291	99	181	08:55:53.866	127DA	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	5,061,500:84:0	
292	**99**	**181**	**08:55:53.866**	**127DA4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**4R3**	**4**	**0**	**5,061,500:84:0**	
293	**99**	**181**	**08:55:54.533**	**127DA4B**	**37ETB**	**07,C7,02,30,18,0**	**Loads wavelength edit table**	**4R3**	**4**	**0**	**5,061,500:85:0**	
294	99	181	08:56:02.533	127DA11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	5,061,501:06:0	
295	**99**	**181**	**08:56:15.866**	**21CNFEATRE01-**		**-----START------**		**4R3**	**4**	**0**	**: :**	
296	99	181	08:57:47.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 619.15 +/- 1	4R3	4	0	5,061,502:73:0	
297	99	181	08:57:47.866	175DA422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	4R3	4	0	5,061,502:73:0	
298	99	181	08:57:49.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 619.27 +/- 1	4R3	4	0	5,061,502:75:1	
299	99	181	08:57:50.533	117DA	**CSMOS**	GS	***** GROUP START CSMOS	4R3	4	0	5,061,502:77:0	
300	99	181	08:57:54.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 620.50 +/- 1	4R3	4	0	5,061,502:83:0	
301	99	181	08:57:55.733		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC * 620.56 +/- 1	4R3	4	0	5,061,502:84:8	
302	99	181	08:57:56.533	175DA176A6A	6TMREC	**LPU**	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	4R3	4	0	5,061,502:86:0	
303	99	181	08:57:57.133		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC * 620.44 +/- 1	4R3	4	0	5,061,502:86:9	
304	99	181	08:57:57.133		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC 620.44 +/- 1	4R3	4	0	5,061,502:86:9	
305	99	181	08:57:58.533	165DA4B	7VECT		Inert vect update UTC	4R3	4	0	5,061,502:89:0	
306	99	181	08:57:59.866	117DA105A106A4A	**7STRP**	**0.023004,0.0,0,0**	**Slew =,0.03**	4R3	4	0	5,061,503:00:0	
307	99	181	09:11:01.200	117DA105A106A4B	**7STRP**	**-0.022004,0.0120**	**Slew =12.01**	4R3	4	0	5,061,515:80:0	
308	99	181	09:11:12.533	117DA105A106A4C	**7STRP**	**0.023004,0.0,0,0**	**Slew =,0.03**	4R3	4	0	5,061,516:06:0	
309	99	181	09:17:52.533	488AE6B	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4R3	4	0	5,061,522:60:0	
310	99	181	09:24:01.866	175DA6A	6TMREC	**NRC**	NO RECORD Record Mode Change	4R3	4	0	5,061,528:68:0	
311	99	181	09:24:01.866		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC * 253.71 +/- 1	4R3	4	0	5,061,528:68:0	
312	99	181	09:24:01.866	175DA422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,061,528:68:0	
313	99	181	09:24:03.066		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 253.65 +/- 1	4R3	4	0	5,061,528:69:8	
314	99	181	09:24:13.866	117DA11A	**CSMOS**	GE	***** GROUP END CSMOS	4R3	4	0	5,061,528:86:0	
315	**99**	**181**	**09:24:47.866**	**21CNFEATRE01-**		**-----STOP-------**		**4R3**	**4**	**0**	**: :**	
316	**99**	**181**	**09:25:21.866**	**21CNFEATRE02-**		**-----START------**		**4R3**	**4**	**0**	**: :**	
317	99	181	09:26:11.866	465KC6A	6DTRN	CMD,6DTRN,465KC6	DMS TRACK TURNAROUND	4R3	4	0	5,061,530:81:0	
318	99	181	09:26:11.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 253.65 +/- 1	4R3	4	0	5,061,530:81:0	
319	99	181	09:26:11.866		DMS:	: *DMS-TURN	P7, TRACK 2, REV, TIC 253.65 +/- 1	4R3	4	0	5,061,530:81:0	
320	99	181	09:26:13.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 253.77 +/- 1	4R3	4	0	5,061,530:83:1	
321	99	181	09:26:13.866	127DB	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	5,061,530:84:0	
322	**99**	**181**	**09:26:14.533**	**127DB4A**	**37ETB**	**07,C7,02,30,18,0**	**Loads wavelength edit table**	**4R3**	**4**	**0**	**5,061,530:85:0**	
323	99	181	09:26:18.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 255.00 +/- 1	4R3	4	0	5,061,531:00:0	
324	99	181	09:26:19.733		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC * 255.06 +/- 1	4R3	4	0	5,061,531:01:8	
325	99	181	09:26:21.133		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC * 254.94 +/- 1	4R3	4	0	5,061,531:03:9	
326	99	181	09:26:22.533	127DB11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	5,061,531:06:0	
327	99	181	09:30:16.066		DMS:	: *REVERSE	P7, TRACK 2, REV, TIC * 199.87 +/- 1	4R3	4	0	5,061,534:83:3	
328	99	181	09:30:17.266		DMS:	: *TURNARND	P7, TRACK *3, *FWD, TIC * 199.81 +/- 1	4R3	4	0	5,061,534:85:1	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	99	181	09:30:17.266		DMS:	: *RUNUP	P7, TRACK 3, FWD, TIC 199.81 +/- 1	4R3	4	0	5,061,534:85:1	
330	99	181	09:30:18.666		DMS:	: *AT_SPD	P7, TRACK 3, FWD, TIC * 199.93 +/-	4R3	4	0	5,061,534:87:2	
331	99	181	09:30:30.666		DMS:	: *AUTOSTOP	P7, TRACK 3, FWD, TIC * 202.06 +/-	4R3	4	0	5,061,535:14:2	
332	99	181	09:30:31.866		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 202.12 +/-	4R3	4	0	5,061,535:16:0	
333	99	181	09:33:15.200		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 202.12 +/-	4R3	4	0	5,061,537:79:0	
334	99	181	09:33:15.200	465KG6A	6DMSC	P7,3	DMS Control Tape P/B 7.68kbps	4R3	4	0	5,061,537:79:0	
335	99	181	09:33:21.866		DMS:	: *RUNUP	P7, TRACK *3, FWD, TIC 202.12 +/-	4R3	4	0	5,061,537:89:0	
336	99	181	09:33:23.266		DMS:	: *P_SLEW	P7, TRACK 3, FWD, TIC * 202.24 +/-	4R3	4	0	5,061,538:00:1	
337	99	181	09:33:23.266		DMS:	: *AT_SPD	P7, TRACK 3, FWD, TIC 202.24 +/-	4R3	4	0	5,061,538:00:1	
338	99	181	09:34:23.200	165DB4A	**7SCAN**	**NORM,53.703,21.8**	**Check S/P Position**	4R3	4	0	5,061,538:90:0	
339	99	181	09:34:30.533		DMS:	**: *RUNDOWN**	P7, TRACK 3, FWD, TIC * 218.01 +/-	4R3	4	0	5,061,539:10:0	
340	99	181	09:34:30.533	465KG6B	6DMSC	RDY,3	DMS Control Tape stop	4R3	4	0	5,061,539:10:0	
341	99	181	09:34:31.733		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 218.07 +/-	4R3	4	0	5,061,539:11:8	
342	99	181	09:36:13.866		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 218.07 +/-	4R3	4	0	5,061,540:74:0	
343	99	181	09:36:13.866	175DB422A6A	6DMSC	R7,3	DMS Control	4R3	4	0	5,061,540:74:0	
344	99	181	09:36:15.866	117DB	**CSMOS**	GS	***** GROUP START CSMOS	4R3	4	0	5,061,540:77:0	
345	99	181	09:36:20.533		DMS:	: *RUNUP	R7, TRACK *3, FWD, TIC 218.07 +/-	4R3	4	0	5,061,540:84:0	
346	99	181	09:36:21.866	175DB176A6A	6TMREC	**LPU**	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	4R3	4	0	5,061,540:86:0	
347	99	181	09:36:21.933		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 218.19 +/-	4R3	4	0	5,061,540:86:1	
348	99	181	09:36:21.933		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC * 218.19 +/-	4R3	4	0	5,061,540:86:1	
349	99	181	09:36:23.866	165DB4B	7VECT		Inert vect update UTC	4R3	4	0	5,061,540:89:0	
350	99	181	09:36:25.200	117DB105A106A4A	**7STRP**	**0.017902,0.0,0,0**	**Slew =,0.03**	4R3	4	0	5,061,541:00:0	
351	99	181	09:46:24.533	117DB105A106A4B	**7STRP**	**-0.017302,0.0080**	**Slew =12.01**	4R3	4	0	5,061,550:80:0	
352	99	181	09:46:36.533	117DB105A106A4C	**7STRP**	**0.017902,0.0,0,0**	**Slew =,0.03**	4R3	4	0	5,061,551:07:0	
353	**99**	**181**	**09:48:37.200**	**21CNFEATRE02-**		**-----STOP-------**		**4R3**	**4**	**0**	**: :**	
354	99	181	09:56:27.200		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC * 500.67 +/-	4R3	4	0	5,061,560:74:0	
355	99	181	09:56:27.200	175DB422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,061,560:74:0	
356	99	181	09:56:27.200	175DB6A	6TMREC	**NRC**	NO RECORD Record Mode Change	4R3	4	0	5,061,560:74:0	
357	99	181	09:56:28.400		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 500.73 +/-	4R3	4	0	5,061,560:75:8	
358	99	181	09:56:35.866	117DB11A	**CSMOS**	GE	***** GROUP END CSMOS	4R3	4	0	5,061,560:87:0	
359	99	181	09:59:59.866	444UX443A4A	**7MODE**	**CRU**	AACS CRUISE MODE	4R3	4	0	5,061,564:29:0	
360	99	181	10:05:23.200	488AE6C	6TMSED	FILL,DL4	Sci, Eng, and D/L Chan	4R3	4	0	5,061,569:59:0	
361	99	181	10:44:02.533	488AE6D	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	4R3	4	0	5,061,607:80:0	
362	99	181	16:45:07.200	165CA4A	7SCAN	NORM,57.581,22.1	Check S/P Position	4R3	4	0	5,061,964:90:0	
363	99	181	16:49:09.200	165CA4B	7VECT		Inert vect update UTC	4R3	4	0	5,061,968:89:0	
364	99	181	17:11:28.533	488AF6A	6TMSED	NORM,DL5	Sci, Eng, and D/L Chan	4R3	4	0	5,061,991:05:0	
365	99	181	17:33:06.533	488AF6B	6TMSED	FILL,DL5	Sci, Eng, and D/L Chan	4R3	4	0	5,062,012:41:0	
366	99	181	17:59:13.200	165CK4A	7SCAN	NORM,57.638,22.1	Check S/P Position	4R3	4	0	5,062,038:25:0	
367	99	181	17:59:55.866	165CK4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,038:89:0	
368	99	181	18:02:12.533	488AF6C	6TMSED	NORM,DL5	Sci, Eng, and D/L Chan	4R3	4	0	5,062,041:21:0	
369	99	181	19:09:32.533	165CL4A	7SCAN	NORM,57.676,22.1	Check S/P Position	4R3	4	0	5,062,107:75:0	
370	99	181	19:10:42.533	165CL4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,108:89:0	
371	99	181	20:20:59.866	165CB4A	7SCAN	NORM,57.189,22.0	Check S/P Position	4R3	4	0	5,062,178:45:0	
372	99	181	20:21:29.200	165CB4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,178:89:0	
373	99	181	20:41:13.200	165CC4A	7SCAN	NORM,56.817,21.9	Check S/P Position	4R3	4	0	5,062,198:45:0	
374	99	181	20:41:42.533	165CC4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,198:89:0	
375	99	181	21:01:26.533	165CD4A	7SCAN	NORM,55.94,21.64	Check S/P Position	4R3	4	0	5,062,218:45:0	
376	99	181	21:01:55.866	165CD4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,218:89:0	
377	99	181	21:44:47.866	488AF6D	6TMSED	FILL,DL5	Sci, Eng, and D/L Chan	4R3	4	0	5,062,261:34:0	
378	99	181	21:44:59.866	488AF6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4R3	4	0	5,062,261:52:0	
379	99	181	21:48:48.533	488AG6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4R3	4	0	5,062,265:31:0	
380	99	181	22:46:05.200	165CE4A	7SCAN	NORM,57.71,22.17	Check S/P Position	4R3	4	0	5,062,321:90:0	
381	99	181	22:50:07.200	165CE4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,325:89:0	
382	99	182	01:16:44.533	165CF4A	7SCAN	NORM,57.707,22.1	Check S/P Position	4R3	4	0	5,062,470:90:0	
383	99	182	01:20:46.533	165CF4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,474:89:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	99	182	02:30:33.200	165CM4A	7SCAN	NORM,57.706,22.1	Check S/P Position	4R3	4	0	5,062,543:90:0	
385	99	182	02:31:33.200	165CM4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,544:89:0	
386	99	182	03:19:05.866		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 500.73 +/-	4R3	4	0	5,062,592:00:0	
387	99	182	03:19:05.866	411JA6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	4R3	4	0	5,062,592:00:0	
388	99	182	03:19:12.533		DMS:	: *RUNUP	R7, TRACK *3, FWD, TIC 500.73 +/-	4R3	4	0	5,062,592:10:0	
389	99	182	03:19:13.933		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 500.85 +/-	4R3	4	0	5,062,592:12:1	
390	99	182	03:19:13.933		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC * 500.85 +/-	4R3	4	0	5,062,592:12:1	
391	99	182	03:19:15.866	411JA6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	4R3	4	0	5,062,592:15:0	
392	99	182	03:21:17.200	411JA6C	6TMREC	**NRC**	NO RECORD Record Mode Change	4R3	4	0	5,062,594:15:0	
393	99	182	03:21:17.866	411JA6D	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,062,594:16:0	
394	99	182	03:21:17.866		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC * 529.90 +/-	4R3	4	0	5,062,594:16:0	
395	99	182	03:21:19.066		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 529.96 +/-	4R3	4	0	5,062,594:17:8	
396	99	182	03:41:09.866	165CN4A	7SCAN	NORM,57.708,22.1	Check S/P Position	4R3	4	0	5,062,613:75:0	
397	99	182	03:42:19.866	165CN4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,614:89:0	
398	99	182	04:52:37.200	165CG4A	7SCAN	NORM,57.21,22.02	Check S/P Position	4R3	4	0	5,062,684:45:0	
399	99	182	04:53:06.533	165CG4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,684:89:0	
400	99	182	05:12:50.533	165CH4A	7SCAN	NORM,56.837,21.9	Check S/P Position	4R3	4	0	5,062,704:45:0	
401	99	182	05:13:19.866	165CH4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,704:89:0	
402	99	182	05:33:03.866	165CI4A	7SCAN	NORM,55.962,21.6	Check S/P Position	4R3	4	0	5,062,724:45:0	
403	99	182	05:33:33.200	165CI4B	7VECT		Inert vect update UTC	4R3	4	0	5,062,724:89:0	
404	99	182	06:59:59.866	481UG4A	7VECT	BB1	Inert vect update UTC	4R3	4	0	5,062,810:43:0	
405	99	182	07:29:51.200		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 529.96 +/-	4R3	4	0	5,062,840:00:0	
406	99	182	07:29:51.200		DMS:	: *SLEW-TIC	P7, TRACK *1, FWD, TIC 529.96 +/-	4R3	4	0	5,062,840:00:0	
407	99	182	07:29:51.200	465KX6A	6DMST	6000	DMS Slew to TIC	4R3	4	0	5,062,840:00:0	
408	99	182	07:29:57.866		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 529.96 +/-	4R3	4	0	5,062,840:10:0	
409	99	182	07:29:59.266		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 530.08 +/-	4R3	4	0	5,062,840:12:1	
410	99	182	08:38:08.533	488AH6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4R3	4	0	5,062,907:49:0	
411	99	182	08:48:00.533	488AH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4R3	4	0	5,062,917:27:0	
412	99	182	09:44:59.866	480ZA6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	4R3	4	0	5,062,973:60:0	
413	99	182	09:51:39.866	480ZA6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	4R3	4	0	5,062,980:23:0	
414	99	182	10:32:32.533	488AH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4R3	4	0	5,063,020:62:0	
415	99	182	11:21:23.200	165CJ4A	7SCAN	NORM,285.161999,	Check S/P Position	4R3	4	0	5,063,068:90:0	
416	99	182	11:25:25.200	165CJ4B	7VECT		Inert vect update UTC	4R3	4	0	5,063,072:89:0	
417	99	182	11:45:37.200	165CJ4C	7VECT		Inert vect update UTC	4R3	4	0	5,063,092:87:0	
418	99	182	12:05:49.200	165CJ4D	7VECT		Inert vect update UTC	4R3	4	0	5,063,112:85:0	
419	99	182	12:14:59.866	488AH6D	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	4R3	4	0	5,063,122:01:0	
420	99	182	12:26:05.800	165CZ4A	7SCAN	NORM,289.040997,	Check S/P Position	4R3	4	0	5,063,132:90:0	
421	99	182	12:27:05.800	165CZ4B	7VECT		Inert vect update UTC	4R3	4	0	5,063,133:89:0	
422	99	182	12:48:39.800	165CZ4C	7VECT		Inert vect update UTC	4R3	4	0	5,063,155:28:0	
423	99	182	13:10:13.800	165CZ4D	7VECT		Inert vect update UTC	4R3	4	0	5,063,176:58:0	
424	99	182	13:58:47.933		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *5997.94 +/-	4R3	4	0	5,063,224:61:2	
425	99	182	13:58:49.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5998.00 +/-	4R3	4	0	5,063,224:63:0	
426	99	182	14:44:37.800		DMS:	: *SLEW-TIC	P7, TRACK *2, *REV, TIC 5998.00 +/-	4R3	4	0	5,063,270:00:0	
427	99	182	14:44:37.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5998.00 +/-	4R3	4	0	5,063,270:00:0	
428	99	182	14:44:37.800	465KY6A	6DMST	535	DMS Slew to TIC	4R3	4	0	5,063,270:00:0	
429	99	182	14:44:39.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5998.12 +/-	4R3	4	0	5,063,270:02:1	
430	99	182	14:44:44.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5999.35 +/-	4R3	4	0	5,063,270:10:0	
431	99	182	14:44:45.666		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC *5999.41 +/-	4R3	4	0	5,063,270:11:8	
432	99	182	14:44:47.066		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC *5999.29 +/-	4R3	4	0	5,063,270:13:9	
433	99	182	14:54:59.800	480ZB6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	4R3	4	0	5,063,280:23:0	
434	99	182	15:01:39.800	480ZB6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	4R3	4	0	5,063,286:77:0	
435	99	182	15:58:56.466	488AI6A	6TMSED	NORM,EL4	Sci, Eng, and D/L Chan	4R3	4	0	5,063,343:45:0	
436	**99**	**182**	**16:28:50.466**	**20EC5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**4R3**	**4**	**0**	**5,063,373:06:0**	
437	**99**	**182**	**16:28:50.467**	**21NNRELOAD02-**		**-----START------**		**4R3**	**4**	**0**	**: :**	
438	**99**	**182**	**16:28:51.800**	**20EC5B**	**37MRL**		**Memory Realocate (software operates from R**	**4R3**	**4**	**0**	**5,063,373:08:0**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	**99**	**182**	**16:28:53.133**	**20EC6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**4R3**	**4**	**0**	**5,063,373:10:0**	
440	**99**	**182**	**16:29:03.133**	**20EC6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**4R3**	**4**	**0**	**5,063,373:25:0**	
441	**99**	**182**	**16:29:13.133**	**20EC5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**5,063,373:40:0**	
442	**99**	**182**	**16:29:33.133**	**20EC5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**5,063,373:70:0**	
443	**99**	**182**	**16:29:55.800**	**20EC4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,063,374:13:0**	
444	**99**	**182**	**16:30:56.466**	**20EC4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,063,375:13:0**	
445	**99**	**182**	**16:31:52.467**	**21JNJUPRTS02***		**-----START------**		**2R3**	**4**	**0**	**: :**	
446	**99**	**182**	**16:31:52.467**	**21NNRELOAD02-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
447	99	182	16:32:48.466	165DF4A	**7SCAN**	**NORM,271.257,-25**	**Check S/P Position**	2R3	4	0	5,063,376:90:0	
448	99	182	16:33:45.133	125LC	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	5,063,377:84:0	
449	**99**	**182**	**16:33:45.133**	**125LC4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**5,063,377:84:0**	
450	**99**	**182**	**16:34:45.800**	**125LC4B**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**5,063,378:84:0**	
451	99	182	16:34:45.800	125LC11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	5,063,378:84:0	
452	99	182	16:35:46.466	127LB	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	5,063,379:84:0	
453	**99**	**182**	**16:35:46.466**	**127LB4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,063,379:84:0**	
454	**99**	**182**	**16:35:47.133**	**127LB4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**5,063,379:85:0**	
455	99	182	16:35:55.133	127LB11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	5,063,380:06:0	
456	**99**	**182**	**16:36:11.133**	**432DC6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**2R3**	**4**	**0**	**5,063,380:30:0**	
457	99	182	16:36:42.466	117DF	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	5,063,380:77:0	
458	99	182	16:36:51.800	117DF105A106A4A	**7STRP**	**-0.016902,0.0,0,**	**Slew =,0.03**	2R3	4	0	5,063,381:00:0	
459	**99**	**182**	**16:46:16.466**	**432DD6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**2R3**	**4**	**0**	**5,063,390:28:0**	
460	99	182	16:46:17.133	117DF11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	5,063,390:29:0	
461	**99**	**182**	**16:47:02.467**	**21JNJUPRTS02***		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
462	**99**	**182**	**16:47:54.466**	**125LD4A**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**5,063,391:84:0**	
463	99	182	16:47:54.466	125LD11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	5,063,391:84:0	
464	99	182	16:47:54.466	125LD	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	5,063,391:84:0	
465	99	182	17:01:00.466	432SG6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,404:80:0	
466	99	182	17:07:12.466	488AI6B	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	2R3	4	0	5,063,411:01:0	
467	99	182	20:29:59.800	480ZC6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	2R3	4	0	5,063,611:52:0	
468	99	182	20:36:39.800	480ZC6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	2R3	4	0	5,063,618:15:0	
469	99	182	21:13:11.933		DMS:	**: *RUNDOWN**	P7, TRACK 2, REV, TIC * 537.06 +/-	2R3	4	0	5,063,654:27:2	
470	99	182	21:13:13.133		DMS:	: *READY	RDY, TRACK 2, REV, TIC * 537.00 +/-	2R3	4	0	5,063,654:29:0	
471	99	182	21:35:43.133	432OC431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,676:52:0	
472	99	182	21:35:43.800	432OC6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,676:53:0	
473	99	182	21:47:43.133	432OK431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,688:40:0	
474	99	182	21:47:43.800	432OK6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,688:41:0	
475	99	182	21:59:24.466	465KZ6A	6DMSC	RDY,3	DMS Control Tape stop	2R3	4	0	5,063,700:00:0	
476	99	182	21:59:24.466		DMS:	: READY	RDY, TRACK *3, *FWD, TIC 537.00 +/-	2R3	4	0	5,063,700:00:0	
477	99	182	22:11:31.800	165GC4A	7SCAN	NORM,330.815998,	Check S/P Position	2R3	4	0	5,063,711:90:0	
478	99	182	22:11:43.133	432OE431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,712:16:0	
479	99	182	22:11:43.800	432OE6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,712:17:0	
480	99	182	22:14:34.466	176GC6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	5,063,715:00:0	
481	99	182	22:15:25.800	117GC	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	5,063,715:77:0	
482	99	182	22:15:35.133	117GC105A106A4A	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,716:00:0	
483	99	182	22:16:35.133	117GC105A106A4B	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,716:90:0	
484	99	182	22:16:40.466	117GC105A106A4C	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,717:07:0	
485	99	182	22:17:40.466	117GC105A106A4D	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,718:06:0	
486	99	182	22:17:45.800	117GC105A106A4E	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,718:14:0	
487	99	182	22:18:45.800	117GC105A106A4F	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,719:13:0	
488	99	182	22:18:51.133	117GC105A106A4G	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,719:21:0	
489	99	182	22:19:51.133	117GC105A106A4H	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,720:20:0	
490	99	182	22:19:56.466	117GC105A106A4I	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,720:28:0	
491	99	182	22:20:56.466	117GC105A106A4J	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,721:27:0	
492	99	182	22:21:01.800	117GC105A106A4K	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,721:35:0	
493	99	182	22:22:01.800	117GC105A106A4L	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,722:34:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	99	182	22:22:07.133	117GC105A106A4M	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,722:42:0	
495	99	182	22:23:07.133	117GC105A106A4N	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,723:41:0	
496	99	182	22:23:12.466	117GC105A106A4O	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,723:49:0	
497	99	182	22:23:43.133	432PY431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,724:04:0	
498	99	182	22:23:43.800	432PY6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,724:05:0	
499	99	182	22:24:12.466	117GC105A106A4P	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,724:48:0	
500	99	182	22:24:17.800	117GC105A106A4Q	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,724:56:0	
501	99	182	22:25:17.800	117GC105A106A4R	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,725:55:0	
502	99	182	22:25:23.133	117GC105A106A4S	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,725:63:0	
503	99	182	22:26:23.133	117GC105A106A4T	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,726:62:0	
504	99	182	22:26:28.466	117GC105A106A4U	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,726:70:0	
505	99	182	22:27:28.466	117GC105A106A4V	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,727:69:0	
506	99	182	22:27:33.800	117GC105A106A4W	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,727:77:0	
507	99	182	22:28:28.466		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 537.00 +/-	2R3	4	0	5,063,728:68:0	
508	99	182	22:28:28.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,063,728:68:0	
509	99	182	22:28:33.800	117GC105A106A4X	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,728:76:0	
510	99	182	22:28:35.133		DMS:	: *RUNUP	R7, TRACK *3, FWD, TIC 537.00 +/-	2R3	4	0	5,063,728:78:0	
511	99	182	22:28:36.533		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC * 537.12 +/-	2R3	4	0	5,063,728:80:1	
512	99	182	22:28:39.133	117GC105A106A4Y	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,728:84:0	
513	99	182	22:28:56.466		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC * 541.79 +/-	2R3	4	0	5,063,729:19:0	
514	99	182	22:29:19.133		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC * 547.10 +/-	2R3	4	0	5,063,729:53:0	
515	99	182	22:29:19.133	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,063,729:53:0	
516	99	182	22:29:20.333		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 547.16 +/-	2R3	4	0	5,063,729:54:8	
517	99	182	22:29:39.133	117GC105A106A4Z	7STRP	0.017352,-0.0010	Slew =12.01	2R3	4	0	5,063,729:83:0	
518	99	182	22:29:44.466	117GC105A106A4AA	7STRP	-0.015401,0.0,0,	Slew =,0.27	2R3	4	0	5,063,730:00:0	
519	99	182	22:30:44.466	117GC11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	5,063,730:90:0	
520	99	182	22:31:15.133	176GC6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	5,063,731:45:0	
521	99	182	22:31:17.133	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,063,731:48:0	
522	99	182	22:31:17.133		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 547.16 +/-	2R3	4	0	5,063,731:48:0	
523	99	182	22:31:23.800		DMS:	: *RUNUP	R7, TRACK *3, FWD, TIC 547.16 +/-	2R3	4	0	5,063,731:58:0	
524	99	182	22:31:25.200		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC * 547.28 +/-	2R3	4	0	5,063,731:60:1	
525	99	182	22:31:27.133		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC * 547.74 +/-	2R3	4	0	5,063,731:63:0	
526	99	182	22:31:38.466	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,063,731:80:0	
527	99	182	22:31:38.466		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC * 550.39 +/-	2R3	4	0	5,063,731:80:0	
528	99	182	22:31:39.666		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 550.45 +/-	2R3	4	0	5,063,731:81:8	
529	99	182	22:47:43.133	432OG431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,747:71:0	
530	99	182	22:47:43.800	432OG6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,747:72:0	
531	99	182	22:59:43.133	432NH431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,759:59:0	
532	99	182	22:59:43.800	432NH6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,759:60:0	
533	99	182	23:23:43.133	432OI431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,783:35:0	
534	99	182	23:23:43.800	432OI6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,783:36:0	
535	99	182	23:35:43.133	432NJ431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,795:23:0	
536	99	182	23:35:43.800	432NJ6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,795:24:0	
537	99	182	23:52:28.466	175MA422A6A	6DMSC	R7,3	DMS Control	2R3	4	0	5,063,811:75:0	
538	99	182	23:52:28.466		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 550.45 +/-	2R3	4	0	5,063,811:75:0	
539	99	182	23:52:35.133		DMS:	: *RUNUP	R7, TRACK *3, FWD, TIC 550.45 +/-	2R3	4	0	5,063,811:85:0	
540	99	182	23:52:36.466	282NB431A6A	6RCSEL	DDSNCG,PLSSEL,EP	Record Select (DDS onl	2R3	4	0	5,063,811:87:0	
541	99	182	23:52:36.466	175MA176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	5,063,811:87:0	
542	99	182	23:52:36.533		DMS:	**: *RECORD**	R7, TRACK 3, FWD, TIC * 550.57 +/-	2R3	4	0	5,063,811:87:1	
543	99	182	23:52:36.533		DMS:	: *AT_SPD	R7, TRACK 3, FWD, TIC 550.57 +/-	2R3	4	0	5,063,811:87:1	
544	99	182	23:52:39.133	431OA6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS onl	2R3	4	0	5,063,812:00:0	
545	99	183	00:05:20.466	488AJ6A	6TMSED	NORM,EL4	Sci, Eng, and D/L Chan	2R3	4	0	5,063,824:50:0	
546	99	183	01:09:20.466	488AJ6B	6TMSED	NORM,EL3	Sci, Eng, and D/L Chan	2R3	4	0	5,063,887:77:0	
547	99	183	01:53:58.466	432OA431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,931:90:0	
548	99	183	01:53:59.133	432OA6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,932:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	99	183	01:54:01.133		DMS:	**: *RUNDOWN**	R7, TRACK 3, FWD, TIC *2257.90 +/-	2R3	4	0	5,063,932:03:0	
550	99	183	01:54:01.133	175MA422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,063,932:03:0	
551	99	183	01:54:02.333		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *2257.96 +/-	2R3	4	0	5,063,932:04:8	
552	99	183	01:54:05.133	282NC431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R3	4	0	5,063,932:09:0	
553	99	183	01:54:23.133	432OM431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,932:36:0	
554	99	183	01:54:23.800	432OM6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,932:37:0	
555	99	183	01:54:53.800	282NC432A431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2R3	4	0	5,063,932:82:0	
556	99	183	01:54:54.466	282NC432A6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,932:83:0	
557	99	183	02:02:40.466	488AJ6C	6TMSED	NORM,EL4	Sci, Eng, and D/L Chan	2R3	4	0	5,063,940:54:0	
558	99	183	02:06:23.133	432NL431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,944:24:0	
559	99	183	02:06:23.800	432NL6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,944:25:0	
560	99	183	02:30:23.133	432OO431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,968:00:0	
561	99	183	02:30:23.800	432OO6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,968:01:0	
562	99	183	02:40:04.466	488AJ6D	6TMSED	FILL,EL4	Sci, Eng, and D/L Chan	2R3	4	0	5,063,977:53:0	
563	99	183	02:42:23.133	432NN431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,063,979:79:0	
564	99	183	02:42:23.800	432NN6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,063,979:80:0	
565	99	183	02:44:59.800	480ZD6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	2R3	4	0	5,063,982:41:0	
566	99	183	02:51:39.800	480ZD6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	2R3	4	0	5,063,989:04:0	
567	99	183	03:06:23.133	432OQ431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,003:55:0	
568	99	183	03:06:23.800	432OQ6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,003:56:0	
569	99	183	03:13:43.133	488AJ6E	6TMSED	NORM,EL4	Sci, Eng, and D/L Chan	2R3	4	0	5,064,010:78:0	
570	99	183	03:18:23.133	432NP431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,015:43:0	
571	99	183	03:18:23.800	432NP6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,015:44:0	
572	99	183	03:42:23.133	432OS431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,039:19:0	
573	99	183	03:42:23.800	432OS6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,039:20:0	
574	99	183	03:51:15.800	165IZ4A	7SCAN	NORM,8.683,6.267	Check S/P Position	2R3	4	0	5,064,047:90:0	
575	99	183	03:54:23.133	432NR431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,051:07:0	
576	99	183	03:54:23.800	432NR6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,051:08:0	
577	99	183	03:55:19.800	165ID4A	7SCAN	NORM,12.688,7.10	Check S/P Position	2R3	4	0	5,064,052:01:0	
578	99	183	03:59:20.466	165ID4B	7VECT		Inert vect update UTC	2R3	4	0	5,064,055:89:0	
579	99	183	04:00:06.466	175IB422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,056:67:0	
580	99	183	04:00:06.466		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 2257.96 +/-	2R3	4	0	5,064,056:67:0	
581	99	183	04:00:13.133	118ID	**SMOS**	GS		2R3	4	0	5,064,056:77:0	
582	99	183	04:00:13.133		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 2257.96 +/-	2R3	4	0	5,064,056:77:0	
583	99	183	04:00:17.800	175IB176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,056:84:0	
584	99	183	04:00:18.400		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 2323.96 +/-	2R3	4	0	5,064,056:84:9	
585	99	183	04:00:18.400		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *2323.96 +/-	2R3	4	0	5,064,056:84:9	
586	99	183	04:00:23.133	118ID110A111A4A	7STRP	0.0,-0.007202,70	Slew =,3.51	2R3	4	0	5,064,057:01:0	
587	99	183	04:00:25.133	175IB422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,057:04:0	
588	99	183	04:00:25.133		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *2489.66 +/-	2R3	4	0	5,064,057:04:0	
589	99	183	04:00:27.866		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *2501.16 +/-	2R3	4	0	5,064,057:08:1	
590	99	183	04:00:29.800	175IC422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,057:11:0	
591	99	183	04:00:29.800		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 2501.16 +/-	2R3	4	0	5,064,057:11:0	
592	99	183	04:00:36.466		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 2501.16 +/-	2R3	4	0	5,064,057:21:0	
593	99	183	04:00:41.133	175IC176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,057:28:0	
594	99	183	04:00:41.733		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *2567.16 +/-	2R3	4	0	5,064,057:28:9	
595	99	183	04:00:41.733		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 2567.16 +/-	2R3	4	0	5,064,057:28:9	
596	99	183	04:00:48.466		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *2732.87 +/-	2R3	4	0	5,064,057:39:0	
597	99	183	04:00:48.466	175IC422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,057:39:0	
598	99	183	04:00:51.200		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *2744.37 +/-	2R3	4	0	5,064,057:43:1	
599	99	183	04:00:53.133	175ID422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,057:46:0	
600	99	183	04:00:53.133		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 2744.37 +/-	2R3	4	0	5,064,057:46:0	
601	99	183	04:00:59.800		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 2744.37 +/-	2R3	4	0	5,064,057:56:0	
602	99	183	04:01:04.466	175ID176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,057:63:0	
603	99	183	04:01:05.066		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 2810.37 +/- 1	2R3	4	0	5,064,057:63:9	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	99	183	04:01:05.066		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *2810.37 +/-	2R3	4	0	5,064,057:63:9	
605	99	183	04:01:11.800		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *2976.07 +/- 1	2R3	4	0	5,064,057:74:0	
606	99	183	04:01:11.800	175ID422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,057:74:0	
607	99	183	04:01:14.533		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *2987.57 +/- 1	2R3	4	0	5,064,057:78:1	
608	99	183	04:01:16.466		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 2987.57 +/- 1	2R3	4	0	5,064,057:81:0	
609	99	183	04:01:16.466	175IE422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,057:81:0	
610	99	183	04:01:23.133		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 2987.57 +/- 1	2R3	4	0	5,064,058:00:0	
611	99	183	04:01:27.800	175IE176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,058:07:0	
612	99	183	04:01:28.400		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *3053.57 +/- 1	2R3	4	0	5,064,058:07:9	
613	99	183	04:01:28.400		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 3053.57 +/- 1	2R3	4	0	5,064,058:07:9	
614	99	183	04:01:33.133	118ID110A111A4B	7STRP	-0.0072,0.0,0,0,	Slew =,8.01	2R3	4	0	5,064,058:15:0	
615	99	183	04:01:35.133	175IE422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,058:18:0	
616	99	183	04:01:35.133		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *3219.27 +/- 1	2R3	4	0	5,064,058:18:0	
617	99	183	04:01:37.866		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *3230.77 +/- 1	2R3	4	0	5,064,058:22:1	
618	99	183	04:01:39.800		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 3230.77 +/- 1	2R3	4	0	5,064,058:25:0	
619	99	183	04:01:39.800	175IF422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,058:25:0	
620	99	183	04:01:46.466		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 3230.77 +/- 1	2R3	4	0	5,064,058:35:0	
621	99	183	04:01:51.133	175IF176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,058:42:0	
622	99	183	04:01:51.733		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *3296.77 +/- 1	2R3	4	0	5,064,058:42:9	
623	99	183	04:01:51.733		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 3296.77 +/- 2	2R3	4	0	5,064,058:42:9	
624	99	183	04:01:56.466	118ID110A111A4C	7STRP	0.0,-0.007202,70	Slew =,3.51	2R3	4	0	5,064,058:50:0	
625	99	183	04:01:58.466	175IF422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,058:53:0	
626	99	183	04:01:58.466		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *3462.48 +/- 2	2R3	4	0	5,064,058:53:0	
627	99	183	04:02:01.200		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *3473.98 +/- 2	2R3	4	0	5,064,058:57:1	
628	99	183	04:02:03.133		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 3473.98 +/- 2	2R3	4	0	5,064,058:60:0	
629	99	183	04:02:03.133	175IG422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,058:60:0	
630	99	183	04:02:09.800		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 3473.98 +/- 2	2R3	4	0	5,064,058:70:0	
631	99	183	04:02:14.466	175IG176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,058:77:0	
632	99	183	04:02:15.066		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *3539.98 +/- 2	2R3	4	0	5,064,058:77:9	
633	99	183	04:02:15.066		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 3539.98 +/- 2	2R3	4	0	5,064,058:77:9	
634	99	183	04:02:21.800		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *3705.68 +/- 2	2R3	4	0	5,064,058:88:0	
635	99	183	04:02:21.800	175IG422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,058:88:0	
636	99	183	04:02:24.533		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *3717.18 +/- 2	2R3	4	0	5,064,059:01:1	
637	99	183	04:02:26.466		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 3717.18 +/- 2	2R3	4	0	5,064,059:04:0	
638	99	183	04:02:26.466	175IH422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,059:04:0	
639	99	183	04:02:33.133		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 3717.18 +/- 2	2R3	4	0	5,064,059:14:0	
640	99	183	04:02:37.800	175IH176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,059:21:0	
641	99	183	04:02:38.400		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *3783.18 +/- 2	2R3	4	0	5,064,059:21:9	
642	99	183	04:02:38.400		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 3783.18 +/- 3	2R3	4	0	5,064,059:21:9	
643	99	183	04:02:45.133	175IH422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,059:32:0	
644	99	183	04:02:45.133		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *3948.88 +/- 3	2R3	4	0	5,064,059:32:0	
645	99	183	04:02:47.866		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *3960.38 +/- 3	2R3	4	0	5,064,059:36:1	
646	99	183	04:02:49.800		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 3960.38 +/- 3	2R3	4	0	5,064,059:39:0	
647	99	183	04:02:49.800	175II422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,059:39:0	
648	99	183	04:02:56.466		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 3960.38 +/- 3	2R3	4	0	5,064,059:49:0	
649	99	183	04:03:01.133	175II176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,059:56:0	
650	99	183	04:03:01.733		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 4026.38 +/- 3	2R3	4	0	5,064,059:56:9	
651	99	183	04:03:01.733		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *4026.38 +/- 3	2R3	4	0	5,064,059:56:9	
652	99	183	04:03:06.466	118ID110A111A4D	7STRP	-0.0072,0.0,0,0,	Slew =,8.01	2R3	4	0	5,064,059:64:0	
653	99	183	04:03:08.466	175II422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,059:67:0	
654	99	183	04:03:08.466		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *4192.09 +/- 3	2R3	4	0	5,064,059:67:0	
655	99	183	04:03:11.200		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *4203.59 +/- 3	2R3	4	0	5,064,059:71:1	
656	99	183	04:03:13.133	175IJ422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,059:74:0	
657	99	183	04:03:13.133		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 4203.59 +/- 3	2R3	4	0	5,064,059:74:0	
658	99	183	04:03:19.800		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 4203.59 +/- 3	2R3	4	0	5,064,059:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	99	183	04:03:24.466	175IJ176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,060:00:0	
660	99	183	04:03:25.066		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 4269.59 +/- 3	2R3	4	0	5,064,060:00:9	
661	99	183	04:03:25.066		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *4269.59 +/- 3	2R3	4	0	5,064,060:00:9	
662	99	183	04:03:29.800	118ID110A111A4E	7STRP	0.0,-0.007202,70	Slew =,3.51	2R3	4	0	5,064,060:08:0	
663	99	183	04:03:31.800	175IJ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,060:11:0	
664	99	183	04:03:31.800		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *4435.29 +/- 3	2R3	4	0	5,064,060:11:0	
665	99	183	04:03:34.533		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *4446.79 +/- 4	2R3	4	0	5,064,060:15:1	
666	99	183	04:03:36.466	175IK422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,060:18:0	
667	99	183	04:03:36.466		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 4446.79 +/- 4	2R3	4	0	5,064,060:18:0	
668	99	183	04:03:43.133		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 4446.79 +/- 4	2R3	4	0	5,064,060:28:0	
669	99	183	04:03:47.800	175IK176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,060:35:0	
670	99	183	04:03:48.400		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 4512.79 +/- 4	2R3	4	0	5,064,060:35:9	
671	99	183	04:03:48.400		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *4512.79 +/- 4	2R3	4	0	5,064,060:35:9	
672	99	183	04:03:55.133		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *4678.49 +/- 4	2R3	4	0	5,064,060:46:0	
673	99	183	04:03:55.133	175IK422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,060:46:0	
674	99	183	04:03:57.866		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *4689.99 +/- 4	2R3	4	0	5,064,060:50:1	
675	99	183	04:03:59.800	175IL422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,060:53:0	
676	99	183	04:03:59.800		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 4689.99 +/- 4	2R3	4	0	5,064,060:53:0	
677	99	183	04:04:06.466		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 4689.99 +/- 4	2R3	4	0	5,064,060:63:0	
678	99	183	04:04:11.133	175IL176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,060:70:0	
679	99	183	04:04:11.733		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 4755.99 +/- 4	2R3	4	0	5,064,060:70:9	
680	99	183	04:04:11.733		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *4755.99 +/- 4	2R3	4	0	5,064,060:70:9	
681	99	183	04:04:18.466		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *4921.70 +/- 4	2R3	4	0	5,064,060:81:0	
682	99	183	04:04:18.466	175IL422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,060:81:0	
683	99	183	04:04:21.200		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *4933.20 +/- 5	2R3	4	0	5,064,060:85:1	
684	99	183	04:04:23.133		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 4933.20 +/- 5	2R3	4	0	5,064,060:88:0	
685	99	183	04:04:23.133	175IM422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,060:88:0	
686	99	183	04:04:29.800		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 4933.20 +/- 5	2R3	4	0	5,064,061:07:0	
687	99	183	04:04:34.466	175IM176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,061:14:0	
688	99	183	04:04:35.066		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 4999.20 +/- 5	2R3	4	0	5,064,061:14:9	
689	99	183	04:04:35.066		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *4999.20 +/- 5	2R3	4	0	5,064,061:14:9	
690	99	183	04:04:39.800	118ID110A111A4F	7STRP	-0.0072,0.0,0,0,	Slew =,8.01	2R3	4	0	5,064,061:22:0	
691	99	183	04:04:41.800		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *5164.90 +/- 5	2R3	4	0	5,064,061:25:0	
692	99	183	04:04:41.800	175IM422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,061:25:0	
693	99	183	04:04:44.533		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *5176.40 +/- 5	2R3	4	0	5,064,061:29:1	
694	99	183	04:04:46.466		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 5176.40 +/- 5	2R3	4	0	5,064,061:32:0	
695	99	183	04:04:46.466	175IN422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,061:32:0	
696	99	183	04:04:53.133		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 5176.40 +/- 5	2R3	4	0	5,064,061:42:0	
697	99	183	04:04:57.800	175IN176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,061:49:0	
698	99	183	04:04:58.400		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 5242.40 +/- 5	2R3	4	0	5,064,061:49:9	
699	99	183	04:04:58.400		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *5242.40 +/- 5	2R3	4	0	5,064,061:49:9	
700	99	183	04:05:03.133	118ID110A111A4G	7STRP	0.0,-0.007202,70	Slew =,3.51	2R3	4	0	5,064,061:57:0	
701	99	183	04:05:05.133		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *5408.10 +/- 5	2R3	4	0	5,064,061:60:0	
702	99	183	04:05:05.133	175IN422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,061:60:0	
703	99	183	04:05:07.866		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *5419.60 +/- 5	2R3	4	0	5,064,061:64:1	
704	99	183	04:05:09.800		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 5419.60 +/- 5	2R3	4	0	5,064,061:67:0	
705	99	183	04:05:09.800	175IO422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,061:67:0	
706	99	183	04:05:16.466		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 5419.60 +/- 5	2R3	4	0	5,064,061:77:0	
707	99	183	04:05:21.133	175IO176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,061:84:0	
708	99	183	04:05:21.733		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *5485.60 +/- 5	2R3	4	0	5,064,061:84:9	
709	99	183	04:05:21.733		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 5485.60 +/- 6	2R3	4	0	5,064,061:84:9	
710	99	183	04:05:28.466	175IO422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,062:04:0	
711	99	183	04:05:28.466		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *5651.31 +/- 6	2R3	4	0	5,064,062:04:0	
712	99	183	04:05:31.200		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *5662.81 +/- 6	2R3	4	0	5,064,062:08:1	
713	99	183	04:05:33.133	175IP422A6A	6DMSC	R806,3	DMS Control	2R3	4	0	5,064,062:11:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	99	183	04:05:33.133		DMS:	: *E4-DELAY	RDY, TRACK *1, FWD, TIC 5662.81 +/- 6	2R3	4	0	5,064,062:11:0	
715	99	183	04:05:39.800		DMS:	: *RUNUP	R806, TRACK *3, FWD, TIC 5662.81 +/- 6	2R3	4	0	5,064,062:21:0	
716	99	183	04:05:44.466	175IP176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,062:28:0	
717	99	183	04:05:45.066		DMS:	**: *RECORD**	R806, TRACK 3, FWD, TIC *5728.81 +/- 6	2R3	4	0	5,064,062:28:9	
718	99	183	04:05:45.066		DMS:	: *AT_SPD	R806, TRACK 3, FWD, TIC 5728.81 +/- 6	2R3	4	0	5,064,062:28:9	
719	99	183	04:05:51.800	175IP422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,062:39:0	
720	99	183	04:05:51.800		DMS:	**: *RUNDOWN**	R806, TRACK 3, FWD, TIC *5894.51 +/- 6	2R3	4	0	5,064,062:39:0	
721	99	183	04:05:54.533		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *5906.01 +/- 6	2R3	4	0	5,064,062:43:1	
722	99	183	04:06:13.133	118ID11A	**SMOS**	GE		2R3	4	0	5,064,062:71:0	
723	99	183	04:06:26.466		DMS:	: READY	RDY, TRACK *4, *REV, TIC 5906.01 +/- 6	2R3	4	0	5,064,063:00:0	
724	99	183	04:06:26.466	465KD6A	6DMSC	RDY,4	DMS Control Tape stop	2R3	4	0	5,064,063:00:0	
725	99	183	04:08:05.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5906.01 +/- 6	2R3	4	0	5,064,064:58:0	
726	99	183	04:08:05.800	175IQ422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,064:58:0	
727	99	183	04:08:07.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5906.13 +/- 6	2R3	4	0	5,064,064:60:1	
728	99	183	04:08:12.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5907.36 +/- 6	2R3	4	0	5,064,064:68:0	
729	99	183	04:08:13.666		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *5907.42 +/- 6	2R3	4	0	5,064,064:69:8	
730	99	183	04:08:18.466	175IQ176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,064:77:0	
731	99	183	04:08:18.933		DMS:	**: *RECORD**	R806, TRACK 4, REV, TIC *5841.42 +/- 6	2R3	4	0	5,064,064:77:7	
732	99	183	04:08:18.933		DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC 5841.42 +/- 7	2R3	4	0	5,064,064:77:7	
733	99	183	04:08:30.466	175IQ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,065:04:0	
734	99	183	04:08:30.466		DMS:	**: *RUNDOWN**	R806, TRACK 4, REV, TIC *5557.59 +/- 7	2R3	4	0	5,064,065:04:0	
735	99	183	04:08:33.133	165IC4A	7SCAN	NORM,14.118,7.71	Check S/P Position	2R3	4	0	5,064,065:08:0	
736	99	183	04:08:33.200		DMS:	: *READY	RDY, TRACK 4, REV, TIC *5546.09 +/- 7	2R3	4	0	5,064,065:08:1	
737	99	183	04:09:27.133	165IC4B	7VECT		Inert vect update UTC	2R3	4	0	5,064,065:89:0	
738	99	183	04:09:32.466	118IC	**SMOS**	GS		2R3	4	0	5,064,066:06:0	
739	99	183	04:09:34.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5546.09 +/- 7	2R3	4	0	5,064,066:09:0	
740	99	183	04:09:34.466	175IR422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,066:09:0	
741	99	183	04:09:35.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5546.21 +/- 7	2R3	4	0	5,064,066:11:1	
742	99	183	04:09:41.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5547.45 +/- 7	2R3	4	0	5,064,066:19:0	
743	99	183	04:09:42.333		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *5547.51 +/- 7	2R3	4	0	5,064,066:20:8	
744	99	183	04:09:47.133	175IR176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5,064,066:28:0	
745	99	183	04:09:47.600		DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC 5481.51 +/- 7	2R3	4	0	5,064,066:28:7	
746	99	183	04:09:47.600		DMS:	**: *RECORD**	R806, TRACK 4, REV, TIC *5481.51 +/- 7	2R3	4	0	5,064,066:28:7	
747	99	183	04:09:47.800	118IC110A111A4A	7STRP	0.0,-0.007203,26	Slew =,8.01	2R3	4	0	5,064,066:29:0	
748	99	183	04:10:13.800	118IC110A111A4B	7STRP	-0.0072,0.0,0,0,	Slew =,8.01	2R3	4	0	5,064,066:68:0	
749	99	183	04:10:22.466	118IC110A111A4C	7STRP	0.0,-0.007203,26	Slew =,8.01	2R3	4	0	5,064,066:81:0	
750	99	183	04:10:48.466	118IC110A111A4D	7STRP	-0.0072,0.0,0,0,	Slew =,8.01	2R3	4	0	5,064,067:29:0	
751	99	183	04:10:57.133	118IC110A111A4E	7STRP	0.0,-0.007203,26	Slew =,8.01	2R3	4	0	5,064,067:42:0	
752	99	183	04:11:23.133	118IC110A111A4F	7STRP	-0.0072,0.0,0,0,	Slew =,8.01	2R3	4	0	5,064,067:81:0	
753	99	183	04:11:31.800	118IC110A111A4G	7STRP	0.0,-0.007203,26	Slew =,8.01	2R3	4	0	5,064,068:03:0	
754	99	183	04:11:57.800	118IC11A	**SMOS**	GE		2R3	4	0	5,064,068:42:0	
755	99	183	04:12:04.466	175IR422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,068:52:0	
756	99	183	04:12:04.466		DMS:	**: *RUNDOWN**	R806, TRACK 4, REV, TIC *2113.31 +/- 7	2R3	4	0	5,064,068:52:0	
757	99	183	04:12:07.200		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2101.81 +/- 7	2R3	4	0	5,064,068:56:1	
758	99	183	04:12:30.466	176GD6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	5,064,069:00:0	
759	99	183	04:13:30.466	165GD4A	7SCAN	NORM,15.052,8.23	Check S/P Position	2R3	4	0	5,064,069:90:0	
760	99	183	04:14:22.466	117GD	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	5,064,070:77:0	
761	99	183	04:14:31.800	117GD105A106A4A	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,071:00:0	
762	99	183	04:16:57.133	117GD105A106A4B	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,073:36:0	
763	99	183	04:17:10.466	117GD105A106A4C	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,073:56:0	
764	99	183	04:18:23.133	432OU431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,074:74:0	
765	99	183	04:18:23.800	432OU6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,074:75:0	
766	99	183	04:19:35.800	117GD105A106A4D	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,076:01:0	
767	99	183	04:19:49.133	117GD105A106A4E	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,076:21:0	
768	99	183	04:22:14.466	117GD105A106A4F	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,078:57:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	99	183	04:22:27.800	117GD105A106A4G	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,078	77:0
770	99	183	04:24:53.133	117GD105A106A4H	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,081	22:0
771	99	183	04:25:06.466	117GD105A106A4I	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,081	42:0
772	99	183	04:26:24.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2101.81 +/- 7	2R3	4	0	5,064,082	68:0
773	99	183	04:26:24.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,064,082	68:0
774	99	183	04:26:25.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2101.93 +/- 7	2R3	4	0	5,064,082	70:1
775	99	183	04:26:31.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2103.16 +/- 7	2R3	4	0	5,064,082	78:0
776	99	183	04:26:32.333		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *2103.22 +/- 7	2R3	4	0	5,064,082	79:8
777	99	183	04:26:33.733		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *2103.10 +/- 7	2R3	4	0	5,064,082	81:9
778	99	183	04:26:52.466		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *2098.71 +/- 7	2R3	4	0	5,064,083	19:0
779	99	183	04:27:15.133	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,083	53:0
780	99	183	04:27:15.133		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *2093.40 +/- 7	2R3	4	0	5,064,083	53:0
781	99	183	04:27:16.333		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2093.34 +/- 7	2R3	4	0	5,064,083	54:8
782	99	183	04:27:31.800	117GD105A106A4J	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,083	78:0
783	99	183	04:27:45.133	117GD105A106A4K	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,084	07:0
784	99	183	04:30:10.466	117GD105A106A4L	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,086	43:0
785	99	183	04:30:23.133	432NT431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,086	62:0
786	99	183	04:30:23.800	432NT6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,086	63:0
787	99	183	04:30:23.800	117GD105A106A4M	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,086	63:0
788	99	183	04:32:49.133	117GD105A106A4N	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,089	08:0
789	99	183	04:33:02.466	117GD105A106A4O	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,089	28:0
790	99	183	04:35:27.800	117GD105A106A4P	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,091	64:0
791	99	183	04:35:41.133	117GD105A106A4Q	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,091	84:0
792	99	183	04:38:06.466	117GD105A106A4R	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,094	29:0
793	99	183	04:38:19.800	117GD105A106A4S	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,094	49:0
794	99	183	04:40:45.133	117GD105A106A4T	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,096	85:0
795	99	183	04:40:48.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,064,096	90:0
796	99	183	04:40:48.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2093.34 +/- 7	2R3	4	0	5,064,096	90:0
797	99	183	04:40:49.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2093.46 +/- 7	2R3	4	0	5,064,097	01:1
798	99	183	04:40:55.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2094.69 +/- 7	2R3	4	0	5,064,097	09:0
799	99	183	04:40:56.333		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *2094.75 +/- 7	2R3	4	0	5,064,097	10:8
800	99	183	04:40:57.733		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *2094.63 +/- 7	2R3	4	0	5,064,097	12:9
801	99	183	04:40:58.466	117GD105A106A4U	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,097	14:0
802	99	183	04:41:16.466		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *2090.24 +/- 7	2R3	4	0	5,064,097	41:0
803	99	183	04:41:39.133	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,097	75:0
804	99	183	04:41:39.133		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *2084.93 +/- 7	2R3	4	0	5,064,097	75:0
805	99	183	04:41:40.333		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2084.87 +/- 7	2R3	4	0	5,064,097	76:8
806	99	183	04:43:23.800	117GD105A106A4V	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,099	50:0
807	99	183	04:43:37.133	117GD105A106A4W	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,099	70:0
808	99	183	04:46:02.466	117GD105A106A4X	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,102	15:0
809	99	183	04:46:15.800	117GD105A106A4Y	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,102	35:0
810	99	183	04:48:41.133	117GD105A106A4Z	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,104	71:0
811	99	183	04:48:54.466	117GD105A106A4AA	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,105	00:0
812	99	183	04:51:19.800	117GD105A106A4AB	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,107	36:0
813	99	183	04:51:33.133	117GD105A106A4AC	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,107	56:0
814	99	183	04:53:58.466	117GD105A106A4AD	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,110	01:0
815	99	183	04:54:11.800	117GD105A106A4AE	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,110	21:0
816	99	183	04:54:23.133	432OW431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,110	38:0
817	99	183	04:54:23.800	432OW6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,110	39:0
818	99	183	04:55:13.133	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,064,111	22:0
819	99	183	04:55:13.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2084.87 +/- 7	2R3	4	0	5,064,111	22:0
820	99	183	04:55:14.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2084.99 +/- 7	2R3	4	0	5,064,111	24:1
821	99	183	04:55:19.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2086.22 +/- 7	2R3	4	0	5,064,111	32:0
822	99	183	04:55:21.000		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *2086.28 +/- 7	2R3	4	0	5,064,111	33:8
823	99	183	04:55:22.400		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *2086.16 +/- 7	2R3	4	0	5,064,111	35:9

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	99	183	04:55:41.133		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *2081.77 +/- 7	2R3	4	0	5,064,111	64:0
825	99	183	04:56:03.800	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,112	07:0
826	99	183	04:56:03.800		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *2076.46 +/- 7	2R3	4	0	5,064,112	07:0
827	99	183	04:56:05.000		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2076.40 +/- 7	2R3	4	0	5,064,112	08:8
828	99	183	04:56:37.133	117GD105A106A4AF	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,112	57:0
829	99	183	04:56:50.466	117GD105A106A4AG	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,112	77:0
830	99	183	04:59:15.800	117GD105A106A4AH	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,115	22:0
831	99	183	04:59:29.133	117GD105A106A4AI	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,115	42:0
832	99	183	05:01:54.466	117GD105A106A4AJ	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,117	78:0
833	99	183	05:02:07.800	117GD105A106A4AK	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,118	07:0
834	99	183	05:04:33.133	117GD105A106A4AL	7STRP	0.033613,0.00032	Slew =12.01	2R3	4	0	5,064,120	43:0
835	99	183	05:04:46.466	117GD105A106A4AM	7STRP	-0.027007,0.0,0,	Slew =,0.27	2R3	4	0	5,064,120	63:0
836	99	183	05:06:23.133	432NV431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,122	26:0
837	99	183	05:06:23.800	432NV6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,122	27:0
838	99	183	05:07:11.800	117GD11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	5,064,123	08:0
839	99	183	05:09:37.800	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,064,125	45:0
840	99	183	05:09:37.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2076.40 +/- 7	2R3	4	0	5,064,125	45:0
841	99	183	05:09:39.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2076.52 +/- 7	2R3	4	0	5,064,125	47:1
842	99	183	05:09:44.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2077.75 +/- 7	2R3	4	0	5,064,125	55:0
843	99	183	05:09:45.666		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *2077.81 +/- 7	2R3	4	0	5,064,125	56:8
844	99	183	05:09:47.066		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *2077.69 +/- 7	2R3	4	0	5,064,125	58:9
845	99	183	05:10:05.800		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *2073.30 +/- 7	2R3	4	0	5,064,125	87:0
846	99	183	05:10:28.466	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,126	30:0
847	99	183	05:10:28.466		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *2067.99 +/- 7	2R3	4	0	5,064,126	30:0
848	99	183	05:10:29.666		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2067.93 +/- 7	2R3	4	0	5,064,126	31:8
849	99	183	05:16:42.466	176GD6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	5,064,132	45:0
850	99	183	05:16:44.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2067.93 +/- 7	2R3	4	0	5,064,132	48:0
851	99	183	05:16:44.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,064,132	48:0
852	99	183	05:16:45.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2068.05 +/- 7	2R3	4	0	5,064,132	50:1
853	99	183	05:16:51.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2069.29 +/- 7	2R3	4	0	5,064,132	58:0
854	99	183	05:16:52.333		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC *2069.35 +/- 7	2R3	4	0	5,064,132	59:8
855	99	183	05:16:53.733		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC *2069.23 +/- 7	2R3	4	0	5,064,132	61:9
856	99	183	05:16:54.466		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC *2069.05 +/- 7	2R3	4	0	5,064,132	63:0
857	99	183	05:17:09.800	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,132	86:0
858	99	183	05:17:09.800		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC *2065.46 +/- 7	2R3	4	0	5,064,132	86:0
859	99	183	05:17:11.000		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2065.40 +/- 7	2R3	4	0	5,064,132	87:8
860	99	183	05:17:12.466	165JA4A	7SCAN	NORM,23.0,11.141	Check S/P Position	2R3	4	0	5,064,132	90:0
861	99	183	05:19:13.133	165JA4B	7VECT		Inert vect update UTC	2R3	4	0	5,064,134	89:0
862	99	183	05:19:55.133	175IS422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,135	61:0
863	99	183	05:19:55.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2065.40 +/- 7	2R3	4	0	5,064,135	61:0
864	99	183	05:19:56.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2065.52 +/- 7	2R3	4	0	5,064,135	63:1
865	99	183	05:20:01.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2066.75 +/- 7	2R3	4	0	5,064,135	71:0
866	99	183	05:20:03.000		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *2066.81 +/- 7	2R3	4	0	5,064,135	72:8
867	99	183	05:20:07.800	175IS176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5,064,135	80:0
868	99	183	05:20:08.266		DMS:	**: *RECORD**	R806, TRACK 4, REV, TIC *2000.81 +/- 7	2R3	4	0	5,064,135	80:7
869	99	183	05:20:08.266		DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC 2000.81 +/- 8	2R3	4	0	5,064,135	80:7
870	99	183	05:21:15.800		DMS:	**: *RUNDOWN**	R806, TRACK 4, REV, TIC * 338.86 +/- 8	2R3	4	0	5,064,137	00:0
871	99	183	05:21:15.800	175IS422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,137	00:0
872	99	183	05:21:18.533		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 327.36 +/- 8	2R3	4	0	5,064,137	04:1
873	99	183	05:30:23.133	432OY431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,146	02:0
874	99	183	05:30:23.800	432OY6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,146	03:0
875	99	183	05:32:16.466	465KE6A	6DTRN	CMD,6DTRN,465KE6	DMS TRACK TURNAROUND	2R3	4	0	5,064,147	81:0
876	99	183	05:32:16.466		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 327.36 +/- 8	2R3	4	0	5,064,147	81:0
877	99	183	05:32:16.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 327.36 +/- 8	2R3	4	0	5,064,147	81:0
878	99	183	05:32:17.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 327.48 +/- 8	2R3	4	0	5,064,147	83:1

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
879	99	183	05:32:23.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 328.72 +/- 8	2R3	4	0	5,064,148:00:0	
880	99	183	05:32:24.333		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 328.78 +/- 8	2R3	4	0	5,064,148:01:8	
881	99	183	05:32:25.733		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 328.66 +/- 8	2R3	4	0	5,064,148:03:9	
882	99	183	05:41:35.133		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/- 8	2R3	4	0	5,064,157:09:0	
883	99	183	05:41:36.333		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/- 8	2R3	4	0	5,064,157:10:8	
884	99	183	05:41:36.333		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/- 8	2R3	4	0	5,064,157:10:8	
885	99	183	05:41:37.733		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2R3	4	0	5,064,157:12:9	
886	99	183	05:41:49.733		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2R3	4	0	5,064,157:30:9	
887	99	183	05:41:50.933		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2R3	4	0	5,064,157:32:7	
888	99	183	05:42:23.133	432NX431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,157:81:0	
889	99	183	05:42:23.800	432NX6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,157:82:0	
890	99	183	06:02:35.133	465KH6A	6DMSC	P7,1	DMS Control Tape P/B 7.68kbps	2R3	4	0	5,064,177:79:0	
891	99	183	06:02:35.133		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2R3	4	0	5,064,177:79:0	
892	99	183	06:02:41.800		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	2R3	4	0	5,064,177:89:0	
893	99	183	06:02:43.200		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC 202.24 +/-	2R3	4	0	5,064,178:00:1	
894	99	183	06:02:43.200		DMS:	: *P_SLEW	P7, TRACK 1, FWD, TIC * 202.24 +/-	2R3	4	0	5,064,178:00:1	
895	99	183	06:03:50.466	465KH6B	6DMSC	RDY,1	DMS Control Tape stop	2R3	4	0	5,064,179:10:0	
896	99	183	06:03:50.466		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC * 218.01 +/-	2R3	4	0	5,064,179:10:0	
897	99	183	06:03:51.666		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 218.07 +/-	2R3	4	0	5,064,179:11:8	
898	99	183	06:06:23.133	432PA431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,181:57:0	
899	99	183	06:06:23.800	432PA6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,181:58:0	
900	99	183	06:18:23.133	432NZ431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,193:45:0	
901	99	183	06:18:23.800	432NZ6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,193:46:0	
902	**99**	**183**	**06:30:05.133**	**21NNRELOAD04-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
903	**99**	**183**	**06:31:05.800**	**20ED5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**5,064,206:06:0**	
904	**99**	**183**	**06:31:07.133**	**20ED5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**5,064,206:08:0**	
905	**99**	**183**	**06:31:08.466**	**20ED6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**5,064,206:10:0**	
906	**99**	**183**	**06:31:18.466**	**20ED6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**5,064,206:25:0**	
907	**99**	**183**	**06:31:28.466**	**20ED5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**5,064,206:40:0**	
908	**99**	**183**	**06:31:48.466**	**20ED5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**5,064,206:70:0**	
909	**99**	**183**	**06:32:11.133**	**20ED4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,064,207:13:0**	
910	**99**	**183**	**06:33:11.800**	**20ED4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,064,208:13:0**	
911	99	183	06:34:03.133	165DG4A	**7SCAN**	**NORM,31.835,15.3**	**Check S/P Position**	2R3	4	0	5,064,208:90:0	
912	**99**	**183**	**06:34:07.800**	**21NNRELOAD04-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
913	**99**	**183**	**06:35:08.466**	**21INHRSPEC01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
914	99	183	06:38:01.800	127EA	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	5,064,212:84:0	
915	**99**	**183**	**06:38:02.466**	**127EA4A**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**5,064,212:85:0**	
916	99	183	06:38:10.466	127EA11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	5,064,213:06:0	
917	99	183	06:38:57.800	117DG	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	5,064,213:77:0	
918	99	183	06:39:05.800	165DG4B	7VECT		Inert vect update UTC	2R3	4	0	5,064,213:89:0	
919	99	183	06:39:07.133	117DG105A106A4A	**7STRP**	**0.03101,0.0,0,0,**	**Slew =,0.03**	2R3	4	0	5,064,214:00:0	
920	99	183	06:39:54.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 218.07 +/-	2R3	4	0	5,064,214:71:0	
921	99	183	06:39:54.466	175EA422A6A	6DMSC	R28,1	DMS Control	2R3	4	0	5,064,214:71:0	
922	99	183	06:40:01.133		DMS:	: *RUNUP	R28, TRACK 1, FWD, TIC 218.07 +/-	2R3	4	0	5,064,214:81:0	
923	99	183	06:40:04.466	175EA176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,064,214:86:0	
924	99	183	06:40:05.133		DMS:	: *AT_SPD	R28, TRACK 1, FWD, TIC 219.57 +/-	2R3	4	0	5,064,214:87:0	
925	99	183	06:40:05.133		DMS:	**: *RECORD**	R28, TRACK 1, FWD, TIC * 219.57 +/-	2R3	4	0	5,064,214:87:0	
926	99	183	06:42:23.133	432PC431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,217:21:0	
927	99	183	06:42:23.800	432PC6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,217:22:0	
928	**99**	**183**	**06:44:00.466**	**21INHRSPEC01-**	**NIMPBK**	**301DF**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
929	**99**	**183**	**06:44:09.133**	**21INHRSPEC01-**	**NIMPBK**	**301EA**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
930	**99**	**183**	**06:44:21.133**	**21INHRSPEC01-**	**DESELC**	**300EA**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
931	**99**	**183**	**06:47:11.133**	**21INHRSPEC01-**	**NIMPBK**	**301EB**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
932	**99**	**183**	**06:47:23.133**	**21INHRSPEC01-**	**DESELC**	**300EB**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
933	**99**	**183**	**06:50:13.133**	**21INHRSPEC01-**	**NIMPBK**	**301EC**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
934	**99**	**183**	**06:50:25.133**	**21INHRSPEC01-**	**DESELC**	**300EC**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
935	**99**	**183**	**06:53:15.133**	**21INHRSPEC01-**	**NIMPBK**	**301ED**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
936	**99**	**183**	**06:53:27.133**	**21INHRSPEC01-**	**DESELC**	**300ED**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
937	**99**	**183**	**06:53:59.800**	**21INHRSPEC01-**	**DESELC**	**300DF**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
938	99	183	06:54:05.133	175EA422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,228:73:0	
939	99	183	06:54:05.133		DMS:	**: *RUNDOWN**	R28, TRACK 1, FWD, TIC * 957.85 +/-	2R3	4	0	5,064,228:73:0	
940	99	183	06:54:06.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 958.15 +/-	2R3	4	0	5,064,228:74:8	
941	99	183	06:54:23.133	432JH431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,229:09:0	
942	99	183	06:54:23.800	432JH6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,229:10:0	
943	**99**	**183**	**06:56:22.466**	**20EE5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**5,064,231:06:0**	
944	**99**	**183**	**06:56:23.800**	**20EE5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**5,064,231:08:0**	
945	**99**	**183**	**06:56:25.133**	**20EE6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**5,064,231:10:0**	
946	**99**	**183**	**06:56:35.133**	**20EE6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**5,064,231:25:0**	
947	**99**	**183**	**06:56:45.133**	**20EE5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**5,064,231:40:0**	
948	**99**	**183**	**06:57:05.133**	**20EE5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**5,064,231:70:0**	
949	**99**	**183**	**06:57:27.800**	**20EE4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,064,232:13:0**	
950	**99**	**183**	**06:58:28.466**	**20EE4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,064,233:13:0**	
951	99	183	06:59:15.800	127EC	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	5,064,233:84:0	
952	**99**	**183**	**06:59:16.466**	**127EC4A**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**5,064,233:85:0**	
953	99	183	06:59:24.466	127EC11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	5,064,234:06:0	
954	99	183	07:00:25.133	117DG105A106A4B	**7STRP**	**-0.03141,0.00620**	**Slew =12.01**	2R3	4	0	5,064,235:06:0	
955	99	183	07:00:37.133	117DG105A106A4C	**7STRP**	**0.03101,0.0,0,0,**	**Slew =,0.03**	2R3	4	0	5,064,235:24:0	
956	99	183	07:01:08.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 958.15 +/-	2R3	4	0	5,064,235:71:0	
957	99	183	07:01:08.466	175EB422A6A	6DMSC	R28,1	DMS Control	2R3	4	0	5,064,235:71:0	
958	99	183	07:01:15.133		DMS:	: *RUNUP	R28, TRACK 1, FWD, TIC 958.15 +/-	2R3	4	0	5,064,235:81:0	
959	99	183	07:01:18.466	175EB176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,064,235:86:0	
960	99	183	07:01:19.133		DMS:	: *AT_SPD	R28, TRACK 1, FWD, TIC 959.65 +/-	2R3	4	0	5,064,235:87:0	
961	99	183	07:01:19.133		DMS:	**: *RECORD**	R28, TRACK 1, FWD, TIC * 959.65 +/-	2R3	4	0	5,064,235:87:0	
962	**99**	**183**	**07:02:05.000**	**21INHRSPEC02-**	**NIMPBK**	**301DA**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
963	**99**	**183**	**07:02:21.133**	**21INHRSPEC02-**	**NIMPBK**	**301DG**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
964	**99**	**183**	**07:02:34.000**	**21INHRSPEC02-**	**DESELC**	**300DA**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
965	**99**	**183**	**07:16:14.466**	**21INHRSPEC02-**	**DESELC**	**300DG**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
966	99	183	07:16:19.133		DMS:	**: *RUNDOWN**	R28, TRACK 1, FWD, TIC *1750.67 +/-	2R3	4	0	5,064,250:72:0	
967	99	183	07:16:19.133	175EB422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,250:72:0	
968	99	183	07:16:20.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *1750.97 +/-	2R3	4	0	5,064,250:73:8	
969	**99**	**183**	**07:17:36.466**	**20EF5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**5,064,252:06:0**	
970	**99**	**183**	**07:17:37.800**	**20EF5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**5,064,252:08:0**	
971	**99**	**183**	**07:17:39.133**	**20EF6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**5,064,252:10:0**	
972	**99**	**183**	**07:17:49.133**	**20EF6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**5,064,252:25:0**	
973	**99**	**183**	**07:17:59.133**	**20EF5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**5,064,252:40:0**	
974	**99**	**183**	**07:18:19.133**	**20EF5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**5,064,252:70:0**	
975	99	183	07:18:23.133	432PE431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	260	4	0	5,064,252:76:0	
976	99	183	07:18:23.800	432PE6A	6RTSL1		R/T Select of DDS and	260	4	0	5,064,252:77:0	
977	**99**	**183**	**07:18:41.800**	**20EF4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,064,253:13:0**	
978	**99**	**183**	**07:19:42.466**	**20EF4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,064,254:13:0**	
979	99	183	07:21:30.466	127ED	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	5,064,255:84:0	
980	**99**	**183**	**07:21:31.133**	**127ED4A**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**5,064,255:85:0**	
981	99	183	07:21:39.133	127ED11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	5,064,256:06:0	
982	99	183	07:21:55.133	117DG105A106A4D	**7STRP**	**-0.03141,0.00620**	**Slew =12.01**	2R3	4	0	5,064,256:30:0	
983	99	183	07:22:07.133	117DG105A106A4E	**7STRP**	**0.03101,0.0,0,0,**	**Slew =,0.03**	2R3	4	0	5,064,256:48:0	
984	99	183	07:22:22.466	175EC422A6A	6DMSC	R28,1	DMS Control	2R3	4	0	5,064,256:71:0	
985	99	183	07:22:22.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 1750.97 +/-	2R3	4	0	5,064,256:71:0	
986	99	183	07:22:29.133		DMS:	: *RUNUP	R28, TRACK 1, FWD, TIC 1750.97 +/-	2R3	4	0	5,064,256:81:0	
987	99	183	07:22:32.466	175EC176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,064,256:86:0	
988	99	183	07:22:33.133		DMS:	**: *RECORD**	R28, TRACK 1, FWD, TIC *1752.47 +/-	2R3	4	0	5,064,256:87:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
989	99	183	07:22:33.133		DMS:	: *AT_SPD	R28, TRACK 1, FWD, TIC 1752.47 +/-	2R3	4	0	5,064,256:87:0	
990	**99**	**183**	**07:22:34.466**	**21INHRSPEC03-**	**NIMPBK**	**301DH**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
991	99	183	07:30:23.133	432JY431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,264:64:0	
992	99	183	07:30:23.800	432JY6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,264:65:0	
993	**99**	**183**	**07:33:50.000**	**21INHRSPEC03-**	**NIMPBK**	**301DB**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
994	**99**	**183**	**07:36:19.000**	**21INHRSPEC03-**	**DESELC**	**300DB**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
995	**99**	**183**	**07:38:20.466**	**21INHRSPEC03-**	**DESELC**	**300DH**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
996	99	183	07:38:33.133		DMS:	**: *RUNDOWN**	R28, TRACK 1, FWD, TIC *2596.21 +/-	2R3	4	0	5,064,272:71:0	
997	99	183	07:38:33.133	175EC422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,272:71:0	
998	99	183	07:38:34.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2596.51 +/-	2R3	4	0	5,064,272:72:8	
999	**99**	**183**	**07:39:51.133**	**20EG5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**5,064,274:06:0**	
1000	**99**	**183**	**07:39:52.466**	**20EG5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**5,064,274:08:0**	
1001	**99**	**183**	**07:39:53.800**	**20EG6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**5,064,274:10:0**	
1002	**99**	**183**	**07:40:03.800**	**20EG6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**5,064,274:25:0**	
1003	**99**	**183**	**07:40:13.800**	**20EG5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**5,064,274:40:0**	
1004	**99**	**183**	**07:40:33.800**	**20EG5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**5,064,274:70:0**	
1005	**99**	**183**	**07:40:56.466**	**20EG4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,064,275:13:0**	
1006	**99**	**183**	**07:41:57.133**	**20EG4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,064,276:13:0**	
1007	99	183	07:43:25.133	117DG105A106A4F	**7STRP**	**-0.03141,0.00620**	**Slew =12.01**	2R3	4	0	5,064,277:54:0	
1008	99	183	07:43:37.133	117DG105A106A4G	**7STRP**	**0.03101,0.0,0,0,**	**Slew =,0.03**	2R3	4	0	5,064,277:72:0	
1009	99	183	07:43:45.133	127EE	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	5,064,277:84:0	
1010	**99**	**183**	**07:43:45.800**	**127EE4A**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**5,064,277:85:0**	
1011	99	183	07:43:53.800	127EE11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	5,064,278:06:0	
1012	99	183	07:44:37.133	175ED422A6A	6DMSC	R28,1	DMS Control	2R3	4	0	5,064,278:71:0	
1013	99	183	07:44:37.133		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2596.51 +/-	2R3	4	0	5,064,278:71:0	
1014	99	183	07:44:43.800		DMS:	: *RUNUP	R28, TRACK 1, FWD, TIC 2596.51 +/-	2R3	4	0	5,064,278:81:0	
1015	99	183	07:44:47.133	175ED176A6A	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,064,278:86:0	
1016	99	183	07:44:47.800		DMS:	**: *RECORD**	R28, TRACK 1, FWD, TIC *2598.01 +/-	2R3	4	0	5,064,278:87:0	
1017	99	183	07:44:47.800		DMS:	: *AT_SPD	R28, TRACK 1, FWD, TIC 2598.01 +/-	2R3	4	0	5,064,278:87:0	
1018	**99**	**183**	**07:46:07.133**	**21INHRSPEC04-**	**NIMPBK**	**301DI**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1019	**99**	**183**	**07:47:51.133**	**21INHRSPEC04-**	**NIMPBK**	**301EP**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1020	**99**	**183**	**07:48:03.133**	**21INHRSPEC04-**	**DESELC**	**300EP**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1021	**99**	**183**	**07:50:53.133**	**21INHRSPEC04-**	**NIMPBK**	**301EQ**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1022	**99**	**183**	**07:51:05.133**	**21INHRSPEC04-**	**DESELC**	**300EQ**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1023	**99**	**183**	**07:53:55.133**	**21INHRSPEC04-**	**NIMPBK**	**301ER**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1024	**99**	**183**	**07:54:07.133**	**21INHRSPEC04-**	**DESELC**	**300ER**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1025	99	183	07:54:23.133	432PG431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,288:40:0	
1026	99	183	07:54:23.800	432PG6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,288:41:0	
1027	**99**	**183**	**07:56:57.133**	**21INHRSPEC04-**	**NIMPBK**	**301ES**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1028	**99**	**183**	**07:57:09.133**	**21INHRSPEC04-**	**DESELC**	**300ES**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1029	**99**	**183**	**07:59:34.333**	**21INHRSPEC04-**	**DESELC**	**300DI**	**MAPPING IO AT HIGH SPATIAL AND S**	**2R3**	**4**	**0**	**: :**	
1030	99	183	07:59:47.800	175ED422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,293:72:0	
1031	99	183	07:59:47.800		DMS:	**: *RUNDOWN**	R28, TRACK 1, FWD, TIC *3389.03 +/-	2R3	4	0	5,064,293:72:0	
1032	99	183	07:59:49.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3389.33 +/-	2R3	4	0	5,064,293:73:8	
1033	**99**	**183**	**08:00:04.466**	**21INHRSPEC01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
1034	99	183	08:04:55.133	117DG11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	5,064,298:78:0	
1035	99	183	08:06:23.133	432JJ431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,300:28:0	
1036	99	183	08:06:23.800	432JJ6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,300:29:0	
1037	99	183	08:15:09.800	165IJ4A	7SCAN	NORM,37.65,16.85	Check S/P Position	2R3	4	0	5,064,308:90:0	
1038	99	183	08:18:02.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3389.33 +/-	2R3	4	0	5,064,311:76:0	
1039	99	183	08:18:02.466	175IT422A6A	6DMSC	R806,1	DMS Control	2R3	4	0	5,064,311:76:0	
1040	99	183	08:18:04.466	118IJ	**SMOS**	GS		2R3	4	0	5,064,311:79:0	
1041	99	183	08:18:09.133		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 3389.33 +/-	2R3	4	0	5,064,311:86:0	
1042	99	183	08:18:13.800	175IT176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5,064,312:02:0	
1043	99	183	08:18:14.400		DMS:	**: *RECORD**	R806, TRACK 1, FWD, TIC *3455.33 +/-	2R3	4	0	5,064,312:02:9	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1044	99	183	08:18:14.400		DMS:	: *AT_SPD	R806, TRACK 1, FWD, TIC 3455.33 +/-	2R3	4	0	5,064,312:02:9	
1045	99	183	08:18:14.466	118IJ110A111A4A	7STRP	-0.0072,0.0,26,0	Slew =2,5.0	2R3	4	0	5,064,312:03:0	
1046	99	183	08:18:23.133	118IJ110A111B4A	7STRP	0.014401,0.00720	Slew =0,9.0	2R3	4	0	5,064,312:16:0	
1047	99	183	08:18:31.800	118IJ110A111B4B	7STRP	-0.0072,0.0,26,0	Slew =4,5.0	2R3	4	0	5,064,312:29:0	
1048	99	183	08:18:57.800	118IJ110A111C4A	7STRP	0.021603,0.00720	Slew =0,9.0	2R3	4	0	5,064,312:68:0	
1049	99	183	08:19:06.466	118IJ110A111C4B	7STRP	-0.0072,0.0,26,0	Slew =4,5.0	2R3	4	0	5,064,312:81:0	
1050	99	183	08:19:32.466	118IJ110A111D4A	7STRP	0.014401,0.00720	Slew =0,9.0	2R3	4	0	5,064,313:29:0	
1051	99	183	08:19:41.133	118IJ110A111D4B	7STRP	-0.0072,0.0,26,0	Slew =2,5.0	2R3	4	0	5,064,313:42:0	
1052	99	183	08:19:49.800	118IJ11A	**SMOS**	GE		2R3	4	0	5,064,313:55:0	
1053	99	183	08:19:56.466	175IT422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,313:65:0	
1054	99	183	08:19:56.466		DMS:	**: *RUNDOWN**	R806, TRACK 1, FWD, TIC *5967.13 +/-	2R3	4	0	5,064,313:65:0	
1055	99	183	08:19:59.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5978.63 +/-	2R3	4	0	5,064,313:69:1	
1056	99	183	08:24:09.800	465KF6A	6DTRN	CMD,6DTRN,465KF6	DMS TRACK TURNAROUND	2R3	4	0	5,064,317:81:0	
1057	99	183	08:24:09.800		DMS:	: *DMS-TURN	P7, TRACK 1, FWD, TIC 5978.63 +/-	2R3	4	0	5,064,317:81:0	
1058	99	183	08:24:09.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5978.63 +/-	2R3	4	0	5,064,317:81:0	
1059	99	183	08:24:16.466		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 5978.63 +/-	2R3	4	0	5,064,318:00:0	
1060	99	183	08:24:17.866		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *5978.75 +/-	2R3	4	0	5,064,318:02:1	
1061	99	183	08:27:46.400		DMS:	: *REVERSE	P7, TRACK 1, FWD, TIC *6027.63 +/-	2R3	4	0	5,064,321:41:9	
1062	99	183	08:27:47.600		DMS:	: *TURNARND	P7, TRACK *2, *REV, TIC *6027.69 +/-	2R3	4	0	5,064,321:43:7	
1063	99	183	08:27:47.600		DMS:	: *RUNUP	P7, TRACK 2, REV, TIC 6027.69 +/-	2R3	4	0	5,064,321:43:7	
1064	99	183	08:27:49.000		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC *6027.57 +/-	2R3	4	0	5,064,321:45:8	
1065	99	183	08:28:01.000		DMS:	: *AUTOSTOP	P7, TRACK 2, REV, TIC *6025.44 +/-	2R3	4	0	5,064,321:63:8	
1066	99	183	08:28:02.200		DMS:	: *READY	RDY, TRACK 2, REV, TIC *6025.38 +/-	2R3	4	0	5,064,321:65:6	
1067	99	183	08:30:23.133	432PI431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,324:04:0	
1068	99	183	08:30:23.800	432PI6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,324:05:0	
1069	99	183	08:42:23.133	432JL431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,335:83:0	
1070	99	183	08:42:23.800	432JL6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,335:84:0	
1071	99	183	09:06:23.133	432PK431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,359:59:0	
1072	99	183	09:06:23.800	432PK6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,359:60:0	
1073	99	183	09:18:23.133	432JN431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,371:47:0	
1074	99	183	09:18:23.800	432JN6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,371:48:0	
1075	99	183	09:42:23.133	432PM431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,395:23:0	
1076	99	183	09:42:23.800	432PM6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,395:24:0	
1077	99	183	09:54:23.133	432JO431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,407:11:0	
1078	99	183	09:54:23.800	432JO6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,407:12:0	
1079	99	183	10:18:23.133	432PO431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,430:78:0	
1080	99	183	10:18:23.800	432PO6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,430:79:0	
1081	99	183	10:25:01.133	488AK6A	6TMSED	FILL,EL4	Sci, Eng, and D/L Chan	2R3	4	0	5,064,437:38:0	
1082	99	183	10:30:23.133	432JQ431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,442:66:0	
1083	99	183	10:30:23.800	432JQ6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,442:67:0	
1084	99	183	10:54:23.133	432PQ431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,466:42:0	
1085	99	183	10:54:23.800	432PQ6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,466:43:0	
1086	99	183	10:58:57.800	165II4A	7SCAN	NORM,41.758,17.8	Check S/P Position	2R3	4	0	5,064,470:90:0	
1087	99	183	11:00:47.133	175IU422A6A	6DMSC	R806,2	DMS Control	2R3	4	0	5,064,472:72:0	
1088	99	183	11:00:47.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 6025.38 +/-	2R3	4	0	5,064,472:72:0	
1089	99	183	11:00:48.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6025.50 +/-	2R3	4	0	5,064,472:74:1	
1090	99	183	11:00:53.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6026.73 +/-	2R3	4	0	5,064,472:82:0	
1091	99	183	11:00:55.000		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *6026.79 +/-	2R3	4	0	5,064,472:83:8	
1092	99	183	11:00:59.800	175IU176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,473:00:0	
1093	99	183	11:01:00.266		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 5960.79 +/-	2R3	4	0	5,064,473:00:7	
1094	99	183	11:01:00.266		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *5960.79 +/-	2R3	4	0	5,064,473:00:7	
1095	99	183	11:01:02.466	175IU422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,473:04:0	
1096	99	183	11:01:02.466		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *5906.65 +/-	2R3	4	0	5,064,473:04:0	
1097	99	183	11:01:05.200		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5895.15 +/-	2R3	4	0	5,064,473:08:1	
1098	99	183	11:02:00.466	116II4A	7STRP	0.0,0.007201,0,0	Slew =0,5.0	2R3	4	0	5,064,474:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1099	99	183	11:02:11.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5895.15 +/-	2R3	4	0	5,064,474:16:0	
1100	99	183	11:02:11.133	175IV422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,474:16:0	
1101	99	183	11:02:12.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5895.27 +/-	2R3	4	0	5,064,474:18:1	
1102	99	183	11:02:17.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5896.51 +/-	2R3	4	0	5,064,474:26:0	
1103	99	183	11:02:19.000		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *5896.57 +/-	2R3	4	0	5,064,474:27:8	
1104	99	183	11:02:23.800	175IV176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,474:35:0	
1105	99	183	11:02:24.266		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 5830.57 +/-	2R3	4	0	5,064,474:35:7	
1106	99	183	11:02:24.266		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *5830.57 +/-	2R3	4	0	5,064,474:35:7	
1107	99	183	11:02:26.466	175IV422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,474:39:0	
1108	99	183	11:02:26.466		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *5776.42 +/-	2R3	4	0	5,064,474:39:0	
1109	99	183	11:02:29.200		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5764.92 +/- 1	2R3	4	0	5,064,474:43:1	
1110	99	183	11:03:40.466	488AK6B	6TMSED	NORM,EL4	Sci, Eng, and D/L Chan	2R3	4	0	5,064,475:59:0	
1111	99	183	11:06:23.133	432JS431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,478:30:0	
1112	99	183	11:06:23.800	432JS6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,478:31:0	
1113	99	183	11:30:23.133	432PS431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,502:06:0	
1114	99	183	11:30:23.800	432PS6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,502:07:0	
1115	99	183	11:42:23.133	432JU431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,513:85:0	
1116	99	183	11:42:23.800	432JU6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,513:86:0	
1117	99	183	12:06:23.133	432PU431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,537:61:0	
1118	99	183	12:06:23.800	432PU6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,537:62:0	
1119	99	183	12:18:23.133	432JW431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,549:49:0	
1120	99	183	12:18:23.800	432JW6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,549:50:0	
1121	99	183	12:33:14.466	432PW431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,064,564:21:0	
1122	99	183	12:33:15.133	432PW6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,064,564:22:0	
1123	99	183	12:59:59.800	488AK6C	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	5,064,590:63:0	
1124	99	183	14:05:00.466	165IL4A	7SCAN	NORM,41.169,17.8	Check S/P Position	2R3	4	0	5,064,654:90:0	
1125	99	183	14:08:51.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5764.92 +/- 1	2R3	4	0	5,064,658:72:0	
1126	99	183	14:08:51.133	175IX422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,658:72:0	
1127	99	183	14:08:52.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5765.04 +/- 1	2R3	4	0	5,064,658:74:1	
1128	99	183	14:08:57.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5766.28 +/- 1	2R3	4	0	5,064,658:82:0	
1129	99	183	14:08:59.000		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *5766.34 +/- 1	2R3	4	0	5,064,658:83:8	
1130	99	183	14:09:03.800	175IX176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,659:00:0	
1131	99	183	14:09:04.266		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *5700.34 +/- 1	2R3	4	0	5,064,659:00:7	
1132	99	183	14:09:04.266		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 5700.34 +/- 1	2R3	4	0	5,064,659:00:7	
1133	99	183	14:09:06.466		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *5646.20 +/- 1	2R3	4	0	5,064,659:04:0	
1134	99	183	14:09:06.466	175IX422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,659:04:0	
1135	99	183	14:09:09.200		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5634.70 +/- 1	2R3	4	0	5,064,659:08:1	
1136	99	183	14:10:04.466	116IL4A	7STRP	0.0,0.007202,0,0	Slew =0,5.0	2R3	4	0	5,064,660:00:0	
1137	99	183	14:10:15.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5634.70 +/- 1	2R3	4	0	5,064,660:16:0	
1138	99	183	14:10:15.133	175IY422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,660:16:0	
1139	99	183	14:10:16.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5634.82 +/- 1	2R3	4	0	5,064,660:18:1	
1140	99	183	14:10:21.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5636.05 +/- 1	2R3	4	0	5,064,660:26:0	
1141	99	183	14:10:23.000		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *5636.11 +/- 1	2R3	4	0	5,064,660:27:8	
1142	99	183	14:10:27.800	175IY176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,660:35:0	
1143	99	183	14:10:28.266		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 5570.11 +/- 1	2R3	4	0	5,064,660:35:7	
1144	99	183	14:10:28.266		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *5570.11 +/- 1	2R3	4	0	5,064,660:35:7	
1145	99	183	14:10:30.466	175IY422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,660:39:0	
1146	99	183	14:10:30.466		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *5515.97 +/- 1	2R3	4	0	5,064,660:39:0	
1147	99	183	14:10:33.200		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5504.47 +/- 2	2R3	4	0	5,064,660:43:1	
1148	99	183	14:17:08.466	165GE4A	7SCAN	NORM,41.258,18.0	Check S/P Position	2R3	4	0	5,064,666:90:0	
1149	99	183	14:19:10.466	176GE6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	5,064,669:00:0	
1150	99	183	14:20:01.800	117GE	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	5,064,669:77:0	
1151	99	183	14:20:11.133	117GE105A106A4A	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,670:00:0	
1152	99	183	14:21:11.133	117GE105A106A4B	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,670:90:0	
1153	99	183	14:21:17.133	117GE105A106A4C	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,671:08:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1154	99	183	14:22:17.133	117GE105A106A4D	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,672	07:0
1155	99	183	14:22:23.133	117GE105A106A4E	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,672	16:0
1156	99	183	14:23:23.133	117GE105A106A4F	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,673	15:0
1157	99	183	14:23:29.133	117GE105A106A4G	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,673	24:0
1158	99	183	14:24:29.133	117GE105A106A4H	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,674	23:0
1159	99	183	14:24:35.133	117GE105A106A4I	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,674	32:0
1160	99	183	14:25:35.133	117GE105A106A4J	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,675	31:0
1161	99	183	14:25:41.133	117GE105A106A4K	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,675	40:0
1162	99	183	14:26:41.133	117GE105A106A4L	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,676	39:0
1163	99	183	14:26:47.133	117GE105A106A4M	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,676	48:0
1164	99	183	14:27:47.133	117GE105A106A4N	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,677	47:0
1165	99	183	14:27:53.133	117GE105A106A4O	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,677	56:0
1166	99	183	14:28:53.133	117GE105A106A4P	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,678	55:0
1167	99	183	14:28:59.133	117GE105A106A4Q	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,678	64:0
1168	99	183	14:29:59.133	117GE105A106A4R	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,679	63:0
1169	99	183	14:30:05.133	117GE105A106A4S	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,679	72:0
1170	99	183	14:31:05.133	117GE105A106A4T	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,680	71:0
1171	99	183	14:31:11.133	117GE105A106A4U	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,680	80:0
1172	99	183	14:32:11.133	117GE105A106A4V	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,681	79:0
1173	99	183	14:32:17.133	117GE105A106A4W	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,681	88:0
1174	99	183	14:33:04.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,064,682	68:0
1175	99	183	14:33:04.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5504.47 +/- 2	2R3	4	0	5,064,682	68:0
1176	99	183	14:33:05.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5504.59 +/- 2	2R3	4	0	5,064,682	70:1
1177	99	183	14:33:11.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5505.83 +/- 2	2R3	4	0	5,064,682	78:0
1178	99	183	14:33:12.333		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *5505.89 +/- 2	2R3	4	0	5,064,682	79:8
1179	99	183	14:33:13.733		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *5505.77 +/- 2	2R3	4	0	5,064,682	81:9
1180	99	183	14:33:17.133	117GE105A106A4X	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,682	87:0
1181	99	183	14:33:23.133	117GE105A106A4Y	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,683	05:0
1182	99	183	14:33:32.466		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *5501.38 +/- 2	2R3	4	0	5,064,683	19:0
1183	99	183	14:33:55.133		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *5496.06 +/- 2	2R3	4	0	5,064,683	53:0
1184	99	183	14:33:55.133	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,683	53:0
1185	99	183	14:33:56.333		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5496.00 +/- 2	2R3	4	0	5,064,683	54:8
1186	99	183	14:34:23.133	117GE105A106A4Z	7STRP	-0.015101,0.0010	Slew =12.01	2R3	4	0	5,064,684	04:0
1187	99	183	14:34:29.133	117GE105A106A4AA	7STRP	0.015001,0.0,0,0	Slew =,0.27	2R3	4	0	5,064,684	13:0
1188	99	183	14:35:29.133	117GE11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	5,064,685	12:0
1189	99	183	14:36:21.800	176GE6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	5,064,686	00:0
1190	99	183	14:36:23.800	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,064,686	03:0
1191	99	183	14:36:23.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5496.00 +/- 2	2R3	4	0	5,064,686	03:0
1192	99	183	14:36:25.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5496.12 +/- 2	2R3	4	0	5,064,686	05:1
1193	99	183	14:36:30.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5497.36 +/- 2	2R3	4	0	5,064,686	13:0
1194	99	183	14:36:31.666		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *5497.42 +/- 2	2R3	4	0	5,064,686	14:8
1195	99	183	14:36:33.066		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *5497.30 +/- 2	2R3	4	0	5,064,686	16:9
1196	99	183	14:36:33.800		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *5497.13 +/- 2	2R3	4	0	5,064,686	18:0
1197	99	183	14:36:45.800	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,686	36:0
1198	99	183	14:36:45.800		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *5494.31 +/- 2	2R3	4	0	5,064,686	36:0
1199	99	183	14:36:47.000		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5494.25 +/- 2	2R3	4	0	5,064,686	37:8
1200	99	183	14:39:23.133	165IM4A	7SCAN	NORM,41.496,17.6	Check S/P Position	2R3	4	0	5,064,688	90:0
1201	99	183	14:43:13.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5494.25 +/- 2	2R3	4	0	5,064,692	72:0
1202	99	183	14:43:13.800	175IZ422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,692	72:0
1203	99	183	14:43:15.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5494.37 +/- 2	2R3	4	0	5,064,692	74:1
1204	99	183	14:43:20.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5495.61 +/- 2	2R3	4	0	5,064,692	82:0
1205	99	183	14:43:21.666		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *5495.67 +/- 2	2R3	4	0	5,064,692	83:8
1206	99	183	14:43:26.466	175IZ176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,693	00:0
1207	99	183	14:43:26.933		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *5429.67 +/- 2	2R3	4	0	5,064,693	00:7
1208	99	183	14:43:26.933		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 5429.67 +/- 2	2R3	4	0	5,064,693	00:7

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1209	99	183	14:43:29.133		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *5375.53 +/- 2	2R3	4	0	5,064,693:04:0	
1210	99	183	14:43:29.133	175IZ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,693:04:0	
1211	99	183	14:43:31.866		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5364.03 +/- 2	2R3	4	0	5,064,693:08:1	
1212	99	183	15:01:38.466	192GG4A	**7CONE**	**9.0,0.0**	Check S/P Position	2R3	4	0	5,064,711:00:0	
1213	99	183	15:08:43.133	176GF6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	2R3	4	0	5,064,718:00:0	
1214	99	183	15:10:57.800	176GF6B	6TMREC	**NRC**	NO RECORD Record Mode Change	2R3	4	0	5,064,720:20:0	
1215	99	183	15:10:59.800	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,064,720:23:0	
1216	99	183	15:10:59.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5364.03 +/- 2	2R3	4	0	5,064,720:23:0	
1217	99	183	15:11:01.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5364.15 +/- 2	2R3	4	0	5,064,720:25:1	
1218	99	183	15:11:06.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5365.38 +/- 2	2R3	4	0	5,064,720:33:0	
1219	99	183	15:11:07.666		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *5365.44 +/- 2	2R3	4	0	5,064,720:34:8	
1220	99	183	15:11:09.066		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC *5365.32 +/- 2	2R3	4	0	5,064,720:36:9	
1221	99	183	15:11:09.800		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *5365.15 +/- 2	2R3	4	0	5,064,720:38:0	
1222	99	183	15:11:21.133	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,720:55:0	
1223	99	183	15:11:21.133		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *5362.49 +/- 2	2R3	4	0	5,064,720:55:0	
1224	99	183	15:11:22.333		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5362.43 +/- 2	2R3	4	0	5,064,720:56:8	
1225	99	183	15:43:05.133	165IN4A	7SCAN	NORM,41.943,17.8	Check S/P Position	2R3	4	0	5,064,751:90:0	
1226	99	183	15:49:57.800	175JA422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,758:72:0	
1227	99	183	15:49:57.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5362.43 +/- 2	2R3	4	0	5,064,758:72:0	
1228	99	183	15:49:59.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5362.55 +/- 2	2R3	4	0	5,064,758:74:1	
1229	99	183	15:50:04.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5363.79 +/- 2	2R3	4	0	5,064,758:82:0	
1230	99	183	15:50:05.666		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *5363.85 +/- 2	2R3	4	0	5,064,758:83:8	
1231	99	183	15:50:10.466	175JA176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,759:00:0	
1232	99	183	15:50:10.933		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 5297.85 +/- 2	2R3	4	0	5,064,759:00:7	
1233	99	183	15:50:10.933		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *5297.85 +/- 2	2R3	4	0	5,064,759:00:7	
1234	99	183	15:50:13.133	175JA422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,759:04:0	
1235	99	183	15:50:13.133		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *5243.71 +/- 2	2R3	4	0	5,064,759:04:0	
1236	99	183	15:50:15.866		DMS:	: *READY	RDY, TRACK 2, REV, TIC *5232.21 +/- 2	2R3	4	0	5,064,759:08:1	
1237	99	183	16:14:59.800	480ZF6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	2R3	4	0	5,064,783:50:0	
1238	99	183	16:21:39.800	480ZF6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	2R3	4	0	5,064,790:13:0	
1239	**99**	**183**	**16:23:36.466**	**20EH5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**5,064,792:06:0**	
1240	**99**	**183**	**16:23:37.800**	**20EH5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**5,064,792:08:0**	
1241	**99**	**183**	**16:23:39.133**	**20EH6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**5,064,792:10:0**	
1242	**99**	**183**	**16:23:49.133**	**20EH6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**5,064,792:25:0**	
1243	**99**	**183**	**16:23:59.133**	**20EH5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**5,064,792:40:0**	
1244	**99**	**183**	**16:24:19.133**	**20EH5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**5,064,792:70:0**	
1245	**99**	**183**	**16:24:41.800**	**20EH4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,064,793:13:0**	
1246	**99**	**183**	**16:25:42.466**	**20EH4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,064,794:13:0**	
1247	99	183	16:26:33.800	165DH4A	**7SCAN**	**NORM,59.9,25.64,**	**Check S/P Position**	2R3	4	0	5,064,794:90:0	
1248	**99**	**183**	**16:27:30.466**	**125LE4A**	**37IST**	**0,2,0,OFF,0,1,0**	**Gain State 2**	**2R3**	**4**	**0**	**5,064,795:84:0**	
1249	99	183	16:27:30.466	125LE	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	5,064,795:84:0	
1250	99	183	16:28:31.133	125LE11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	5,064,796:84:0	
1251	**99**	**183**	**16:28:31.133**	**125LE4B**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**5,064,796:84:0**	
1252	99	183	16:29:31.800	127LC	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	5,064,797:84:0	
1253	**99**	**183**	**16:29:31.800**	**127LC4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,064,797:84:0**	
1254	**99**	**183**	**16:29:32.466**	**127LC4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**5,064,797:85:0**	
1255	99	183	16:29:40.466	127LC11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	5,064,798:06:0	
1256	**99**	**183**	**16:31:57.800**	**432DE6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**2R3**	**4**	**0**	**5,064,800:30:0**	
1257	99	183	16:32:29.133	117DH	**CSMOS**	GS	***** GROUP START CSMOS	2R3	4	0	5,064,800:77:0	
1258	99	183	16:32:38.466	117DH105A106A4A	**7STRP**	**0.0076,0.0,0,0,0**	**Slew =,0.04**	2R3	4	0	5,064,801:00:0	
1259	**99**	**183**	**16:32:42.466**	**21NNRELOAD05-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
1260	99	183	16:35:49.800	117DH105A106A4B	**7STRP**	**0.0,0.051132,0,0**	**Slew =12.01**	2R3	4	0	5,064,804:14:0	
1261	99	183	16:36:05.133	117DH105A106A4C	**7STRP**	**0.0076,0.0,0,0,0**	**Slew =,0.04**	2R3	4	0	5,064,804:37:0	
1262	**99**	**183**	**16:36:45.133**	**21NNRELOAD05-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
1263	**99**	**183**	**16:36:45.133**	**21JNJUPRTS03***		**-----START------**		**2R3**	**4**	**0**	**: :**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1264	99	183	16:39:16.466	117DH105A106A4D	**7STRP**	**0.0,0.051132,0,0**	**Slew =12.01**	2R3	4	0	5,064,807:51:0	
1265	99	183	16:39:31.800	117DH105A106A4E	**7STRP**	**0.0076,0.0,0,0,0**	**Slew =,0.04**	2R3	4	0	5,064,807:74:0	
1266	**99**	**183**	**16:42:03.133**	**432DF6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**2R3**	**4**	**0**	**5,064,810:28:0**	
1267	99	183	16:42:43.133	117DH11A	**CSMOS**	GE	***** GROUP END CSMOS	2R3	4	0	5,064,810:88:0	
1268	99	183	16:51:46.466	125LF	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	5,064,819:84:0	
1269	99	183	16:51:46.466	125LF11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	5,064,819:84:0	
1270	**99**	**183**	**16:51:46.466**	**125LF4A**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R3**	**4**	**0**	**5,064,819:84:0**	
1271	**99**	**183**	**16:51:55.133**	**21JNJUPRTS03***		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
1272	99	183	17:07:12.466	488AL6A	6TMSED	NORM,DL5	Sci, Eng, and D/L Chan	2R3	4	0	5,064,835:17:0	
1273	99	183	17:09:01.800	165IO4A	7SCAN	NORM,43.278,18.3	Check S/P Position	2R3	4	0	5,064,836:90:0	
1274	99	183	17:12:52.466	175JB422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,840:72:0	
1275	99	183	17:12:52.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 5232.21 +/- 2	2R3	4	0	5,064,840:72:0	
1276	99	183	17:12:53.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5232.33 +/- 2	2R3	4	0	5,064,840:74:1	
1277	99	183	17:12:59.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5233.56 +/- 2	2R3	4	0	5,064,840:82:0	
1278	99	183	17:13:00.333		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *5233.62 +/- 2	2R3	4	0	5,064,840:83:8	
1279	99	183	17:13:05.133	175JB176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,841:00:0	
1280	99	183	17:13:05.600		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *5167.62 +/- 2	2R3	4	0	5,064,841:00:7	
1281	99	183	17:13:05.600		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 5167.62 +/- 3	2R3	4	0	5,064,841:00:7	
1282	99	183	17:13:12.466	175JB422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,841:11:0	
1283	99	183	17:13:12.466		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *4998.64 +/- 3	2R3	4	0	5,064,841:11:0	
1284	99	183	17:13:15.200		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4987.14 +/- 3	2R3	4	0	5,064,841:15:1	
1285	99	183	17:27:45.800	488AL6B	6TMSED	FILL,DL5	Sci, Eng, and D/L Chan	2R3	4	0	5,064,855:47:0	
1286	99	183	17:56:51.800	488AL6C	6TMSED	NORM,DL5	Sci, Eng, and D/L Chan	2R3	4	0	5,064,884:27:0	
1287	99	183	18:30:55.800	165IP4A	7SCAN	NORM,45.125,18.9	Check S/P Position	2R3	4	0	5,064,917:90:0	
1288	99	183	18:34:46.466	175JC422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,064,921:72:0	
1289	99	183	18:34:46.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4987.14 +/- 3	2R3	4	0	5,064,921:72:0	
1290	99	183	18:34:47.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4987.26 +/- 3	2R3	4	0	5,064,921:74:1	
1291	99	183	18:34:53.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4988.49 +/- 3	2R3	4	0	5,064,921:82:0	
1292	99	183	18:34:54.333		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *4988.55 +/- 3	2R3	4	0	5,064,921:83:8	
1293	99	183	18:34:59.133	175JC176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,064,922:00:0	
1294	99	183	18:34:59.600		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *4922.55 +/- 3	2R3	4	0	5,064,922:00:7	
1295	99	183	18:34:59.600		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 4922.55 +/- 3	2R3	4	0	5,064,922:00:7	
1296	99	183	18:35:01.800	175JC422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,064,922:04:0	
1297	99	183	18:35:01.800		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *4868.41 +/- 3	2R3	4	0	5,064,922:04:0	
1298	99	183	18:35:04.533		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4856.91 +/- 3	2R3	4	0	5,064,922:08:1	
1299	99	183	19:39:49.800	20MC6A	6CKSUM	MAG,4040,46F0		2R3	4	0	5,064,986:12:0	
1300	99	183	19:40:46.466	480MB6	6MROH	12	read from LLM1A12,2282,0,A2	2R3	4	0	5,064,987:06:0	
1301	99	183	19:40:46.466	480MB6A	6MROH	12,2282,0,A2	read from LLM1A12,2282,0,A2	2R3	4	0	5,064,987:06:0	
1302	99	183	20:00:55.133	165IQ4A	7SCAN	NORM,47.974,19.7	Check S/P Position	2R3	4	0	5,065,006:90:0	
1303	99	183	20:04:45.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4856.91 +/- 3	2R3	4	0	5,065,010:72:0	
1304	99	183	20:04:45.800	175JD422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,065,010:72:0	
1305	99	183	20:04:47.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4857.03 +/- 3	2R3	4	0	5,065,010:74:1	
1306	99	183	20:04:52.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4858.27 +/- 3	2R3	4	0	5,065,010:82:0	
1307	99	183	20:04:53.666		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *4858.33 +/- 3	2R3	4	0	5,065,010:83:8	
1308	99	183	20:04:58.466	175JD176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,065,011:00:0	
1309	99	183	20:04:58.933		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 4792.33 +/- 4	2R3	4	0	5,065,011:00:7	
1310	99	183	20:04:58.933		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *4792.33 +/- 3	2R3	4	0	5,065,011:00:7	
1311	99	183	20:05:05.800		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *4623.34 +/- 4	2R3	4	0	5,065,011:11:0	
1312	99	183	20:05:05.800	175JD422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,011:11:0	
1313	99	183	20:05:08.533		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4611.84 +/- 4	2R3	4	0	5,065,011:15:1	
1314	99	183	20:14:59.733	480ZG6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	2R3	4	0	5,065,020:83:0	
1315	99	183	20:21:39.733	480ZG6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	2R3	4	0	5,065,027:46:0	
1316	99	183	21:30:54.400	165IR4A	7SCAN	NORM,51.345,20.6	Check S/P Position	2R3	4	0	5,065,095:90:0	
1317	99	183	21:34:45.066	175JE422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R3	4	0	5,065,099:72:0	
1318	99	183	21:34:45.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4611.84 +/- 4	2R3	4	0	5,065,099:72:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1319	99	183	21:34:46.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4611.96 +/- 4	2R3	4	0	5,065,099:74:1	
1320	99	183	21:34:51.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4613.20 +/- 4	2R3	4	0	5,065,099:82:0	
1321	99	183	21:34:52.933		DMS:	: *RUNUP	R806, TRACK *2, *REV, TIC *4613.26 +/- 4	2R3	4	0	5,065,099:83:8	
1322	99	183	21:34:57.733	175JE176A6A	6TMREC	AI8	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,065,100:00:0	
1323	99	183	21:34:58.200		DMS:	: *AT_SPD	R806, TRACK 2, REV, TIC 4547.26 +/- 4	2R3	4	0	5,065,100:00:7	
1324	99	183	21:34:58.200		DMS:	**: *RECORD**	R806, TRACK 2, REV, TIC *4547.26 +/- 4	2R3	4	0	5,065,100:00:7	
1325	99	183	21:35:00.400		DMS:	**: *RUNDOWN**	R806, TRACK 2, REV, TIC *4493.11 +/- 4	2R3	4	0	5,065,100:04:0	
1326	99	183	21:35:00.400	175JE422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,100:04:0	
1327	99	183	21:35:03.133		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4481.61 +/- 4	2R3	4	0	5,065,100:08:1	
1328	99	183	23:00:53.733	165IS4A	7SCAN	NORM,55.048,21.4	Check S/P Position	2R3	4	0	5,065,184:90:0	
1329	99	183	23:04:51.066	118IS	**SMOS**	GS		2R3	4	0	5,065,188:82:0	
1330	99	183	23:05:01.066	118IS110A111A4A	7STRP	-0.006,0.0,92,0,	Slew =,3.01	2R3	4	0	5,065,189:06:0	
1331	99	183	23:05:19.066	175JF422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,189:33:0	
1332	99	183	23:05:19.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4481.61 +/- 4	2R3	4	0	5,065,189:33:0	
1333	99	183	23:05:20.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4481.73 +/- 4	2R3	4	0	5,065,189:35:1	
1334	99	183	23:05:25.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4482.97 +/- 4	2R3	4	0	5,065,189:43:0	
1335	99	183	23:05:26.933		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *4483.03 +/- 4	2R3	4	0	5,065,189:44:8	
1336	99	183	23:05:30.400	175JF176A6A	6TMREC	HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2R3	4	0	5,065,189:50:0	
1337	99	183	23:05:30.933		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 4476.73 +/- 4	2R3	4	0	5,065,189:50:8	
1338	99	183	23:05:30.933		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *4476.73 +/- 4	2R3	4	0	5,065,189:50:8	
1339	99	183	23:05:31.733	118IS11A	**SMOS**	GE		2R3	4	0	5,065,189:52:0	
1340	99	183	23:05:58.400		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *4380.17 +/- 4	2R3	4	0	5,065,190:01:0	
1341	99	183	23:05:58.400	175JF422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,190:01:0	
1342	99	183	23:05:59.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4379.17 +/- 4	2R3	4	0	5,065,190:02:8	
1343	99	183	23:59:59.733	481UB4A	7VECT		Inert vect update UTC	2R3	4	0	5,065,243:40:0	
1344	99	184	00:09:36.400	488AM6A	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	5,065,252:86:0	
1345	99	184	01:01:13.066	165IT4A	7SCAN	NORM,60.54,22.63	Check S/P Position	2R3	4	0	5,065,303:90:0	
1346	99	184	01:05:04.400	488AM6B	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	2R3	4	0	5,065,307:73:0	
1347	99	184	01:05:10.400	118IT	**SMOS**	GS		2R3	4	0	5,065,307:82:0	
1348	99	184	01:05:20.400	118IT110A111A4A	7STRP	-0.005,0.0,92,0,	Slew =,3.01	2R3	4	0	5,065,308:06:0	
1349	99	184	01:05:38.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4379.17 +/- 4	2R3	4	0	5,065,308:33:0	
1350	99	184	01:05:38.400	175JG422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,308:33:0	
1351	99	184	01:05:39.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4379.29 +/- 4	2R3	4	0	5,065,308:35:1	
1352	99	184	01:05:45.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4380.52 +/- 4	2R3	4	0	5,065,308:43:0	
1353	99	184	01:05:46.266		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *4380.58 +/- 4	2R3	4	0	5,065,308:44:8	
1354	99	184	01:05:49.733	175JG176A6A	6TMREC	HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2R3	4	0	5,065,308:50:0	
1355	99	184	01:05:50.266		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 4374.28 +/- 4	2R3	4	0	5,065,308:50:8	
1356	99	184	01:05:50.266		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *4374.28 +/- 4	2R3	4	0	5,065,308:50:8	
1357	99	184	01:05:51.066	118IT11A	**SMOS**	GE		2R3	4	0	5,065,308:52:0	
1358	99	184	01:06:17.733		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *4277.72 +/- 4	2R3	4	0	5,065,309:01:0	
1359	99	184	01:06:17.733	175JG422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,309:01:0	
1360	99	184	01:06:18.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4276.72 +/- 4	2R3	4	0	5,065,309:02:8	
1361	99	184	01:44:59.733	480ZH6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	2R3	4	0	5,065,347:26:0	
1362	99	184	01:47:44.400	488AM6C	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	5,065,350:00:0	
1363	99	184	01:51:39.733	480ZH6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	2R3	4	0	5,065,353:80:0	
1364	99	184	02:31:12.400	165IU4A	7SCAN	NORM,64.922,23.4	Check S/P Position	2R3	4	0	5,065,392:90:0	
1365	99	184	02:34:56.400	488AM6D	6TMSED	FILL,DL4	Sci, Eng, and D/L Chan	2R3	4	0	5,065,396:62:0	
1366	99	184	02:35:09.733	118IU	**SMOS**	GS		2R3	4	0	5,065,396:82:0	
1367	99	184	02:35:19.733	118IU110A111A4A	7STRP	-0.005,0.0,92,0,	Slew =,3.01	2R3	4	0	5,065,397:06:0	
1368	99	184	02:35:37.733	175JH422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,397:33:0	
1369	99	184	02:35:37.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4276.72 +/- 4	2R3	4	0	5,065,397:33:0	
1370	99	184	02:35:39.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4276.84 +/- 4	2R3	4	0	5,065,397:35:1	
1371	99	184	02:35:44.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4278.07 +/- 4	2R3	4	0	5,065,397:43:0	
1372	99	184	02:35:45.600		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *4278.13 +/- 4	2R3	4	0	5,065,397:44:8	
1373	99	184	02:35:49.066	175JH176A6A	6TMREC	HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2R3	4	0	5,065,397:50:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1374	99	184	02:35:49.600		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 4271.83 +/- 4	2R3	4	0	5,065,397:50:8	
1375	99	184	02:35:49.600		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *4271.83 +/- 4	2R3	4	0	5,065,397:50:8	
1376	99	184	02:35:50.400	118IU11A	**SMOS**	GE		2R3	4	0	5,065,397:52:0	
1377	99	184	02:36:17.066	175JH422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,398:01:0	
1378	99	184	02:36:17.066		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *4175.27 +/- 4	2R3	4	0	5,065,398:01:0	
1379	99	184	02:36:18.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4174.27 +/- 4	2R3	4	0	5,065,398:02:8	
1380	99	184	03:08:35.733	488AM6E	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	5,065,429:88:0	
1381	99	184	04:21:25.066	165IV4A	7SCAN	NORM,70.476999,2	Check S/P Position	2R3	4	0	5,065,501:90:0	
1382	99	184	04:25:22.400	118IV	**SMOS**	GS		2R3	4	0	5,065,505:82:0	
1383	99	184	04:25:32.400	118IV110A111A4A	7STRP	-0.0045,0.0,92,0	Slew =,3.01	2R3	4	0	5,065,506:06:0	
1384	99	184	04:25:50.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4174.27 +/- 4	2R3	4	0	5,065,506:33:0	
1385	99	184	04:25:50.400	175JI422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,506:33:0	
1386	99	184	04:25:51.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4174.39 +/- 4	2R3	4	0	5,065,506:35:1	
1387	99	184	04:25:57.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4175.62 +/- 4	2R3	4	0	5,065,506:43:0	
1388	99	184	04:25:58.266		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *4175.68 +/- 4	2R3	4	0	5,065,506:44:8	
1389	99	184	04:26:01.733	175JI176A6A	6TMREC	HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2R3	4	0	5,065,506:50:0	
1390	99	184	04:26:02.266		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *4169.38 +/- 4	2R3	4	0	5,065,506:50:8	
1391	99	184	04:26:02.266		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 4169.38 +/- 5	2R3	4	0	5,065,506:50:8	
1392	99	184	04:26:03.066	118IV11A	**SMOS**	GE		2R3	4	0	5,065,506:52:0	
1393	99	184	04:26:29.733		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *4072.82 +/- 5	2R3	4	0	5,065,507:01:0	
1394	99	184	04:26:29.733	175JI422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,507:01:0	
1395	99	184	04:26:30.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *4071.82 +/- 5	2R3	4	0	5,065,507:02:8	
1396	99	184	06:41:57.733	165IW4A	7SCAN	NORM,77.808,24.8	Check S/P Position	2R3	4	0	5,065,640:90:0	
1397	99	184	06:45:59.733	165IW4B	7VECT		Inert vect update UTC	2R3	4	0	5,065,644:89:0	
1398	99	184	06:46:05.066	118IW	**SMOS**	GS		2R3	4	0	5,065,645:06:0	
1399	99	184	06:46:29.733	118IW110A111A4A	7STRP	-0.0038,0.0,92,0	Slew =,3.01	2R3	4	0	5,065,645:43:0	
1400	99	184	06:46:53.066	175JJ422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,645:78:0	
1401	99	184	06:46:53.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4071.82 +/- 5	2R3	4	0	5,065,645:78:0	
1402	99	184	06:46:54.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4071.94 +/- 5	2R3	4	0	5,065,645:80:1	
1403	99	184	06:46:59.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4073.18 +/- 5	2R3	4	0	5,065,645:88:0	
1404	99	184	06:47:00.400	118IW11A	**SMOS**	GE		2R3	4	0	5,065,645:89:0	
1405	99	184	06:47:00.933		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *4073.24 +/- 5	2R3	4	0	5,065,645:89:8	
1406	99	184	06:47:04.400	175JJ176A6A	6TMREC	HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2R3	4	0	5,065,646:04:0	
1407	99	184	06:47:04.933		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 4066.94 +/- 5	2R3	4	0	5,065,646:04:8	
1408	99	184	06:47:04.933		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *4066.94 +/- 5	2R3	4	0	5,065,646:04:8	
1409	99	184	06:47:32.400		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *3970.37 +/- 5	2R3	4	0	5,065,646:46:0	
1410	99	184	06:47:32.400	175JJ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,646:46:0	
1411	99	184	06:47:33.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3969.37 +/- 5	2R3	4	0	5,065,646:47:8	
1412	99	184	07:42:37.733	165JM4A	7SCAN	NORM,80.929999,2	Check S/P Position	2R3	4	0	5,065,700:90:0	
1413	99	184	07:46:39.733	165JM4B	7VECT		Inert vect update UTC	2R3	4	0	5,065,704:89:0	
1414	99	184	07:46:45.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3969.37 +/- 5	2R3	4	0	5,065,705:07:0	
1415	99	184	07:46:45.733	175JN422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,705:07:0	
1416	99	184	07:46:47.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3969.49 +/- 5	2R3	4	0	5,065,705:09:1	
1417	99	184	07:46:52.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3970.73 +/- 5	2R3	4	0	5,065,705:17:0	
1418	99	184	07:46:53.600		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *3970.79 +/- 5	2R3	4	0	5,065,705:18:8	
1419	99	184	07:46:57.066	175JN176A6A	6TMREC	HIS	115.2 KBPS SSI + NIMS RECORD Record Mode	2R3	4	0	5,065,705:24:0	
1420	99	184	07:46:57.600		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *3964.49 +/- 5	2R3	4	0	5,065,705:24:8	
1421	99	184	07:46:57.600		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 3964.49 +/- 5	2R3	4	0	5,065,705:24:8	
1422	99	184	07:47:11.733	175JN422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,705:46:0	
1423	99	184	07:47:11.733		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *3914.80 +/- 5	2R3	4	0	5,065,705:46:0	
1424	99	184	07:47:12.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3913.80 +/- 5	2R3	4	0	5,065,705:47:8	
1425	99	184	07:48:31.733	175JO422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,706:75:0	
1426	99	184	07:48:31.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3913.80 +/- 5	2R3	4	0	5,065,706:75:0	
1427	99	184	07:48:33.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3913.92 +/- 5	2R3	4	0	5,065,706:77:1	
1428	99	184	07:48:38.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3915.16 +/- 5	2R3	4	0	5,065,706:85:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1429	99	184	07:48:39.600		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *3915.22 +/- 5	2R3	4	0	5,065,706	86:8
1430	99	184	07:48:43.066	175JO176A6A	6TMREC	HIS	115.2 KBPS SSI + NIMS RECORD Record Mode	2R3	4	0	5,065,707	01:0
1431	99	184	07:48:43.600		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 3908.92 +/- 5	2R3	4	0	5,065,707	01:8
1432	99	184	07:48:43.600		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *3908.92 +/- 5	2R3	4	0	5,065,707	01:8
1433	99	184	07:48:57.733	175JO422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,707	23:0
1434	99	184	07:48:57.733		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *3859.23 +/- 5	2R3	4	0	5,065,707	23:0
1435	99	184	07:48:58.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3858.23 +/- 5	2R3	4	0	5,065,707	24:8
1436	99	184	07:49:42.400	165JO4A	7SCAN	NORM,81.301,25.2	Check S/P Position	2R3	4	0	5,065,707	90:0
1437	99	184	07:53:44.400	165JO4B	7VECT		Inert vect update UTC	2R3	4	0	5,065,711	89:0
1438	99	184	07:53:50.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3858.23 +/- 5	2R3	4	0	5,065,712	07:0
1439	99	184	07:53:50.400	175JP422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,712	07:0
1440	99	184	07:53:51.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3858.35 +/- 5	2R3	4	0	5,065,712	09:1
1441	99	184	07:53:57.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3859.58 +/- 5	2R3	4	0	5,065,712	17:0
1442	99	184	07:53:58.266		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *3859.64 +/- 5	2R3	4	0	5,065,712	18:8
1443	99	184	07:54:01.733	175JP176A6A	6TMREC	HIS	115.2 KBPS SSI + NIMS RECORD Record Mode	2R3	4	0	5,065,712	24:0
1444	99	184	07:54:02.266		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *3853.34 +/- 5	2R3	4	0	5,065,712	24:8
1445	99	184	07:54:02.266		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 3853.34 +/- 5	2R3	4	0	5,065,712	24:8
1446	99	184	07:54:16.400	175JP422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,712	46:0
1447	99	184	07:54:16.400		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *3803.65 +/- 5	2R3	4	0	5,065,712	46:0
1448	99	184	07:54:17.600		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3802.65 +/- 5	2R3	4	0	5,065,712	47:8
1449	99	184	08:01:50.400	165IX4A	7SCAN	NORM,81.969999,2	Check S/P Position	2R3	4	0	5,065,719	90:0
1450	99	184	08:05:47.733	118IX	**SMOS**	GS		2R3	4	0	5,065,723	82:0
1451	99	184	08:05:57.733	118IX110A111A4A	7STRP	-0.0039,0.0,92,0	Slew =,3.01	2R3	4	0	5,065,724	06:0
1452	99	184	08:06:15.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3802.65 +/- 5	2R3	4	0	5,065,724	33:0
1453	99	184	08:06:15.733	175JK422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,724	33:0
1454	99	184	08:06:17.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3802.77 +/- 5	2R3	4	0	5,065,724	35:1
1455	99	184	08:06:22.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3804.01 +/- 5	2R3	4	0	5,065,724	43:0
1456	99	184	08:06:23.600		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *3804.07 +/- 5	2R3	4	0	5,065,724	44:8
1457	99	184	08:06:27.066	175JK176A6A	6TMREC	HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2R3	4	0	5,065,724	50:0
1458	99	184	08:06:27.600		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 3797.77 +/- 5	2R3	4	0	5,065,724	50:8
1459	99	184	08:06:27.600		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *3797.77 +/- 5	2R3	4	0	5,065,724	50:8
1460	99	184	08:06:28.400	118IX11A	**SMOS**	GE		2R3	4	0	5,065,724	52:0
1461	99	184	08:06:55.066		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *3701.21 +/- 5	2R3	4	0	5,065,725	01:0
1462	99	184	08:06:55.066	175JK422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,725	01:0
1463	99	184	08:06:56.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3700.21 +/- 5	2R3	4	0	5,065,725	02:8
1464	99	184	08:24:32.400	488AN6A	6TMSED	NORM,DL3	Sci, Eng, and D/L Chan	2R3	4	0	5,065,742	40:0
1465	99	184	08:58:40.400	488AN6B	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	5,065,776	18:0
1466	99	184	09:54:54.400	488AN6C	6TMSED	FILL,DL4	Sci, Eng, and D/L Chan	2R3	4	0	5,065,831	74:0
1467	99	184	10:00:08.400	165IY4A	7SCAN	NORM,88.150999,2	Check S/P Position	2R3	4	0	5,065,836	90:0
1468	99	184	10:04:05.733	118IY	**SMOS**	GS		2R3	4	0	5,065,840	82:0
1469	99	184	10:04:15.733	118IY110A111A4A	7STRP	-0.0039,0.0,92,0	Slew =,3.01	2R3	4	0	5,065,841	06:0
1470	99	184	10:04:33.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3700.21 +/- 5	2R3	4	0	5,065,841	33:0
1471	99	184	10:04:33.733	175JL422A6A	6DMSC	R115,0	DMS Control Tape runup 115.2kb	2R3	4	0	5,065,841	33:0
1472	99	184	10:04:35.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3700.33 +/- 5	2R3	4	0	5,065,841	35:1
1473	99	184	10:04:40.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3701.56 +/- 5	2R3	4	0	5,065,841	43:0
1474	99	184	10:04:41.600		DMS:	: *RUNUP	R115, TRACK *2, *REV, TIC *3701.62 +/- 5	2R3	4	0	5,065,841	44:8
1475	99	184	10:04:45.066	175JL176A6A	6TMREC	HMA	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2R3	4	0	5,065,841	50:0
1476	99	184	10:04:45.600		DMS:	**: *RECORD**	R115, TRACK 2, REV, TIC *3695.32 +/- 5	2R3	4	0	5,065,841	50:8
1477	99	184	10:04:45.600		DMS:	: *AT_SPD	R115, TRACK 2, REV, TIC 3695.32 +/- 5	2R3	4	0	5,065,841	50:8
1478	99	184	10:04:46.400	118IY11A	**SMOS**	GE		2R3	4	0	5,065,841	52:0
1479	99	184	10:05:13.733		DMS:	**: *RUNDOWN**	R115, TRACK 2, REV, TIC *3596.41 +/- 5	2R3	4	0	5,065,842	02:0
1480	99	184	10:05:13.733	175JL422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,842	02:0
1481	99	184	10:05:14.933		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3595.41 +/- 5	2R3	4	0	5,065,842	03:8
1482	99	184	10:11:13.733	175ZA422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2R3	4	0	5,065,847	87:0
1483	99	184	10:11:13.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3595.41 +/- 5	2R3	4	0	5,065,847	87:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1484	99	184	10:11:15.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3595.53 +/- 5	2R3	4	0	5,065,847:89:1	
1485	99	184	10:11:20.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3596.77 +/- 5	2R3	4	0	5,065,848:06:0	
1486	99	184	10:11:21.600		DMS:	: *RUNUP	R7, TRACK *2, *REV, TIC *3596.83 +/- 5	2R3	4	0	5,065,848:07:8	
1487	99	184	10:11:22.400	175ZA176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	5,065,848:09:0	
1488	99	184	10:11:23.000		DMS:	: *AT_SPD	R7, TRACK 2, REV, TIC 3596.71 +/- 5	2R3	4	0	5,065,848:09:9	
1489	99	184	10:11:23.000		DMS:	**: *RECORD**	R7, TRACK 2, REV, TIC *3596.71 +/- 5	2R3	4	0	5,065,848:09:9	
1490	99	184	10:11:43.066	175ZA422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,065,848:40:0	
1491	99	184	10:11:43.066		DMS:	**: *RUNDOWN**	R7, TRACK 2, REV, TIC *3592.01 +/- 5	2R3	4	0	5,065,848:40:0	
1492	99	184	10:11:44.266		DMS:	: *READY	RDY, TRACK 2, REV, TIC *3591.95 +/- 5	2R3	4	0	5,065,848:41:8	
1493	99	184	10:33:33.733	488AN6D	6TMSED	NORM,DL4	Sci, Eng, and D/L Chan	2R3	4	0	5,065,870:04:0	
1494	**99**	**184**	**10:41:40.466**	**21NNRELOAD06-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
1495	**99**	**184**	**10:42:41.066**	**20EZ5A**	**37PL**		**Program Load (halts microprocessor & unwri**	**2R3**	**4**	**0**	**5,065,879:06:0**	
1496	**99**	**184**	**10:42:42.400**	**20EZ5B**	**37MRL**		**Memory Realocate (software operates from R**	**2R3**	**4**	**0**	**5,065,879:08:0**	
1497	**99**	**184**	**10:42:43.733**	**20EZ6B**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**	**2R3**	**4**	**0**	**5,065,879:10:0**	
1498	**99**	**184**	**10:42:53.733**	**20EZ6C**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**	**2R3**	**4**	**0**	**5,065,879:25:0**	
1499	**99**	**184**	**10:43:03.733**	**20EZ5C**	**37IRT**		**Instrument Reset (goes into POR state)**	**260**	**4**	**0**	**5,065,879:40:0**	
1500	**99**	**184**	**10:43:23.733**	**20EZ5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**5,065,879:70:0**	
1501	**99**	**184**	**10:43:46.400**	**20EZ4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,065,880:13:0**	
1502	**99**	**184**	**10:44:37.066**	**432JB6B**	**6RTDS2**	**NIMNCG,AACDSL,RT**	**AACS DESELECT**	**2R0**	**4**	**0**	**5,065,880:89:0**	
1503	**99**	**184**	**10:44:47.066**	**20EZ4B**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**5,065,881:13:0**	
1504	**99**	**184**	**10:45:43.133**	**21NNRELOAD06-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
1505	**99**	**184**	**10:45:43.133**	**21NNCHOPOF01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
1506	99	184	10:46:35.066	127LR	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	5,065,882:84:0	
1507	**99**	**184**	**10:46:35.066**	**127LR4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**2R0**	**4**	**0**	**5,065,882:84:0**	
1508	**99**	**184**	**10:46:35.733**	**127LR4B**	**37ETB**	**04,C4,02,00,00**	**Loads wavelength edit table**	**2R0**	**4**	**0**	**5,065,882:85:0**	
1509	99	184	10:46:43.733	127LR11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R0	4	0	5,065,883:06:0	
1510	99	184	10:49:37.066	125LR	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	5,065,885:84:0	
1511	**99**	**184**	**10:49:37.066**	**125LR4A**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2R0**	**4**	**0**	**5,065,885:84:0**	
1512	99	184	10:50:05.066	20KA4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2R0	4	0	5,065,886:35:0	
1513	**99**	**184**	**10:50:37.733**	**125LR4B**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**260**	**4**	**0**	**5,065,886:84:0**	
1514	**99**	**184**	**10:51:38.400**	**125LR4C**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**2O0**	**4**	**0**	**5,065,887:84:0**	
1515	99	184	10:51:38.400	125LR11A	NIMSINIT	GE	##### GROUP END INIT	2O0	4	0	5,065,887:84:0	
1516	**99**	**184**	**10:55:49.800**	**21NNCHOPOF01-**		**-----STOP-------**		**2O0**	**4**	**0**	**: :**	
1517	99	184	10:59:59.733		DMS:	: READY	RDY, TRACK 2, REV, TIC 3591.95 +/- 5	2O0	4	0	5,065,896:17:0	
1518	**99**	**184**	**11:00:00.000**	**20A3FD**	**40HRPR**	**Final Condition**	**RCT Heater OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**	
1519	**99**	**184**	**11:00:00.000**	**20A3FB**	**37F2PR**	**Final Condition**	**Shield Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**	
1520	**99**	**184**	**11:00:00.000**	**20A3FA**	**37F1PR**	**Final Condition**	**Radiator Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**	
1521	**99**	**184**	**11:00:00.000**	**20A3EZ**	**37C2PR**	**Final Condition**	**Optics Heater 2 OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**	
1522	**99**	**184**	**11:00:00.000**	**20A3EY**	**37C1PR**	**Final Condition**	**Optics Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**	
1523	**99**	**184**	**11:00:00.000**	**20A3EX**	**37HR**	**Final Condition**	**Replacement Heaters OFF**	**2O0**	**4**	**0**	**5,065,896:17:4**	
1524	**99**	**184**	**11:00:00.000**	**20A3EW**	**37A**	**Final Condition**	**NIMS Power ON**	**2O0**	**4**	**0**	**5,065,896:17:4**	
1525	**99**	**184**	**11:00:00.000**	**20A3FE**	**40T1PR**	**Final Condition**	**PCT Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**	
1526	**99**	**184**	**11:00:00.000**	**20A3FF**	**40T2R**	**Final Condition**	**PCT Heater 2 OFF**	**2O0**	**4**	**0**	**5,065,896:17:4**	

Sequence:	C21BQG	Created: 6/18/99	Begin: 99-184/11:00:00 Finish: 99-223/14:00:00

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
1	99	184	10:59:59.733		DMS:	: READY	RDY, TRACK 2, REV, TIC 3591.95 +/- 5	2O0	4	0	5,065,896:17:0
2	**99**	**184**	**11:00:00.000**	**20A3FB**	**37F2PR**	**Initial Condition**	**Shield Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**
3	**99**	**184**	**11:00:00.000**	**20A3FF**	**40T2R**	**Initial Condition**	**PCT Heater 2 OFF**	**2O0**	**4**	**0**	**5,065,896:17:4**
4	**99**	**184**	**11:00:00.000**	**20A3EW**	**37A**	**Initial Condition**	**NIMS Power ON**	**2O0**	**4**	**0**	**5,065,896:17:4**
5	**99**	**184**	**11:00:00.000**	**20A3EX**	**37HR**	**Initial Condition**	**Replacement Heaters OFF**	**2O0**	**4**	**0**	**5,065,896:17:4**
6	**99**	**184**	**11:00:00.000**	**20A3EY**	**37C1PR**	**Initial Condition**	**Optics Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**
7	**99**	**184**	**11:00:00.000**	**20A3EZ**	**37C2PR**	**Initial Condition**	**Optics Heater 2 OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**
8	**99**	**184**	**11:00:00.000**	**20A3FA**	**37F1PR**	**Initial Condition**	**Radiator Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**
9	**99**	**184**	**11:00:00.000**	**20A3FD**	**40HRPR**	**Initial Condition**	**RCT Heater OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**
10	**99**	**184**	**11:00:00.000**	**20A3FE**	**40T1PR**	**Initial Condition**	**PCT Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**5,065,896:17:4**
11	99	184	11:00:16.400	488AA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,065,896:42:0
12	99	184	11:00:59.733	488AA6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,065,897:16:0
13	**99**	**184**	**11:01:48.400**	**432MA6B**	**6RTDS2**	**NIMDSL,AACDSL,RT**	**NIMS R/T DESELECTAACS DESELECT**	**2O0**	**4**	**0**	**5,065,897:89:0**
14	99	184	11:04:59.733	444UB443A4A	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	5,065,901:12:0
15	99	184	11:15:59.733	41AD99A	**POWER**	**PWR MODE change**	Change to Maneuver/Playback Mode	2O0	4	0	5,065,912:01:0
16	**99**	**184**	**11:17:53.733**	**41AD3G**	**40T1P**		**1 PCT Heater 1 ON (primary relay)**	**2O0**	**4**	**0**	**5,065,913:81:0**
17	**99**	**184**	**11:18:03.733**	**41AD3H**	**40T1P**		**2 PCT Heater 1 ON (primary relay)**	**2O0**	**4**	**0**	**5,065,914:05:0**
18	**99**	**184**	**11:18:13.733**	**41AD3I**	**40T2**		**1 PCT Heater 2 ON**	**2O0**	**4**	**0**	**5,065,914:20:0**
19	**99**	**184**	**11:18:23.733**	**41AD3J**	**40T2**		**2 PCT Heater 2 ON**	**2O0**	**4**	**0**	**5,065,914:35:0**
20	99	184	11:22:03.733	20WA4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	5,065,918:01:0
21	99	184	11:22:53.733	20WA4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,065,918:76:0
22	99	184	11:23:03.733	176SA6A	6TMREC	**IPB**	INITIATE PLAYBACK (PB CONTROL) Record Mod	2O0	4	0	5,065,919:00:0
23	99	184	16:37:20.400	488AA6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,066,229:75:0
24	99	184	16:59:59.733	481UI4A	7VECT	BB1	Inert vect update UTC	2O0	4	0	5,066,252:21:0
25	99	184	17:22:39.733	488AB6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,066,274:59:0
26	99	184	17:51:45.733	488AB6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,066,303:39:0
27	99	184	18:04:59.733	488AB6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	5,066,316:47:0
28	99	184	18:08:31.066	176TA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	5,066,320:00:0
29	99	184	18:32:32.400	488AB6D	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	2O0	4	0	5,066,343:69:0
30	99	184	18:38:59.733	20SQ4I	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	5,066,350:13:0
31	99	184	18:53:59.733	20SQ4K	7SLEW	INIT,POS,17.45	Stator movement	2O0	4	0	5,066,364:89:0
32	99	184	19:05:59.733	20SQ4L	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,066,376:77:0
33	99	184	19:12:59.733	20SQ4M	7SLEW	INIT,NEG,17.45	Stator movement	2O0	4	0	5,066,383:70:0
34	99	184	19:24:59.733	20SQ4N	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,066,395:58:0
35	99	184	19:36:59.733	20SQ4AH	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	5,066,407:46:0
36	99	184	19:53:03.733	20SL4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	5,066,423:36:0
37	99	184	19:53:53.733	20SL4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,066,424:20:0
38	99	184	19:54:41.066	176TB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	5,066,425:00:0
39	99	184	20:12:59.733	488AB6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,066,443:10:0
40	99	184	22:40:00.400	488AC6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,066,588:46:0
41	99	185	00:30:56.400	488AC6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,066,698:20:0
42	99	185	00:54:24.400	488AC6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,066,721:39:0
43	99	185	01:32:48.400	488AC6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,066,759:37:0
44	99	185	02:24:50.400	488AC6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,066,810:79:0
45	99	185	02:58:29.733	488AD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,066,844:14:0
46	99	185	11:55:44.333	488AE6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,067,375:45:0
47	99	185	12:23:28.333	488AE6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	5,067,402:84:0
48	99	185	12:38:24.333	488AE6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,067,417:63:0
49	99	185	13:22:34.333	488AE6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,067,461:34:0
50	99	185	13:51:40.333	488AE6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,067,490:14:0
51	99	185	15:50:24.333	488AF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,067,607:53:0
52	99	185	16:22:24.333	488AF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,067,639:21:0
53	99	185	17:47:44.333	488AF6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,067,723:57:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	99	185	23:09:52.333	488AG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,068,042	20:0
55	99	186	00:35:12.333	488AG6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,068,126	56:0
56	99	186	00:54:24.333	488AG6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,068,145	55:0
57	99	186	01:22:08.333	488AG6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,068,173	03:0
58	99	186	02:24:45.000	488AG6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,068,234	87:0
59	99	186	02:58:24.333	488AH6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,068,268	22:0
60	99	186	06:43:38.333	488AH6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,068,491	00:0
61	99	187	02:42:22.266	488AI6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,069,676	51:0
62	99	187	04:04:38.266	488AI6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,069,757	84:0
63	99	187	04:38:17.600	488AI6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,069,791	19:0
64	99	187	10:53:44.933	488AJ6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,070,162	49:0
65	99	187	11:02:24.266	488AJ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,070,171	09:0
66	99	187	12:09:44.933	488AJ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,070,237	64:0
67	99	187	12:23:45.600	488AJ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,070,251	51:0
68	99	187	12:50:34.933	488AJ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,070,278	08:0
69	99	187	16:20:16.266	488AK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,070,485	43:0
70	99	187	18:56:00.266	488AK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,070,639	45:0
71	99	187	19:43:18.266	488AK6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,070,686	25:0
72	99	187	19:49:20.266	488AK6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,070,692	22:0
73	99	188	08:18:50.866	488AL6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,071,433	47:0
74	99	188	08:28:48.200	488AL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,071,443	33:0
75	99	188	09:13:36.200	488AL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,071,487	61:0
76	99	188	11:42:56.200	488AL6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,071,635	33:0
77	99	188	16:20:16.200	488AM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,071,909	59:0
78	99	188	18:49:36.200	488AM6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,057	31:0
79	99	188	19:33:21.533	488AM6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,100	56:0
80	99	188	19:40:48.200	488AM6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	5,072,107	89:0
81	99	189	00:42:54.866	488AN6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	5,072,406	70:0
82	99	189	00:48:00.200	488AN6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,072,411	73:0
83	99	189	01:09:20.200	488AN6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,432	82:0
84	99	189	02:09:27.533	488AN6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,492	33:0
85	99	189	02:43:06.200	488AN6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,525	58:0
86	99	189	04:48:38.800	488AO6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,649	73:0
87	99	189	04:55:28.133	488AO6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,072,656	50:0
88	99	189	08:23:56.800	488AO6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,072,862	67:0
89	99	189	08:33:04.133	488AO6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,871	69:0
90	99	189	09:44:25.466	488AO6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,942	30:0
91	99	189	10:18:04.133	488AP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,072,975	55:0
92	99	189	10:38:56.133	488AP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,072,996	22:0
93	99	189	11:53:00.133	488AP6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	5,073,069	45:0
94	99	189	11:57:33.466	176SB6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	5,073,074	00:0
95	99	189	17:20:00.133	488AQ6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	2O0	4	0	5,073,392	82:0
96	99	189	18:01:00.133	488AQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,073,433	41:0
97	99	189	18:13:41.466	176SC6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	5,073,446	00:0
98	99	189	19:30:08.133	488AQ6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,073,521	55:0
99	99	189	19:31:55.466	488AQ6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,073,523	34:0
100	99	190	00:54:00.800	488AR6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,073,841	84:0
101	99	190	01:17:52.133	488AR6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,073,865	47:0
102	99	190	02:14:21.466	488AR6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,073,921	35:0
103	99	190	02:48:00.133	488AR6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,073,954	60:0
104	99	190	03:53:00.133	488AR6E	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	2O0	4	0	5,074,018	86:0
105	99	190	03:57:06.133	176TF6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	5,074,023	00:0
106	99	190	04:06:00.133	20UD4C	7STAT	17.45,209.15,-10	Stator inertial point	2O0	4	0	5,074,031	73:0
107	99	190	04:25:02.133	490UA412A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	5,074,050	57:0
108	99	190	04:30:00.133	490UA412A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	5,074,055	49:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	99	190	04:30:20.133	20UD4D	7STAT	17.45,209.15,-10	Stator inertial point	2O0	4	0	5,074,055:79:0	
110	99	190	04:34:10.133	490UA412A4E	7VECT		Inert vect update UTC	2O0	4	0	5,074,059:60:0	
111	99	190	04:34:14.133	490UA412A4F	7TURN	2,RTH	ALERT Thruster	2O0	4	0	5,074,059:66:0	
112	99	190	04:38:02.133	490UA412A406A4A	7VECT		Inert vect update UTC	2O0	4	0	5,074,063:44:0	
113	99	190	04:38:04.133	490UA412A406A4B	7STAR	11,701,278.81	Star catalog update	2O0	4	0	5,074,063:47:0	
114	99	190	04:38:06.133	490UA412A406A4C	7STAR	2,111,285.778,13	Star catalog update	2O0	4	0	5,074,063:50:0	
115	99	190	04:38:08.133	490UA412A406A4D	7STAR	3,395,305.43	Star catalog update	2O0	4	0	5,074,063:53:0	
116	99	190	04:38:10.133	490UA412A406A4E	7STAR	4,350,120.46	Star catalog update	2O0	4	0	5,074,063:56:0	
117	99	190	04:38:12.133	490UA412A406A4F	7STAR	5,0,0.0,0.0	Star catalog update	2O0	4	0	5,074,063:59:0	
118	99	190	04:38:14.133	490UA412A406A4G	7STAR	6,0,0.0,0.0	Star catalog update	2O0	4	0	5,074,063:62:0	
119	99	190	04:48:06.133	20UD4F	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,074,073:40:0	
120	99	190	04:56:10.133	490UA412A4G	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	5,074,081:38:0	
121	99	190	06:30:00.133	488AS6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,074,174:20:0	
122	99	190	06:30:04.133	20UW4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	5,074,174:26:0	
123	99	190	06:30:54.133	20UW4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,074,175:10:0	
124	99	190	06:32:48.800	176TG6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	5,074,177:00:0	
125	99	190	09:30:40.133	488AS6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,074,352:82:0	
126	99	190	11:02:04.800	488AS6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,074,443:28:0	
127	99	190	11:31:10.800	488AS6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,074,472:08:0	
128	99	190	11:34:24.133	488AS6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,074,475:25:0	
129	99	190	12:52:16.733	488AT6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,074,552:27:0	
130	99	190	12:55:28.066	488AT6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,074,555:41:0	
131	99	190	18:04:24.733	431MA6A	6RCSEL	DDSSEL,PLSNCG,EP	Record Select (DDS onl	2O0	4	0	5,074,861:00:0	
132	99	191	00:34:06.733	488AU6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,075,246:38:0	
133	99	191	00:43:44.066	488AU6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,075,255:85:0	
134	99	191	01:32:48.066	488AU6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,075,304:42:0	
135	99	191	06:18:40.066	488AU6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,075,587:17:0	
136	99	191	06:31:28.066	488AU6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,075,599:77:0	
137	99	191	08:01:04.066	488AV6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,075,688:42:0	
138	99	191	08:43:44.066	488AV6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,075,730:60:0	
139	99	191	10:13:20.066	488AV6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,075,819:25:0	
140	99	191	17:30:40.066	488AW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,076,251:73:0	
141	99	191	19:00:16.066	488AW6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,076,340:38:0	
142	99	191	19:33:55.400	488AW6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,076,373:64:0	
143	99	191	19:40:48.000	488AW6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,076,380:46:0	
144	99	192	00:29:12.666	488AX6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,076,665:68:0	
145	99	192	00:39:28.000	488AX6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,076,675:81:0	
146	99	192	01:28:32.000	488AX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,076,724:38:0	
147	99	192	05:14:40.000	488AX6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,076,948:06:0	
148	99	192	07:24:48.000	488AY6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,077,076:70:0	
149	99	192	07:56:48.000	488AY6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,077,108:38:0	
150	99	192	08:39:28.000	488AY6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,077,150:56:0	
151	99	192	09:57:42.666	176ST6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	5,077,228:00:0	
152	99	192	10:02:00.000	20UQ4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,077,232:22:0	
153	99	192	10:03:00.000	20UQ4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2O0	4	0	5,077,233:21:0	
154	99	192	10:05:00.000	20UQ4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	5,077,235:19:0	
155	99	192	10:09:04.000	488AY6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,077,239:21:0	
156	99	192	10:10:30.000	20UQ4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2O0	4	0	5,077,240:59:0	
157	99	192	10:10:30.666	20UQ4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2O0	4	0	5,077,240:60:0	
158	99	192	10:10:50.666	20UQ4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2O0	4	0	5,077,240:90:0	
159	99	192	10:10:51.333	20UQ4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2O0	4	0	5,077,241:00:0	
160	99	192	10:11:11.333	20UQ4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	5,077,241:30:0	
161	99	192	10:11:12.000	20UQ4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	5,077,241:31:0	
162	99	192	10:11:22.000	20UQ4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	5,077,241:46:0	
163	99	192	10:11:22.666	20UQ4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	5,077,241:47:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	99	192	10:11:32.666	20UQ4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2O0	4	0	5,077,241:62:0	
165	99	192	10:11:33.333	20UQ4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2O0	4	0	5,077,241:63:0	
166	99	192	10:13:20.000	20UQ4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2O0	4	0	5,077,243:41:0	
167	99	192	10:13:20.666	20UQ4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2O0	4	0	5,077,243:42:0	
168	99	192	10:13:40.666	20UQ4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2O0	4	0	5,077,243:72:0	
169	99	192	10:13:41.333	20UQ4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2O0	4	0	5,077,243:73:0	
170	99	192	10:14:01.333	20UQ4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	5,077,244:12:0	
171	99	192	10:14:02.000	20UQ4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	5,077,244:13:0	
172	99	192	10:14:12.000	20UQ4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	5,077,244:28:0	
173	99	192	10:14:12.666	20UQ4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	5,077,244:29:0	
174	99	192	10:14:22.666	20UQ4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2O0	4	0	5,077,244:44:0	
175	99	192	10:14:23.333	20UQ4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2O0	4	0	5,077,244:45:0	
176	99	192	10:15:20.000	20UQ4Z	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	5,077,245:39:0	
177	99	192	10:40:04.000	20UJ4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	5,077,269:81:0	
178	99	192	10:40:54.000	20UJ4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,077,270:65:0	
179	99	192	10:42:12.000	176SU6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	5,077,272:00:0	
180	99	192	17:30:40.000	488AZ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,077,675:89:0	
181	99	192	18:56:00.000	488AZ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,077,760:34:0	
182	99	192	19:24:19.333	488AZ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,077,788:35:0	
183	99	193	02:22:59.333	488BA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,078,202:41:0	
184	99	193	02:53:52.000	488BA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,078,232:90:0	
185	99	193	03:46:47.266	488BA6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,078,285:30:0	
186	99	193	04:15:53.933	488BA6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,078,314:11:0	
187	99	193	07:56:47.933	488BA6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,078,532:54:0	
188	99	193	08:33:03.933	488BB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,078,568:42:0	
189	99	193	09:31:46.600	488BB6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,078,626:48:0	
190	99	193	10:00:52.600	488BB6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,078,655:28:0	
191	99	193	10:04:47.933	488BB6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,078,659:17:0	
192	99	193	13:52:15.266	488BB6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,078,884:13:0	
193	99	193	13:55:11.933	488BC6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,078,887:05:0	
194	99	194	00:24:25.266	488BD6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,079,509:33:0	
195	99	194	00:39:27.933	488BD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,079,524:22:0	
196	99	194	01:48:55.266	488BD6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,079,592:85:0	
197	99	194	02:22:34.600	488BD6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,079,626:20:0	
198	99	194	02:49:35.933	488BD6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,079,652:86:0	
199	99	194	04:52:14.600	488BE6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,079,774:22:0	
200	99	194	09:36:21.933	488BE6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,080,055:22:0	
201	99	194	09:54:07.933	488BE6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,080,072:74:0	
202	99	194	17:26:23.866	488BF6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,080,520:10:0	
203	99	194	18:51:43.866	488BF6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,080,604:46:0	
204	99	194	19:19:32.533	488BF6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,080,632:01:0	
205	99	195	07:48:14.533	488BG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,081,372:44:0	
206	99	195	08:24:31.866	488BG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,081,408:34:0	
207	99	195	09:49:51.866	488BG6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,081,492:70:0	
208	99	195	13:52:34.533	488BH6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,081,732:74:0	
209	99	195	13:55:11.866	488BH6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,081,735:37:0	
210	99	196	08:23:21.133	488BI6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,082,831:35:0	
211	99	196	09:09:19.800	488BI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,082,876:78:0	
212	99	196	09:46:26.466	488BI6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,082,913:51:0	
213	99	196	10:15:32.466	488BI6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,082,942:31:0	
214	99	196	13:52:19.800	488BI6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,083,156:68:0	
215	99	196	13:57:19.800	488BJ6A	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,083,161:63:0	
216	99	197	00:09:46.466	488BK6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,083,767:37:0	
217	99	197	00:18:07.800	488BK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,083,775:61:0	
218	99	197	01:05:03.800	488BK6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,083,822:08:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	99	197	03:45:03.733	488BK6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,083,980:30:0	
220	99	197	08:22:23.733	488BL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,084,254:56:0	
221	99	197	09:45:35.733	488BL6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,084,336:82:0	
222	99	197	15:02:53.733	488BM6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,084,650:65:0	
223	99	197	15:05:35.733	488BM6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,084,653:35:0	
224	99	198	00:23:32.400	488BN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,085,205:18:0	
225	99	198	00:58:39.733	488BN6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,085,239:85:0	
226	99	198	03:30:07.733	488BN6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,085,389:67:0	
227	99	198	03:58:37.066	488BN6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,085,417:83:0	
228	99	198	04:02:07.733	488BN6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,085,421:35:0	
229	99	198	07:44:55.733	488BO6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,085,641:67:0	
230	99	198	07:54:39.733	488BO6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,085,651:33:0	
231	99	198	08:58:39.733	488BO6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,085,714:60:0	
232	99	198	09:11:12.400	488BO6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,085,727:06:0	
233	99	198	09:40:18.400	488BO6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,085,755:77:0	
234	99	198	16:09:35.666	488BP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,086,140:78:0	
235	99	198	16:42:33.666	488BP6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,086,173:42:0	
236	99	198	17:09:23.000	488BP6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,086,199:90:0	
237	99	198	20:53:57.666	488BP6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,086,422:09:0	
238	99	198	20:57:35.666	488BP6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,086,425:63:0	
239	99	199	07:43:42.333	488BQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,087,064:64:0	
240	99	199	08:09:35.666	488BQ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,087,090:28:0	
241	99	199	09:24:15.666	488BQ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,087,164:14:0	
242	99	199	15:11:59.666	488BR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,087,508:06:0	
243	99	199	16:05:19.666	488BR6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,087,560:74:0	
244	99	199	20:53:58.266	488BR6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,087,846:26:0	
245	99	199	20:57:35.600	488BR6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,087,849:79:0	
246	99	200	00:05:06.266	488BS6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,088,035:29:0	
247	99	200	00:13:51.600	488BS6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,088,043:89:0	
248	99	200	01:28:14.266	488BS6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,088,117:49:0	
249	99	200	02:00:31.600	488BS6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,088,149:43:0	
250	99	200	02:01:32.933	488BS6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,088,150:44:0	
251	99	200	08:01:03.600	488BT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,088,506:04:0	
252	99	200	08:50:07.600	488BT6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,088,554:52:0	
253	99	200	09:25:58.266	488BT6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,088,590:02:0	
254	99	200	10:00:04.933	488BT6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,088,623:69:0	
255	99	200	13:52:40.933	488BT6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,088,853:73:0	
256	99	200	13:57:19.600	488BU6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,088,858:36:0	
257	99	200	15:08:51.600	488BU6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,088,929:13:0	
258	99	200	15:13:28.933	488BU6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,088,933:65:0	
259	99	200	15:20:31.600	488BU6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,088,940:62:0	
260	99	200	15:45:02.933	488BU6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,088,964:85:0	
261	99	200	15:58:55.600	488BV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,088,978:60:0	
262	99	200	20:54:04.933	488BV6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,089,270:52:0	
263	99	200	20:57:35.600	488BV6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,089,274:04:0	
264	99	200	21:56:11.600	176SQ6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	5,089,332:00:0	
265	99	200	22:02:15.600	465BA6A	6DMST	5000	DMS Slew to TIC	2O0	4	0	5,089,338:00:0	
266	99	200	22:02:15.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3591.95 +/- 5	2O0	4	0	5,089,338:00:0	
267	99	200	22:02:15.600		DMS:	: *SLEW-TIC	P7, TRACK *1, *FWD, TIC 3591.95 +/- 5	2O0	4	0	5,089,338:00:0	
268	99	200	22:02:22.266		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 3591.95 +/- 5	2O0	4	0	5,089,338:10:0	
269	99	200	22:02:23.666		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *3592.07 +/- 5	2O0	4	0	5,089,338:12:1	
270	99	200	23:42:21.066		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *4997.94 +/- 5	2O0	4	0	5,089,436:90:2	
271	99	200	23:42:22.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/- 5	2O0	4	0	5,089,437:01:0	
272	99	201	01:53:54.266	488BW6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,089,567:09:0	
273	99	201	02:04:47.600	488BW6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,089,577:79:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	99	201	03:15:53.533	488BW6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,089,648	17:0
275	99	201	03:44:59.533	488BW6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,089,676	88:0
276	99	201	03:55:56.866	465BB6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	5,089,687	73:0
277	99	201	03:55:56.866		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/- 5	2O0	4	0	5,089,687	73:0
278	99	201	03:55:58.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/- 5	2O0	4	0	5,089,687	75:1
279	99	201	03:56:03.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/- 5	2O0	4	0	5,089,687	83:0
280	99	201	03:56:04.733		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/- 5	2O0	4	0	5,089,687	84:8
281	99	201	03:56:08.600		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/- 5	2O0	4	0	5,089,687	90:6
282	99	201	03:56:08.600		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/- 5	2O0	4	0	5,089,687	90:6
283	99	201	04:21:48.866	465BB6B	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	5,089,713	35:0
284	99	201	04:21:48.866		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 255.79 +/- 5	2O0	4	0	5,089,713	35:0
285	99	201	04:21:50.066		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/- 5	2O0	4	0	5,089,713	36:8
286	99	201	06:25:40.866		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/- 5	2O0	4	0	5,089,835	81:0
287	99	201	06:25:40.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/- 5	2O0	4	0	5,089,835	81:0
288	99	201	06:25:40.866	465BC6A	6DTRN	CMD,6DTRN,465BC6	DMS TRACK TURNAROUND	2O0	4	0	5,089,835	81:0
289	99	201	06:25:42.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/- 5	2O0	4	0	5,089,835	83:1
290	99	201	06:25:47.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/- 5	2O0	4	0	5,089,836	00:0
291	99	201	06:25:48.733		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/- 5	2O0	4	0	5,089,836	01:8
292	99	201	06:25:50.133		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/- 5	2O0	4	0	5,089,836	03:9
293	99	201	06:29:09.533	488BW6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	5,089,839	30:0
294	99	201	06:29:50.800		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/- 5	2O0	4	0	5,089,840	00:9
295	99	201	06:29:52.000		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/- 5	2O0	4	0	5,089,840	02:7
296	99	201	06:29:52.000		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/- 5	2O0	4	0	5,089,840	02:7
297	99	201	06:29:53.400		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	5,089,840	04:8
298	99	201	06:30:05.400		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	5,089,840	22:8
299	99	201	06:30:06.600		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	5,089,840	24:6
300	99	201	06:35:43.533	465BD6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	2O0	4	0	5,089,845	75:0
301	99	201	06:35:43.533		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	5,089,845	75:0
302	99	201	06:35:50.200		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	2O0	4	0	5,089,845	85:0
303	99	201	06:35:54.066		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	2O0	4	0	5,089,845	90:8
304	99	201	06:35:54.066		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	2O0	4	0	5,089,845	90:8
305	99	201	07:07:37.533	465BD6B	6DMSC	RDY,1	DMS Control Tape stop	2O0	4	0	5,089,877	34:0
306	99	201	07:07:37.533		DMS:	: *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	2O0	4	0	5,089,877	34:0
307	99	201	07:07:38.733		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	2O0	4	0	5,089,877	35:8
308	99	201	07:23:13.533	465BE6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	2O0	4	0	5,089,892	73:0
309	99	201	07:23:13.533		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	2O0	4	0	5,089,892	73:0
310	99	201	07:23:14.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	2O0	4	0	5,089,892	75:1
311	99	201	07:23:20.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	2O0	4	0	5,089,892	83:0
312	99	201	07:23:21.400		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	2O0	4	0	5,089,892	84:8
313	99	201	07:23:25.266		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	2O0	4	0	5,089,892	90:6
314	99	201	07:23:25.266		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	2O0	4	0	5,089,892	90:6
315	99	201	07:26:55.533	488BX6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	2O0	4	0	5,089,896	42:0
316	99	201	07:55:21.533		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC * 164.96 +/-	2O0	4	0	5,089,924	53:0
317	99	201	07:55:21.533	465BF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	5,089,924	53:0
318	99	201	07:55:22.733		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	2O0	4	0	5,089,924	54:8
319	99	201	07:55:26.600		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	2O0	4	0	5,089,924	60:6
320	99	201	07:55:26.600		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	2O0	4	0	5,089,924	60:6
321	99	201	07:58:55.533	488BX6B	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	5,089,928	10:0
322	99	201	08:27:22.200	465BF6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	5,089,956	22:0
323	99	201	08:27:22.200		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	2O0	4	0	5,089,956	22:0
324	99	201	08:27:23.400		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	2O0	4	0	5,089,956	23:8
325	99	201	08:42:05.533	465BG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2O0	4	0	5,089,970	73:0
326	99	201	08:42:05.533		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	2O0	4	0	5,089,970	73:0
327	99	201	08:42:06.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	2O0	4	0	5,089,970	75:1
328	99	201	08:42:12.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	2O0	4	0	5,089,970	83:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	99	201	08:42:13.400		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	2O0	4	0	5,089,970:84:8	
330	99	201	08:42:17.266		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	2O0	4	0	5,089,970:90:6	
331	99	201	08:42:17.266		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	2O0	4	0	5,089,970:90:6	
332	99	201	09:00:51.533	488BX6C	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	2O0	4	0	5,089,989:33:0	
333	99	201	09:14:12.866	465BH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2O0	4	0	5,090,002:52:0	
334	99	201	09:14:12.866		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	2O0	4	0	5,090,002:52:0	
335	99	201	09:14:14.066		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	2O0	4	0	5,090,002:53:8	
336	99	201	09:14:17.933		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	2O0	4	0	5,090,002:59:6	
337	99	201	09:14:17.933		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	2O0	4	0	5,090,002:59:6	
338	99	201	09:15:18.866		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	2O0	4	0	5,090,003:60:0	
339	99	201	09:15:18.866	465BH6B	6DMSC	RDY,3	DMS Control Tape stop	2O0	4	0	5,090,003:60:0	
340	99	201	09:15:20.066		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	2O0	4	0	5,090,003:61:8	
341	99	201	09:15:59.533	488BX6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,090,004:30:0	
342	99	201	09:22:07.533	488BX6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,090,010:36:0	
343	99	201	09:28:04.866	488BY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,090,016:26:0	
344	99	201	09:29:48.866	465BI6A	6DMSC	RDY,4	DMS Control Tape stop	2O0	4	0	5,090,018:00:0	
345	99	201	09:29:48.866		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	2O0	4	0	5,090,018:00:0	
346	99	201	09:30:42.866	465BJ6A	6DTRN	CMD,6DTRN,465BJ6	DMS TRACK TURNAROUND	2O0	4	0	5,090,018:81:0	
347	99	201	09:30:42.866		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	2O0	4	0	5,090,018:81:0	
348	99	201	09:30:42.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	2O0	4	0	5,090,018:81:0	
349	99	201	09:30:44.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	2O0	4	0	5,090,018:83:1	
350	99	201	09:30:49.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	2O0	4	0	5,090,019:00:0	
351	99	201	09:30:50.733		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	2O0	4	0	5,090,019:01:8	
352	99	201	09:30:52.133		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	2O0	4	0	5,090,019:03:9	
353	99	201	09:42:17.933		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2O0	4	0	5,090,030:31:6	
354	99	201	09:42:19.133		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2O0	4	0	5,090,030:33:4	
355	99	201	09:42:19.133		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2O0	4	0	5,090,030:33:4	
356	99	201	09:42:20.533		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2O0	4	0	5,090,030:35:5	
357	99	201	09:42:32.533		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2O0	4	0	5,090,030:53:5	
358	99	201	09:42:33.733		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2O0	4	0	5,090,030:55:3	
359	99	201	10:00:04.200	20SR4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	5,090,047:84:0	
360	99	201	10:00:54.200	20SR4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,090,048:68:0	
361	99	201	10:02:10.200	176SR6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	5,090,050:00:0	
362	99	201	14:57:03.533	488BY6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,090,341:59:0	
363	99	201	15:14:07.533	488BY6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,090,358:48:0	
364	99	201	15:54:39.533	488BZ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,090,398:56:0	
365	99	201	20:54:08.200	488BZ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,090,694:73:0	
366	99	201	20:57:35.533	488BZ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,090,698:20:0	
367	99	202	07:29:03.533	488CA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,091,322:68:0	
368	99	202	07:54:39.533	488CA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,091,348:06:0	
369	99	202	09:09:19.533	488CA6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,091,421:83:0	
370	99	202	14:57:03.466	488CB6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,091,765:75:0	
371	99	202	15:14:07.466	488CB6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,091,782:64:0	
372	99	202	15:50:23.466	488CB6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,091,818:52:0	
373	99	202	20:54:12.133	488CB6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,092,119:04:0	
374	99	202	20:57:35.466	488CC6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,092,122:36:0	
375	99	203	14:59:12.133	488CD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,093,192:11:0	
376	99	203	15:09:51.466	488CD6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,093,202:60:0	
377	99	203	15:50:23.466	488CD6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,093,242:68:0	
378	99	203	23:07:43.400	488CE6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,093,675:25:0	
379	99	203	23:52:31.400	488CE6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,093,719:53:0	
380	99	204	01:22:46.066	488CE6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,093,808:76:0	
381	99	204	01:47:43.400	488CE6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,093,833:47:0	
382	99	204	01:53:38.066	488CE6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,093,839:33:0	
383	99	204	07:16:15.400	488CF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,094,158:40:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	99	204	08:30:55.400	488CF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,094,232:26:0	
385	99	204	08:40:29.400	488CF6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,094,241:68:0	
386	99	204	09:14:35.400	488CF6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,094,275:43:0	
387	99	204	14:46:23.400	488CG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,094,603:57:0	
388	99	204	16:02:41.400	488CG6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,094,679:08:0	
389	99	204	16:26:39.400	488CG6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,094,702:72:0	
390	99	204	16:36:33.400	488CG6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,094,712:53:0	
391	99	204	16:53:00.066	488CG6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	5,094,728:77:0	
392	99	204	16:57:12.066	176SD6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	5,094,733:00:0	
393	99	204	22:31:27.400	488CH6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	2O0	4	0	5,095,063:53:0	
394	99	204	23:01:00.066	488CH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,095,092:73:0	
395	99	204	23:03:13.400	176SE6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	5,095,095:00:0	
396	99	204	23:50:23.400	488CH6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,095,141:59:0	
397	99	205	00:01:03.400	488CH6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,095,152:18:0	
398	99	205	01:02:38.066	488CH6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,095,213:09:0	
399	99	205	01:41:19.400	488CI6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,095,251:33:0	
400	99	205	01:48:04.733	488CI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,095,258:04:0	
401	99	205	09:32:47.333	488CJ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,095,717:59:0	
402	99	205	11:17:19.333	488CJ6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,095,821:03:0	
403	99	205	11:23:42.666	488CJ6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2O0	4	0	5,095,827:32:0	
404	99	205	11:34:23.333	488CJ6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,095,837:83:0	
405	99	205	14:54:27.333	488CJ6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,096,035:71:0	
406	99	205	15:05:35.333	488CK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,096,046:72:0	
407	99	205	15:39:43.333	488CK6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,096,080:50:0	
408	99	205	20:54:22.666	488CK6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,096,391:68:0	
409	99	205	20:57:35.333	488CK6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,096,394:84:0	
410	99	206	00:00:00.000	481UC4A	7VECT		Inert vect update UTC	2O0	4	0	5,096,575:30:0	
411	99	206	07:09:32.666	488CL6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,097,000:14:0	
412	99	206	07:39:43.333	488CL6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,097,030:00:0	
413	99	206	08:54:23.333	488CL6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,097,103:77:0	
414	99	206	14:52:47.266	488CM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,097,458:28:0	
415	99	206	15:39:43.266	488CM6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,097,504:66:0	
416	99	206	18:54:41.933	488CM6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	5,097,697:51:0	
417	99	206	18:58:07.266	488CM6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,097,700:86:0	
418	99	206	20:29:59.933	41XE99A	**POWER**	**PWR MODE change**	Change to Calib/Decon Mode	2O0	4	0	5,097,791:74:0	
419	**99**	**206**	**20:30:00.000**	**21NNRCTRLT01-**		**-----START------**		**2O0**	**4**	**0**	**: :**	
420	**99**	**206**	**20:30:03.933**	**41XE3I**	**40T1PR**		**1 PCT Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**5,097,791:80:0**	
421	**99**	**206**	**20:30:13.933**	**41XE3J**	**40T1PR**		**2 PCT Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**5,097,792:04:0**	
422	**99**	**206**	**20:30:23.933**	**41XE3K**	**40T2R**		**1 PCT Heater 2 OFF**	**2O0**	**4**	**0**	**5,097,792:19:0**	
423	**99**	**206**	**20:30:33.933**	**41XE3L**	**40T2R**		**2 PCT Heater 2 OFF**	**2O0**	**4**	**0**	**5,097,792:34:0**	
424	99	206	20:40:17.933	176XU6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	5,097,802:00:0	
425	99	206	20:44:09.266	20XE4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	5,097,805:74:0	
426	99	206	20:48:15.933	20DA4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	5,097,809:80:0	
427	99	206	20:49:05.933	20DA4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	5,097,810:64:0	
428	99	206	20:50:24.600	176XV6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	5,097,812:00:0	
429	**99**	**206**	**20:51:25.266**	**185XE10A3A**	**40HRP**		**1 RCT Heater ON (primary relay)**	**2O0**	**4**	**0**	**5,097,813:00:0**	
430	**99**	**206**	**20:51:30.600**	**185XE10B3A**	**40HRP**		**2 RCT Heater ON (primary relay)**	**2O0**	**4**	**0**	**5,097,813:08:0**	
431	99	206	23:54:37.266	488CN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,097,994:17:0	
432	99	207	01:12:23.266	488CN6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	5,098,071:09:0	
433	99	207	01:37:03.266	488CN6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,098,095:45:0	
434	99	207	01:43:09.266	488CN6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	5,098,101:48:0	
435	99	207	08:46:11.933	125XE	NIMSINIT	GS	##### GROUP START INIT	2O0	4	0	5,098,519:84:0	
436	**99**	**207**	**08:46:11.933**	**125XE4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**260**	**4**	**0**	**5,098,519:84:0**	
437	**99**	**207**	**08:47:12.600**	**125XE4B**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**5,098,520:84:0**	
438	**99**	**207**	**08:48:13.266**	**125XE4C**	**37IST**	**0,2,0,OFF,0,1,3**	**Gain State 1**	**1R0**	**4**	**0**	**5,098,521:84:0**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	99	207	08:49:13.933	125XE11A	NIMSINIT	GE	##### GROUP END INIT	1R0	4	0	5,098,522:84:0	
440	**99**	**207**	**08:49:13.933**	**125XE4D**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**1R0**	**4**	**0**	**5,098,522:84:0**	
441	99	207	08:51:15.266	127XE	NIMSTAB	GS	%%%%% GROUP START TAB	1R0	4	0	5,098,524:84:0	
442	**99**	**207**	**08:51:15.266**	**127XE4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**1R3**	**4**	**0**	**5,098,524:84:0**	
443	**99**	**207**	**08:51:15.933**	**127XE4B**	**37ETB**	**0A,CA,18,03,FF,1**	**Loads wavelength edit table**	**1R3**	**4**	**0**	**5,098,524:85:0**	
444	99	207	08:52:09.266	127XE11A	NIMSTAB	GE	%%%%% GROUP END TAB	1R3	4	0	5,098,525:74:0	
445	99	207	08:55:22.600	176XE6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1R3	4	0	5,098,529:00:0	
446	99	207	08:57:23.933	20UC4A	7SCAN	NORM,19.723,6.95	Check S/P Position	1R3	4	0	5,098,531:00:0	
447	99	207	09:01:26.600	192XE4A	**7CONE**	**17.0,119.7**	Check S/P Position	1R3	4	0	5,098,535:00:0	
448	**99**	**207**	**09:03:47.933**	**432XE6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**1R3**	**4**	**0**	**5,098,537:30:0**	
449	**99**	**207**	**09:04:47.266**	**432XF6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**1R3**	**4**	**0**	**5,098,538:28:0**	
450	99	207	09:07:30.600	192XE4B	**7CONE**	**17.0,0.0**	Check S/P Position	1R3	4	0	5,098,541:00:0	
451	**99**	**207**	**09:09:51.933**	**432XU6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**1R3**	**4**	**0**	**5,098,543:30:0**	
452	**99**	**207**	**09:11:51.933**	**432XV6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**1R3**	**4**	**0**	**5,098,545:28:0**	
453	99	207	09:13:34.600	192XE4C	**7CONE**	**17.0,119.7**	Check S/P Position	1R3	4	0	5,098,547:00:0	
454	**99**	**207**	**09:15:35.933**	**185XE10C3A**	**40HRPR**		**1 RCT Heater OFF (primary relay)**	**1R3**	**4**	**0**	**5,098,549:00:0**	
455	**99**	**207**	**09:15:41.266**	**185XE10D3A**	**40HRPR**		**2 RCT Heater OFF (primary relay)**	**1R3**	**4**	**0**	**5,098,549:08:0**	
456	**99**	**207**	**09:15:55.933**	**432XW6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**1R3**	**4**	**0**	**5,098,549:30:0**	
457	**99**	**207**	**09:16:55.266**	**432XY6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**1R3**	**4**	**0**	**5,098,550:28:0**	
458	99	207	09:18:33.266	125DC11A	NIMSINIT	GE	##### GROUP END INIT	1R3	4	0	5,098,551:84:0	
459	**99**	**207**	**09:18:33.266**	**125DC4A**	**37IST**	**0,2,0,OFF,0,1,1**	**Gain State 4**	**4R3**	**4**	**0**	**5,098,551:84:0**	
460	99	207	09:18:33.266	125DC	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	5,098,551:84:0	
461	99	207	09:19:33.933	127DC	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	5,098,552:84:0	
462	**99**	**207**	**09:19:33.933**	**127DC4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**4R3**	**4**	**0**	**5,098,552:84:0**	
463	**99**	**207**	**09:19:34.600**	**127DC4B**	**37ETB**	**07,C7,31,80,00,0**	**Loads wavelength edit table**	**4R3**	**4**	**0**	**5,098,552:85:0**	
464	99	207	09:19:38.600	192XE4D	**7CONE**	**17.0,153.0**	Check S/P Position	4R3	4	0	5,098,553:00:0	
465	**99**	**207**	**09:19:58.600**	**432DG6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**4R3**	**4**	**0**	**5,098,553:30:0**	
466	99	207	09:20:27.933	127DC11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	5,098,553:74:0	
467	99	207	09:20:34.600	125DD	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	5,098,553:84:0	
468	99	207	09:20:34.600	125DD11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	5,098,553:84:0	
469	**99**	**207**	**09:20:34.600**	**125DD4A**	**37IST**	**0,2,1,OFF,1,0,1**	**OPCAL**	**4R3**	**4**	**0**	**5,098,553:84:0**	
470	99	207	09:22:07.266	488CO6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4R3	4	0	5,098,555:41:0	
471	99	207	09:22:35.933	125DE	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	5,098,555:84:0	
472	99	207	09:22:35.933	125DE11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	5,098,555:84:0	
473	**99**	**207**	**09:22:35.933**	**125DE4A**	**37IST**	**0,2,1,OFF,1,0,1**	**OPCAL**	**4R3**	**4**	**0**	**5,098,555:84:0**	
474	**99**	**207**	**09:22:59.266**	**432DH6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**4R3**	**4**	**0**	**5,098,556:28:0**	
475	99	207	09:26:38.600	127XF	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	5,098,559:84:0	
476	**99**	**207**	**09:26:38.600**	**127XF4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**4R0**	**4**	**0**	**5,098,559:84:0**	
477	**99**	**207**	**09:26:39.266**	**127XF4B**	**37ETB**	**04,C4,02,00,00**	**Loads wavelength edit table**	**4R0**	**4**	**0**	**5,098,559:85:0**	
478	99	207	09:27:32.600	127XF11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R0	4	0	5,098,560:74:0	
479	99	207	09:29:40.600	125XF	NIMSINIT	GS	##### GROUP START INIT	4R0	4	0	5,098,562:84:0	
480	**99**	**207**	**09:29:40.600**	**125XF4A**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**4R0**	**4**	**0**	**5,098,562:84:0**	
481	**99**	**207**	**09:30:41.266**	**125XF4B**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**460**	**4**	**0**	**5,098,563:84:0**	
482	99	207	09:31:41.933	125XF11A	NIMSINIT	GE	##### GROUP END INIT	460	4	0	5,098,564:84:0	
483	**99**	**207**	**09:31:41.933**	**125XF4C**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**4O0**	**4**	**0**	**5,098,564:84:0**	
484	99	207	09:38:39.933	41XU99A	**POWER**	**PWR MODE change**	Change to Maneuver/Playback Mode	4O0	4	0	5,098,571:74:0	
485	**99**	**207**	**09:40:33.933**	**41XU3G**	**40T1P**		**1 PCT Heater 1 ON (primary relay)**	**4O0**	**4**	**0**	**5,098,573:63:0**	
486	**99**	**207**	**09:40:43.933**	**41XU3H**	**40T1P**		**2 PCT Heater 1 ON (primary relay)**	**4O0**	**4**	**0**	**5,098,573:78:0**	
487	**99**	**207**	**09:40:53.933**	**41XU3I**	**40T2**		**1 PCT Heater 2 ON**	**4O0**	**4**	**0**	**5,098,574:02:0**	
488	**99**	**207**	**09:41:03.933**	**41XU3J**	**40T2**		**2 PCT Heater 2 ON**	**4O0**	**4**	**0**	**5,098,574:17:0**	
489	99	207	09:48:50.600	20DB4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	5,098,581:80:0	
490	99	207	09:49:40.600	20DB4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,098,582:64:0	
491	99	207	09:50:59.266	176XF6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	5,098,584:00:0	
492	**99**	**207**	**09:51:48.666**	**21NNRCTRLT01-**		**-----STOP-------**		**4O0**	**4**	**0**	**: :**	
493	99	207	10:36:01.933	488CO6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,098,628:50:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	99	207	14:44:42.600	488CO6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,098,874	45:0
495	99	207	14:54:55.266	488CO6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,098,884	54:0
496	99	207	15:35:27.266	488CP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,098,924	62:0
497	99	207	20:54:21.200	488CP6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,099,240	07:0
498	99	207	20:57:35.200	488CP6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	5,099,243	25:0
499	99	207	23:36:05.866	488CQ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4O0	4	0	5,099,400	04:0
500	99	207	23:46:07.200	488CQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,099,409	87:0
501	99	208	00:57:16.533	488CQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,099,480	30:0
502	99	208	01:30:39.200	488CQ6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,099,513	31:0
503	99	208	01:30:55.200	488CQ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,099,513	55:0
504	99	208	05:23:53.200	488CR6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,099,744	01:0
505	99	208	05:29:35.200	488CR6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,099,749	59:0
506	99	208	10:02:08.533	488CR6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,100,019	19:0
507	99	208	14:40:19.866	488CS6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,100,294	31:0
508	99	208	15:37:10.533	488CS6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,100,350	51:0
509	99	208	20:54:33.866	488CT6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,100,664	42:0
510	99	208	20:57:35.200	488CT6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,100,667	41:0
511	99	208	23:44:52.533	488CT6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,100,832	82:0
512	99	209	01:02:08.533	488CT6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,100,909	29:0
513	99	209	01:26:23.200	488CT6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,100,933	27:0
514	99	209	01:32:45.866	488CU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,100,939	55:0
515	99	209	04:38:29.800	488CU6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,101,123	27:0
516	99	209	04:42:39.133	488CU6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,101,127	37:0
517	99	209	06:59:54.466	488CU6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,101,263	14:0
518	99	209	07:31:11.133	488CU6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,101,294	08:0
519	99	209	08:45:51.133	488CV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,101,367	85:0
520	99	209	14:33:35.133	488CV6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,101,711	77:0
521	99	209	14:50:39.133	488CW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,101,728	66:0
522	99	209	15:31:11.133	488CW6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,101,768	74:0
523	99	209	16:04:59.800	488CW6C	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	4O0	4	0	5,101,802	23:0
524	99	209	16:08:47.133	176TC6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	5,101,806	00:0
525	99	209	16:34:29.800	20SY4I	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	5,101,831	39:0
526	99	209	16:49:29.800	20SY4K	7SLEW	INIT,POS,17.45	Stator movement	4O0	4	0	5,101,846	24:0
527	99	209	17:01:29.800	20SY4L	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,101,858	12:0
528	99	209	17:08:29.800	20SY4M	7SLEW	INIT,NEG,17.45	Stator movement	4O0	4	0	5,101,865	05:0
529	99	209	17:20:29.800	20SY4N	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,101,876	84:0
530	99	209	17:27:29.800	20SY4O	7SLEW	INIT,POS,4.36	Stator movement	4O0	4	0	5,101,883	77:0
531	99	209	17:39:29.800	20SY4P	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,101,895	65:0
532	99	209	17:46:29.800	20SY4Q	7SLEW	INIT,NEG,4.36	Stator movement	4O0	4	0	5,101,902	58:0
533	99	209	17:58:29.800	20SY4R	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,101,914	46:0
534	99	209	18:17:29.800	20SY4U	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4O0	4	0	5,101,933	27:0
535	99	209	18:26:29.800	20SY4AH	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	5,101,942	18:0
536	99	209	18:40:03.800	20SK4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	5,101,955	56:0
537	99	209	18:40:53.800	20SK4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,101,956	40:0
538	99	209	18:42:28.466	176TD6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	5,101,958	00:0
539	99	209	18:43:59.800	488CW6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,101,959	46:0
540	99	209	20:54:37.800	488CX6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,102,088	64:0
541	99	209	20:57:35.133	488CX6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,102,091	57:0
542	99	210	14:35:05.733	488CY6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,103,137	47:0
543	99	210	14:46:23.066	488CY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,103,148	62:0
544	99	210	15:24:47.066	488CY6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,103,186	60:0
545	99	210	15:53:00.400	488CY6D	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	4O0	4	0	5,103,214	52:0
546	99	210	15:57:29.066	176TH6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	5,103,219	00:0
547	99	210	16:06:00.400	20UE4C	7STAT	17.45,211.19,-11	Stator inertial point	4O0	4	0	5,103,227	39:0
548	99	210	16:25:02.400	490UB412A4B	**7MODE**	**INT**	AACS INERTIAL MODE	4O0	4	0	5,103,246	23:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	99	210	16:30:00.400	490UB412A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4O0	4	0	5,103,251:15:0	
550	99	210	16:30:20.400	20UE4D	7STAT	17.45,211.19,-11	Stator inertial point	4O0	4	0	5,103,251:45:0	
551	99	210	16:34:10.400	490UB412A4E	7VECT		Inert vect update UTC	4O0	4	0	5,103,255:26:0	
552	99	210	16:34:14.400	490UB412A4F	7TURN	2,RTH	ALERT Thruster	4O0	4	0	5,103,255:32:0	
553	99	210	16:38:02.400	490UB412A406A4A	7STAR	11,701,278.81	Star catalog update	4O0	4	0	5,103,259:10:0	
554	99	210	16:38:04.400	490UB412A406A4B	7STAR	2,111,285.778,13	Star catalog update	4O0	4	0	5,103,259:13:0	
555	99	210	16:38:06.400	490UB412A406A4C	7STAR	3,395,305.43	Star catalog update	4O0	4	0	5,103,259:16:0	
556	99	210	16:38:08.400	490UB412A406A4D	7STAR	4,350,120.46	Star catalog update	4O0	4	0	5,103,259:19:0	
557	99	210	16:38:10.400	490UB412A406A4E	7STAR	5,0,0.0,0.0	Star catalog update	4O0	4	0	5,103,259:22:0	
558	99	210	16:38:12.400	490UB412A406A4F	7STAR	6,0,0.0,0.0	Star catalog update	4O0	4	0	5,103,259:25:0	
559	99	210	16:48:06.400	20UE4F	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,103,269:06:0	
560	99	210	16:56:10.400	490UB412A4G	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	5,103,277:04:0	
561	99	210	18:30:00.400	488CY6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,103,369:77:0	
562	99	210	18:30:04.400	20UL4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	5,103,369:83:0	
563	99	210	18:30:54.400	20UL4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,103,370:67:0	
564	99	210	18:32:11.066	176TI6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	5,103,372:00:0	
565	99	210	20:54:30.400	488CZ6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,103,512:69:0	
566	99	210	20:57:35.066	488CZ6B	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	5,103,515:73:0	
567	99	210	23:26:27.733	488CZ6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4O0	4	0	5,103,663:04:0	
568	99	210	23:35:27.066	488CZ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,103,671:85:0	
569	99	211	00:46:53.066	488CZ6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,103,742:53:0	
570	99	211	01:11:27.066	488DA6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,103,766:80:0	
571	99	211	01:17:37.066	488DA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,103,772:89:0	
572	99	211	09:02:55.066	488DB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,104,233:15:0	
573	99	211	10:30:59.733	488DB6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,104,320:25:0	
574	99	211	10:57:49.066	488DB6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,104,346:73:0	
575	99	211	14:27:11.066	488DB6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,104,553:79:0	
576	99	211	15:11:59.066	488DC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,104,598:16:0	
577	99	211	20:54:45.000	488DC6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,104,937:16:0	
578	99	211	20:57:35.000	488DC6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,104,939:89:0	
579	99	212	06:50:18.333	488DD6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,105,526:17:0	
580	99	212	07:11:59.000	488DD6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,105,547:57:0	
581	99	212	08:11:43.000	488DD6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,105,606:64:0	
582	99	212	14:25:40.333	488DE6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,105,976:50:0	
583	99	212	14:29:19.000	488DE6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,105,980:14:0	
584	99	213	00:00:23.666	488DF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,106,544:87:0	
585	99	213	00:41:35.000	488DF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,106,585:63:0	
586	99	213	01:19:23.666	488DF6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,106,623:08:0	
587	99	213	01:48:29.666	488DF6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,106,651:79:0	
588	99	213	05:19:32.266	488DF6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,106,860:54:0	
589	99	213	14:23:41.600	488DG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,107,398:70:0	
590	99	213	15:01:18.933	488DG6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,107,435:89:0	
591	99	213	20:54:52.933	488DH6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,107,785:60:0	
592	99	213	20:57:34.933	488DH6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,107,788:30:0	
593	99	213	23:25:31.600	488DH6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,107,934:59:0	
594	99	214	00:37:18.933	488DH6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,108,005:59:0	
595	99	214	00:44:15.600	488DH6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,108,012:47:0	
596	99	214	01:13:21.600	488DI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,108,041:27:0	
597	99	214	09:28:30.933	488DJ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,108,531:01:0	
598	99	214	10:25:44.200	488DJ6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,108,587:55:0	
599	99	214	10:32:30.866	488DJ6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	4O0	4	0	5,108,594:28:0	
600	99	214	14:25:56.866	488DJ6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	4O0	4	0	5,108,825:16:0	
601	99	214	14:31:26.866	488DJ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,108,830:56:0	
602	99	214	15:01:18.866	488DK6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,108,860:14:0	
603	99	214	15:57:46.866	176SV6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	4O0	4	0	5,108,916:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	99	214	16:02:00.200	20UR4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,108,920:16:0	
605	99	214	16:03:00.200	20UR4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	4O0	4	0	5,108,921:15:0	
606	99	214	16:05:00.200	20UR4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	4O0	4	0	5,108,923:13:0	
607	99	214	16:10:30.200	20UR4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	4O0	4	0	5,108,928:53:0	
608	99	214	16:10:30.866	20UR4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	4O0	4	0	5,108,928:54:0	
609	99	214	16:10:50.866	20UR4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	4O0	4	0	5,108,928:84:0	
610	99	214	16:10:51.533	20UR4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	4O0	4	0	5,108,928:85:0	
611	99	214	16:11:11.533	20UR4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	4O0	4	0	5,108,929:24:0	
612	99	214	16:11:12.200	20UR4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	4O0	4	0	5,108,929:25:0	
613	99	214	16:11:22.200	20UR4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	4O0	4	0	5,108,929:40:0	
614	99	214	16:11:22.866	20UR4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	4O0	4	0	5,108,929:41:0	
615	99	214	16:11:32.866	20UR4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	4O0	4	0	5,108,929:56:0	
616	99	214	16:11:33.533	20UR4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	4O0	4	0	5,108,929:57:0	
617	99	214	16:13:20.200	20UR4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	4O0	4	0	5,108,931:35:0	
618	99	214	16:13:20.866	20UR4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	4O0	4	0	5,108,931:36:0	
619	99	214	16:13:40.866	20UR4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	4O0	4	0	5,108,931:66:0	
620	99	214	16:13:41.533	20UR4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	4O0	4	0	5,108,931:67:0	
621	99	214	16:14:01.533	20UR4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	4O0	4	0	5,108,932:06:0	
622	99	214	16:14:02.200	20UR4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	4O0	4	0	5,108,932:07:0	
623	99	214	16:14:12.200	20UR4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	4O0	4	0	5,108,932:22:0	
624	99	214	16:14:12.866	20UR4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	4O0	4	0	5,108,932:23:0	
625	99	214	16:14:22.866	20UR4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	4O0	4	0	5,108,932:38:0	
626	99	214	16:14:23.533	20UR4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	4O0	4	0	5,108,932:39:0	
627	99	214	16:15:20.200	20UR4Z	**7MODE**	**CRU**	AACS CRUISE MODE	4O0	4	0	5,108,933:33:0	
628	99	214	16:40:04.200	20UK4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	4O0	4	0	5,108,957:75:0	
629	99	214	16:40:54.200	20UK4B	7SLEW	DIS,POS,0.0	Stator movement	4O0	4	0	5,108,958:59:0	
630	99	214	16:42:16.200	176SW6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	4O0	4	0	5,108,960:00:0	
631	99	214	20:55:32.866	488DK6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,109,210:45:0	
632	99	214	20:57:34.866	488DK6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,109,212:46:0	
633	99	215	03:08:53.533	488DL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,109,579:67:0	
634	99	215	04:29:06.200	488DL6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,109,659:06:0	
635	99	215	04:58:12.866	488DL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,109,687:78:0	
636	99	215	09:09:49.533	488DM6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,109,936:64:0	
637	99	215	09:15:42.866	488DM6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,109,942:48:0	
638	99	215	10:03:03.533	488DM6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,109,989:32:0	
639	99	215	10:30:27.533	488DM6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,110,016:41:0	
640	99	215	10:57:17.533	488DM6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,110,042:90:0	
641	99	215	14:15:53.533	488DN6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,110,239:37:0	
642	99	215	14:18:38.866	488DN6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,110,242:12:0	
643	99	215	14:53:57.533	488DN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,110,277:05:0	
644	99	215	15:05:34.866	488DN6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,110,288:50:0	
645	99	215	18:55:16.800	488DN6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,110,515:66:0	
646	99	215	18:58:06.800	488DO6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,110,518:48:0	
647	99	216	14:15:52.133	488DP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,111,663:51:0	
648	99	216	14:27:10.800	488DP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,111,674:68:0	
649	99	216	15:01:18.800	488DP6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,111,708:46:0	
650	99	216	18:55:08.133	488DP6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,111,939:69:0	
651	99	216	18:58:06.800	488DP6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	5,111,942:64:0	
652	99	216	22:57:15.466	488DQ6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4O0	4	0	5,112,179:20:0	
653	99	216	23:07:42.800	488DQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,112,189:51:0	
654	99	217	00:21:05.466	488DQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,112,262:12:0	
655	99	217	00:45:50.800	488DQ6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,112,286:56:0	
656	99	217	00:51:53.466	488DQ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,112,292:54:0	
657	99	217	04:39:54.066	488DR6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,112,518:09:0	
658	99	217	04:44:46.733	488DR6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,112,522:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	99	217	14:11:00.733	488DS6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,113,082	85:0
660	99	217	14:20:46.733	488DS6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,113,092	54:0
661	99	217	15:07:42.733	488DS6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,113,139	01:0
662	99	217	18:55:24.733	488DS6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,113,364	19:0
663	99	217	18:58:06.733	488DS6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,113,366	80:0
664	99	217	23:11:04.733	488DT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,113,617	06:0
665	99	218	00:25:57.400	488DT6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,113,691	11:0
666	99	218	00:54:22.733	488DT6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,113,719	21:0
667	99	218	00:57:58.733	488DT6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,113,722	72:0
668	99	218	08:45:50.733	488DU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,114,185	47:0
669	99	218	09:45:03.400	488DU6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,114,244	07:0
670	99	218	10:11:53.333	488DU6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,114,270	56:0
671	99	218	14:03:42.666	488DU6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,114,499	81:0
672	99	218	14:22:54.666	488DU6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,114,518	80:0
673	99	218	15:16:14.666	488DV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,114,571	57:0
674	99	218	21:55:10.666	488DW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,114,966	16:0
675	99	218	22:54:54.666	488DW6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,115,025	23:0
676	99	218	23:07:12.666	488DW6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,115,037	38:0
677	99	218	23:09:50.666	488DW6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	4O0	4	0	5,115,040	02:0
678	99	218	23:24:46.666	488DW6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,115,054	72:0
679	99	219	06:26:15.333	488DX6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,115,471	58:0
680	99	219	07:01:18.666	488DX6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,115,506	28:0
681	99	219	09:02:54.666	488DX6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,115,626	52:0
682	99	219	13:59:26.666	488DY6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,115,919	77:0
683	99	219	14:16:30.666	488DY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,115,936	66:0
684	99	219	15:26:54.666	488DY6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	4O0	4	0	5,116,006	32:0
685	99	219	21:33:50.600	488DZ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,116,369	23:0
686	99	219	22:48:30.600	488DZ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,116,443	09:0
687	99	219	23:01:35.266	488DZ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,116,456	03:0
688	99	219	23:03:26.600	488DZ6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	4O0	4	0	5,116,457	79:0
689	99	219	23:18:22.600	488DZ6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,116,472	58:0
690	99	220	14:01:26.600	488EA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,117,346	00:0
691	99	220	15:10:33.933	488EA6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,117,414	33:0
692	99	220	15:44:13.266	488EA6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,117,447	59:0
693	99	220	16:03:10.600	488EA6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,117,466	36:0
694	99	220	20:49:02.600	488EB6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,117,749	11:0
695	99	220	23:58:59.933	432MC431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	4O0	4	0	5,117,936	90:0
696	99	220	23:59:00.600	432MC6A	6RTSL1		R/T Select of DDS and	4O0	4	0	5,117,937	00:0
697	99	221	00:00:31.266	488EB6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,117,938	45:0
698	99	221	00:39:10.600	488EB6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,117,976	66:0
699	99	221	01:41:18.600	488EB6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,118,038	16:0
700	99	221	03:25:24.533	488EC6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,118,141	12:0
701	99	221	03:30:06.533	488EC6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,118,145	71:0
702	99	221	23:11:39.200	488ED6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,119,314	31:0
703	99	222	00:25:21.200	488ED6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,119,387	21:0
704	99	222	00:59:00.533	488ED6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,119,420	47:0
705	99	222	01:32:46.533	488ED6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,119,453	83:0
706	99	222	06:25:02.533	488EE6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,119,742	88:0
707	99	222	07:40:18.533	488EE6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,119,817	37:0
708	99	222	08:05:18.533	488EE6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,119,842	12:0
709	99	222	08:14:31.200	488EE6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,119,851	22:0
710	99	222	10:26:43.800	176SN6A	6TMREC	**TPB**	TERMINATE PLAYBACK (PB CONTROL) Record Mo	4O0	4	0	5,119,982	00:0
711	99	222	10:32:47.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,119,988	00:0
712	99	222	10:32:47.800		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,119,988	00:0
713	99	222	10:32:47.800		DMS:	: *TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,119,988	00:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	99	222	10:32:47.800	465WK6A	6DMST	5000	DMS Slew to TIC	4O0	4	0	5,119,988:00:0	
715	99	222	10:32:54.466		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,119,988:10:0	
716	99	222	10:32:55.866		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	4O0	4	0	5,119,988:12:1	
717	99	222	13:55:10.466	488EF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,120,188:14:0	
718	99	222	15:10:15.133	488EF6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,120,262:37:0	
719	99	222	15:43:58.466	488EF6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,120,295:69:0	
720	99	222	15:47:22.466	488EF6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,120,299:11:0	
721	99	222	16:13:56.600		DMS:	: *RUNDOWN	P7, TRACK 1, FWD, TIC *4997.94 +/-	4O0	4	0	5,120,325:36:2	
722	99	222	16:13:57.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4998.00 +/-	4O0	4	0	5,120,325:38:0	
723	99	222	16:26:29.133	465WL6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,120,337:73:0	
724	99	222	16:26:29.133		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	4O0	4	0	5,120,337:73:0	
725	99	222	16:26:30.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	4O0	4	0	5,120,337:75:1	
726	99	222	16:26:35.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	4O0	4	0	5,120,337:83:0	
727	99	222	16:26:37.000		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *4999.41 +/-	4O0	4	0	5,120,337:84:8	
728	99	222	16:26:40.866		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	4O0	4	0	5,120,337:90:6	
729	99	222	16:26:40.866		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	4O0	4	0	5,120,337:90:6	
730	99	222	16:52:21.133		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 255.79 +/-	4O0	4	0	5,120,363:35:0	
731	99	222	16:52:21.133	465WL6B	6DMSC	RDY,4	DMS Control Tape stop	4O0	4	0	5,120,363:35:0	
732	99	222	16:52:22.333		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	4O0	4	0	5,120,363:36:8	
733	99	222	19:00:15.800	465WM6A	6DTRN	CMD,6DTRN,465WM6	DMS TRACK TURNAROUND	4O0	4	0	5,120,489:81:0	
734	99	222	19:00:15.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	4O0	4	0	5,120,489:81:0	
735	99	222	19:00:15.800		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	4O0	4	0	5,120,489:81:0	
736	99	222	19:00:17.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	4O0	4	0	5,120,489:83:1	
737	99	222	19:00:22.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	4O0	4	0	5,120,490:00:0	
738	99	222	19:00:23.666		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	4O0	4	0	5,120,490:01:8	
739	99	222	19:00:25.066		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	4O0	4	0	5,120,490:03:9	
740	99	222	19:04:09.800	488EF6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	4O0	4	0	5,120,493:68:0	
741	99	222	19:04:25.733		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	4O0	4	0	5,120,494:00:9	
742	99	222	19:04:26.933		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	4O0	4	0	5,120,494:02:7	
743	99	222	19:04:26.933		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	4O0	4	0	5,120,494:02:7	
744	99	222	19:04:28.333		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	4O0	4	0	5,120,494:04:8	
745	99	222	19:04:40.333		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	4O0	4	0	5,120,494:22:8	
746	99	222	19:04:41.533		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	4O0	4	0	5,120,494:24:6	
747	99	222	19:10:18.466	465WN6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,120,499:75:0	
748	99	222	19:10:18.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,120,499:75:0	
749	99	222	19:10:25.133		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,120,499:85:0	
750	99	222	19:10:29.000		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	4O0	4	0	5,120,499:90:8	
751	99	222	19:10:29.000		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	4O0	4	0	5,120,499:90:8	
752	99	222	19:42:12.466		DMS:	: *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	4O0	4	0	5,120,531:34:0	
753	99	222	19:42:12.466	465WN6B	6DMSC	RDY,1	DMS Control Tape stop	4O0	4	0	5,120,531:34:0	
754	99	222	19:42:13.666		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	4O0	4	0	5,120,531:35:8	
755	99	222	19:57:48.466	465WO6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,120,546:73:0	
756	99	222	19:57:48.466		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	4O0	4	0	5,120,546:73:0	
757	99	222	19:57:49.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	4O0	4	0	5,120,546:75:1	
758	99	222	19:57:55.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	4O0	4	0	5,120,546:83:0	
759	99	222	19:57:56.333		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	4O0	4	0	5,120,546:84:8	
760	99	222	19:58:00.200		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	4O0	4	0	5,120,546:90:6	
761	99	222	19:58:00.200		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	4O0	4	0	5,120,546:90:6	
762	99	222	20:29:56.466	465WP6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,120,578:53:0	
763	99	222	20:29:56.466		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC * 164.96 +/-	4O0	4	0	5,120,578:53:0	
764	99	222	20:29:57.666		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	4O0	4	0	5,120,578:54:8	
765	99	222	20:30:01.533		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	4O0	4	0	5,120,578:60:6	
766	99	222	20:30:01.533		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	4O0	4	0	5,120,578:60:6	
767	99	222	21:01:57.133	465WP6B	6DMSC	RDY,3	DMS Control Tape stop	4O0	4	0	5,120,610:22:0	
768	99	222	21:01:57.133		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	4O0	4	0	5,120,610:22:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	99	222	21:01:58.333		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	4O0	4	0	5,120,610:23:8	
770	99	222	21:03:58.466	488EG6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	4O0	4	0	5,120,612:22:0	
771	99	222	21:16:40.466	465WQ6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,120,624:73:0	
772	99	222	21:16:40.466		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	4O0	4	0	5,120,624:73:0	
773	99	222	21:16:41.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	4O0	4	0	5,120,624:75:1	
774	99	222	21:16:47.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	4O0	4	0	5,120,624:83:0	
775	99	222	21:16:48.333		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	4O0	4	0	5,120,624:84:8	
776	99	222	21:16:52.200		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	4O0	4	0	5,120,624:90:6	
777	99	222	21:16:52.200		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	4O0	4	0	5,120,624:90:6	
778	99	222	21:48:47.800		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	4O0	4	0	5,120,656:52:0	
779	99	222	21:48:47.800	465WR6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	4O0	4	0	5,120,656:52:0	
780	99	222	21:48:49.000		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	4O0	4	0	5,120,656:53:8	
781	99	222	21:48:52.866		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	4O0	4	0	5,120,656:59:6	
782	99	222	21:48:52.866		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	4O0	4	0	5,120,656:59:6	
783	99	222	21:49:53.800		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	4O0	4	0	5,120,657:60:0	
784	99	222	21:49:53.800	465WR6B	6DMSC	RDY,3	DMS Control Tape stop	4O0	4	0	5,120,657:60:0	
785	99	222	21:49:55.000		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	4O0	4	0	5,120,657:61:8	
786	99	222	21:50:59.800	488EG6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,120,658:68:0	
787	99	222	22:04:23.800	465WS6A	6DMSC	RDY,4	DMS Control Tape stop	4O0	4	0	5,120,672:00:0	
788	99	222	22:04:23.800		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	4O0	4	0	5,120,672:00:0	
789	99	222	22:05:17.800	465WT6A	6DTRN	CMD,6DTRN,465WT6	DMS TRACK TURNAROUND	4O0	4	0	5,120,672:81:0	
790	99	222	22:05:17.800		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	4O0	4	0	5,120,672:81:0	
791	99	222	22:05:17.800		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	4O0	4	0	5,120,672:81:0	
792	99	222	22:05:19.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	4O0	4	0	5,120,672:83:1	
793	99	222	22:05:24.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	4O0	4	0	5,120,673:00:0	
794	99	222	22:05:25.666		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	4O0	4	0	5,120,673:01:8	
795	99	222	22:05:27.066		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	4O0	4	0	5,120,673:03:9	
796	99	222	22:16:52.866		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	4O0	4	0	5,120,684:31:6	
797	99	222	22:16:54.066		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	4O0	4	0	5,120,684:33:4	
798	99	222	22:16:54.066		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	4O0	4	0	5,120,684:33:4	
799	99	222	22:16:55.466		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	4O0	4	0	5,120,684:35:5	
800	99	222	22:17:07.466		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	4O0	4	0	5,120,684:53:5	
801	99	222	22:17:08.666		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	4O0	4	0	5,120,684:55:3	
802	99	222	22:45:45.800	488EG6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,120,712:83:0	
803	99	222	22:50:38.466	488EG6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	4O0	4	0	5,120,717:67:0	
804	99	222	23:26:54.466	488EG6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	4O0	4	0	5,120,753:55:0	
805	99	222	23:59:59.800	481UD4A	7VECT		Inert vect update UTC	4O0	4	0	5,120,786:30:0	
806	99	223	06:13:12.466	488EH6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	4O0	4	0	5,121,155:40:0	
807	99	223	06:22:54.466	488EH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,121,165:03:0	
808	99	223	07:30:24.466	488EH6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,121,231:72:0	
809	99	223	07:37:34.466	488EH6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,121,238:80:0	
810	99	223	07:47:59.800	488EH6E	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	4O0	4	0	5,121,249:17:0	
811	99	223	08:02:00.466	488EI6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	4O0	4	0	5,121,263:04:0	
812	99	223	13:25:59.800	488EI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	4O0	4	0	5,121,583:43:0	
813	99	223	13:44:30.466	488EI6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	4O0	4	0	5,121,601:71:0	
814	99	223	13:50:13.133	41TJ99A	**POWER**	**PWR MODE change**	Change to Data Taking Mode	4O0	4	0	5,121,607:39:0	
815	**99**	**223**	**13:50:17.133**	**41TJ3A**	**40T1PR**		**1 PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**5,121,607:45:0**	
816	**99**	**223**	**13:50:27.133**	**41TJ3B**	**40T1PR**		**2 PCT Heater 1 OFF (primary relay)**	**4O0**	**4**	**0**	**5,121,607:60:0**	
817	**99**	**223**	**13:50:37.133**	**41TJ3C**	**40T2R**		**1 PCT Heater 2 OFF**	**4O0**	**4**	**0**	**5,121,607:75:0**	
818	**99**	**223**	**13:50:47.133**	**41TJ3D**	**40T2R**		**2 PCT Heater 2 OFF**	**4O0**	**4**	**0**	**5,121,607:90:0**	
819	99	223	13:59:59.800		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	4O0	4	0	5,121,617:09:0	
820	**99**	**223**	**14:00:00.000**	**20A3EW**	**37A**	**Final Condition**	**NIMS Power ON**	**4O0**	**4**	**0**	**5,121,617:09:3**	
821	**99**	**223**	**14:00:00.000**	**20A3EZ**	**37C2PR**	**Final Condition**	**Optics Heater 2 OFF (primary relay)**	**4O0**	**4**	**0**	**5,121,617:09:3**	
822	**99**	**223**	**14:00:00.000**	**20A3FA**	**37F1PR**	**Final Condition**	**Radiator Flash Heater OFF (primary relay)**	**4O0**	**4**	**0**	**5,121,617:09:3**	
823	**99**	**223**	**14:00:00.000**	**20A3FB**	**37F2PR**	**Final Condition**	**Shield Flash Heater OFF (primary relay)**	**4O0**	**4**	**0**	**5,121,617:09:3**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	99	223	14:00:00.000	20A3FD	40HRPR	Final Condition	RCT Heater OFF (primary relay)	4O0	4	0	5,121,617	09:3
825	99	223	14:00:00.000	20A3FF	40T2R	Final Condition	PCT Heater 2 OFF	4O0	4	0	5,121,617	09:3
826	99	223	14:00:00.000	20A3EX	37HR	Final Condition	Replacement Heaters OFF	4O0	4	0	5,121,617	09:3
827	99	223	14:00:00.000	20A3EY	37C1PR	Final Condition	Optics Heater 1 OFF (primary relay)	4O0	4	0	5,121,617	09:3
828	99	223	14:00:00.000	20A3FE	40T1PR	Final Condition	PCT Heater 1 OFF (primary relay)	4O0	4	0	5,121,617	09:3

21CNFEATRE04

```
OAPEL:  21CNFEATRE04              ALIAS:  21CNFEATRE04
EXT:    A                         PSID:   DD
SCLK1:  05061490:00:0             SCLK2:  05061494:79:0
SCET1:    99-181/08:44:51.200     SCET2:    99-181/08:49:47.000
TARGET: CALLISTO                  PARTITION: 1

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

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

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

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

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	03018	0,0011,0000,0001,1000
1	1BDFF	1,1011,1101,1111,1111
2	03018	0,0011,0000,0001,1000
3	1BDFF	1,1011,1101,1111,1111
4	03018	0,0011,0000,0001,1000
5	1BDFF	1,1011,1101,1111,1111
6	03018	0,0011,0000,0001,1000
7	1BDFF	1,1011,1101,1111,1111
8	03018	0,0011,0000,0001,1000
9	1BDFF	1,1011,1101,1111,1111
10	03018	0,0011,0000,0001,1000
11	1BDFF	1,1011,1101,1111,1111
12	03018	0,0011,0000,0001,1000
13	1BDFF	1,1011,1101,1111,1111
14	03018	0,0011,0000,0001,1000
15	1BDFF	1,1011,1101,1111,1111
16	03018	0,0011,0000,0001,1000
17	1BDFF	1,1011,1101,1111,1111
18	03018	0,0011,0000,0001,1000
19	1BDFF	1,1011,1101,1111,1111
20	03018	0,0011,0000,0001,1000
21	1BDFF	1,1011,1101,1111,1111
22	03018	0,0011,0000,0001,1000
23	1BDFF	1,1011,1101,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

21JNJUPRTS02

OAPEL: 21JNJUPRTS02 ALIAS: 21JNJUPRTS02
EXT: R PSID: DF
SCLK1: 05063381:00:0 SCLK2: 05063390:12:0
SCET1: 1999-182/16:36:51.800 SCET2: 1999-182/16:46:05.800
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

21INHRSPEC01

```
OAPEL:  21INHRSPEC01              ALIAS:  21INHRSPEC01
EXT:    A                         PSID:   DG
SCLK1:  05064218:75:0             SCLK2:  05064228:65:0
SCET1:    99-183/06:44:00.466     SCET2:    99-183/06:53:59.800
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: 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

21INHRSPEC01

```
OAPEL:  21INHRSPEC01              ALIAS:  21INHRSPEC01
EXT:    B                         PSID:   DG
SCLK1:  05064236:64:0             SCLK2:  05064250:64:0
SCET1:    99-183/07:02:05.000     SCET2:    99-183/07:16:14.333
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: 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

21INHRSPEC01

```
OAPEL:  21INHRSPEC01              ALIAS:  21INHRSPEC01
EXT:    C                         PSID:   DG
SCLK1:  05064256:88:0             SCLK2:  05064272:51:0
SCET1:    99-183/07:22:34.333     SCET2:    99-183/07:38:20.333
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: 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

21INHRSPEC01

```
OAPEL:  21INHRSPEC01              ALIAS:  21INHRSPEC01
EXT:    D                         PSID:   DG
SCLK1:  05064280:23:0             SCLK2:  05064293:51:0
SCET1:    99-183/07:46:07.133     SCET2:    99-183/07:59:34.333
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: 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

21JNJUPRTS03

```
OAPEL:  21JNJUPRTS03            ALIAS:  21JNJUPRTS03
EXT:    R                       PSID:   DH
SCLK1:  05064801:00:0           SCLK2:  05064810:12:0
SCET1:  1999-183/16:32:38.466   SCET2:  1999-183/16:41:52.466
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

21NNRCTRLT01

```
OAPEL:  21NNRCTRLT01            ALIAS:  LSNNRCTRTA01
EXT:    R                       PSID:   XU
SCLK1:  05098538:00:0           SCLK2:  05098538:12:0
SCET1:  1999-207/09:04:28.600   SCET2:  1999-207/09:04:36.600
TARGET: CAL                     PARTITION: 1

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

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

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

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

EDIT TABLE

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

21NNRCTRLT01

```
OAPEL:  21NNRCTRLT01            ALIAS:  LSNNRCTRTA01
EXT:    S                       PSID:   XU
SCLK1:  05098544:00:0           SCLK2:  05098545:12:0
SCET1:  1999-207/09:10:32.600   SCET2:  1999-207/09:11:41.266
TARGET: CAL                     PARTITION: 1

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

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

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

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

EDIT TABLE

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

21NNRCTRLT01

```
OAPEL:  21NNRCTRLT01            ALIAS:  LSNNRCTRTA01
EXT:    T                       PSID:   XU
SCLK1:  05098550:00:0           SCLK2:  05098550:12:0
SCET1:  1999-207/09:16:36.600   SCET2:  1999-207/09:16:44.600
TARGET: CAL                     PARTITION: 1

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

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

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

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

EDIT TABLE

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

21NNOPCAL_01

```
OAPEL:  21NNOPCAL_01            ALIAS:  LSNNOPCAL_01
EXT:    R                       PSID:   DC
SCLK1:  05098554:00:0           SCLK2:  05098556:12:0
SCET1:  1999-207/09:20:39.266   SCET2:  1999-207/09:22:48.600
TARGET: CAL                     PARTITION: 1

MODE:       3                   GAIN:       4
CHOP:       1                   GRAT_OFF:   4
PTAB_A:     1 1 0 0 124         PTAB_B:     1 1 0 0 124
ECAL:       0                   OPCAL:      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:   048                 TLMFMT:     RT

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

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

EDIT TABLE

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

NIMS C21 OBSTAB

This is a time-ordered ASCII TABLE (listing) of GALILEO NIMS observation parameters for use by downlink data processing of the NIMS C21 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: mmeelllnnn 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 ).
-------------------------------------------------------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------------------------------------------------------
21CNFEATRE0421CNFEATRE04ADD05061490:00:005061494:79:01         CALLISTO 3414 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525        1        228LPU  99-181/08:44:51.200  99-181/08:49:47.000
          000000000000000000000000000000000000000000000000000000003262280012601030180 11BDFF0103018011BDFF0103018011BDFF0103018011BD
FF0103018011BDFF0103018011BDFF0103018011BDFF0103018011BDFF0103018011BDFF0103018011BDFF0103018011BDFF01000000100000
21JNJUPRTS0221JNJUPRTS02RDF05063381:00:005063390:12:01         JUPITER  3214 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  408RT 1999-182/16:36:51.8001999-182/16:46:05.800
          000000000000000000000000000000000000000000000000000000000302408000 2241FFFF0200000

21INHRSPEC0121INHRSPEC01ADG05064218:75:005064228:65:01         IO       3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525        2        360MPW  99-183/06:44:00.466  99-183/06:53:59.800
          000000000000000000000000000000000000000000000000000000003263600012601 1BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
21INHRSPEC0121INHRSPEC01BDG05064236:64:005064250:64:01         IO       3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525        1        360MPW  99-183/07:02:05.000  99-183/07:16:14.333
          000000000000000000000000000000000000000000000000000000003263600012601 1BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
21INHRSPEC0121INHRSPEC01CDG05064256:88:005064272:51:01         IO       3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525        1        360MPW  99-183/07:22:34.333  99-183/07:38:20.333
          000000000000000000000000000000000000000000000000000000003263600012601 1BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
21INHRSPEC0121INHRSPEC01DDG05064280:23:005064293:51:01         IO       3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0065525        2        360MPW  99-183/07:46:07.133  99-183/07:59:34.333
          000000000000000000000000000000000000000000000000000000003263600012601 1BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BD
FF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF011BDFF01000000100000
21JNJUPRTS0321JNJUPRTS03RDH05064801:00:005064810:12:01         JUPITER  3214 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  408RT 1999-183/16:32:38.4661999-183/16:41:52.466
          000000000000000000000000000000000000000000000000000000000302408000 2241FFFF0200000

21NNRCTRLT01LSNNRCTRTA01RXU05098538:00:005098538:12:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  252RT 1999-207/09:04:28.6001999-207/09:04:36.600
          000000000000000000000000000000000000000000000000000000000303252000 312003FF12007FF0200000

21NNRCTRLT01LSNNRCTRTA01SXU05098544:00:005098545:12:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  252RT 1999-207/09:10:32.6001999-207/09:11:41.266
          000000000000000000000000000000000000000000000000000000000303252000 312003FF12007FF0200000

21NNRCTRLT01LSNNRCTRTA01TXU05098550:00:005098550:12:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  252RT 1999-207/09:16:36.6001999-207/09:16:44.600
          000000000000000000000000000000000000000000000000000000000303252000 312003FF12007FF0200000

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```

```
--------------------------------------------------------------------------------------------------------------------------------
21NNOPCAL_01LSNNOPCAL_01RDC05098554:00:005098556:12:01         CAL      3414 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                  048RT 1999-207/09:20:39.2661999-207/09:22:48.600
           00000000000000000000000000000000000000000000000000302048000 224180000200000

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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.

Chopper on

ACTIVITY ID: 21NNCHOPON01-
START TIME: 99-181/06:21:20.534

Activity ID: Orbit 21 Target N Inst N OAPEL CHOPON SeqNo 01 -

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

Time System	CDS	Load ID	Calendar Date	06/30/99	Week 78
Start	CEE-CDS 00000085:00:0	99-181/06:21:20.534		CEE-000/01:25:56.666	
End	CEE-CDS 00000075:00:0	99-181/06:31:27.200		CEE-000/01:15:50.000	
Duration	00000010:00:0	000/00:10:06.666		000/00:10:06.666	

Top Label	21NNCHOPON01-				
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 on NIMS Chopper

Design Detail

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NIMS Real-Time Software Reload ACTIVITY ID: 21NNRELOAD01-
START TIME: 99-181/06:42:33.200

Activity ID: Orbit 21 Target N Inst N OAPEL RELOAD SeqNo 01 -

Title	NIMS Real-Time Software Reload	Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team NIMS	Working Group AWG

Time System	CDS	Load ID	Calendar Date 06/30/99 Week 78
Start	CEE-CDS 00000064:02:0	99-181/06:42:33.200	CEE-000/01:04:44.000
End	CEE-CDS 00000061:00:0	99-181/06:45:36.534	CEE-000/01:01:40.666
Duration	00000003:02:0	000/00:03:03.334	000/00:03:03.334

Top Label 21NNRELOAD01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	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 C21 reload OAPELS are:
21NNRELOAD01, 21NNRELOAD02, 21NNRELOAD04, 21NNRELOAD05, 21NNRELOAD06.
21NNRELOAD06 occurs outbound just before 21NNCHOPOF01

21CNFEATRE03, 21CNFEATRE04, 21CNFEATRE01, 21CNFEATRE02, 21NNRCTRLT01 did not have reloads.

Design Detail

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

37PL - Halt NIMS Processor
37MRL - Memory Reallocate
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.

165IA:TT= 0 TMC= 1 C= -13.50 XC= -0.10 BS= 0/8971 TC= 1(0.82 106.30)
A= 728 pD= 110 SR=17.450 RA50=307.13 DEC50=-16.97 cone= 97.14 clock=106.00
118IA:#SB= 1 Cs= 6.70 XCs= 0.10 TPP= 26 SR= 3.000 RR= 3.000 BM=F RC= 1 BS= 3/8971
1:#s= 5 #p= 1 Cr= 0.00 XCr= 0.00

21CNDRKMAT01

TARGET G3.1 lisac: 6/11/1999 14:14:44

FILE:P.21CSDRKMAT01

TARGET BODY : CALLISTO

MINI:m.target

S/C EPH:/DATA/NAVIO/990312-tour.NS

PERIAPSIS:

THINNING:

START:CEE 99-181/07:47:17.200 -CDS 04:00:0

BODY PLOT TIME:TARGET-TIME D= 110 S= 5.000

OBSERVATION:21CSDRKMAT01

DESCRIP:CALLISTO_DARK_MATERIAL_01

Calllisto Ride along with SSI

ACTIVITY ID: 21CNDRKMAT01+
START TIME: 99-181/07:39:11.867

Activity ID: Orbit 21 Target C Inst N OAPEL DRKMAT SeqNo 01 +

Title	Calllisto Ride along with SSI			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	06/30/99 Week 78
Start	CEE-CDS 00000008:00:0	99-181/07:39:11.867		CEE-000/00:08:05.333	
End	CEE-CDS 00000003:00:0	99-181/07:44:15.200		CEE-000/00:03:02.000	
Duration	00000005:00:0	000/00:05:03.333		000/00:05:03.333	

Top Label	21CNDRKMAT01				
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

Ride-along with SSI.
To obtain NIMS spectra in conjunction with the planned SSI observation and to further the on going collaborative efforts of the composition/morphology studies.

No Data Returned

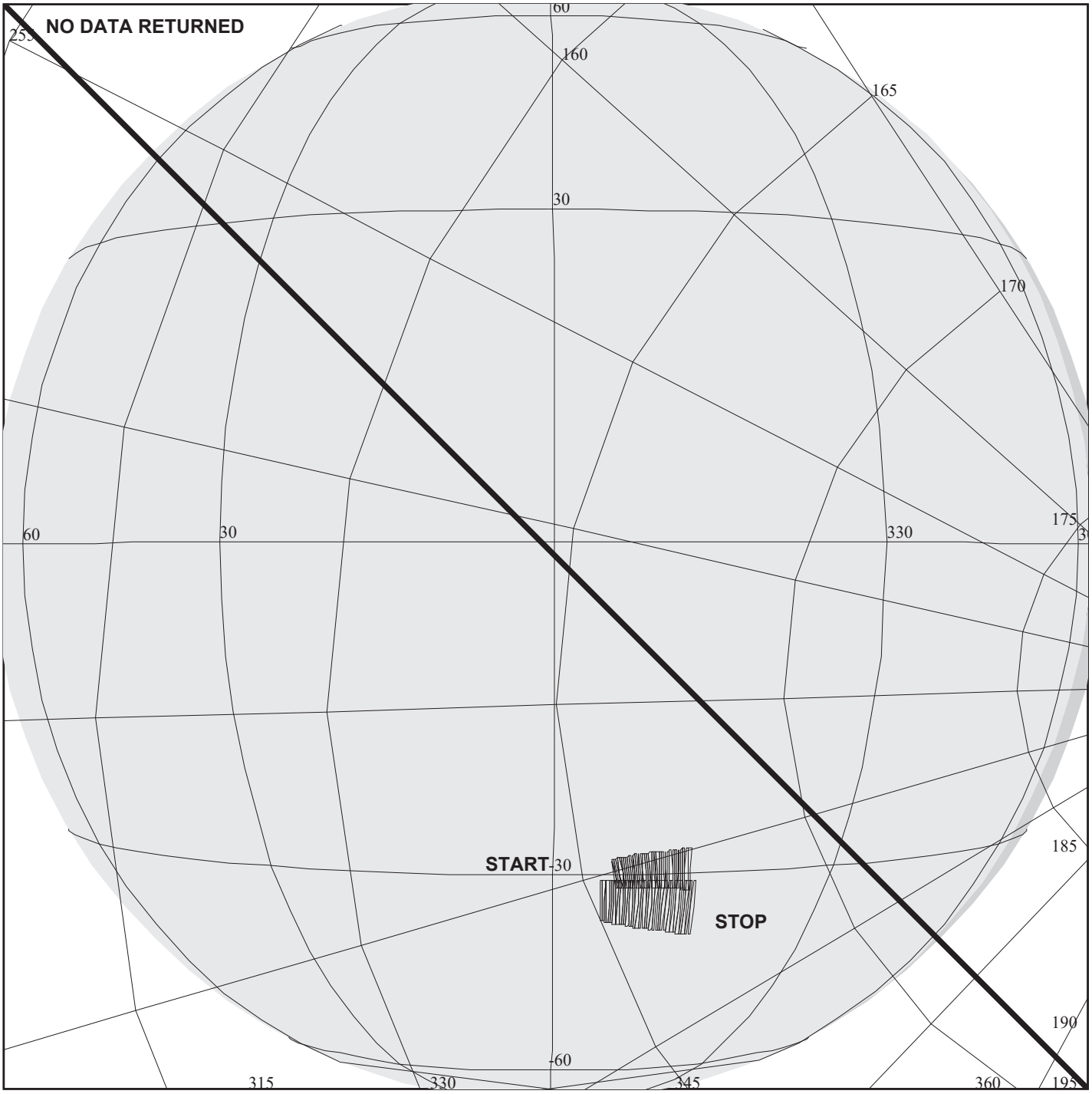
Design Detail

Long Map, ride along

Latitude 1 N
Longitude 106 W

Long Map (LM), Gain 4, Grating Start 0, IM8, CLM442, CLM360

Galileo Activity Plan Form 05/04/99 14:29:49 rev 6/95



165DZ:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/3521 TC= 2(168 265.60)
A= 546 pD= 0 SR= 8.000 RA50= 36.25 DEC50= 17.09 cone=168.00 clock=265.60
165DC:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/3885 TC= 1(-30 354)
A= 360 pD= 3628 SR= 8.000 RA50= 42.64 DEC50= 11.68 cone=164.05 clock=296.07
117DC:#SB= 1 OR= 0.030 RR= 4.000 BM=F RC= 1 BS= 0/3885
1:#s= 2 Cs= 17.85 XCs= 0.00 Cr= -21.00 XCr= 6.00 sD= 1798 rD= 38

21CNFEATRE03

TARGET G3.1 lisac: 6/11/1999 14:14:44

FILE:P.21CNFEATRE03

TARGET BODY : CALLISTO

MINI:m.target

S/C EPH:/DATA/NAVIO/990312-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:CEE 99-181/07:47:17.200 +CDS 21:00:0

BODY PLOT TIME:TARGET-TIME D= 3628 S= 1.000

OBSERVATION:21CNFEATRE03

DESCRIP:POLAR_CROSSING_PREPOSITION

Callisto Feature Observation — ACTIVITY ID: 21CNFEATRE03- / START TIME: 99-181/08:07:30.533

Activity ID: Orbit 21 Target C Inst N OAPEL FEATRE SeqNo 03 -

Title	Callisto Feature Observation			Instrument	NIMS
Requestor	NIMS-SWG/M.SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	06/30/99 Week 78
Start	CEE+CDS 00000020:00:0	99-181/08:07:30.533		CEE+000/00:20:13.333	
End	CEE+CDS 00000045:00:0	99-181/08:32:47.200		CEE+000/00:45:30.000	
Duration	00000025:00:0	000/00:25:16.667		000/00:25:16.667	

Top Label	21CNFEATRE03-				
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

Obtain high-resolution spectral and spatial data of Callisto's surface in order to further the on going compositional studies started in Galileo's prime mission.

TICS=1163, FMT=MPW, MBTG= 2.400, PPR_RA=0.116

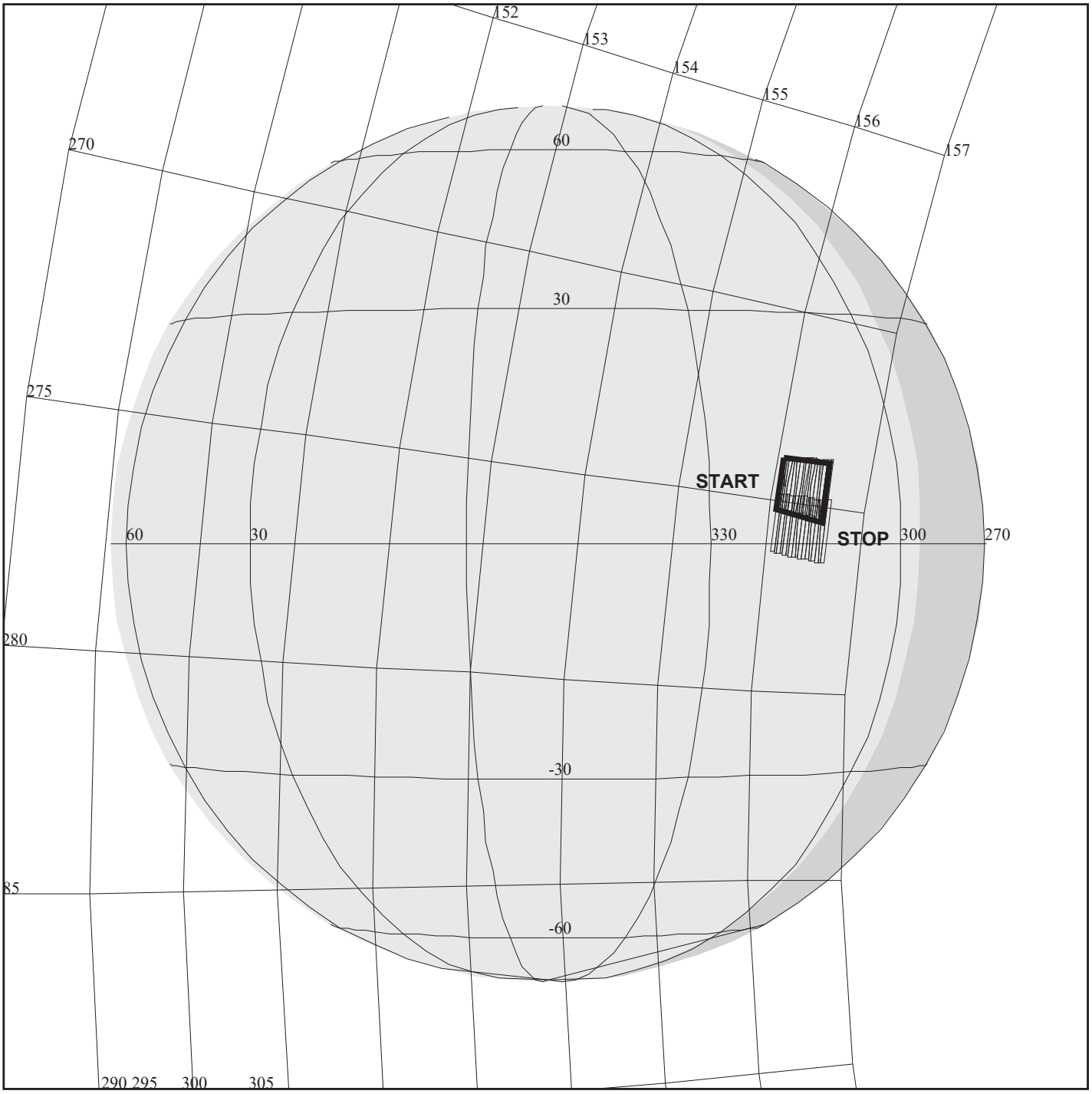
No Data Returned

Design Detail

Latitude -28 to -35
Longitude 345 to 355 W

Long Map (LM), Gain 4, Grating Start 0, MPW, CLM442, CLM360

Galileo Activity Plan Form 05/04/99 14:29:49 rev 6/95



165DD:TT= 0 TMC= 1 C= -4.50 XC= -3.00 BS= 0/0073 TC= 1(5 317)
A= 728 pD= 1810 SR= 8.000 RA50= 48.55 DEC50= 20.77 cone=156.09 clock=274.51
117DD:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0073
1:#s= 2 Cs= 8.85 XCs= 0.00 Cr= -8.85 XCr= 7.00 sD= 888 rD= 36

21CNFEATRE04

TARGET G3.1 lisac: 6/11/1999 14:14:44

FILE:P.21CNFEATRE04

TARGET BODY : CALLISTO

MINI:m.target

S/C EPH:/DATA/NAVIO/990312-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:CEE 99-181/07:47:17.200 +CDS 57:00:0

BODY PLOT TIME:TARGET-TIME D= 1810 S= 0.800

OBSERVATION:21CNFEATRE04

DESCRIP:CALLISTO_FEATURE_OBSERVATION_S

Callisto Feature Observation — ACTIVITY ID: 21CNFEATRE04- — START TIME: 99-181/08:44:55.200

Activity ID: Orbit 21 Target C Inst N OAPEL FEATRE SeqNo 04 -

Title	Callisto Feature Observation			Instrument	NIMS
Requestor	NIMS-SWG/M.SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	06/30/99 Week 78
Start	CEE+CDS 00000057:00:0	99-181/08:44:55.200		CEE+000/00:57:38.000	
End	CEE+CDS 00000067:00:0	99-181/08:55:01.866		CEE+000/01:07:44.666	
Duration	00000010:00:0	000/00:10:06.666		000/00:10:06.666	

Top Label	21CNFEATRE04-				
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

Obtain high-resolution spectral and spatial data of Callisto's surface in order to further the on going compositional studies started in Galileo's prime mission.

TICS=530, FMT=MPW, MBTG= 2.040, PPR_RA=0.053

Data Returned

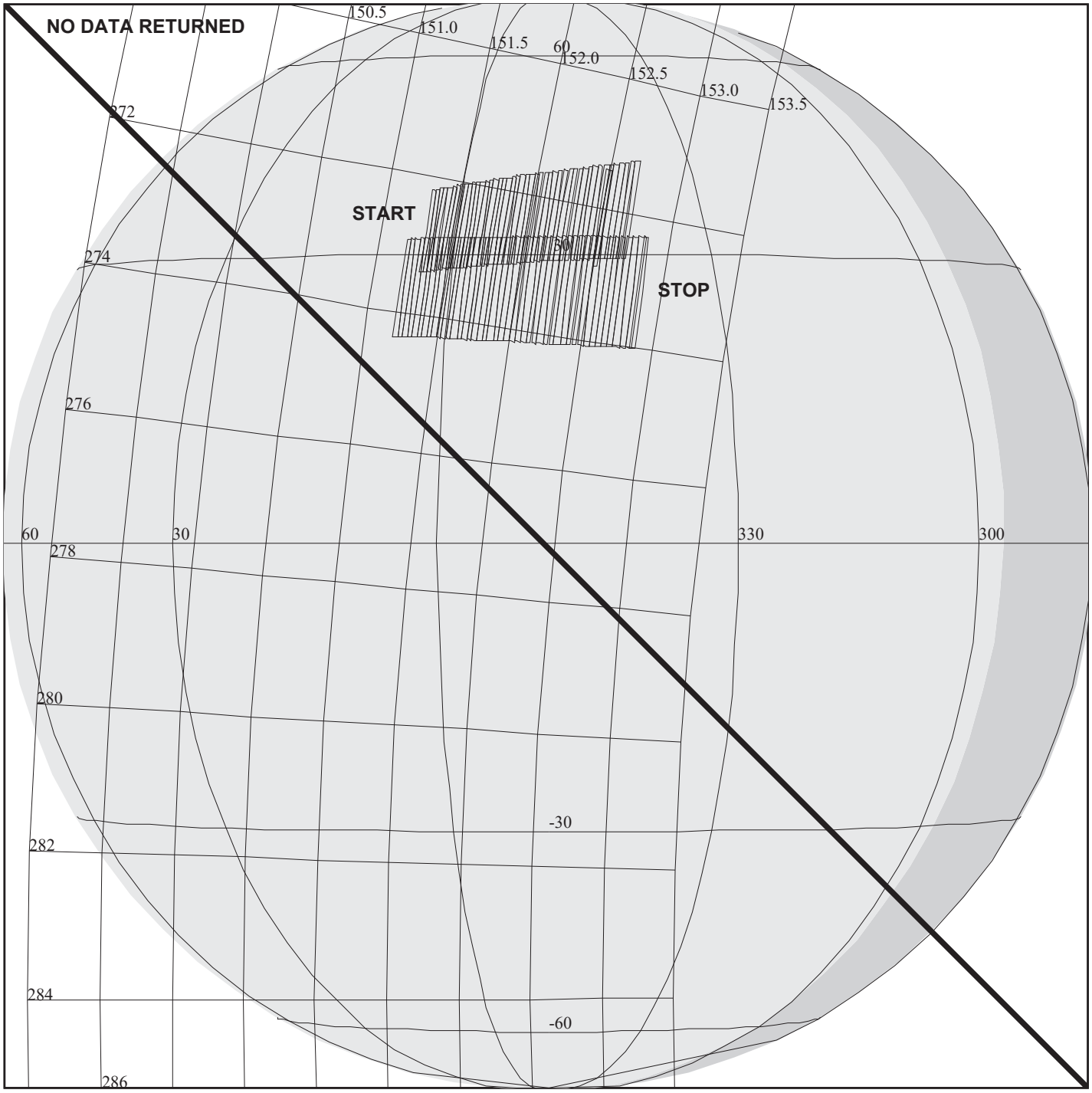
Design Detail

Latitude 0 to +10
Longitude 312 to 322 W

This region includes the Igaluk and Vali craters.

Long Map (LM), Gain 4, Grating Start 0, LPU, CLM243D, CLM228D

Galileo Activity Plan Form — 05/04/99 14:29:49 rev 6/95



165DA:TT= 0 TMC= 1 C= -20.00 XC= -35.00 BS= 0/2439 TC= 3
A= 546 pD= 4732 SR=17.450 RA50= 52.90 DEC50= 23.43 cone=151.32 clock=272.78
117DA:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/2439
1:#s= 2 Cs= 23.00 XCs= 0.00 Cr= -22.00 XCr= 12.00 sD= 2344 rD= 34

21CNFEATRE01

TARGET G3.1 lisac: 6/11/1999 14:14:44

FILE:P.21CNFEATRE01

TARGET BODY : CALLISTO

MINI:m.target

S/C EPH:/DATA/NAVIO/990312-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:CEE 99-181/07:47:17.200 +CDS 70:00:0 **BODY PLOT TIME:TARGET-TIME D= 4732 S= 1.000**

OBSERVATION:21CNFEATRE01 **DESCRIP:CALLISTO_FEATURE_OBSERVATION_30N**

Callisto Feature Observation ACTIVITY ID: 21CNFEATRE01-
START TIME: 99-181/08:56:15.866

Activity ID: Orbit 21 Target C Inst N OAPEL FEATRE SeqNo 01 -

Title	Callisto Feature Observation			Instrument	NIMS
Requestor	NIMS-SWG/M.SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	06/30/99 Week 78
Start	CEE+CDS 00000068:20:0	99-181/08:56:15.866		CEE+000/01:08:58.666	
End	CEE+CDS 00000096:40:0	99-181/09:24:47.866		CEE+000/01:37:30.666	
Duration	00000028:20:0	000/00:28:32.000		000/00:28:32.000	

Top Label	21CNFEATRE01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Obtain high-resolution spectral and spatial data of Callisto's surface in order to further the on going compositional studies started in Galileo's prime mission.

TICS= 368, FMT= LPU, MBTG= 1.400, PPR_RA=0.137

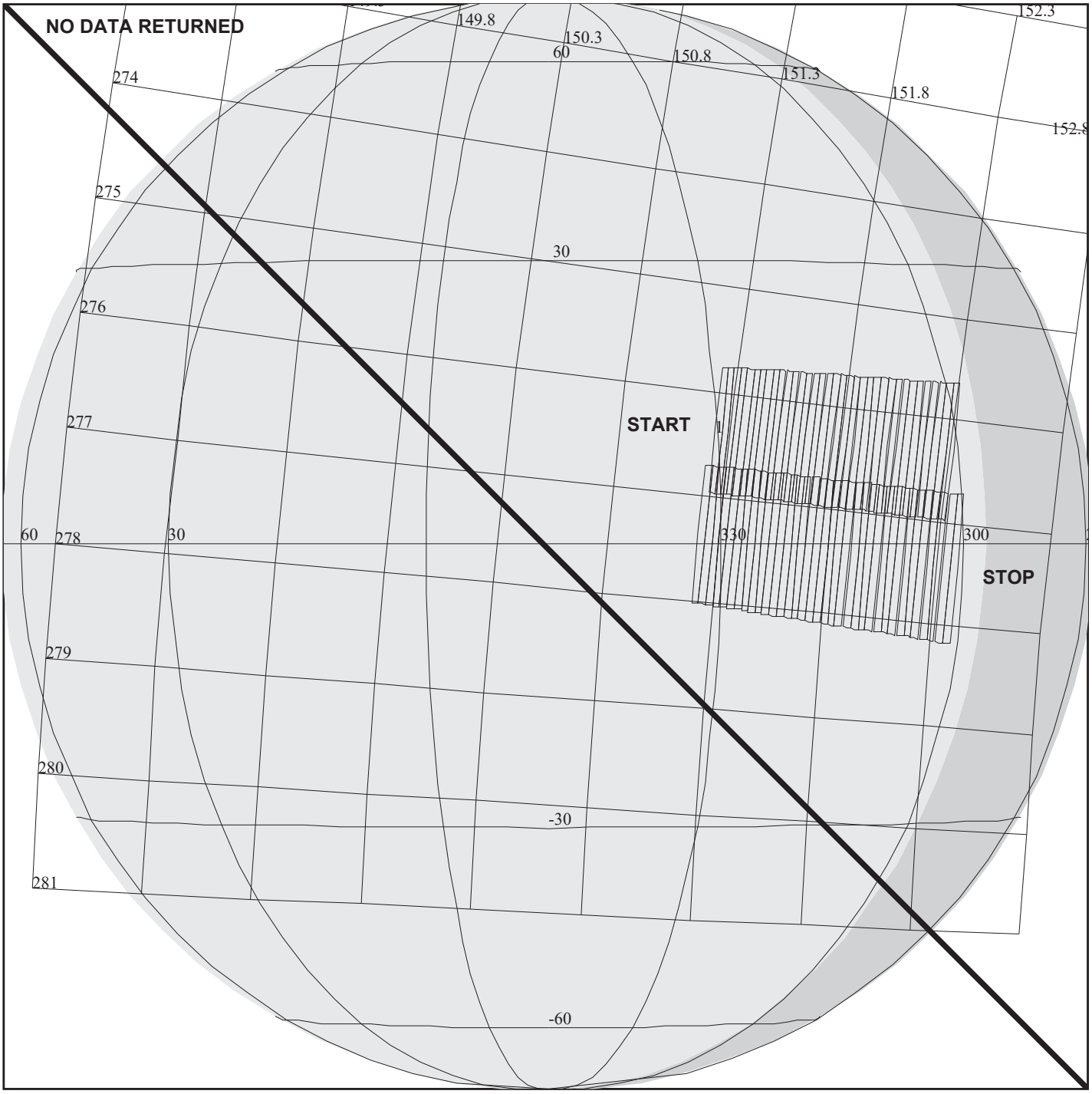
No Data Returned

Design Detail

Latitude +20 to +40
Longitude 340 to 10 W

Long Map (LM), Gain 4, Grating Start 0, LPU, CLM243D_0, CLM180D_0

Galileo Activity Plan Form 05/04/99 14:29:50 rev 6/95



165DB:TT= 0 TMC= 1 C= -10.00 XC= -4.00 BS= 0/9355 TC= 1(5 317)
A= 364 pD= 3628 SR= 8.000 RA50= 53.70 DEC50= 21.88 cone=151.23 clock=276.36
117DB:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/9355
1:#s= 2 Cs= 17.90 XCs= 0.00 Cr= -17.30 XCr= 8.00 sD= 1798 rD= 36

21CNFEATRE02

TARGET G3.1 lisac: 6/11/1999 14:14:44

FILE:P.21CNFEATRE02

TARGET BODY : CALLISTO

MINI:m.target

S/C EPH:/DATA/NAVIO/990312-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:CEE 99-181/07:47:17.200 +CDS 108:00:0 **BODY PLOT TIME:TARGET-TIME D= 3628 S= 1.000**

OBSERVATION:21CNFEATRE02 **DESCRIP:CALLISTO_FEATURE_OBSERVATION_0**

Callisto Feature Observation ACTIVITY ID: 21CNFEATRE02-
START TIME: 99-181/09:25:21.866

Activity ID: Orbit 21 Target C Inst N OAPEL FEATRE SeqNo 02 -

Title	Callisto Feature Observation			Instrument	NIMS
Requestor	NIMS-SWG/M.SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	06/30/99 Week 78
Start	CEE+CDS 00000097:00:0	99-181/09:25:21.866		CEE+000/01:38:04.666	
End	CEE+CDS 00000120:00:0	99-181/09:48:37.200		CEE+000/02:01:20.000	
Duration	00000023:00:0	000/00:23:15.334		000/00:23:15.334	

Top Label	21CNFEATRE02-				
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

Obtain high-resolution spectral and spatial data of Callisto's surface in order to further the on going compositional studies started in Galileo's prime mission.

TICS= 283, FMT= LPU, MBTG= 2.160, PPR_RA=0.106

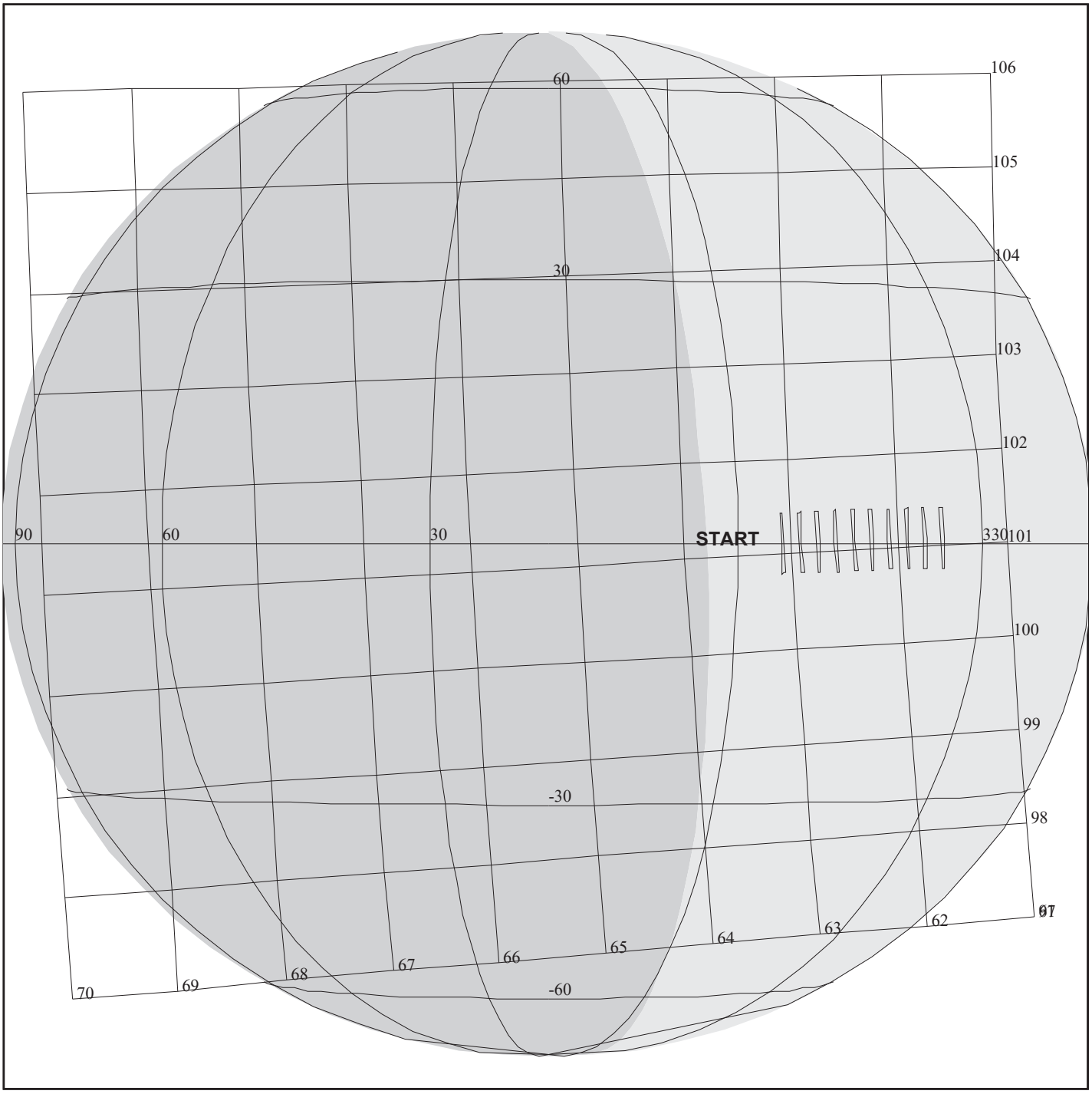
No Data Returned

Design Detail

Latitude -10 to +20
Longitude 300 to 330 W

Long Map (LM), Gain 4, Grating Start 0, LPU, CLM243D_0, CLM180D_0

Galileo Activity Plan Form 05/04/99 14:29:50 rev 6/95



165DF:TT= 0 TMC= 1 C= -38.00 XC= -2.00 BS= 0/4235 TC= 3
A= 728 pD= 0 SR= 8.000 RA50=271.26 DEC50=-25.29 cone= 63.10 clock=101.12
117DF:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/4235
1:#s= 1 Cs= -16.90 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1696 rD= 34

21JNJUPRTS02

TARGET G3.1 lisac: 6/11/1999 14:14:44

FILE:P.21JNJUPRTS02

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990312-tour.NS

PERIAPSIS: **THINNING:NIM 7**

START:JEE 99-183/05:05:09.133 -CDS 740:00:0 **BODY PLOT TIME:TARGET-TIME D= 0 S= 1.000**

OBSERVATION:21JNJUPRTS02 **DESCRIP:JUPITER_REATIME_OBSERVATION_02**

Jupiter Realtime Observation

ACTIVITY ID: 21JNJUPRTS02*
START TIME: 99-182/16:31:52.467

Activity ID: Orbit 21 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	07/01/99 Week 79
Start	JEE-CDS 00000745:00:0	99-182/16:31:52.467		JEE-000/12:33:16.666	
End	JEE-CDS 00000730:00:0	99-182/16:47:02.467		JEE-000/12:18:06.666	
Duration	00000015:00:0	000/00:15:10.000		000/00:15:10.000	

Top Label	21JNJUPRTS02*				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To obtain full spectra of various Jovian territories to further in-depth studies of Jupiter's atmosphere.

FREE_RTS=0.16 Mbits

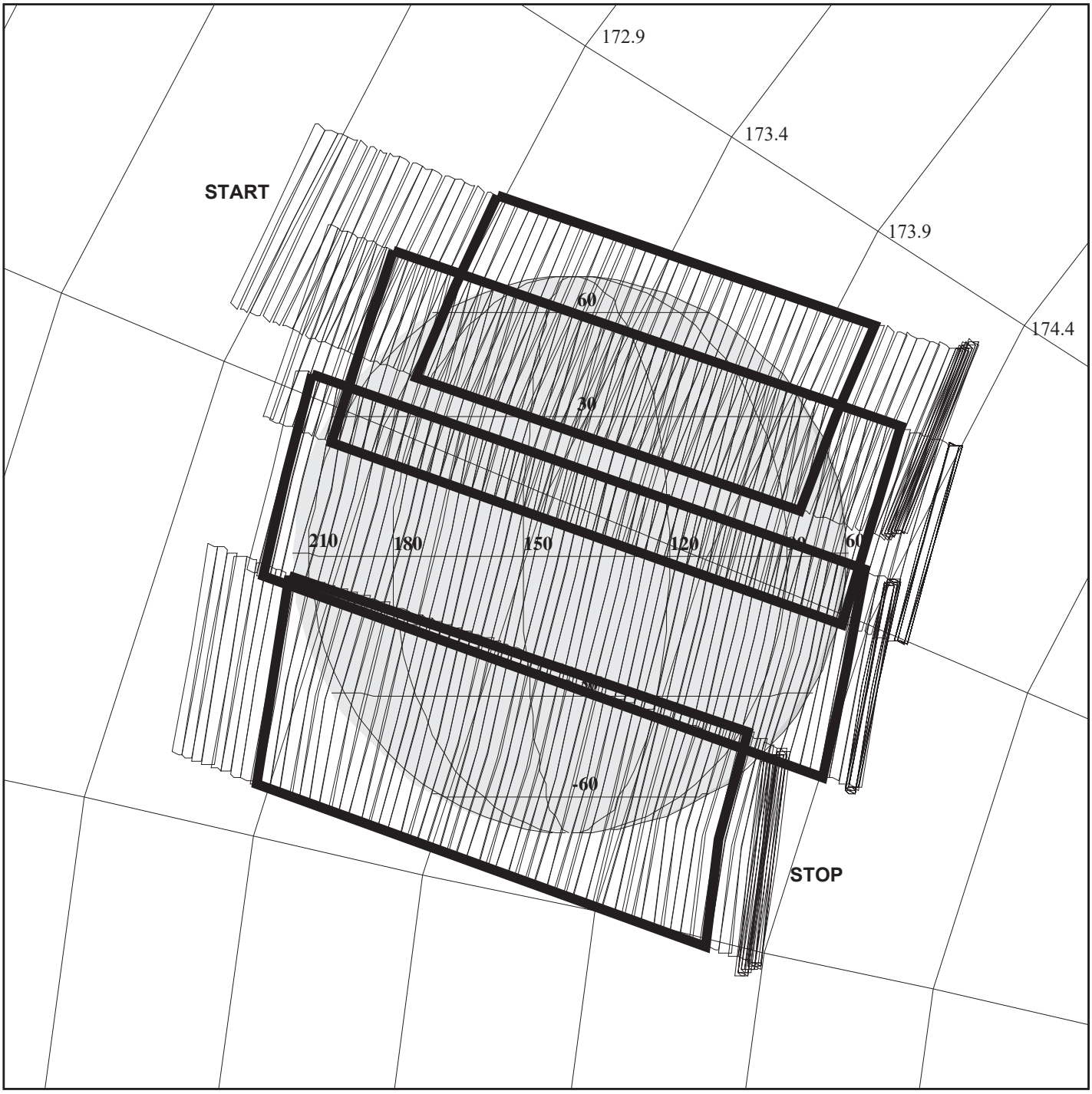
Data Returned

Design Detail

Latitude Equatorial
Longitude 340 to 355 W

Long Map (LM), Gain 2, Grating Start 0, R/T, JLM408

Galileo Activity Plan Form 05/04/99 14:29:50 rev 6/95



165DG:TT= 0 TMC= 1 C= -20.50 XC= -8.80 BS= 0/5841 TC= 3
A= 910 pD= 15444 SR= 8.000 RA50= 31.83 DEC50= 15.33 cone=172.35 clock=256.70
117DG:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/5841
1:#s= 4 Cs= 31.00 XCs= 0.00 Cr= -31.40 XCr= 6.20 sD= 3834 rD= 36

21INHRSPEC01

TARGET G3.1 lisac: 6/11/1999 14:14:44

FILE:P.21INHRSPEC01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990312-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:IEE 99-183/05:12:13.800 +CDS 86:00:0

BODY PLOT TIME:TARGET-TIME D=15444 S= 0.300

OBSERVATION:21INHRSPEC01

DESCRIP:Io_Monitoring_at_High_Spec_Res

Mapping Io at High Spatial and Spectral ACTIVITY ID: 21INHRSPEC01-
START TIME: 99-183/06:35:08.466

Activity ID: Orbit 21 Target I Inst N OAPEL HRSPEC SeqNo 01 -

Title	Mapping Io at High Spatial and Spectral Instrument		NIMS
Requestor	NIMS-SWG/R.	Team NIMS	Working Group SWG

Time System	CDS	Load ID	Calendar Date 07/02/99 Week 79
Start	IEE+CDS 00000082:00:0	99-183/06:35:08.466	IEE+000/01:22:54.666
End	IEE+CDS 00000166:00:0	99-183/08:00:04.466	IEE+000/02:47:50.666
Duration	00000084:00:0	000/01:24:56.000	000/01:24:56.000

Top Label	21INHRSPEC01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	Yes

Observation Objective

Highest resolution global mosaic of Io during Galileo and GEM.
Objective is to obtain high spatial and spectral map of one hemisphere of Io.

TICS= 3167, FMT= MPW, MBTG= 17.470, PPR_RA=0.0

Data Returned

Design Detail

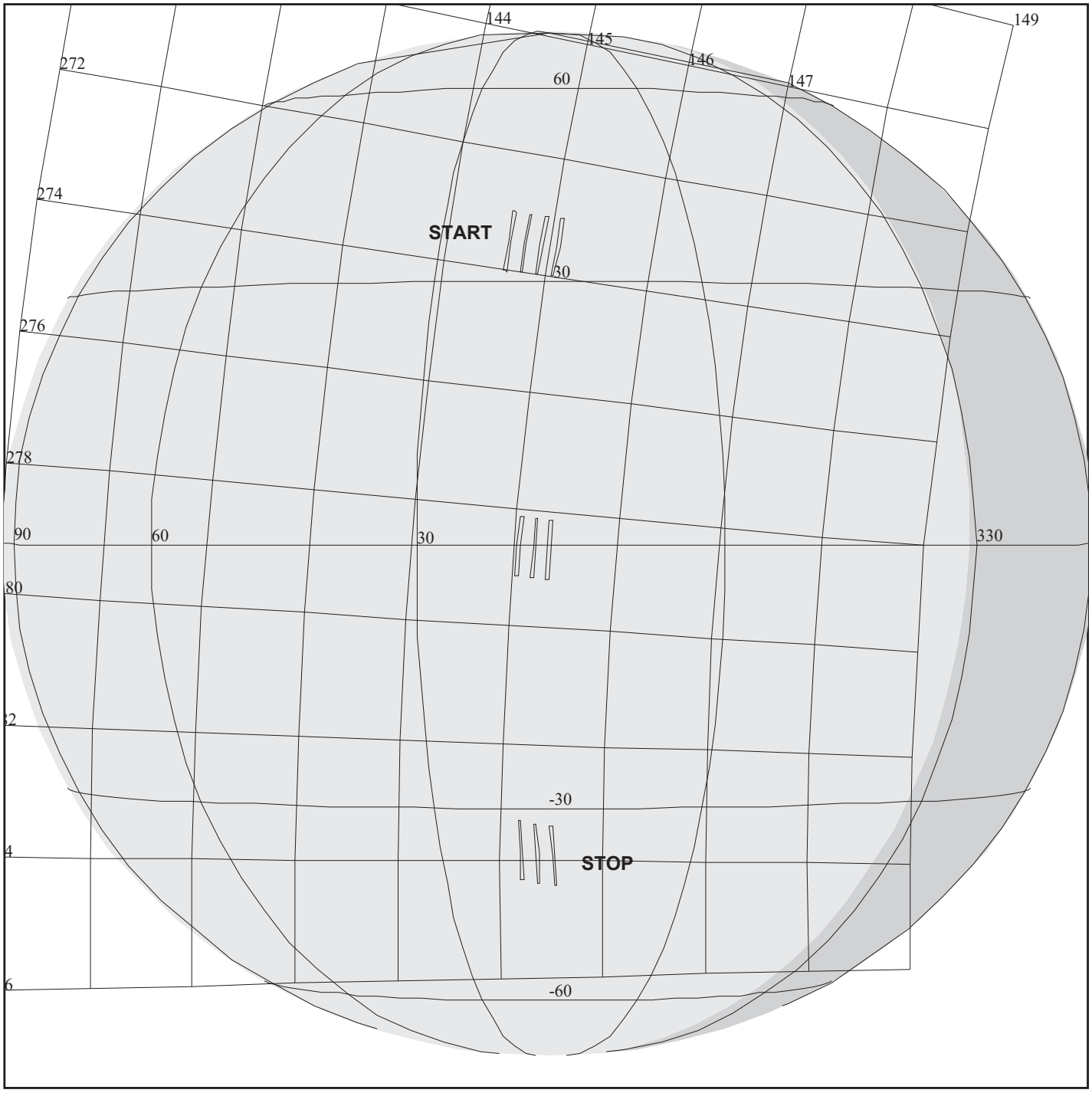
Global mosaic in Long Map, 360 wavelengths, record mode is MPW.
NIMS resolution is approximately 60 km/pixel.
Central longitude is approximately 130 degrees West.
Cost is approximately 20 Mbits, 2000 tics.

Global mosaic in 4 swaths, NIMS reloaded before the start of EACH swath.
Extra-long scans into dark sky off target to allow for pointing errors and time for the reloads.

Severe problems with AACS caused the pointing to jump erratically.
See the discussion in Chapter 7.

Long Map (LM), Gain 2, Grating Start 0, MPW, ILM442, ILM360

Galileo Activity Plan Form 05/04/99 14:29:50 rev 6/95



165DH:TT= 0 TMC= 1 C= -13.00 XC= -50.00 BS= 0/2675 TC= 3
A=1092 pD= 0 SR= 8.000 RA50= 59.90 DEC50= 25.64 cone=144.59 clock=273.51
117DH:#SB= 1 OR= 0.040 RR=12.000 BM=F RC= 1 BS= 0/2675
1:#s= 3 Cs= 7.60 XCs= 0.00 Cr= 0.00 XCr= 51.00 sD= 574 rD= 46

21JNJUPRTS03

TARGET G3.1 lisac: 6/11/1999 14:14:44

FILE:P.21JNJUPRTS03

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990312-tour.NS

PERIAPSIS: **THINNING:NIM 7**

START:JEE 99-183/05:05:09.133 +CDS 680:00:0 **BODY PLOT TIME:TARGET-TIME D= 0 S= 1.000**

OBSERVATION:21JNJUPRTS03 **DESCRIP:JUPITER_REATIME_OBSERVATION_03**

Jupiter Realtime Observation — ACTIVITY ID: 21JNJUPRTS03* — START TIME: 99-183/16:36:45.133

Activity ID: Orbit 21 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	07/02/99 Week 79
Start	JEE+CDS 00000684:00:0	99-183/16:36:45.133		JEE+000/11:31:36.000	
End	JEE+CDS 00000699:00:0	99-183/16:51:55.133		JEE+000/11:46:46.000	
Duration	00000015:00:0	000/00:15:10.000		000/00:15:10.000	

Top Label	21JNJUPRTS03*				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To obtain full spectra of various Jovian territories to further in-depth studies of Jupiter's atmosphere.

FREE_RTS=0.16 Mbits

Data Returned

Design Detail

Three Latitude regions observed:

1) Latitude +36
   Longitude 15 to 20 W
2) Latitude 0
   Longitude 15 to 20 W
3) Latitude -36
   Longitude 15 to 20 W

Long Map (LM), Gain 2, Grating Start 0, R/T, JLM408

Galileo Activity Plan Form — 05/04/99 14:29:51 rev 6/95

Chopper off

ACTIVITY ID: 21NNCHOPOF01-
START TIME: 99-184/10:45:43.133

Activity ID: Orbit 21 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	07/03/99 Week 79
Start	IEE+CDS 00001754:00:0	99-184/10:45:43.133		IEE+001/05:33:29.333	
End	IEE+CDS 00001764:00:0	99-184/10:55:49.800		IEE+001/05:43:36.000	
Duration	00000010:00:0	000/00:10:06.667		000/00:10:06.667	

Top Label 21NNCHOPOF01-
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.

Design Detail

Galileo Activity Plan Form 05/04/99 14:29:51 rev 6/95

NIMS RCT Real Time Calibration

ACTIVITY ID: 21NNRCTRLT01-
START TIME: 99-206/20:30:00.000

Activity ID: Orbit 21 Target N Inst N OAPEL RCTRLT SeqNo 01 -

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

Time System	CDS	Load ID	Calendar Date 07/25/99 Week 82
Start	RTA+CDS 00000000:00:0	99-206/20:30:00.000	RTA+000/00:00:00.000
End	RTA+CDS 00000793:00:0	99-207/09:51:48.666	RTA+000/13:21:48.666
Duration	00000793:00:0	000/13:21:48.666	000/13:21:48.666

Top Label 21NNRCTRLT01-
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

The NIMS OPCAL has been included in the RCT calibration for GEM.
Perform NIMS Optical Calibration to calibrate the NIMS grating.

This is a GEM Library Sequence
The Dark cone angle must be selected using Pointer.

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 05/04/99 14:29:51 rev 6/95

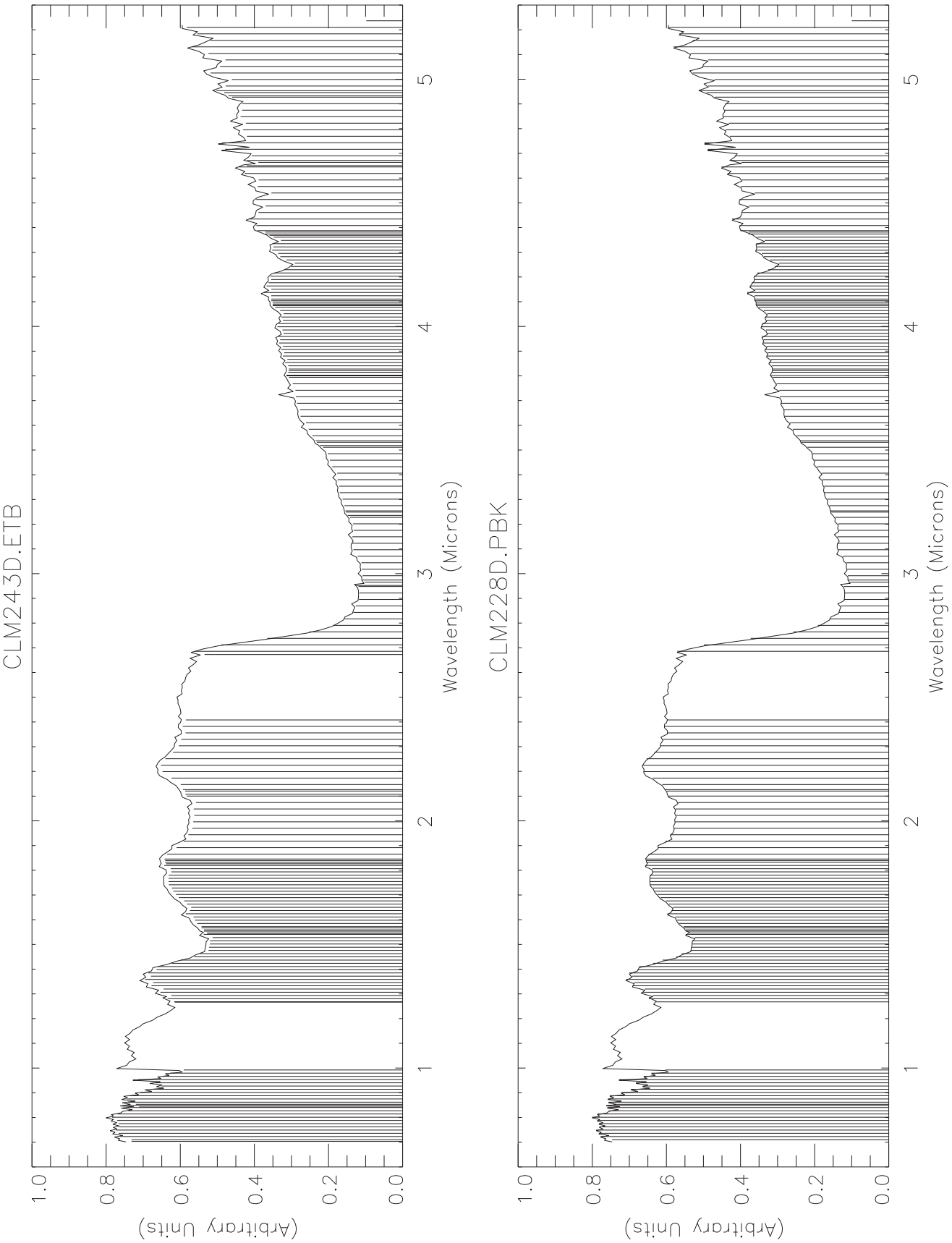
Chapter 6 - Edit Tables

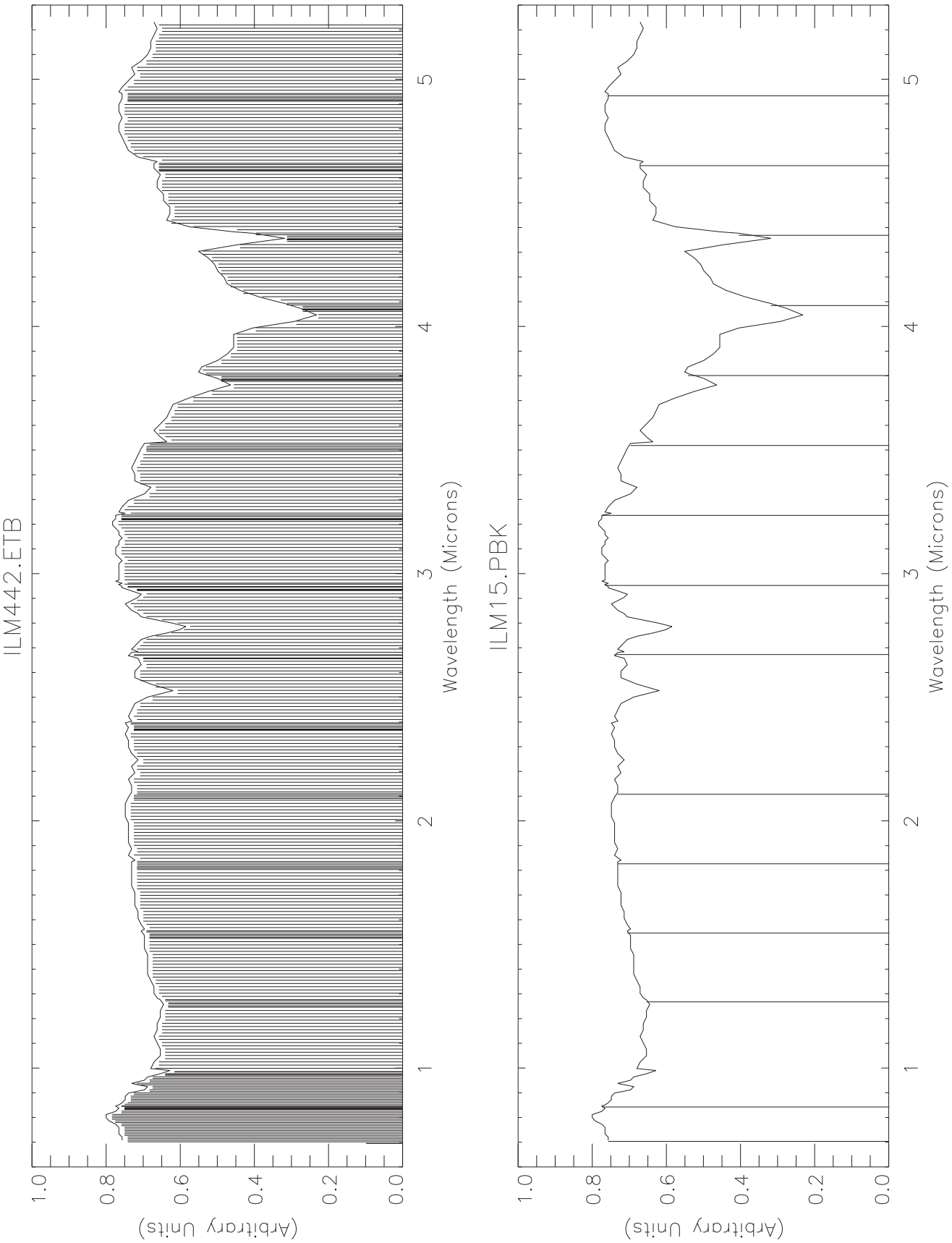
Contents

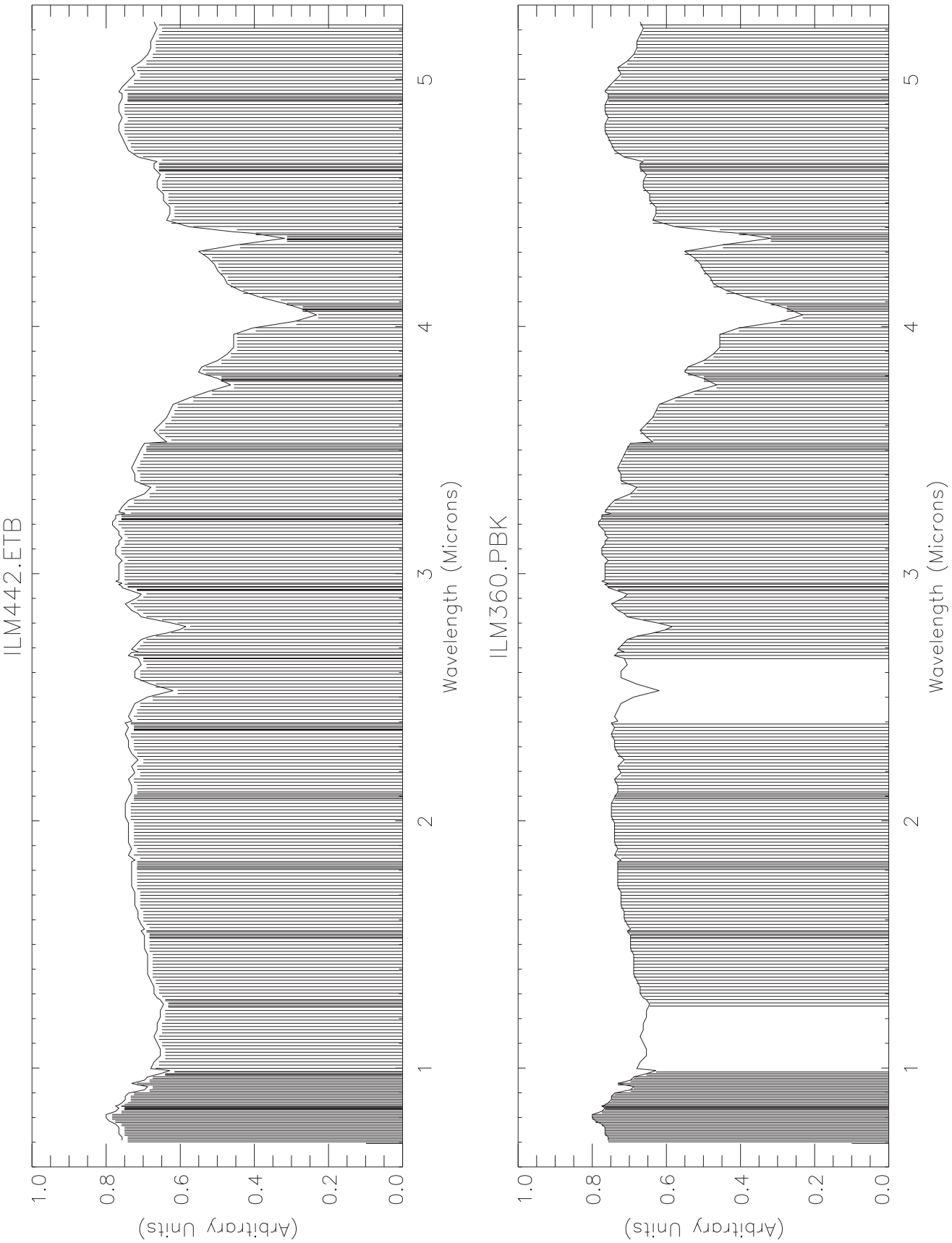
Introduction to Chapter 6

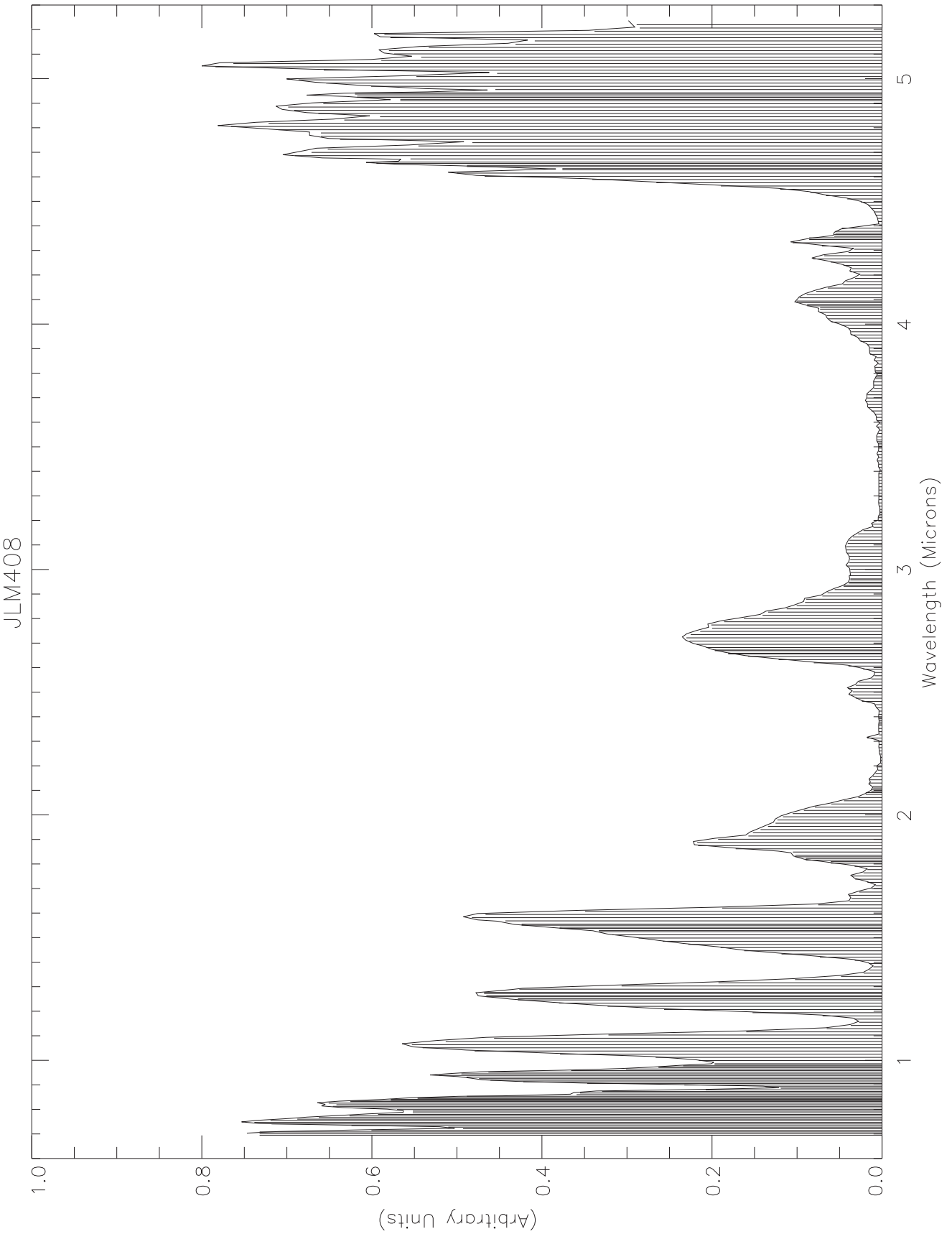
NIMS Edit Table Plots

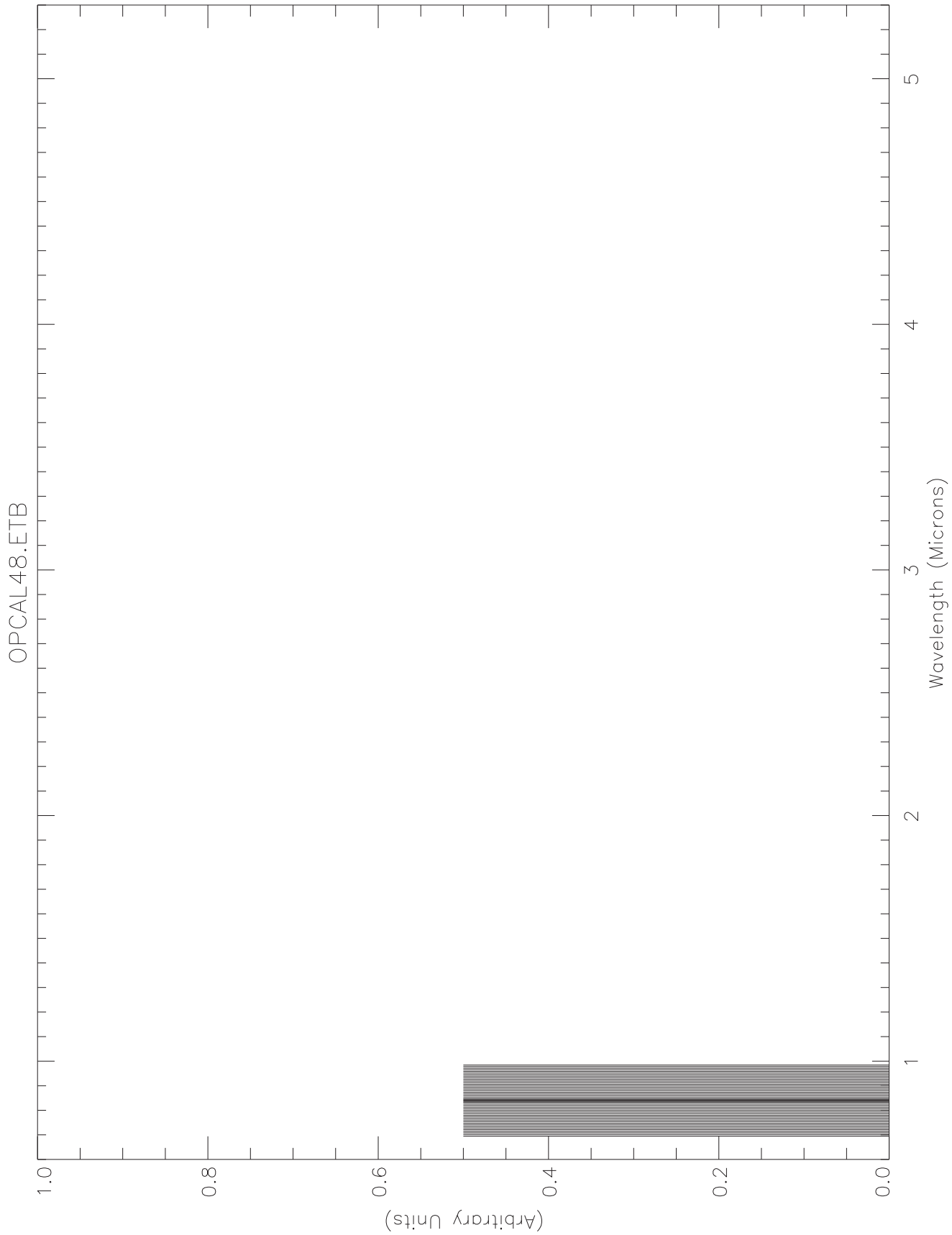
This chapter contains plots of the NIMS Edit Tables used in C21. The representative spectra used in these plots are observational reference spectra for the target body as obtained from telescopic observations from the Earth. Each reference spectrum is a composite of multiple published sources. Vertical 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.

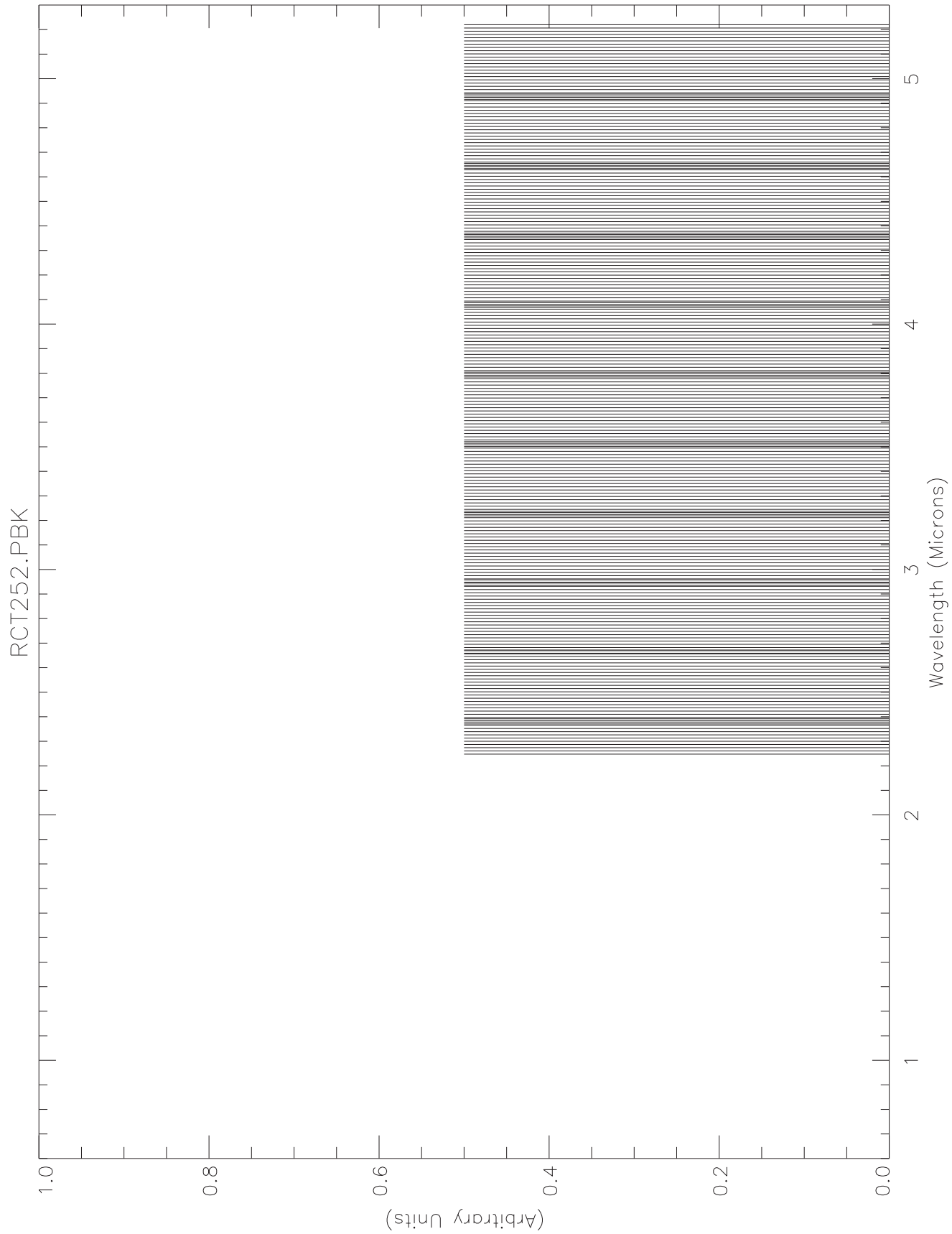

CLM243D.ETB
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)
CLM228D.PBK
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


ILM442.ETB
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)
ILM15.PBK
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


ILM442.ETB
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)
ILM360.PBK
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


JLM408
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


OPCAL48.ETB
(Arbitrary Units)
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


RCT252.PBK
1.0
0.8
0.6
0.4
0.2
0.0
(Arbitrary Units)
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 C21 orbit. Due to the low downlink data rates available for Galileo Jupiter Operations and other unforeseen and unpredictable events during the C21 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 five autonomous reloads of the NIMS RAM code from CDS during the C21 encounter, one just before each science observation. No observations were lost due to a NIMS processor halt. The approach that we are taking to avoid data loss due to processor halts has proven to be very successful.

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

AACS was in Cruise mode for most of the C21 encounter period. During the 21INHRSPEC01 observation, the scan platform experienced serious pointing problems.

The plots on the pages 3 and 4 show the geometry of the NIMS C21 observations using a north trajectory pole projection. The 'returned' observations are in Bold characters and the 'non-returned' in gray. The observations with an asterix were taken with the NIMS software halted.

The spreadsheets on pages 5 and 6 summarize the 'final' playback model for the 'returned' C21 data.

The text on page 7 gives a 'recap' of the C21 playback events which affected which observations were returned.

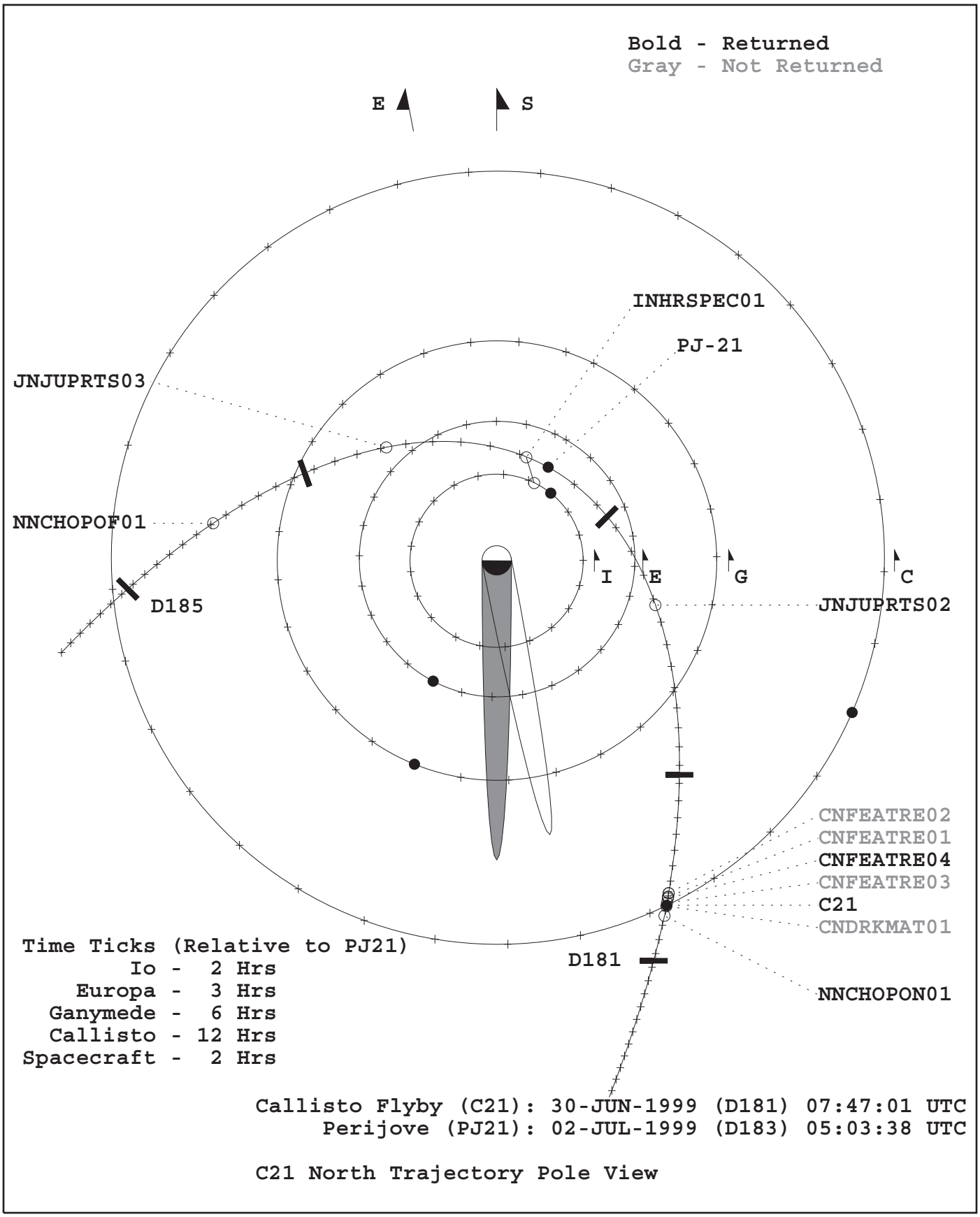
A Timeline of C21 playback events is on pages 7 through 17.

The text on page 18 describes the C21 NIMS and Spacecraft Anomalies.

The text on page 19 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 20 and 21.

The text on page 22 is a guide to understanding the NIMS MASK.

NIMS C21 OBSERVATIONS

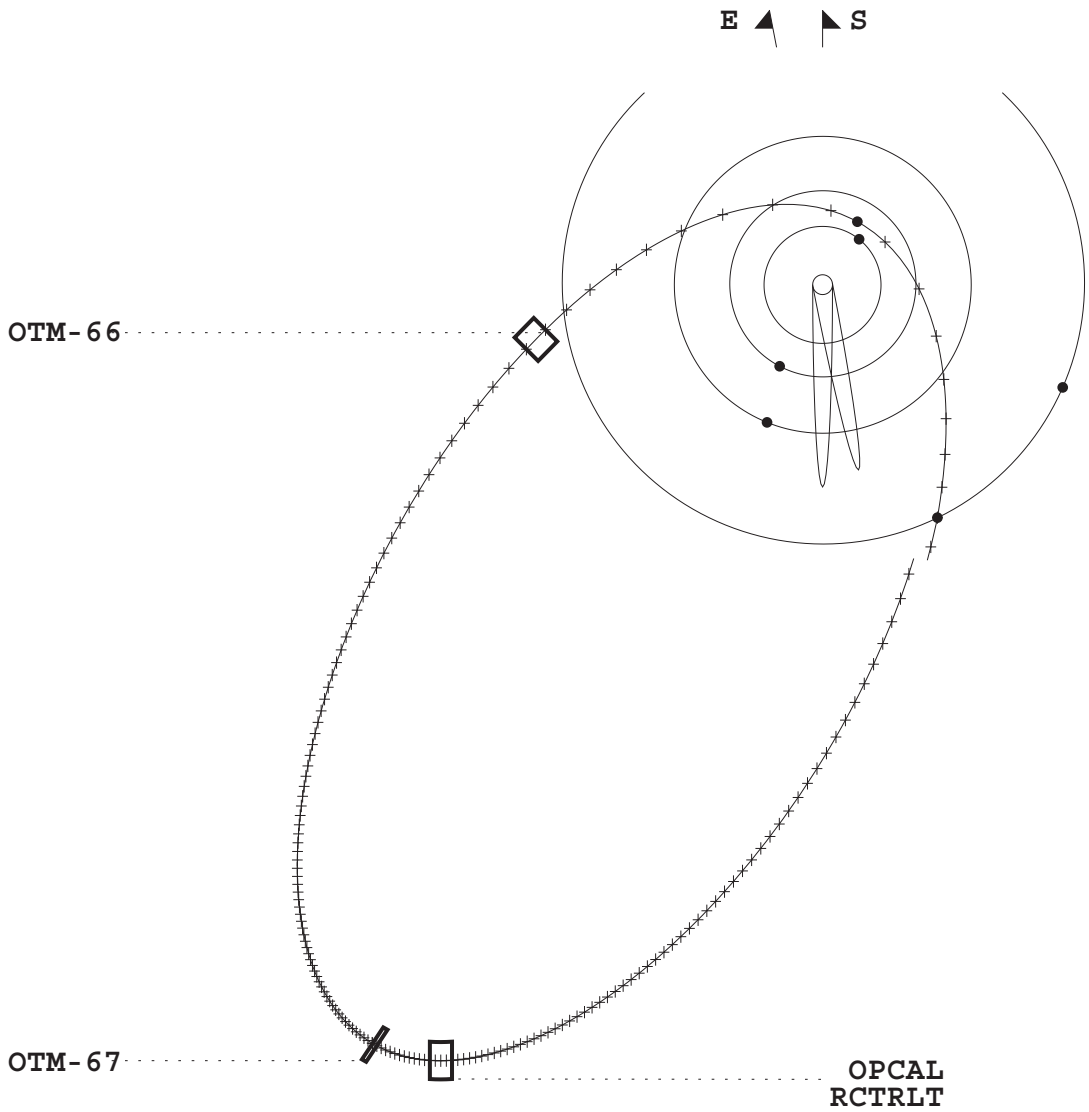


NIMS - FEL - 05/01/00

NIMS C21 CRUISE CALIBRATIONS

Callisto Flyby (C21): 30-JUN-1999 (D181) 07:47:01 UTC
Perijove (PJ21): 02-JUL-1999 (D183) 05:03:38 UTC
Apojove (AJ21): 22-JUl-1999 (D203) 16:00:00 UTC

Time Ticks (Relative to C21)
Spacecraft - 6 Hours



C21 North Trajectory Pole View, Perijove to Perijove

NIMS C21 DATA RETURN

Activity ID	Observation Title	NIMS Edit TABLE	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
21CNFEATRE04	Callisto Feature Observation	C21CLM243D	C21CLM228D_0	LM	4	0	4	LPU	DD
21JNJUPRTS02*	Jupiter Real-Time Observation	C21JLM442/MB	R/T	LM	2	0	4	R/T	DF
21INHRSPEC01	Mapping Io at High Resolution	C21ILM442	C21ILM15	LM	2	0	4	MPW	DG
21INHRSPEC02	Mapping Io at High Resolution	C21ILM442	C21ILM360	LM	2	0	4	MPW	DG
21INHRSPEC03	Mapping Io at High Resolution	C21ILM442	C21ILM360	LM	2	0	4	MPW	DG
21INHRSPEC04	Mapping Io at High Resolution	C21ILM442	C21ILM15	LM	2	0	4	MPW	DG
21JNJUPRTS03*	Jupiter Real-Time Observation	C21JLM442/MB	R/T	LM	2	0	4	R/T	DH
21NNRCTRLT01	NIMS Real-Time RCT Calibration	C21RCT252	R/T	LM	1	0	4	R/T	
21NNROPCAL01	NIMS OPCAL	C21OPCAL48	R/T	LM	4	0	4	R/T	
21INHRSPEC01	Mapping Io at High Resolution	C21ILM442	C21ILM360	LM	2	0	4	MPW	DG
21INHRSPEC02-gf	Mapping Io at High Resolution	C21ILM442	C21ILM360	LM	2	0	4	MPW	DG
21INHRSPEC03-gf	Mapping Io at High Resolution	C21ILM442	C21ILM360	LM	2	0	4	MPW	DG
21INHRSPEC04	Mapping Io at High Resolution	C21ILM442	C21ILM360	LM	2	0	4	MPW	DG

NIMS C21 DATA RETURN

Activity ID	Mode	Record Format	Record Time (sec)	PB Time (sec)	Selected Bits of Tape sBOT (MBITS)	Tota Bits of Tape BOT (Mbit)	Mode Cycle time (sec)	RT BTG Thold Mbits	Comp	Total BTG Mbits (w/4% ohead)	Data Reduct. Factor (sBOT/BTG)	Pass
21CNFEATRE04-	LM	LPU	600	220	1.36	3.70	8.667	0	1.97	0.611	2.22	1
21JNJUPRTS02*	LM	R/T					8.667	0.160	0			
21INHRSPEC01-	LM	MPW	3600	48	0.55	41.47	8.667	0	1.15	0.015	36.80	1
21INHRSPEC01-	LM	MPW	3600	833	9.60	41.47	8.667	0	1.29	5.579	1.72	1
21INHRSPEC01-	LM	MPW	3600	946	10.90	41.47	8.667	0	1.33	6.145	1.77	1
21INHRSPEC01-	LM	MPW	3600	48	0.55	41.47	8.667	0	1.15	0.015	36.80	1
21JNJUPRTS03*	LM	R/T					8.667	0				
21NNRCTRLT01-	LM	R/T					8.667	0.080				
21INHRSPEC01-	LM	MPW	3600	599	6.90	41.47	8.667	0	1.12	4.621	1.49	2
21INHRSPEC01-	LM	MPW	3600	30	0.35	41.47	8.667	0	1.29	0.201	1.72	2
21INHRSPEC01-	LM	MPW	3600	149	1.72	41.47	8.667	0	1.33	0.968	1.77	2
21INHRSPEC01-	LM	MPW	3600	807	9.30	41.47	8.667	0	1.12	6.225	1.49	2
										24.380	**Total**	
										23.465	**Allocation**	
										0.915	**Over/Under**	

RECAP OF C21 PLAYBACK EVENTS

C21 featured the highest-resolution NIMS observation of Io of the entire mission to that point. Although NIMS recorded several observations of Callisto during the encounter, the Io observation took precedence, and only a small portion of the recorded Callisto data was returned to Earth.

The Io encounter was a success for the spacecraft as a whole, as no spacecraft safing events took place. However, during the long NIMS recording of 21INHRSPEC01, there were several scan platform mis-slews that seriously impacted the data. These were attributed to the high radiation environment in combination with the use of faint stars for scan platform orientation and pointing. The software mis-identified radiation hits as target stars, and commanded a series of scan platform slews to "recover." Although the appearance of the data was initially discouraging, subsequent processing has yielded satisfactory results for some portion of the observation.

The high scientific value of 21INHRSPEC01 forced new strategies in the observation design and playback. Instrument software reloads were inserted into the mosaic before each of the 4 scans across the target. Uncertainties regarding whether or not the observation had been successfully recorded, and what the actual compression might be, led to the employment of a variety of new tactics during playback, as noted below. Misunderstandings between members of the Science Planning and Operations Team led to some unhappiness on the part of some team members, and lent added interest to the cliff-hanger finish of the playback period. In the end all teams received all of the data that had been commanded for playback, with the exception of the loss of one partial frame of SSI data at the very end.

Due to tight schedules projected for 1999, the C21 orbit sequence was first integrated in late 1997. That product was taken "off the shelf" for revisions in March 1999.

The following timeline details the most signifigant events of the C21 playback period. Most of the text below is excerpted from messages issued at the time.

C21 Playback Events Timeline (09-22-97 to 08-10-99)

09-22-97: (K. Schimmels) C21 Playback tables need to be developed in the next few weeks along with the encounter and cruise products.

10-17-97: (J. Gross) The latest merge of the C21 PBT is finally done. We had some modelling problems that cost us more than a day. NIMS allocation is 25.513 Mbits.

By now I have contacted the teams with any constraint violations I found. Kathy will also be constraint-checking the PBT in the very near future, and may be contacting you with additional items. At this point, we would like to make hand-edits to any problems we find, so that we can archive this product without doing another delivery.

03-16-99: (J. Gross) Here's what our pbt delivery schedule will look like:
Fri Mar 19 - 1st SST product released;
includes new telemetry
Mon Mar 22 - PB Coord. sends out updated allocations
Wed Mar 31 - 1st PBT delivery

03-24-99: (J. Gross) NIMS allocation - 26.6% - 27.357

04-08-99: (J. Gross) NIMS allocation is 26.510
(AACS already taken out)

06-10-99: (J. Gross) Unforunately, it appears that our capability has gone down by about 11% (~93 MB down from ~105 MB). I calculated our new capability by taking this new telemetry file and adding to it all the RTSFMT,RTEFMT,OPTRTM,OPTREC, PPB, and RPB PA's from the Final OP product (version C21XQA). This may not exactly match the capability in the official S&CG product, but it's certainly close enough for our purposes.
With this decrease in capability, we are now barely meeting the OPG estimate (a whopping 0.9% increase). Therefore I am unable to satisfy the OPG requirement that any additional capability at S&CG be given off the top to SSI (3.0 MB), NIMS (2.0), and PPR (0.6 MB).
The only margin being held is the usual 4% of the total capability + 2.0 MB of SPOT margin.
NIMS allocation is 23.279.

06-17-99: (Special request for C21 Io playback)
The HRSPEC observation in C21 is possibly the most significant observation of Io for NIMS in the entire suite of Galileo missions. NIMS presently plans to invest > 75% of our downlink bits to bring it back.
Since NIMS is deep in the radiation environment it is possible that our instrument will experience radiation hits causing NIMS to record invalid data on the tape. NIMS did not get enough information from the engineering channels to see this as it happens. As an example, if scan 1 of the 4 scans was selected for playback and it turns out to be corrupted, NIMS might receive ~6 Mb of useless data as a result. (We may be able to rule out this worst case after discussions with Tal. We might only receive headers in our packets, costing much less).

There is a simple strategy that would let NIMS preview the data at a low cost and avoid playing back large quantities of garbage. We propose a 3-pass playback plan, initiating playback with the Io HRSPEC01 (or at some convenient location nearby). This first mini-pass would be very short. NIMS would pick up a few seconds of data, with only a few wavelengths, from every 2-3 Rims of the observation. The amount of downlink bits would be well under .5 Mbits. Thereafter playback would continue as in our standard procedure, with 2 passes, starting at the beginning of recording.
The inconvenience to other teams should be minimal, involving replacing pass numbers in singles with numbers 1 digit higher. This might be most efficiently done as a global search and replace on a merged table during your process.
I realize that this is very late in the process. We are all coping with complicated workloads. Still this simple change would insure against possible serious degradation of the science value of the NIMS downlink bits in C21. I hope you will give serious consideration to this change.

06-21-99: (J. Gross) I just talked with Erickson about your 3-pass request, and here's what we've agreed to do:

1) NIMS will be allowed the opportunity for a third pass through INHRSPEC01 for the purpose of gap-filling only.
2) C21 playback will be proceed in the usual first-in, first-out manner.
3) The cost of the slewing from the end of Pass 2 playback to INHRSPEC will be split between NIMS and SPOT. A rough estimate of that cost is 2 MB. Therefore, NIMS should reserve 1.0 MB of their allocation for that cost. The first 1.0 MB of the SPOT margin will also be reserved for that cost.

06-21-99: Thanks for your consideration of our request for an early preview pass over 21INHRSPEC01. Your counterproposal of a final third pass for gap filling could permit NIMS to assemble a nearly gap-free observations, which is our main objective. Thus we will agree to that, but in the mean time we will work to make the third pass not necessary if at all possible.
Our strategy now will be to play back all of the observation in pass 1, and fill gaps in pass 2.

06-22-99: The C21 encounter begins on 30 June. The playback table that will be uplinked to the spacecraft was delivered Friday.
The Io observation 21INHRSPEC01 is possibly the most significant NIMS Io observation of the entire mission to date. Previously our best spatial resolution was ~120 km / pixel, whereas in this case the resolution is about 60 km / pixel. NIMS should be able to resolve small-scale features features for compositional information to an extent that was previously impossible.

The concensus of team members is that this Io observation takes priority over all of the Callisto observations. Therefore NIMS is making a special effort to obtain the fullest possible spatial and spectral coverage.
21INHRSPEC01 poses a number of problems. Since NIMS is much deeper within the Jovian radiation environment than in prior encounters (aside from J0), there is a significant probability of instrument software crashes due to radiation hits. There is a significant probability that NIMS will see poor data compression ratios due to noise.
Software reloads are included in the sequence prior to each of the 4 15-minute scans across the target. If there is a stoppage due to radiation hits following a reload, data for the balance of that scan will not be recorded correctly.
There are two unpleasant worst case scenarios. Firstly NIMS could return many megabits of garbage, at a low compression ratio. We currently believe this is unlikely based on our experience in E12 when NIMS returned data from 12ENDLINEA01 after an instrument stoppage. In that case a relatively small amount of bad data was returned. The second unpleasant possibility is that lots of fill packets might be generated, during high data downlink rate periods, if very little NIMS data results following a stoppage, AND if AACS data are commanded to enter the downlink stream.
We made a last-minute proposal to the project to permit NIMS a quick preview pass over the data, prior to beginning standard playback. This was not possible due to the necessity of generating and approving a number of real-time commands, requiring the participation of the SST and MCT teams. The project will permit NIMS, at some cost, to make a late, third pass over the data. However, logistically, this may not be feasible since the third pass would most probably begin only a matter of hours after our pass 2 data hit the ground, giving NIMS no time to create new commands for gap fill.
The total downlink allocation for NIMS in this orbit is 23.279 Mbits. With compression estimated at 1.2, 21INHRSPEC01 will require about 22.7 Mbits. At present we are planning to return a portion of 21CNFEATRE04, along with HRSPEC. If compression of the Io data is poor, it will affect our ability to return all of our spatial and/or spectral coverage of Io.
In light of all of the above uncertainties we are adopting a strategy that minimizes all of the risks and gives NIMS time to adapt to conditions. In the first tape pass we are commanding for return all of the central two scans of 21INHRSPEC01 at 360 wavelengths. This is our highest priority data and we will be able to fill gaps in pass 2. We are previewing the polar scans in pass 1, returning a single instrument cycle of data every 3 Rims. If there are software stoppages we will learn the approximate times when they occurred and will not attempt to play the data back in the second pass.

This strategy will let NIMS adapt to either software stoppage problems or compression problems by retaining a significant number of bits for second pass playback. The downside is that we will probably not be able to fill any gaps that occur in the polar scans which will come down in pass 2. (Gaps in our data frequently occur due to DSN hardware and / or weather problems).
If SSI cooperates by playing back lots of Io plumes data after our HRSPEC in pass 2, then it is barely possible that we could make use of the third tape pass for these gap fills.

06-23-99: (J. Gross) SPOT has committed to providing NIMS and MWG the opportunity for a third pass, should they need it. I wasn't trying to say that NIMS and MWG will be FORCED to do a third pass.
I'm a bit worried about the second pass thru HRSPEC right now. If you haven't looked at the schedule yet, it's the last thing to hit the ground. There's actually some Pass 2 data in the plan that has "fallen off the end". Now, we know that we invariably run ahead of schedule, but I'm still not sure that it will be enough time for you to have an effective third pass. I'm going to ask Kari to talk to her team about shifting some bits from Pass 1 Io Plumes to Pass 2. I think they'd be willing to do it, it's just something she has to run past them first, so we weren't able to implement in this table. This will help matters, but I'm not sure how much. Keep praying that everybody overcompresses! :)
Also, if they want to do a third pass, NIMS has to be prepared to shoulder about half of the cost of slewing through 2.5 tracks, as I indicated in an earlier email.
I don't see that 1.0 MB of internal margin reflected in this table; NIMS has used up all but ~0.1 MB.

06-28-99: (M. Segura) I have just been informed that a potential weakness has been discovered in the BURP patch which protects against safing after bus resets. It appears that should a reset occur during a DTURN, one of the possible results would be the loss of the DMS.
This has caused a bit of worry and nail biting here so the project is marching along the path of disabling the patch while we are executing DTURNS in C21. The C21 impact is the lack of protection from safing (loss of data - NIMS is powered off and heaters on in safing event). Unfortunately, the observation to follow the most critical DTURN (at 7.6 Rj or so) is the NIMS Io global map.
We've done every thing possible to protect that observation and it's really unfortunate to be confronted with this development at this late date.

06-29-99: C21 encounter begins (day 180 07:00 UTC).

06-30-99: Callisto close approach occurs at 07:47:01 UTC.

06-30-99: (J. Erickson) The gyros have performed well during this encounter. The inertial mode observations near Callisto close approach were all performed per plan, and the gyros have now been turned off for the upcoming perijove pass high radiation environment. Perijove will be on 7/1 at 10:49 p.m. PDT.

07-02-99: Perijove occurs at 05:03:38 UTC.

07-02-99: (J. Erickson) The Galileo spacecraft is operating normally, after completing the passage through the high radiation environment of the Jupiter close approach region. The spacecraft experienced three faults, and on board fault protect and the new bus reset protection software handled all of them correctly. The spacecraft is continuing to perform the planned observations and has completed approximately 95% of the total recording planned for the encounter.
At about 6:10 p.m. PDT on 7/1, the radiation appears to have caused the star scanner to mis-identify stars sufficient to erroneously cause a discrete jump in the spacecraft attitude. The Atitude Control Subsystem then reacted to the sudden jump by assuming the spin bearing assembly was misbehaving and swapped autonomously to the backup SBA. No data was lost as a result of this swap, and the spacecraft continued to record the planned observations.
At about 11:30 p.m. PDT on 7/1, the radiation appears to have caused a second fault, this time in the Scan Actuator Subsystem in the Attitude Control Subsystem. This fault occurred just prior to a Near Infrared Mapping Spectrometer observation, and further analysis is required to determine if this observation was interfered with.
The bus reset protection software again proved it's value, as a bus reset occurred at about 3:51 a.m. PDT on 7/2. The software handled it as planned, and the sequence continued unaffected.

07-02-99: (R. Mehlman) Both Jupiter realtime observations are in, and tubes have been generated. No obvious problems, except booms in the first.
We know from engineering values that NIMS went to gain state 2 after the Callisto observations, and stayed that way before and after the Io observation. We have a good SCLK value after the Io observation, which preoves that NIMS had not halted during the 4th swath of HRSPEC. However there are no clues to the status of the first three swaths.

07-06-99: (M. Segura) As most of you have heard, the scan platform safed twice in the C21 encounter - the second incident ~ 10 minutes before our Io observation. During the time period of 183/06:11:11 to 183/07:37:51 (scet) there were a total of four mis-slews detected. The period from 183/07:37:51 to 183/09:04:31 showed another 3 mis-slews - the "trapped" mis-slew was in Jupiter real-time 03.

I estimate that the majority (5 at most) of the mis-slews will be within the Io observation. There was one SSI mis-slew "trapped". Unfortunately, there won't be much further detail to the affects until the "preview - jailbar data" is returned 2 weeks from now.

06-07-99: (NIMS C21 Playback Strategy) The Galileo spacecraft penetrated significantly deeper into the Jovian radiation environment in C21 than was the case for any prior prime mission or extended mission orbit following JOI. We presently have no information concerning whether or not the instrument software crashed during any of the first 3 scans of our most crucial observation 21INHRSPEC01; however we are confident that no crash occurred during the final scan. We presently have no information regarding the noise level and the likely compression ratio for this observation.

The occurrence of an AACS system fault causing temporary spacecraft safing about 10 minutes prior to 21INHRSPEC01 is another source of concern. We expect that the scan platform had time to reposition itself for our observation. Marcia Segura has learned that AACS recorded 5 mis-slews during the period of the observation, of magnitude unknown. There are some possible scenarios with a significant downside. Although it has not happened previously, it is possible that a command to play back NIMS data that was never recorded (due to instrument stoppage) could return large quantities of meaningless data. In a worst case, commands to play back 50% of 21INHRSPEC01 could consume more downlink bits than NIMS has for our total C21 allocation, potentially affecting other teams' ability to return their data. We regard this as a very low probability event. A somewhat more likely scenario would involve compression performance that is up to 20% lower than predicted. In that case we would be unable to return 21INHRSPEC01 completely, but other teams would not be affected.

An additional driver for playback strategy is found in the "iffy" performance of the DSN. It is considerably more likely (in comparison with the scenarios above) that there will be gaps in our pass 1 data. This provides a strong incentive to return as much of the data as possible, as soon as possible, so that we may fill the resulting gaps in pass 2. In light of the above uncertainties, however, it would be unadvisable to attempt to return 100% of the data in pass 1. Although a number of alternative strategies were discussed during the past week, in the end we are retaining our original strategy. This is to command for playback the most important 50% of 21INHRSPEC01 in pass 1, while also "previewing" the polar scans by returning small snippets of data at intervals. Should the worst of the worst case scenarios materialize, there is a single option open to NIMS. That option is to terminate playback and re-initiate with the following segment in the existing playback table. This will impact other teams by preventing

them from playing back (in pass 1) the data that accompanies 21INHRSPEC01 in segment 4. Playback will only be terminated if that course will result in lesser impact to the other teams than would be the case if playback were allowed to continue.
Again, the worst case scenario involves unprecedented events. To some extent we have had the same risk throughout the mission; the difference this time lies in the large quantity of downlink bits concentrated in a single observation. Thus we are prepared to deal with the extreme bad-luck case, but we anticipate that playback will follow its normal course, and that no intervention will be required. We will as usual monitor the course of playback closely, and we are requesting a special effort on the part of the query-servers crew to ensure uninterrupted access to the data as it arrives.

07-14-99: We have no new information and no additional downlink bits allocation this week so there are no changes to the playback table.
Lucas Kamp has generated plots of the AACS pointing data for the period of 21INHRSPEC01. We only have data spaced at 5 Rim intervals so conclusions are only preliminary; however it appears that the second and third scans of the observation were affected by a significant pointing error and correction. These are the scans that are commanded for playback in pass 1. If we see substantial amounts of dark sky this should improve our data compression and reduce our consumption of downlink bits significantly.
Playback is running ahead of schedule and it now appears that the first data from 21INHRSPEC01 will hit the ground early tomorrow morning (15 July).

07-21-99: In this update we made a number of modifications to adapt to conditions. We now have all of our pass 1 21INHRSPEC01 data on the ground, and have implemented commands for the pass 2 portion.
21INHRSPEC01 consists of 4 scans across the body. It appears that severe pointing errors affected all 4 scans. During C21, it is believed that radiation noise affected the star scanner, which was employing relatively faint stars to maintain attitude. The actual causes and effects are not fully known, but what we know now can be encapsulated as follows:
Scan 1: From the snippets received before the first big DSN data gap, it appears NIMS was nearly on target, but possibly pointing too far north. We will continue as planned to bring down the whole scan in pass 2.
Scan 2: This one was more severely affected. Instead of landing on-body, it is even farther mis-pointed to the north of Io. Approximately the last third of it is completely off the body. The earliest portion, affected by a data gap, appears to be in the right position. We are filling this gap at the start, and including 3 more instrument cycles from before the former start time, in hopes that more data near the limb can help constrain the pointing.

Scan 3: Instead of the southern equatorial portion of the body, this saw a portion of the northeastern limb. Instead of scanning across the diameter of the target, it appears that we were "sitting and staring" at this location for a considerable period. The resulting spectra are rather nice and a hot spot is in evidence. There is a 2.5 Rim gap in the data that we are filling in pass 2.
Scan 4: This one apparently executed as planned but there are large departures of the position of the southern limb relative to the predicted position. We returned only snippets in pass 1 and will bring down the entire scan in pass 2. About half a Rim of playback time was added to the end of the scan to ensure we will get all of the long-itudes, and will have sufficient data for fitting the limb. Compression for 21INHRSPEC01 is running a little better than predicted (1.3 versus 1.2), and the compression savings permitted NIMS to enter our gap fills and extensions as noted above, with a little left over. This will go to complete playback of the top scan of 21CNFEATRE04 in pass 3. If slewing inefficiency turns out to be less than expected, there may be a release of margin bits next week, which might be employed for more Callisto, or for cost of slewing to do more gap fills on 21INHRSPEC01 in pass 3.

07-21-99: (J. Gross) After much analysis, the bad news is that there will be no margin release. The good news is, no one has to cut! From now thru Terminate Playback, there are 36.3 MB of capability. During that time, we have 36.04 MB of (MB data selected + teams' unused MB + worst-case inefficient slewing). So, despite what PBT Editor thinks, it looks like we should be able to finish (which is a good thing!)

07-28-99: No modifications to the playback table were made in today's delivery. No margin was released due to results of modeling with the Mirage/Playback Table Editor program, which continue to show large amounts of "slewing inefficiency" (downlink fill packets generated while the tape recorder slews over recorded data not selected for playback).
NIMS is not planning to make use of the 3 pass option for 21INHRSPEC gap-filling due to the high cost to NIMS of doing so (1 Mbit subtracted from our allocation, for slewing inefficiency). We do have .2 Mbits of Callisto data selected at the start of pass 3.
We have approximately 10 Mbits of data selected for pass 2 playback of 21INHRSPEC01, including the upper and lower scans, and gap fill for the others. Compression for these is estimated to be the same as we saw for the middle two scans (1.3).

08-03-99: (J. Gross) I've checked the bested data and looked at what we have left in the plan, and I'm unable to release any margin bits. Here's the picture:

```
  18.177 -> capability 'til Terminate (from start of 4th
            scan of INHRSPEC01)
 -14.558 -> data still to be played back from current PBT
  -1.660 -> unused team BTG
  -2.030 -> worst-case estimate of remaining inefficiency
```

08-04-99: Today's is the final update for the C21 playback table. We made only one change to the existing table. We deleted our commands to play back additional Callisto data from 21CNFEATRE04. We needed to do this because our 21INHRSPEC01 data from the top and bottom scans across the body is coming down with lower compression than was the case for the two central scans returned earlier.

As this is written we are nearing the end of the 4th scan. So far compression has been quite variable, with the first half of the 4th scan averaging 1.18, versus predicted compression of 1.3. This will result in an increase in the downlink bits requirement for this scan of about 0.6 Mbits. Fortunately, according to the Playback Coordinator, we have returned significantly less data to date than predicted. Our bit savings, together with the .22 Mbits we are cutting out of the plan, should cover the expected overage on the balance of the 4th scan.

The mis-slews of the scan platform during 21INHRSPEC01 have had the effect of making accurate compressions prediction nearly impossible. The erratic scan platform motion, caused by radiation hits producing star misidentifications by the star scanner, moves our boresight on and off the target, in unpredictable ways. As a result we cannot be sure about the compression for the remainder of 21INHRSPEC01, even though we have more than 80% of the observation on the ground, and we have a few snippets of data (obtained earlier) from the 4th scan.

On the positive side, some portions of 21INHRSPEC01 are quite interesting. The noise level is lower than one would expect based on Galileo's close proximity to Jupiter (~7.2 Rj).

08-04-99: (J. Gross) As of Wednesday afternoon, we are in the middle of playing back the 4th scan of NIMS Io High-Res Spectra. Playback is on schedule and is 85% complete. To date we have received 77.61 MB and have 1.30 MB of gaps. Playback terminates on Tuesday, August 10 at approximately 3:27 AM PDT.

Major Changes to This Week's PBT

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1. SSI used up internal margin by adding cutout windows in Io Color and Io Albedo.
2. MWG used up internal margin by adding gap-fill and selecting 7.5 new RIMs of Perijove Crossing data.
3. NIMS deleted Pass 3 Callisto feature data to account for undercompression of Io High-Res Spectra.
4. One additional segment (Segment 13) was added to accomodate increased number of Pass 3 SINGLEs.

Outstanding Issues

The only remaining issue is that the schedule appears not to finish. In fact, none of Segment 13 is on the schedule! However - we have 13.711 MB of capability left, we have 11.235 MB of data selected, and a worst-case inefficiency of 1.52 MB. 13.711-11.235-1.52 = 0.956, meaning we should be able to get almost 1.0 MB or more into Segment 13, so we're really OK.

08-10-99: Playback terminates at 10:27 UTC.

NIMS Anomaly Report - C21 Sequence

There were no NIMS processor halts detected during the C21 Encounter. Detectors 3 and 8 are still not functioning and are expected to be lost for the rest of the mission.

The scan platform experienced severe pointing problems during NIMS' highest resolution observation (to date) of Io. The erratic pointing during this observation was attributed to operating in cruise mode, high radiation and a poor choice of stars for the star scanner's star set.

Processor Halts

There were no NIMS processor halts in C21.

The high priority observation 21INHRSPEC01 was protected from halts by placing software reloads between each of the four swaths across the disk, as well as at the beginning of the observation. No data in this 1 hour twenty minute record were lost due to halts, even though the observation took place about 1 hour after perijove.

Scan Platform Anomaly

AACS operated in Cruise mode during the C21 encounter, except for the Callisto flyby period, in response to errors in the gyro rates. Scan platform pointing in cruise mode is maintined using the star scanner. During the NIMS observation 21INHRSPEC01, scan platform pointing was very erratic. The pointing became so bad that the last three of the four swaths across Io's disk could not be reconstructed.

The erratic pointing was attributed to mis-identification of stars by the star scanner due to the high radiation environment. When a star is mis-identified by the star scanner, the scan platform is perceived to be pointed in the wrong place and is commanded to move a percentage of the error towards the new 'correct' location. A poor choice of dim stars for the star scanner's star set made it easy for radiation spikes to be confused with the true stars.

Because of poor pointing, the 21INHRSPEC01 mosaic was only partially recoverable. The pointing for the first swath across the northern hemisphere of Io had a large component of wobble at multiple periods. This swath was recoverable by fitting periodicities in the location of Io's limb in the NIMS footprint and identification of Io hotspots. The beginning of the second swath started at a spot on Io different from that planned. The scan stayed on Io for about half of the scan, but then went out of control and off of Io's disk. The third swath started at a spot near Io's limb inconsistent with the planned mosaic. It did not scan across Io but seemed to hover about one spot on Io's limb. The fourth swath did manage to scan across the disk, but the location of Io's limb in the NIMS footprint showed that the pointing was very wild, jumping in unknown directions. Thus it was not possible to reconstruct the last three swaths across Io.

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.