NIMS GUIDE TO THE I33 ORBIT

Original: December 2001

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VERSION DATE: 020415

I33 Encounter starts 01/15/02, I33 Playback starts 01/28/02

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 I32 Orbit for the NIMS Team. The aim of this guide is to provide detailed information on the various NIMS I32 observations and calibrations. Also included in this document is background information on the I32 orbit. This guide was produced before the start of the I32 orbit. After analysis of the NIMS I32 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 I32 orbit. Chapter 2 gives an overview of the I32 orbit and summarizes the NIMS science objectives for the I32 orbit using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry for the I32 orbit. Chapter 4 summarizes the NIMS I32 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 I32 orbit.

For more information on the I32 orbit, please refer to the Galileo Orbit Planning guide and the Galileo Orbit Activity Plan for the I32 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.

Table of Contents

Chapter 1 - Introduction

Contents

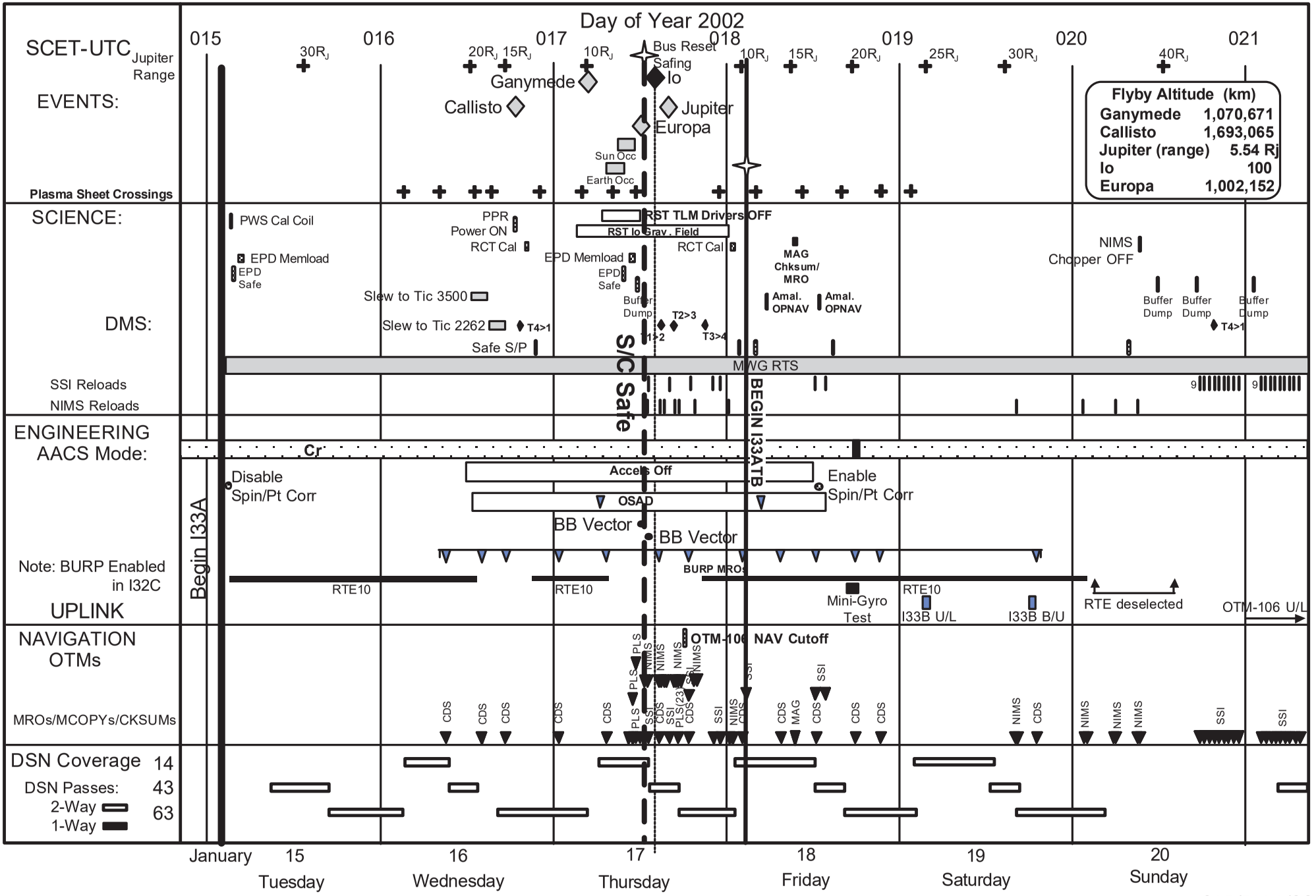
Introduction

This I33 orbit is the thirty-third of thirty-three orbits in Galileo's Tour of the Jovian system and the seventh orbit in the Galileo Millennium Mission (GMM). I33 is an Io Flyby.

There are 12 autonomous reloads of the NIMS RAM code from CDS planned during the I33A encounter period, one just before each science observation. These reloads are in response to the on-going flight-anomalies where the NIMS RAM code takes some bit hits and halts the instrument during when the spacecraft is close to Jupiter. NIMS personnel will monitior the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

The I33 orbit is divided into 2 sequence loads: one Encounter Load (I33A) and one Orbital Cruise Loads (I32B and I33C). The I33A load begins on D015 (01/15/02) and ends on D021 (01/21/02). This load contains a flyby of Io. The Cruise Load runs from D021 to D307. Playback of the recorded data takes place during the Cruise phase, I33B. A high-level overview timeline of the I33 orbit can be found on the following three pages.

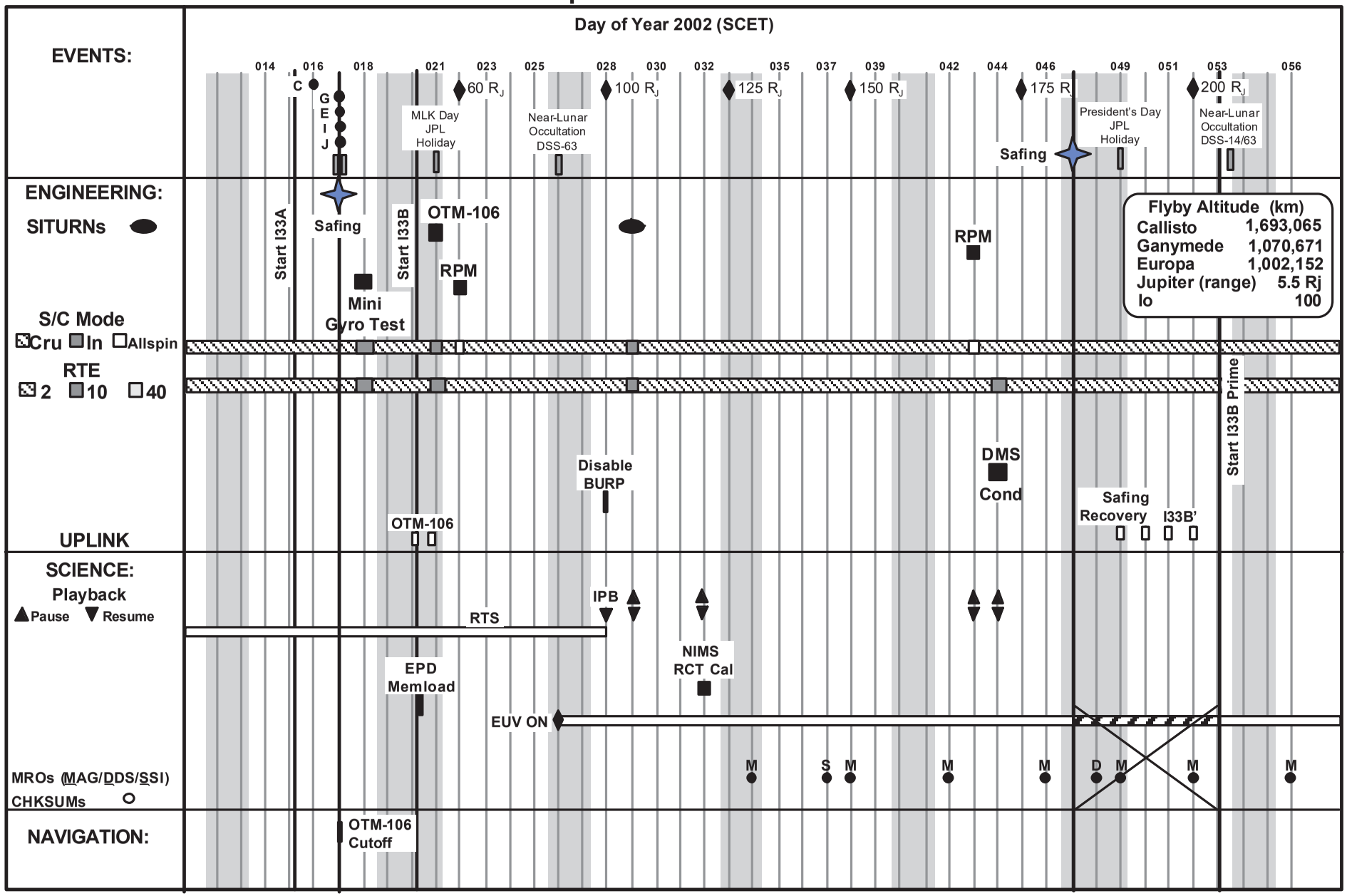
I33A Encounter Period Overview



SAB/BMcL/SST
1/24/02

Note: Sequence activities were cancelled at 02-017/13:41:09.933 by safing apparently caused by a despun bus reset that was not caught by the patch.
Another despun bus reset occurred at 02-018/02:44:56.400 that was correctly handled by the patch.

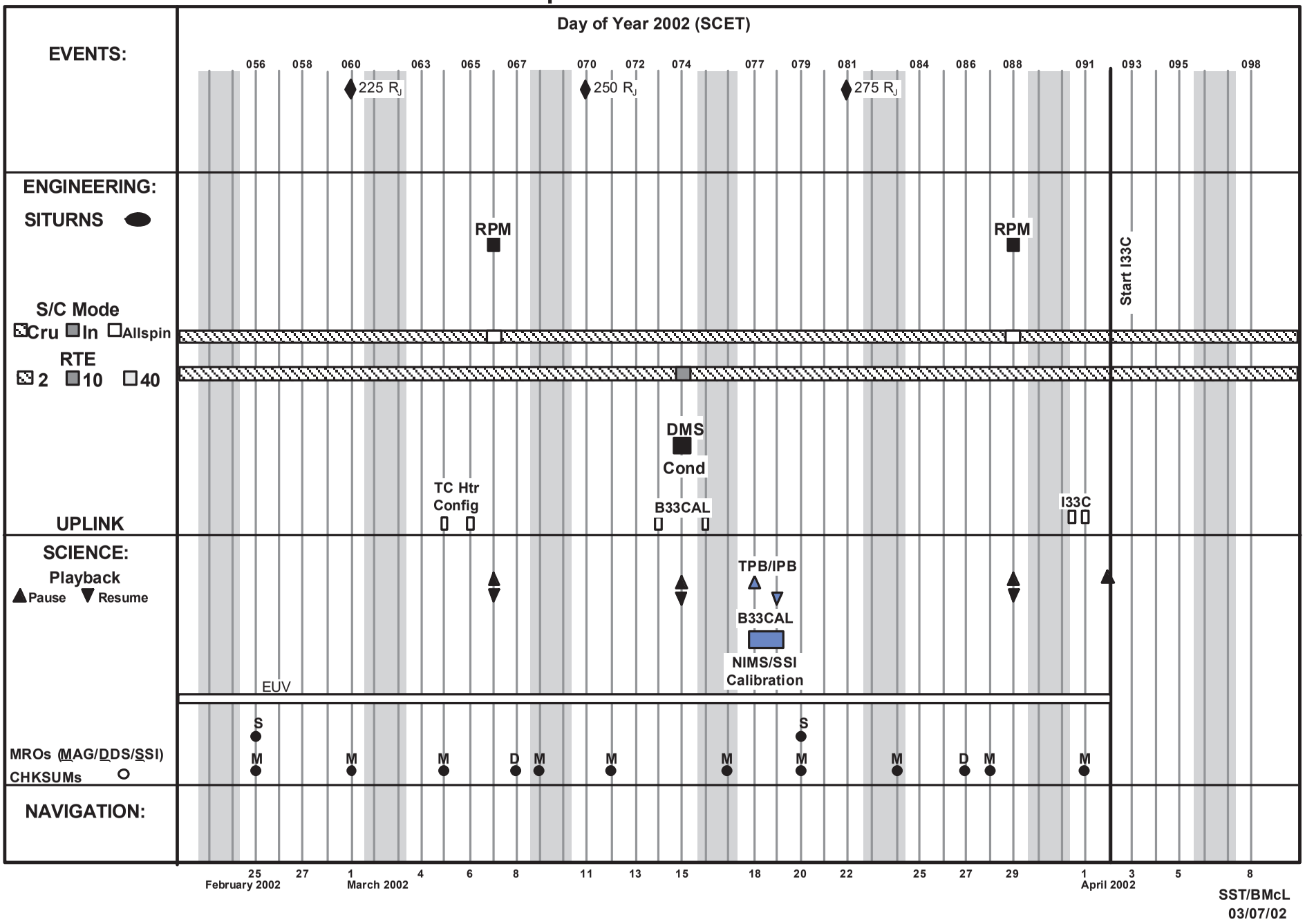
I33B Sequence Overview - Part 1



Note: Spacecraft activities were halted at 02-017/13:41:10 SCET by spacecraft safing (Despun Bus Parity Error), and again at approximately 02-047/20:51 SCET by a spacecraft safing incident (A-String down).

SST/BMcL
03/07/02

I33B Sequence Overview - Part 2



The following table lists the major events during I33, including NIMS Real Time observations, in UTC.

01/15/02	02-015/02:00:00	I33 Encounter Start
01/17/02	02-017/13:47:49	NIMS RAM Reload 01
01/17/02	02-017/14:09:27	I33 Io Closest Approach
01/17/02	02-017/14:15:33	NIMS RAM Reload 02
01/17/02	02-017/14:34:26	NIMS RAM Reload 03
01/17/02	02-017/15:15:53	NIMS RAM Reload 04
01/17/02	02-017/15:38:08	NIMS RAM Reload 05
01/17/02	02-017/16:23:35	PJ-33 Jupiter Closest Approach
01/17/02	02-017/19:06:12	NIMS RAM Reload 06
01/17/02	02-018/00:06:30	NIMS RAM Reload 07
01/17/02	02-019/23:37:06	NIMS RAM Reload 08
01/17/02	02-020/02:56:17	NIMS RAM Reload 09
01/17/02	02-020/06:16:29	NIMS RAM Reload 10
01/17/02	02-020/08:27:12	NIMS RAM Reload 11
01/28/02	02-028/00:29:52	Start I33 Playback
02/02/02	02-033/00:13:45	NIMS RAM Reload 14
02/02/02	02-033/00:32:21	NIMS R/T RCT CAL
03/31/02	02-090/23:59:59	End I33 Playback

Chapter 2 - Orbit Overview

Contents

Introduction to Chapter 2

This chapter gives an overview of the NIMS observations in the I33 Orbit.

The text on page 3 summarizes the NIMS science objectives for I33. The NIMS calibrations are discussed on page 3. Early data return and I33 playback are also discussed on page 3.

The table on page 4 is a time-ordered listing of the NIMS Oapels for I33.

The plot on page 5 shows the geometry of the NIMS I33 observations using a north trajectory pole view projection. The plot on page 6 shows the geometry of the NIMS I33 observations during the Io Flyby using a north trajectory pole view projection. The plot on page 7 shows the geometry of the NIMS I33 calibrations.

The spreadsheet on page 8 summarizes the various inputs for the NIMS I33 Observations. The spreadsheet on pages 9 and 10 summarizes the resource usage for the NIMS I33 observations.

The table on page 11 lists various NIMS I33 observing parameters: target latitude/longitude, range, cone angle, incidence angle light), emission angle view) and phase angle.

The timeline on pages 12 through 18 shows the placement of the I33 observations for all intruments during the I33 Encounter Period.

The tapemap on page 19 shows the placement of the I33 observations on the spacecraft's tape recorder.

The timeline on pages 20 through 30 shows the preliminary I33 playback schedule.

The NIMS I33 mosaic designs are summarized on pages 31 and 32 in time-order.

NIMS I33 SCIENCE OVERVIEW

Jupiter Science

There are three Jupiter observations in I33, all recorded. These observations are Jupiter global maps (JNGLOBAL). The mosaics are centered at 138, 258 and 18 degrees W. longitude at 120 degree intervals to give complete global coverage.

Io Science

The I33 Io sequence design is similar to that used in I32 in response to the loss of spectral capability due to the stuck grating. The NIMS observations are mostly mapping instead of sit-and-stare spectrum building observations. NIMS and SSI did collaborate on some targets, but no ride-along behind SSI will be returned.

33INMARDUK01 - nightside swath across Marduk hot spot.
33INKANEHE01 - high res dayside obs of part of Kanehekili hot spot.
33INMOSAIC01 - dayside two-swath mosaic of the Kanehekili region.
33INMOSAIC02 - dayside two-swath mosaic of the Hi'iaka hot spot region.
33INREGION01 - dayside five-swath regional map, pole to pole.
33INGLOBAL01 - dayside four-swath global map, pole to pole.
33INGLOBAL02 - dayside three-swath global map, pole to pole.

Europa Science

There are no Europa observations in I33.

Ganymede Science

There are no Ganymede observations in I33.

Callisto Science

There are no Callisto observations in I33.

Calibration

There is one NIMS calibration observation planned for I33: an RCT cal.

Early Data Return

There is one realtime observations in I33, the RCT calibration.

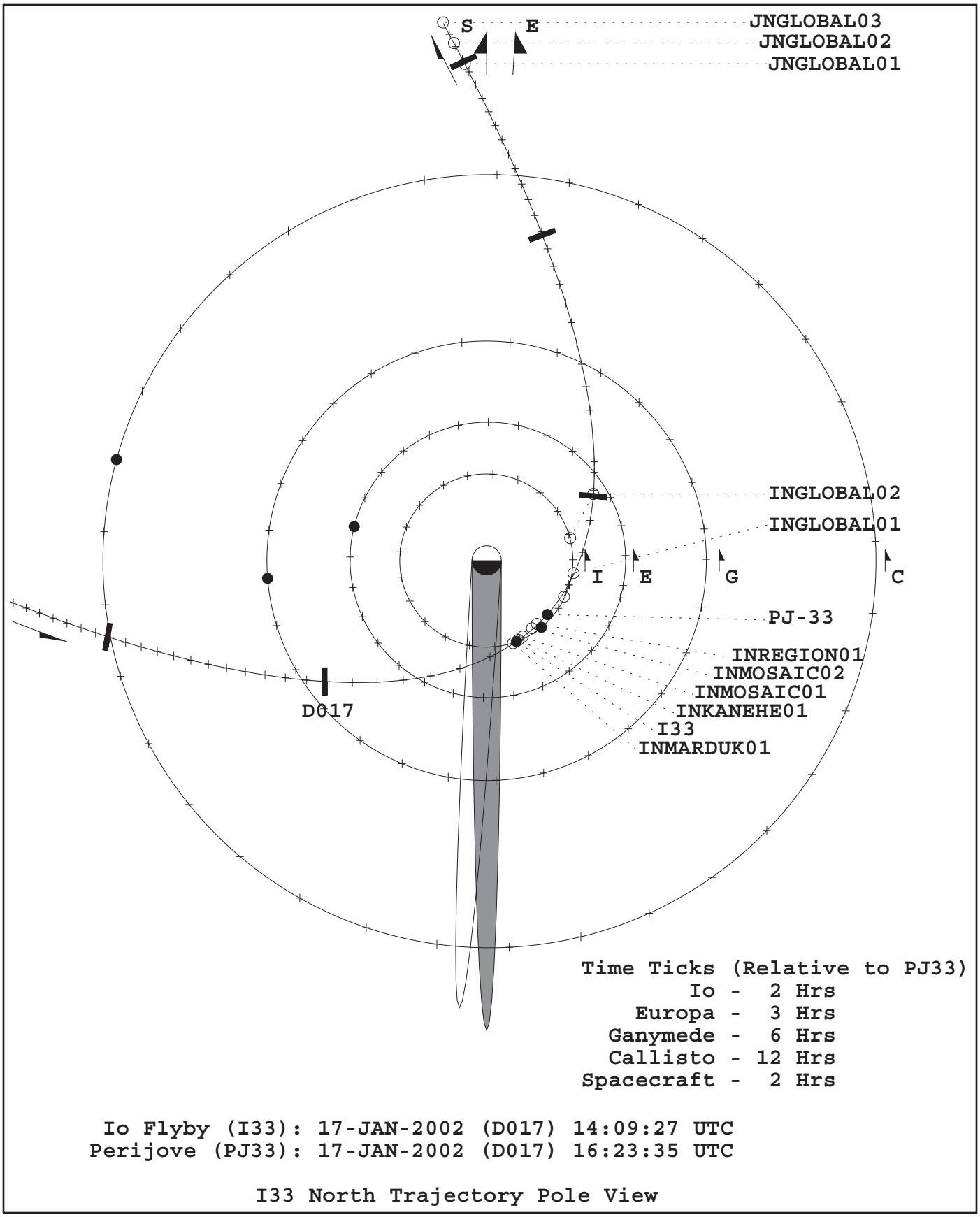
I33 Playback

I33 playback is split into two passes through the tape.

I33 Time-Ordered Listing

OAPEL	Start (UTC)	End (UTC)	Duration
33INMARDUK01	02-017/13:54:23	02-017/14:01:27	000/00:07:04
33INKANEHE01	02-017/14:18:39	02-017/14:24:43	000/00:06:04
33INMOSAIC01	02-017/14:37:11	02-017/14:53:22	000/00:16:10
33INMOSAIC02	02-017/15:18:39	02-017/15:36:51	000/00:18:12
33INREGION01	02-017/15:38:47	02-017/16:30:48	000/00:52:00
33INGLOBAL01	02-017/19:07:49	02-017/20:07:29	000/00:59:39
33INGLOBAL02	02-018/00:09:08	02-018/00:28:21	000/00:19:12
33JNGLOBAL01	02-019/23:43:24	02-020/00:10:47	000/00:27:22
33JNGLOBAL02	02-020/03:03:36	02-020/03:27:08	000/00:23:32
33JNGLOBAL03	02-020/06:24:54	02-020/06:46:08	000/00:21:11
33NNRCTRLT01	02-032/12:00:00	02-033/01:21:34	000/13:21:34

NIMS I33 OBSERVATIONS

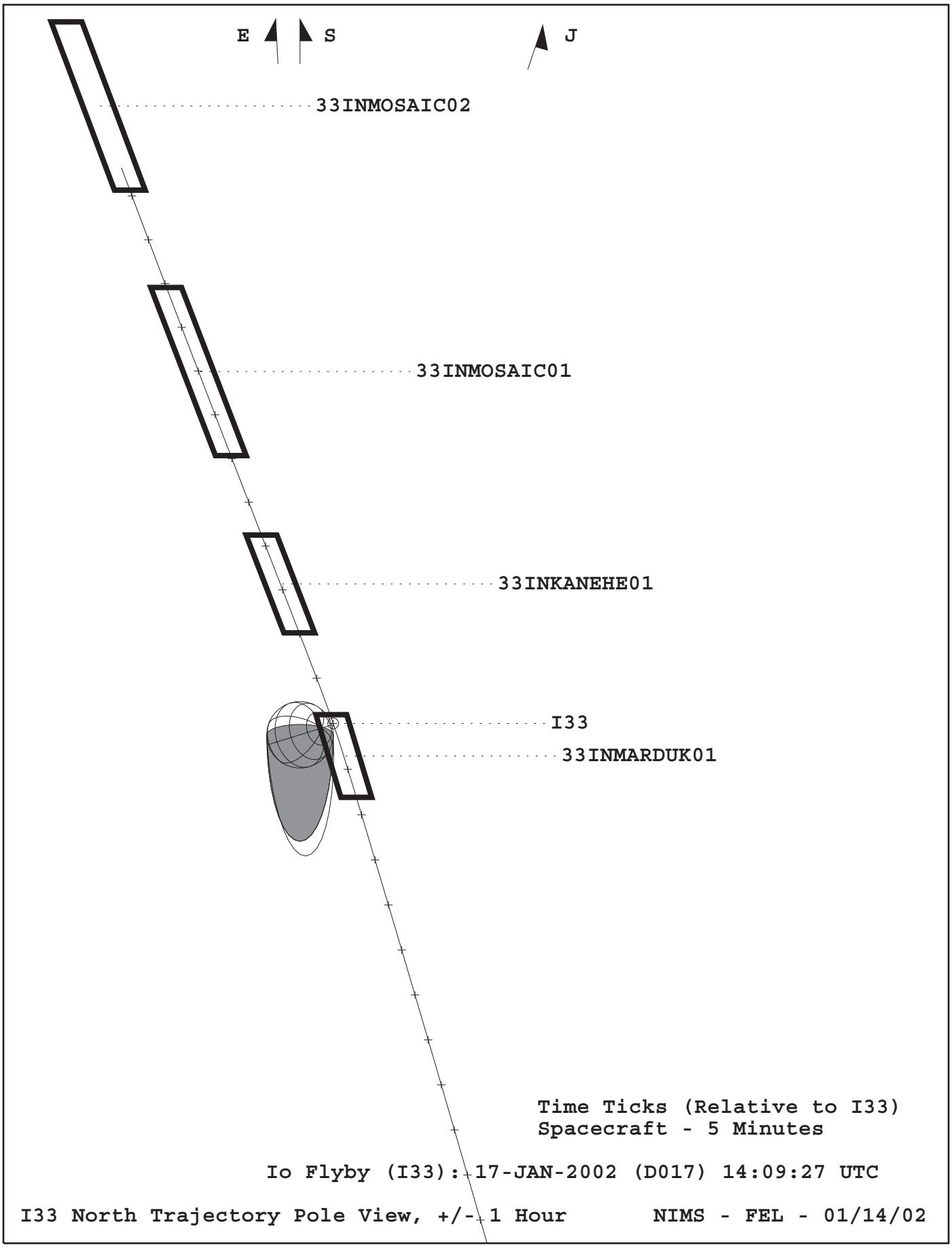


Io Flyby (I33): 17-JAN-2002 (D017) 14:09:27 UTC
Perijove (PJ33): 17-JAN-2002 (D017) 16:23:35 UTC

I33 North Trajectory Pole View

NIMS - FEL - 12/06/01

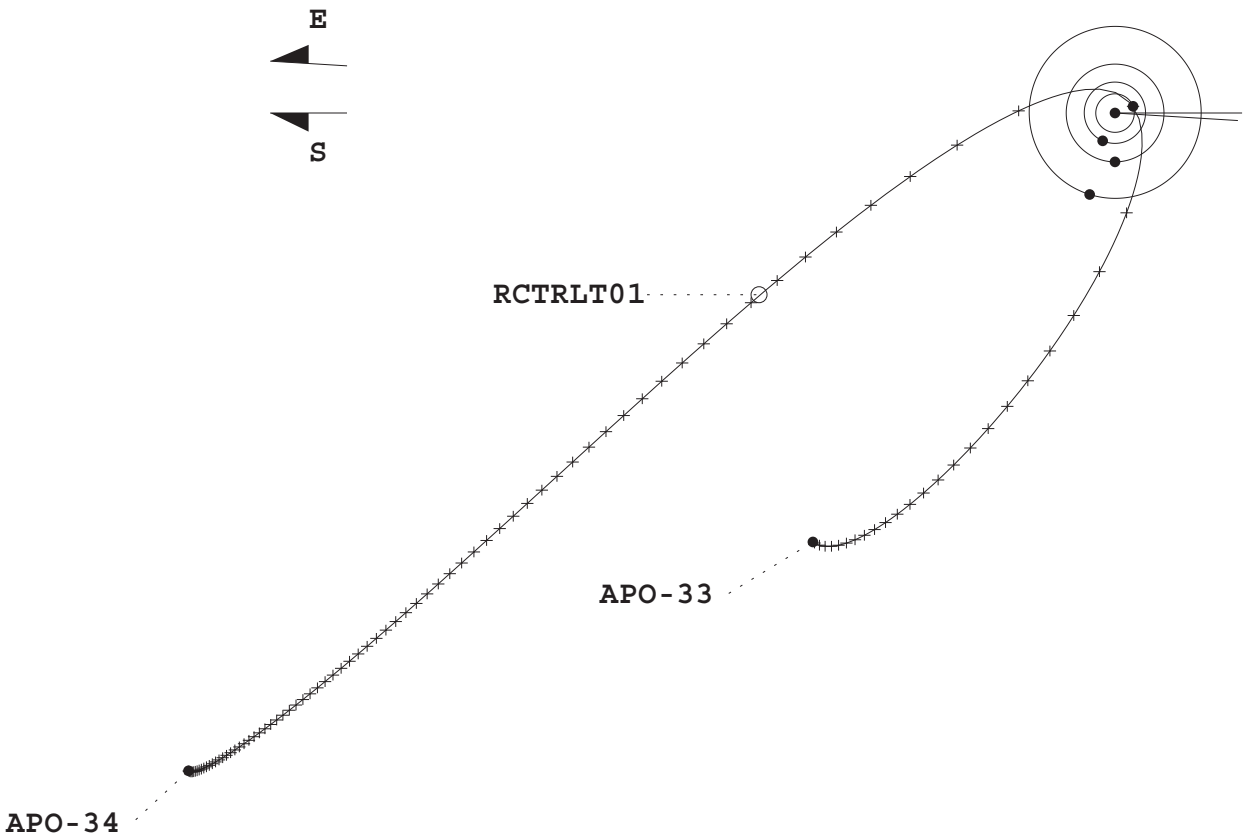
NIMS I33 IO FLYBY OBSERVATIONS



Io Flyby (I33): 17-JAN-2002 (D017) 14:09:27 UTC

I33 North Trajectory Pole View, +/- 1 Hour NIMS - FEL - 01/14/02

NIMS I33 CALIBRATIONS



Time Ticks (Relative to I33)
Spacecraft - 2 Days

Io Flyby (I33): 17-JAN-2002 (D017) 14:09:27 UTC
Perijove (PJ33): 17-JAN-2002 (D017) 16:23:35 UTC
Apojove (A34): 13-JUN-2002 (D164) 04:21:54 UTC

I33 North Trajectory Pole View

NIMS - FEL - 01/14/02

I33 INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	Obs. Cost (tracks)	Obs. Cost (ticks)	PSID
33INMARDUK01	Io Marduk Observation	I33ILM442	I33ILM144	LM	1	0	4	MPW	0.0737	430	DB
33INKANEHE01	Io Kanehekili Obs	I33ILM442	I33ILM144	LM	2	0	4	MPW	0.0463	270	DC
33INMOSAIC01	Io Mosaic Observation	I33ILM442	I33ILMFG96	LM	2	0	4	MPW	0.1387	808	DD
33INMOSAIC02	Io Mosaic Observation	I33ILM442	I33ILMFG96	LM	2	0	4	MPW	0.1565	912	DE
33INREGION01	Io Regional Obs	I33ILM442	I33ISMFG72	SM	2	0	4	MPW	0.4425	2579	DF
33INGLOBAL01	Io Global Obs	I33ILMFG252	I33ILM144comp	LM	2	0	4	LPU	0.1370	798	DG
33INGLOBAL02	Io Global Obs	I33ILMFG252	I33ILMFG72A	LM	2	0	4	LPU	0.0422	246	DK
33JNGLOBAL01	Jupiter Global	I33JXM10	I33JXMFG7	XM	2	0	6	LPU	0.0569	331	DH
33JNGLOBAL02	Jupiter Global	I33JXM10	I33JXMFG7	XM	2	0	6	LPU	0.0495	289	DI
33JNGLOBAL03	Jupiter Global	I33JXM10	I33JXMFG7	XM	2	0	6	LPU	0.0422	246	DJ
33INMARDUK01	Io Marduk Observation	I33ILM442	I33ILM144comp	LM	1	0	4	MPW	0.0737	430	DB
33INMOSAIC01	Io Mosaic Observation	I33ILM442	I33ILMFG48	LM	2	0	4	MPW	0.1387	808	DD
33INMOSAIC02	Io Mosaic Observation	I33ILM442	I33ILMFG48	LM	2	0	4	MPW	0.1565	912	DE
33INREGION01-gf	Io Regional Obs	I33ILM442	I33ISMFG72	SM	2	0	4	MPW	0.4421	2576	DF
33INGLOBAL01	Io Global Obs	I33ILMFG252	I33ILMFG108B	LM	2	0	4	LPU	0.1370	798	DG

I33 RESOURCES

Activity ID	Mode	Record Format	Obs. Cost (tracks)	Obs. Cost (ticks)	Number Wavelengths Returned	Obs Record Time (sec)	Obs PB Time (sec)	Selected Bits to Tape sBOT(MBITS)	Bits to Tape BOT (Mbit)	Mode Cycle time (sec)
33INMARDUK01	LM	MPW	0.0728	424	360	480	480	5.53	5.53	8.667
33INKANEHE01	LM	MPW	0.0366	213	360	240	240	2.76	2.76	8.667
33INMOSAIC01	LM	MPW	0.1362	794	360	900	900	10.37	10.37	8.667
33INMOSAIC02	LM	MPW	0.1543	899	360	1020	1020	11.75	11.75	8.667
33INREGION01	SM	MPW	0.4348	2534	360	2880	2880	33.18	33.18	2.33
33INGLOBAL01	LM	LPU	0.1371	799	253	3400	3400	20.97	20.97	8.667
33INGLOBAL02	LM	LPU	0.0414	241	253	1020	1020	6.29	6.29	8.667
33JNGLOBAL01	XM	LPU	0.0559	325	10	1380	1380	8.51	8.51	0.333
33JNGLOBAL02	XM	LPU	0.0486	283	10	1200	1200	7.40	7.40	0.333
33JNGLOBAL03	XM	LPU	0.0414	241	10	1020	1020	6.29	6.29	0.333
I33 tape USAGE			**0.9719**	**6754**						

I33 RESOURCES

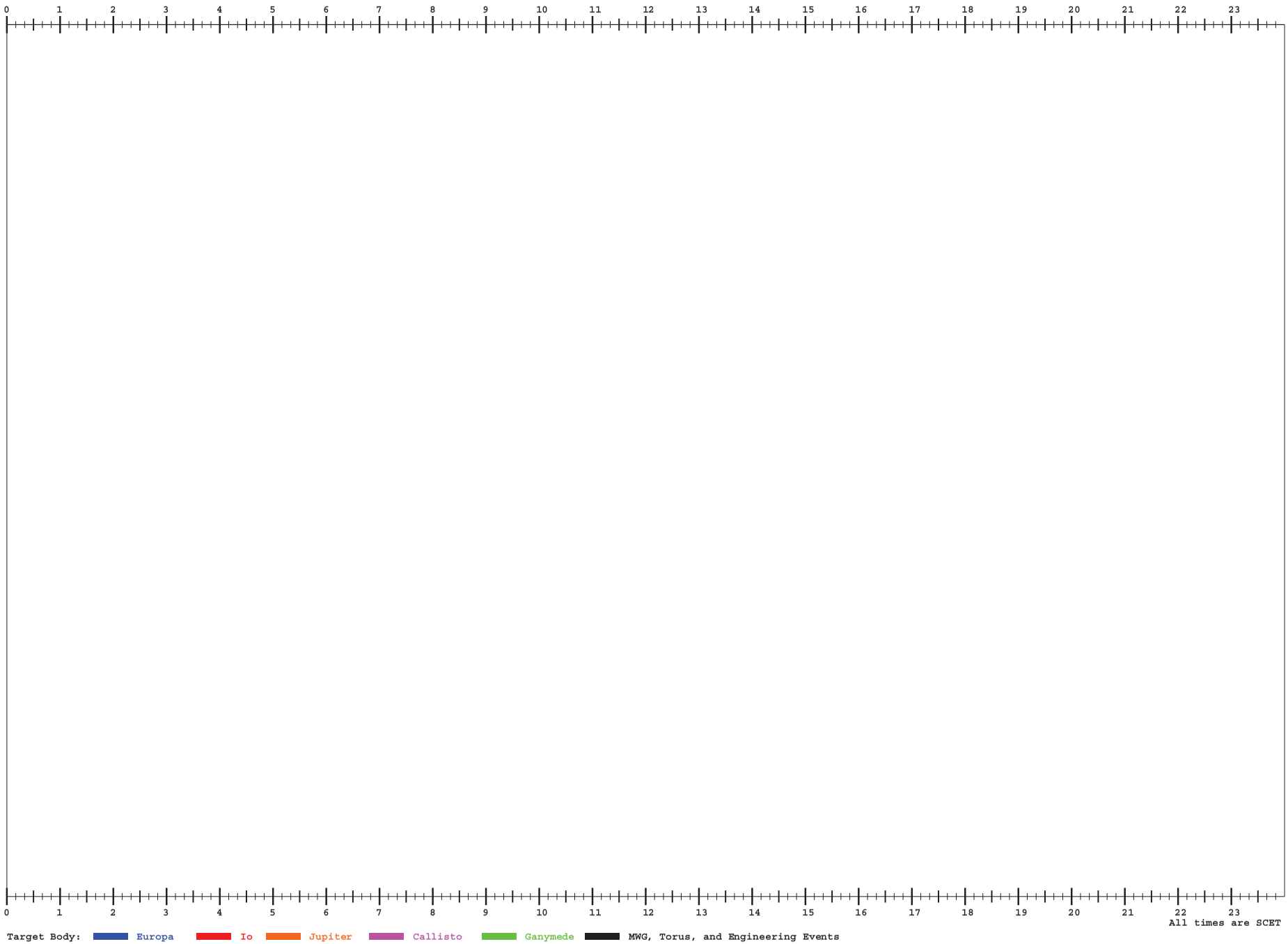
Activity ID	AACS Mbits c 2.5	Comp Thold RT BTG	Total BTG (Mbits) (w/4% ohead)	Data Reduction Pass Factor (sBOT/BOT)
33INMARDUK01	0.03	1.2	3.4559	1.6
33INKANEHE01	0.01	1.2	1.7279	1.6
33INMOSAIC01	0.05	1.2	6.4798	1.6
33INMOSAIC02	0.06	1.2	7.3437	1.6
33INREGION01	0.17	1.2	77.1296	0.4
33INGLOBAL01	0.20	1.2	17.2033	1.2
33INGLOBAL02	0.06	1.2	5.1610	1.2
33JNGLOBAL01	0.08	1.5	5.7465	1.5
33JNGLOBAL02	0.07	1.5	4.9970	1.5
33JNGLOBAL03	0.06	1.5	4.2474	1.5
Totals			**129.2448**	

NIMS I33 OBSERVING GEOMETRY

OAPEL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
33INMARDUK01	-28 to -26	207 to 210	2.5 to 5.8K	38 to 73	152 to 154	37 to 66	103 to 137
33INKANEHE01	-15 to -13	32 to 34	4.1 to 6.5K	164	18 to 20	6 to 14	17 to 21
33INMOSAIC01	-20 to -11	29 to 39	14 to 22K	159	15 to 22	18 to 29	23 to 26
33INMOSAIC02	-14 to +8	67 to 89	35 to 44K	160	34 to 57	12 to 34	24 to 25
33INREGION01	-90 to +90	330 to 150	48 to 73K	160	3 to 113	3 to 90	23
33INGLOBAL01	-90 to +90	356 to 176	145 to 167K	162	10 to 111	10 to 90	21
33INGLOBAL02	-90 to +90	45 to 225	242 to 250K	155	1 to 119	1 to 90	29
33JNGLOBAL01	-90 to +90	48 to 228	2400K	173	1 to 91	2 to 91	1
33JNGLOBAL02	-90 to +90	168 to 348	2500K	172	0 to 92	1 to 91	2
33JNGLOBAL03	-90 to +90	288 to 108	2600K	171	0 to 93	0 to 91	3

I33 ENCOUNTER
Plot Time: 02-014/00:00:00.000 to 02-15/00:00:00.000
Date of Plot: 12-Dec-101 12:29:35

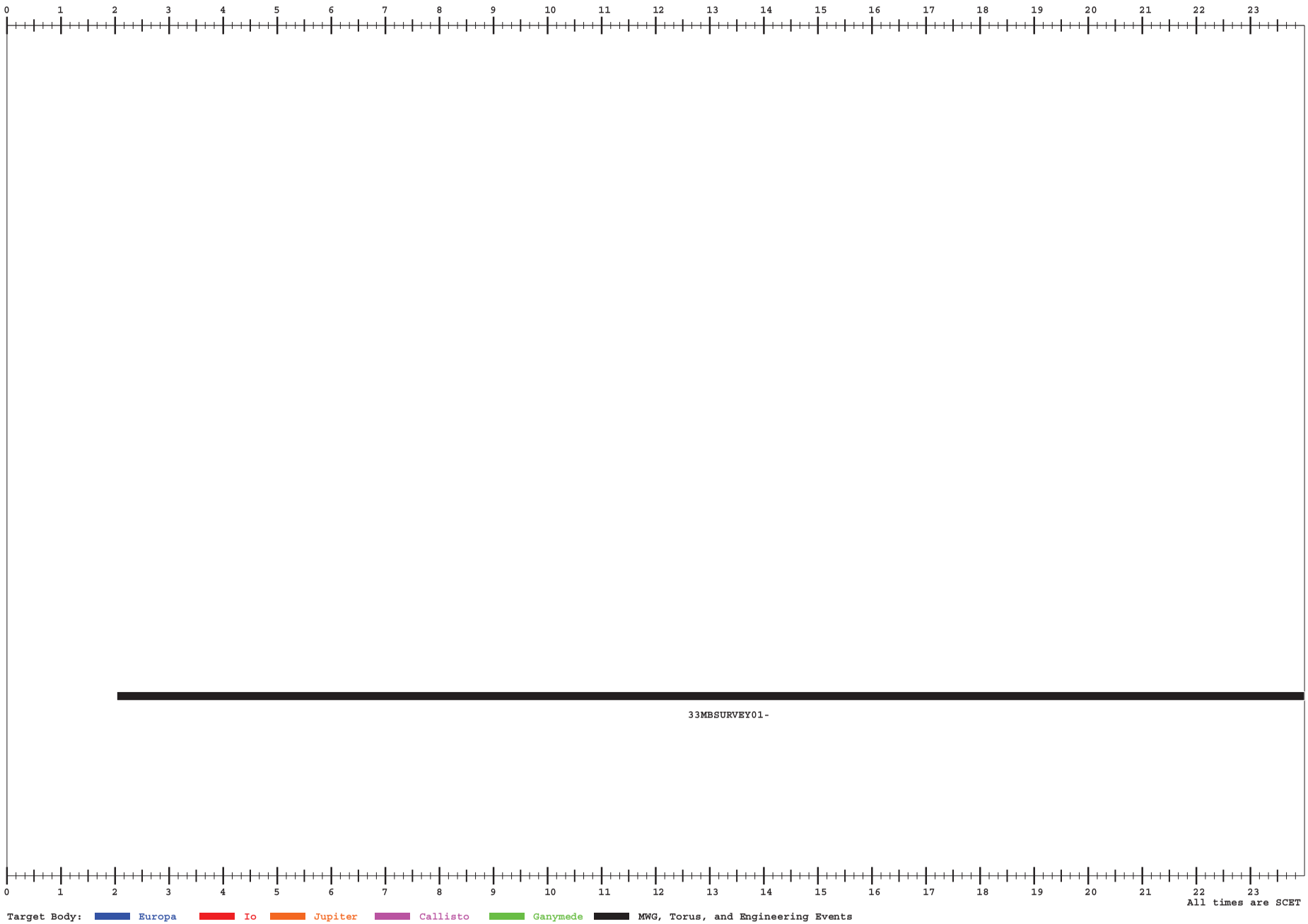
GEM: I33



Target Body: Europa Io Jupiter Callisto Ganymede MWG, Torus, and Engineering Events

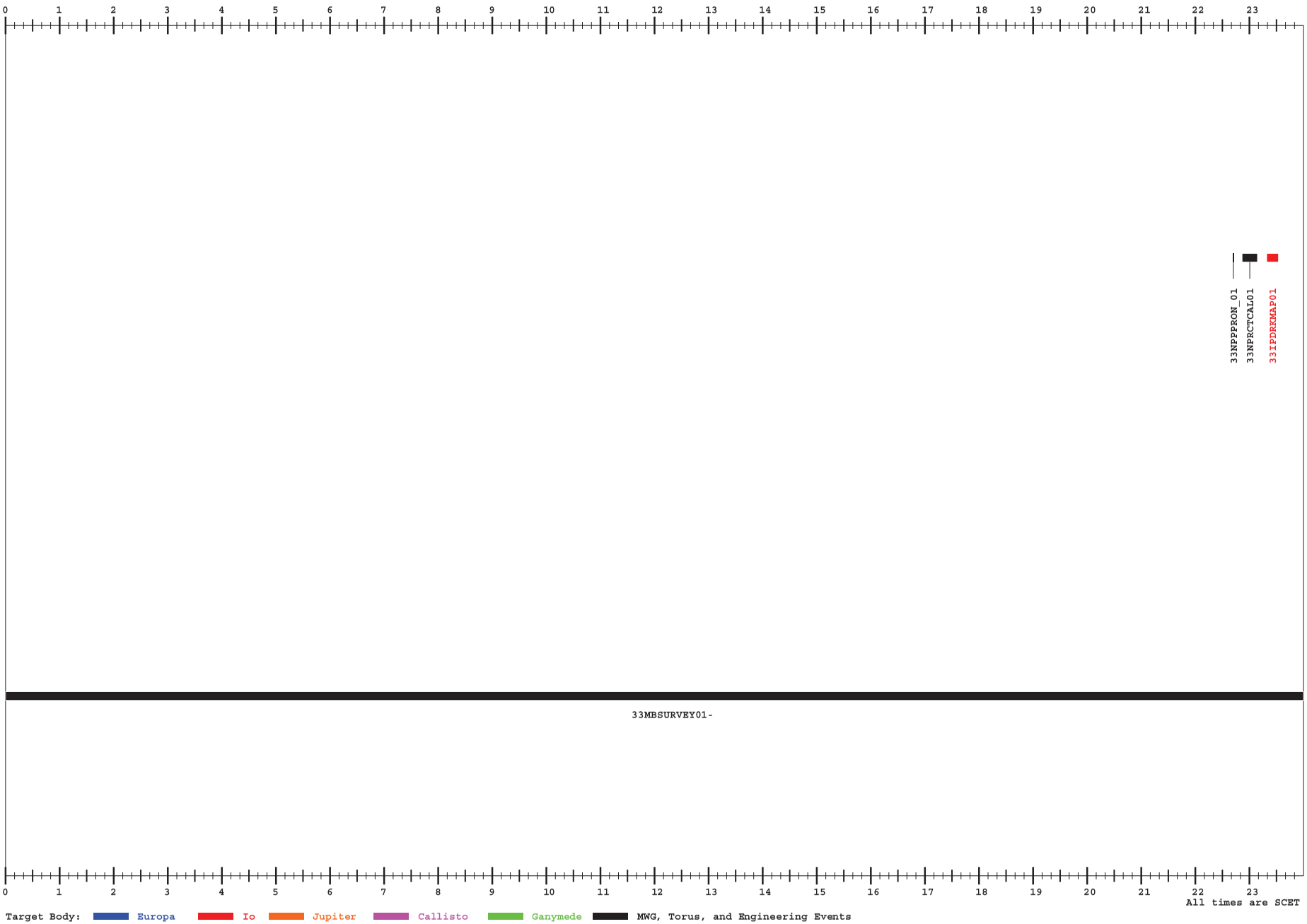
GEM: I33

I33 ENCOUNTER
Plot Time: 02-15/00:00:00.000 to 02-16/00:00:00.000
Date of Plot: 12-Dec-101 12:29:35



GEM: I33

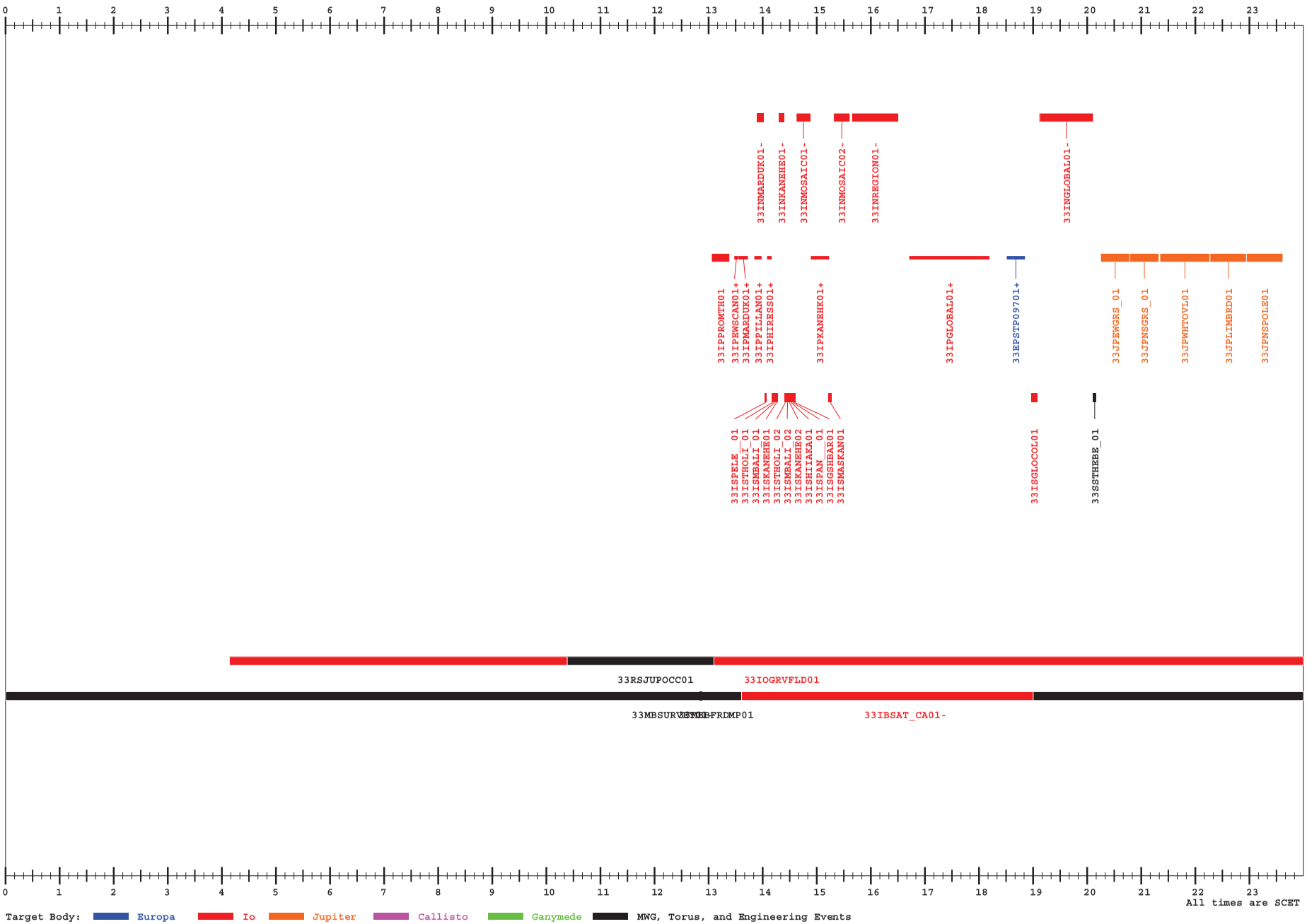
I33 ENCOUNTER
Plot Time: 02-16/00:00:00.000 to 02-17/00:00:00.000
Date of Plot: 12-Dec-101 12:29:35



Target Body: Europa Io Jupiter Callisto Ganymede MWG, Torus, and Engineering Events

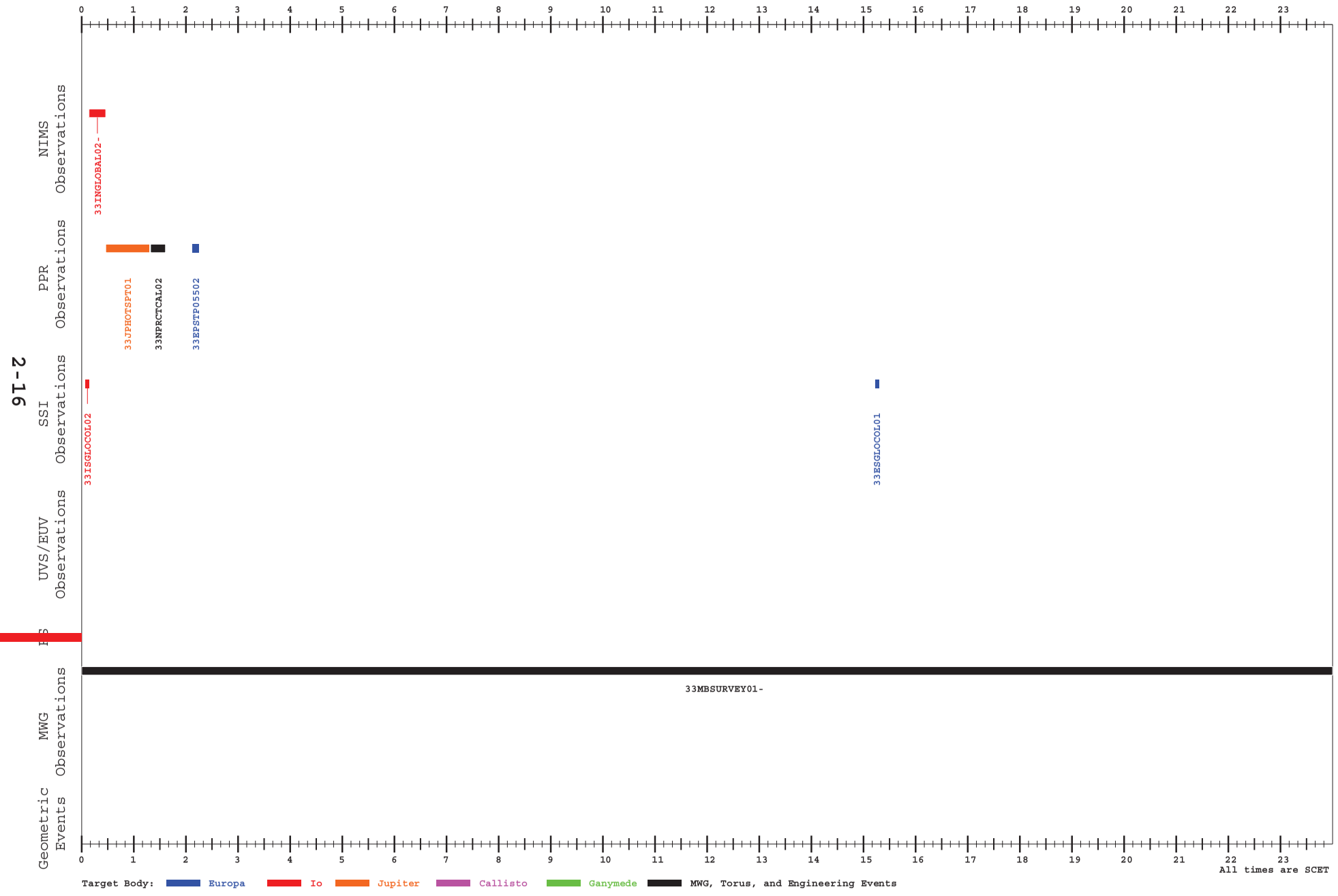
GEM: I33

I33 ENCOUNTER
Plot Time: 02-17/00:00:00.000 to 02-18/00:00:00.000
Date of Plot: 12-Dec-101 12:29:35



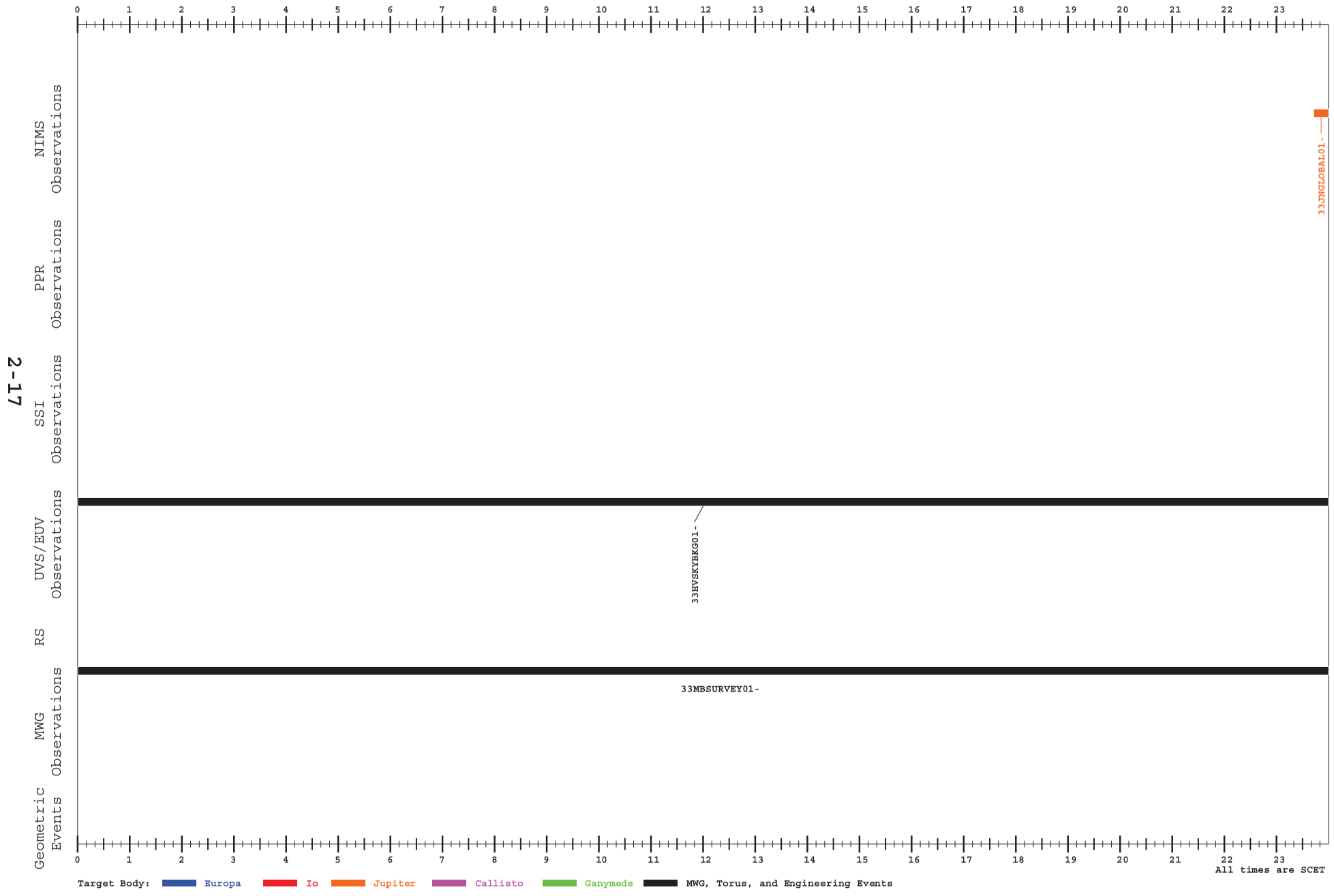
GEM: I33

I33 ENCOUNTER
Plot Time: 02-18/00:00:00.000 to 02-19/00:00:00.000
Date of Plot: 12-Dec-101 12:29:36



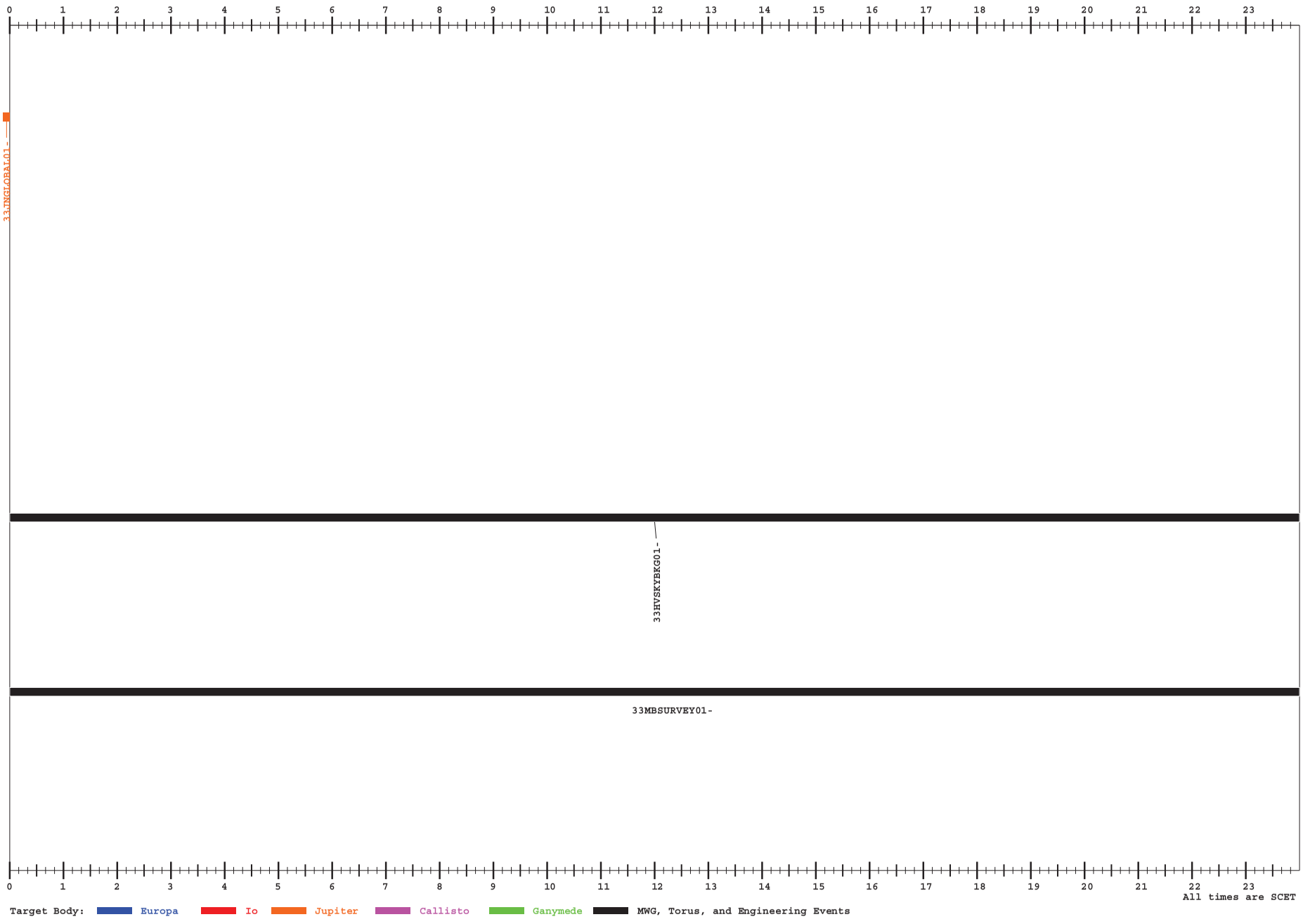
GEM: I33

I33 ENCOUNTER
Plot Time: 02-19/00:00:00.000 to 02-20/00:00:00.000
Date of Plot: 12-Dec-101 12:29:36

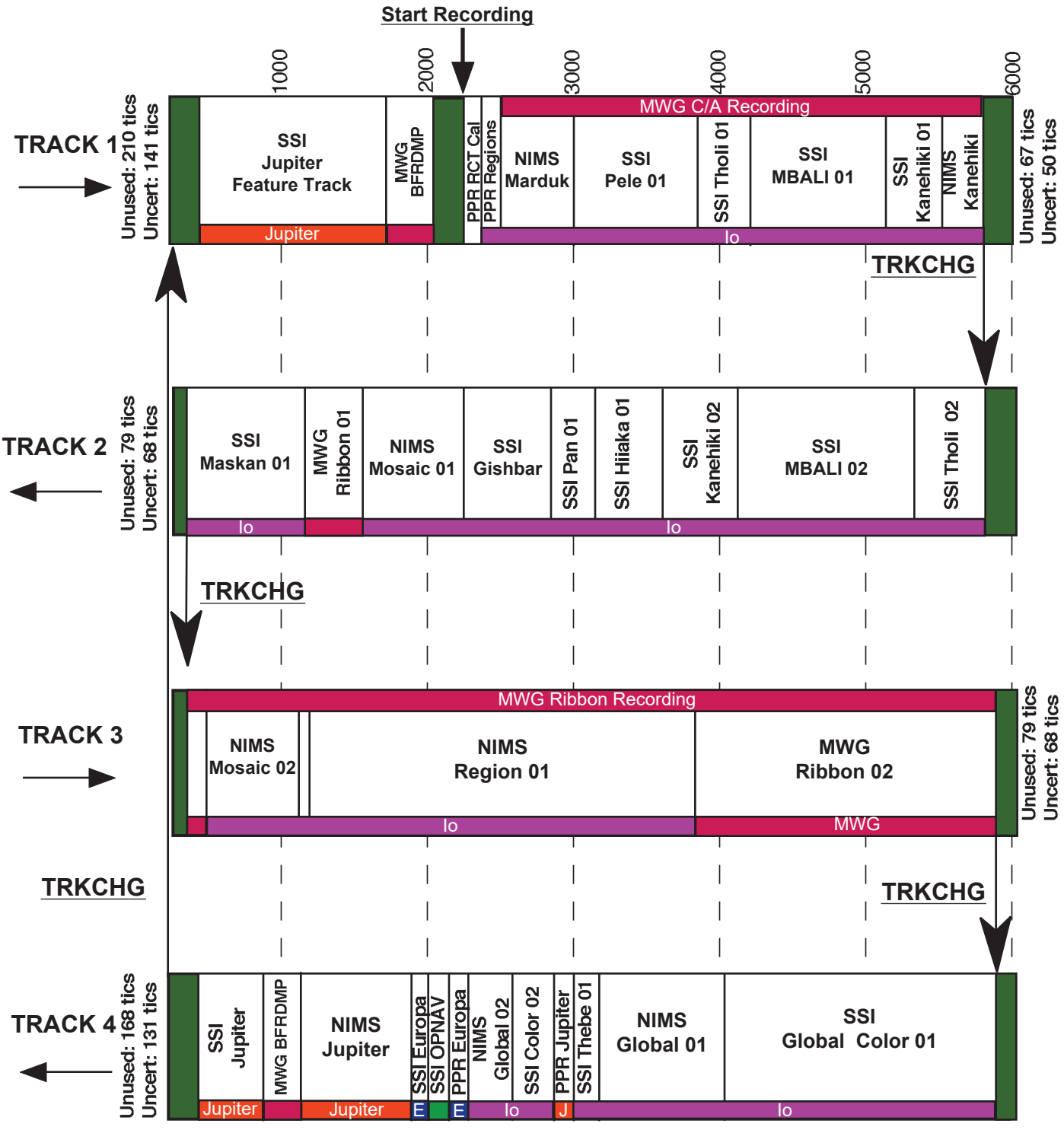


GEM: I33

I33 ENCOUNTER
Plot Time: 02-20/00:00:00.000 to 02-21/00:00:00.000
Date of Plot: 12-Dec-101 12:29:36



I33 ENCOUNTER HIGH-LEVEL TAPEMAP

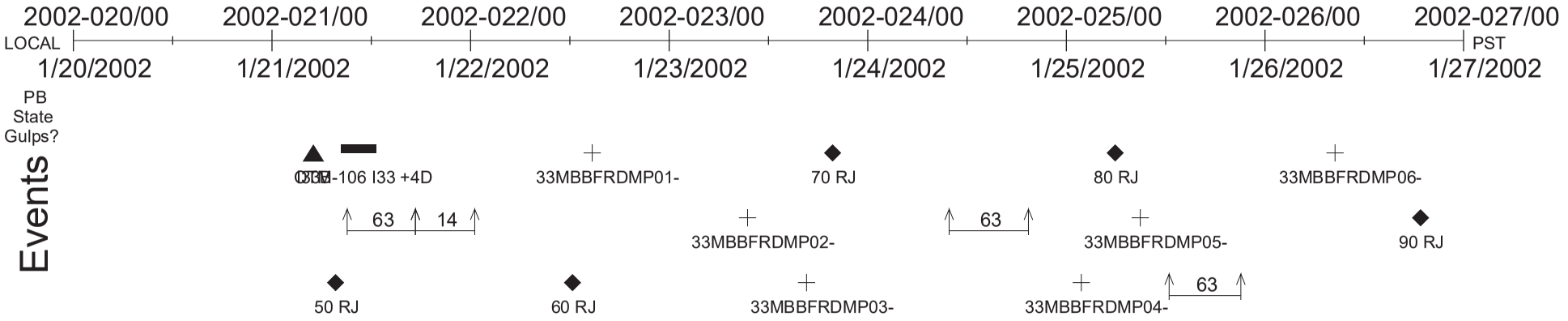


L. Barnard, 12/14/01

I33PBA

Playback / Date Returned

2-20



I33PBA

ORPROs Loaded: orpro.i33bed.edited

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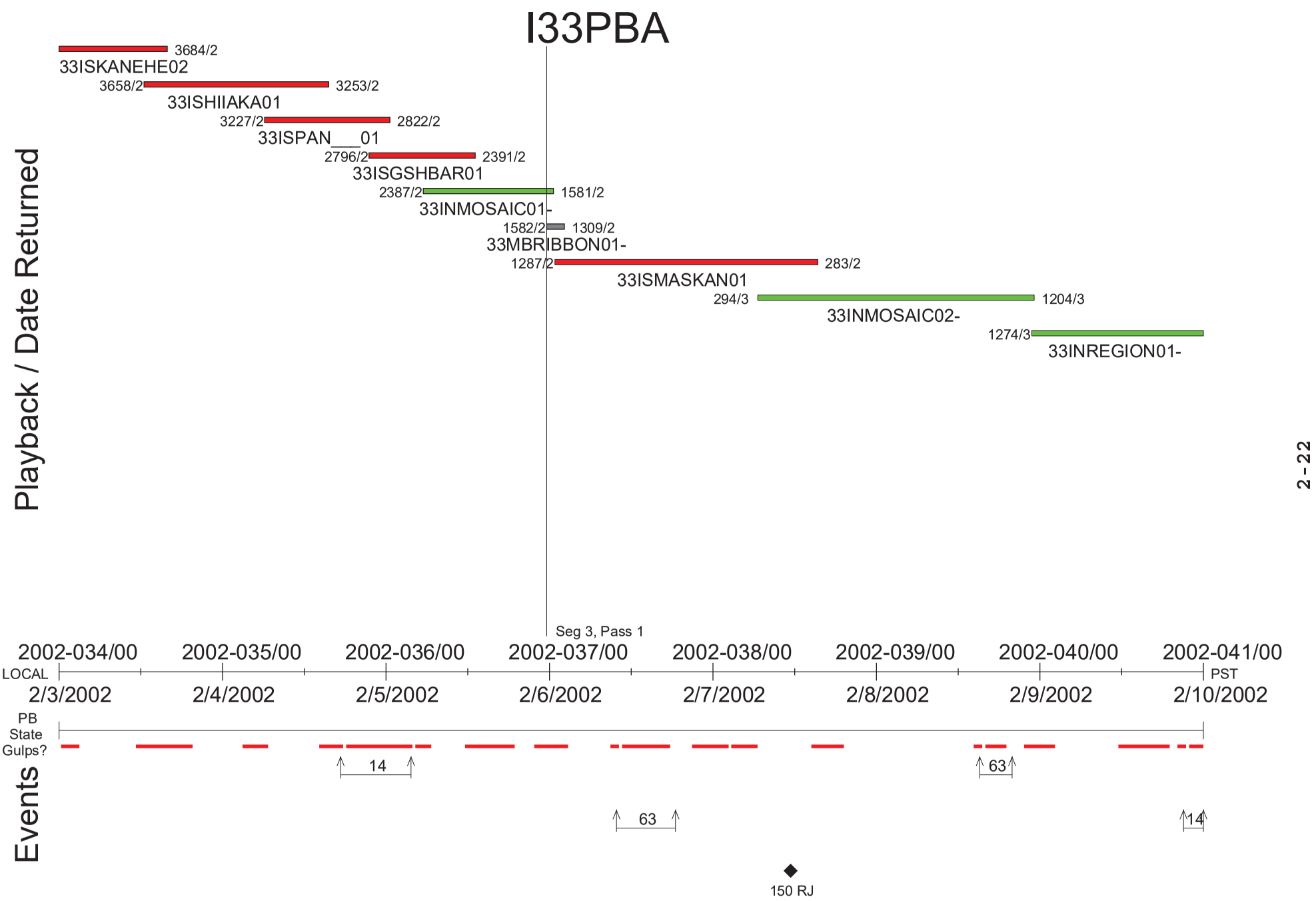
I33PBA
Playback / Date Returned
3684/2
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3658/2
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1581/2
33INMOSAIC01-
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33MBRIBBON01-
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33ISMASKAN01
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33INMOSAIC02-
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33INREGION01-
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2/9/2002
2/10/2002
PB State Gulps?
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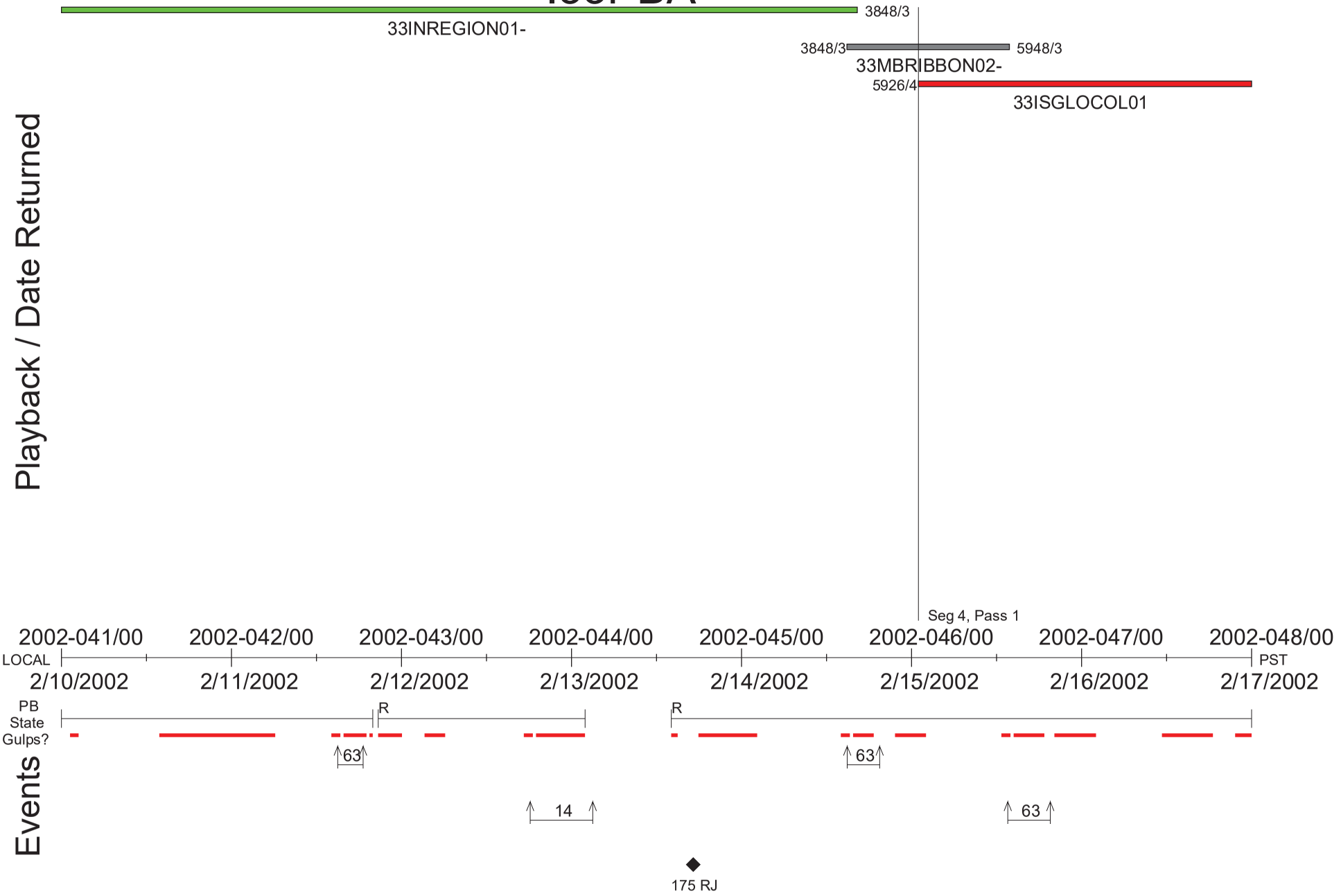
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33MBRIBBON02-
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33INGLOBAL01-

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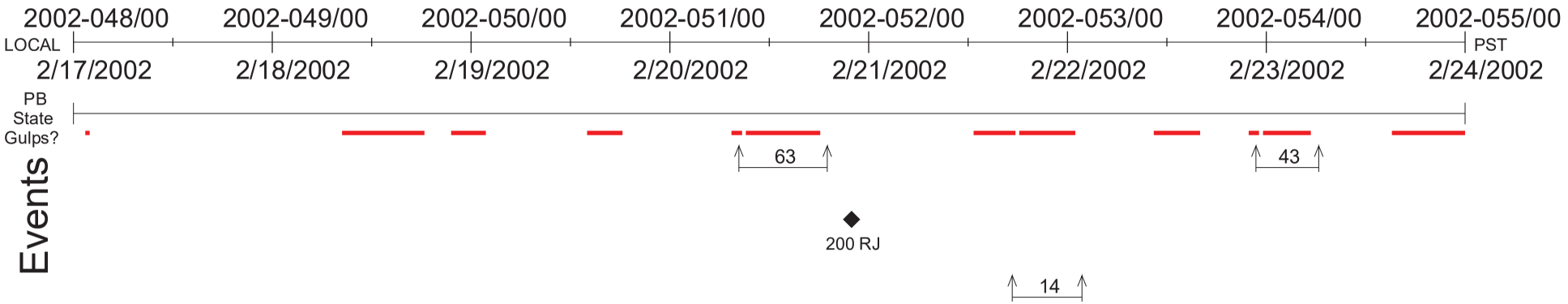

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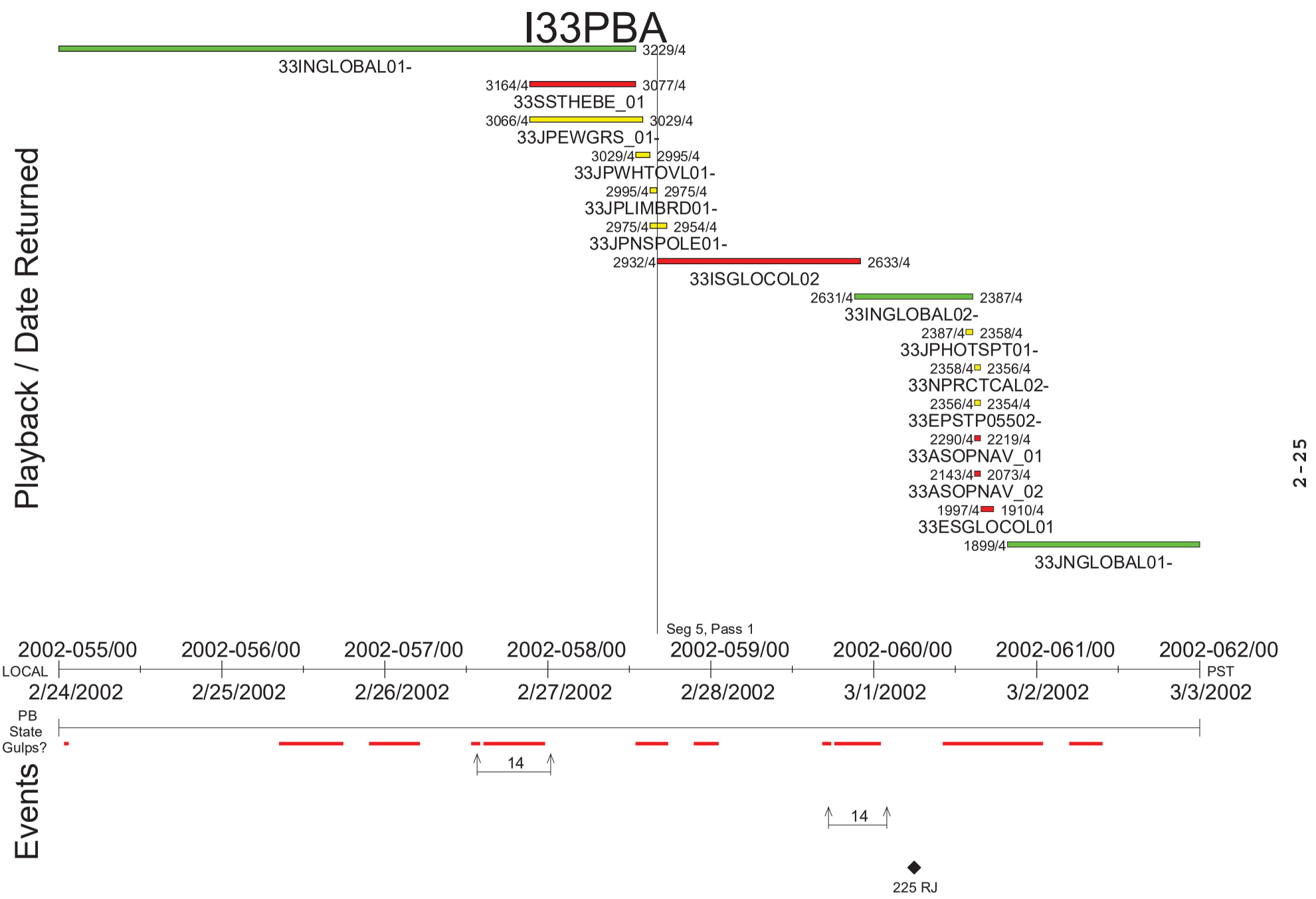
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3066/4
3029/4
33JPEWGRS_01-
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33JPWHTOVL01-
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33INGLOBAL02-
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33ASOPNAV_02
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3/3/2002
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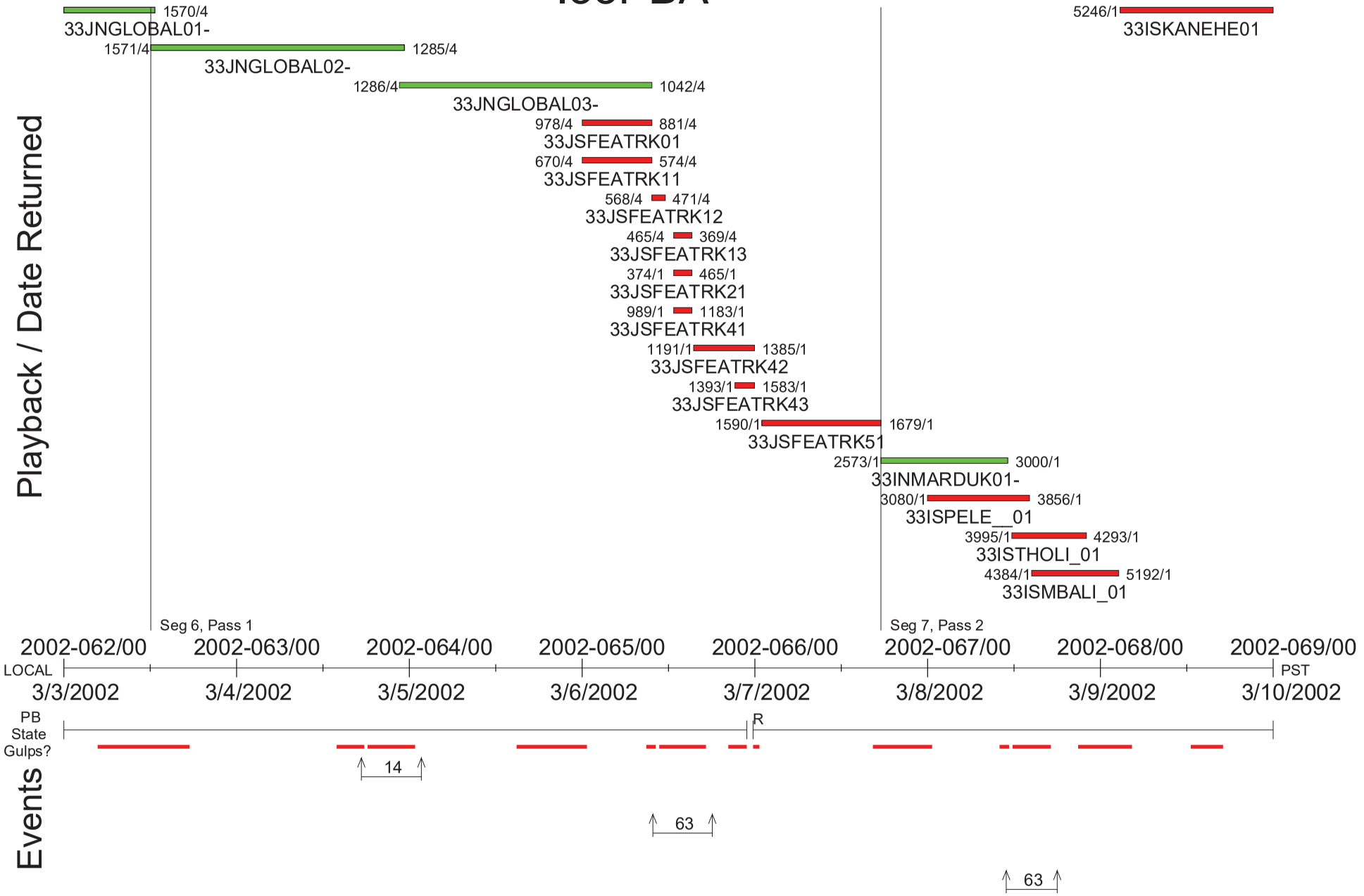
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33JNGLOBAL02-
1286/4
1042/4
33JNGLOBAL03-
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33JSFEATRK11
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33JSFEATRK12
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33JSFEATRK13
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465/1
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989/1
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1583/1
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4384/1
5192/1
33ISMBALI_01
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3/8/2002
3/9/2002
3/10/2002
PB
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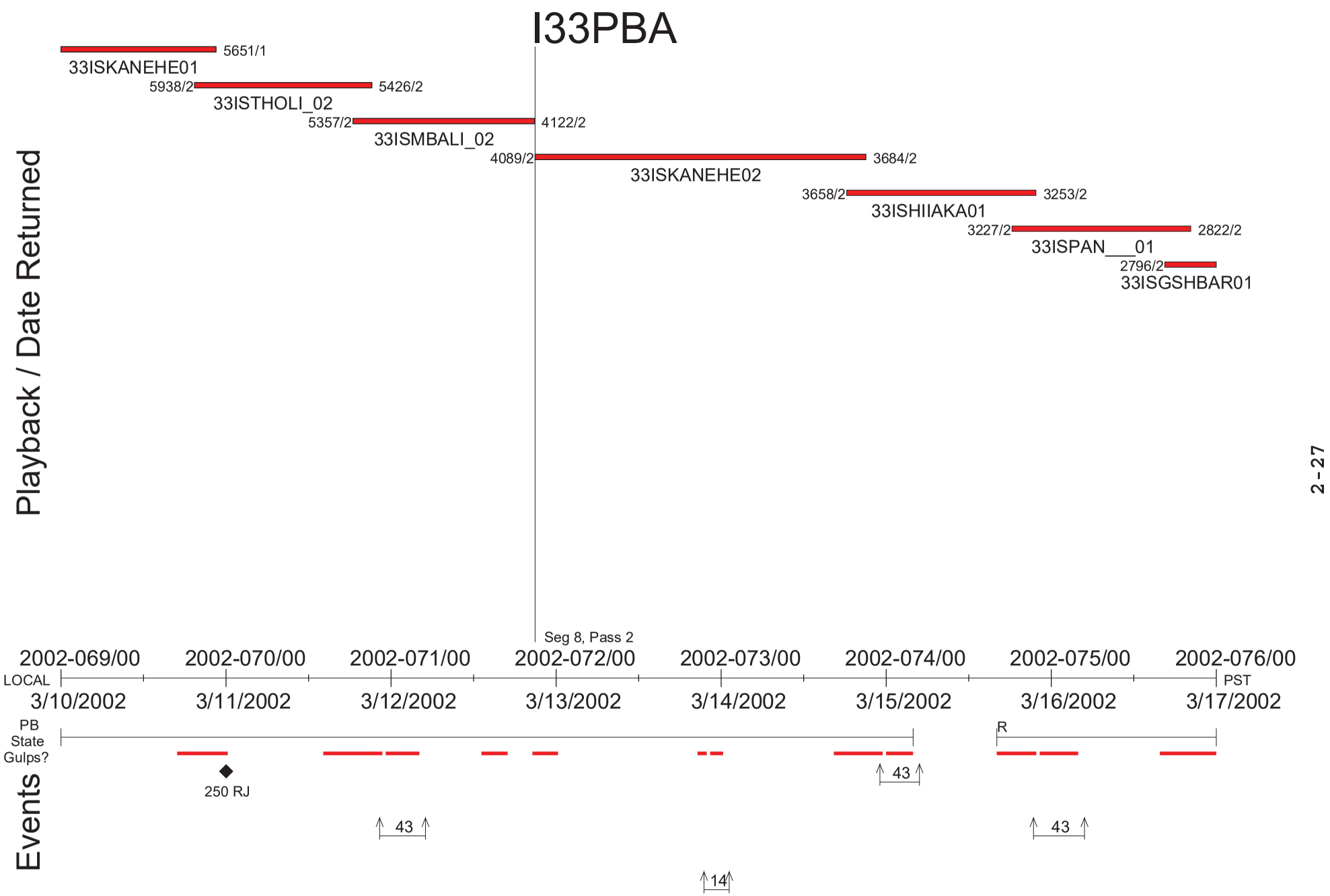
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33ISMBALI_02
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33ISKANEHE02
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33ISHIIAKA01
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33ISPAN___01
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33ISGSHBAR01
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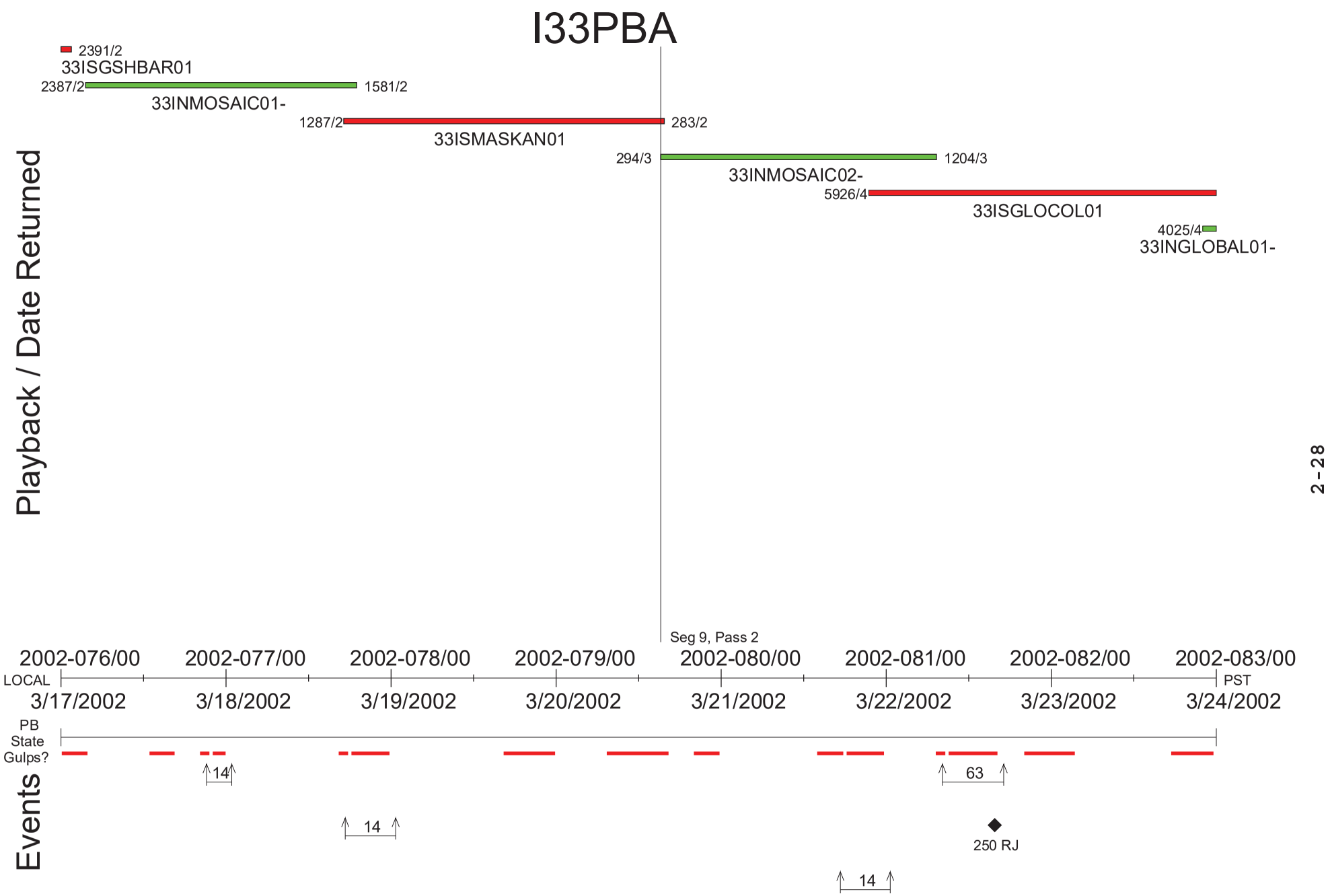
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2387/2
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33INMOSAIC02-
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33ISGLOCOL01
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33INGLOBAL01-
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2002-077/00
2002-078/00
2002-079/00
2002-080/00
2002-081/00
2002-082/00
2002-083/00
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PB State Gulps?
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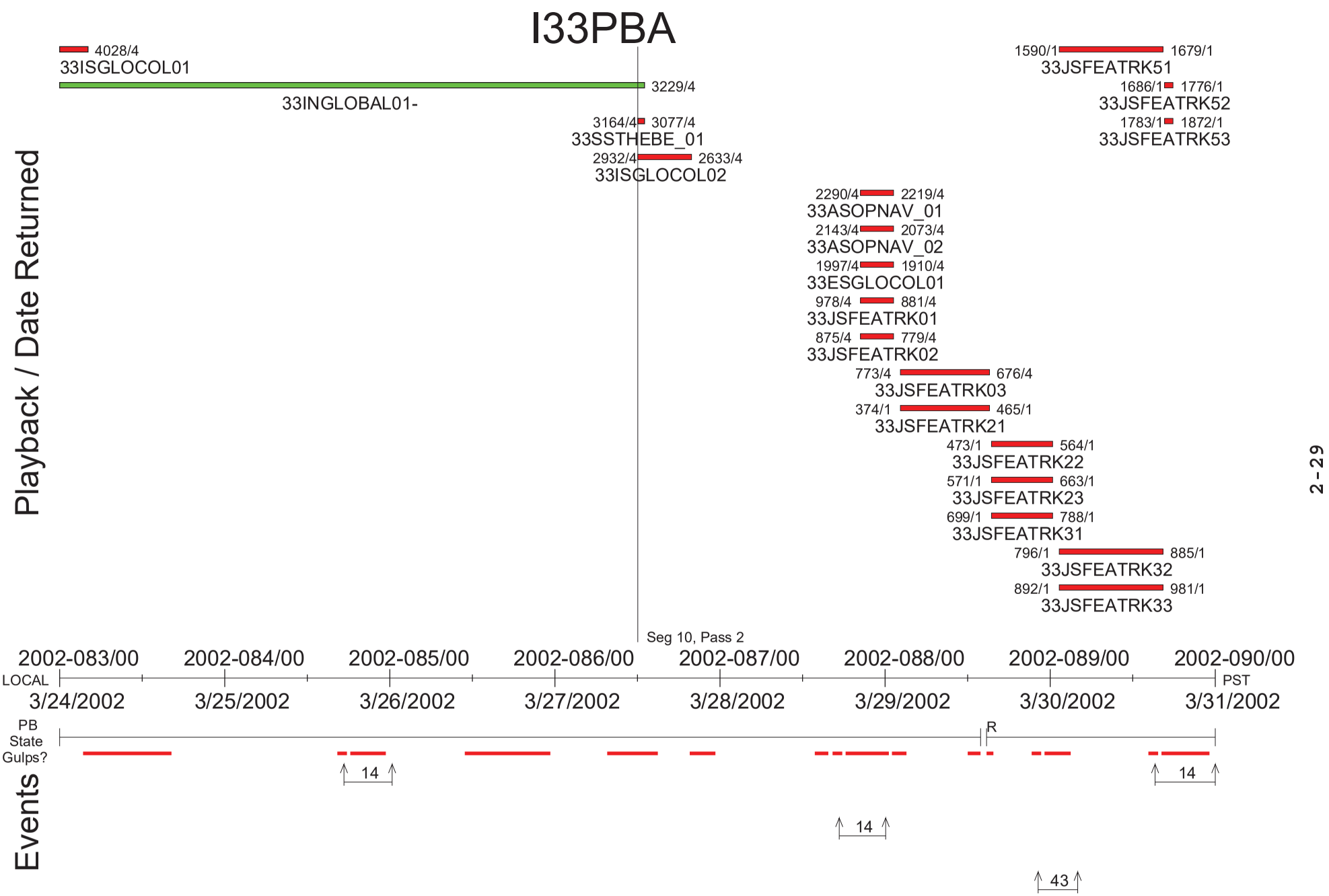
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3229/4
33INGLOBAL01-
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33SSTHEBE_01
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33JSFEATRK51
1686/1
1776/1
33JSFEATRK52
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33ASOPNAV_02
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3/28/2002
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3/31/2002
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State
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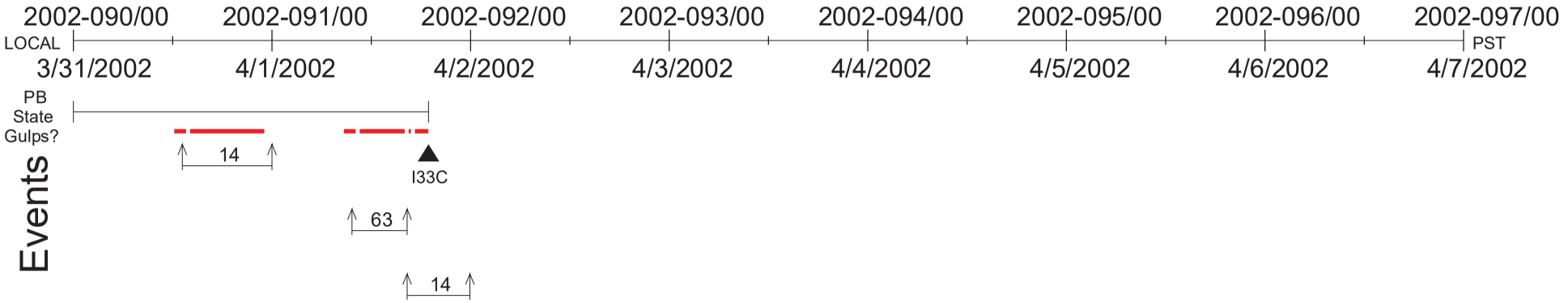
Playback / Date Returned



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Chapter 3 - Orbit Geometries

Contents

Introduction to Chapter 3

This chapter contains diagrams of various aspects of geometry for the I33 Orbit.

The figure on page 3 is a North Trajectory Pole View of the I33 Orbit from apoapsis to apoapsis.

The figure on page 4 is a North Trajectory Pole View of the I33 Orbit from +/- 5 days of Jupiter closest approach.

The figure on page 5 is a North Trajectory Pole View of the I33 Orbit from +/- 2 days of Jupiter closest approach.

The figure on page 6 is a North Trajectory Pole View of the I33 Orbit from +/- 1 day of Jupiter closest approach.

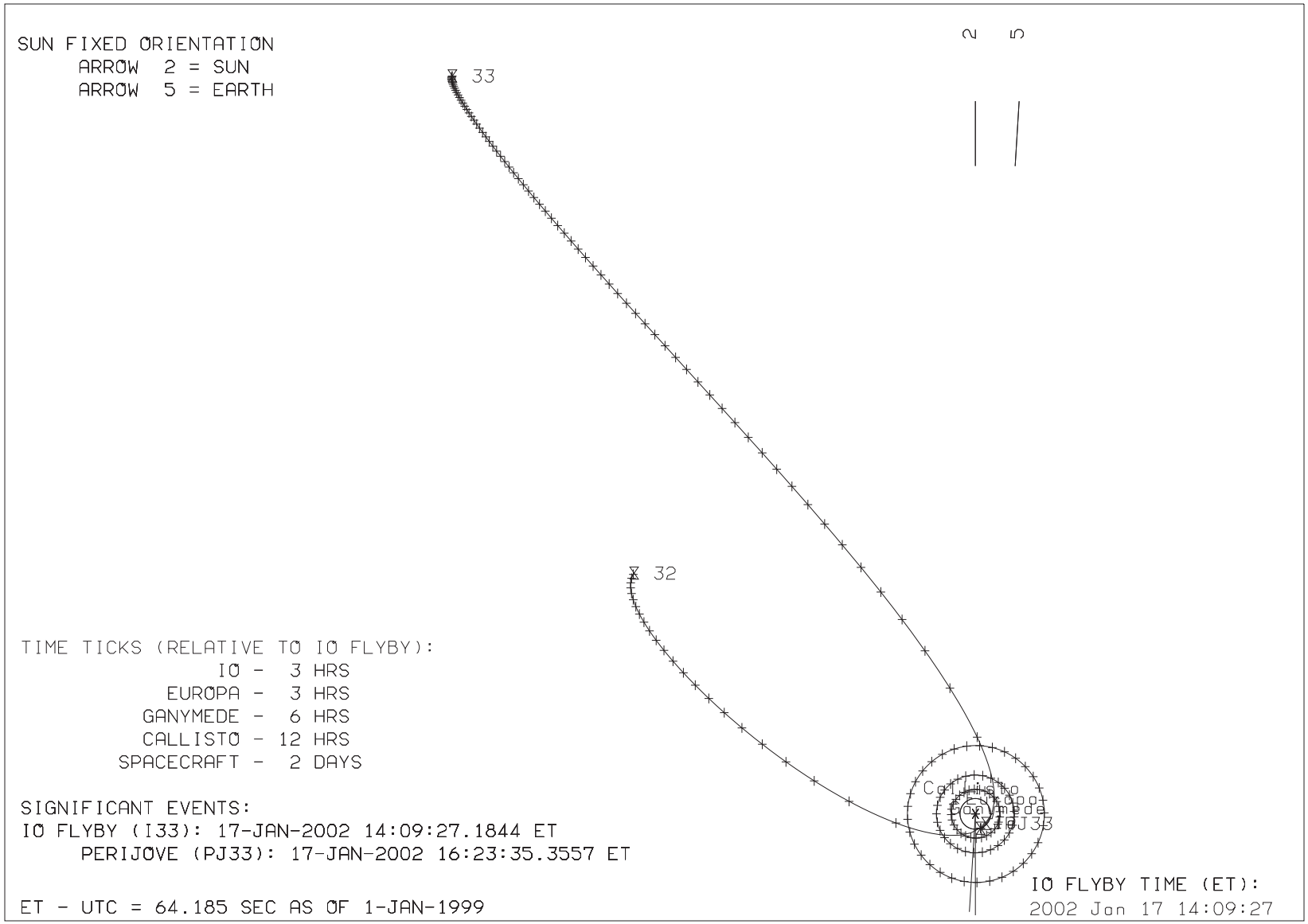
The figure on page 7 is a North Trajectory Pole View of the I33 Orbit from +/- 6 hours of Io closest approach.

The figure on page 8 is a North Trajectory Pole View of the I33 Orbit from +/- 1 hour of Io closest approach.

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

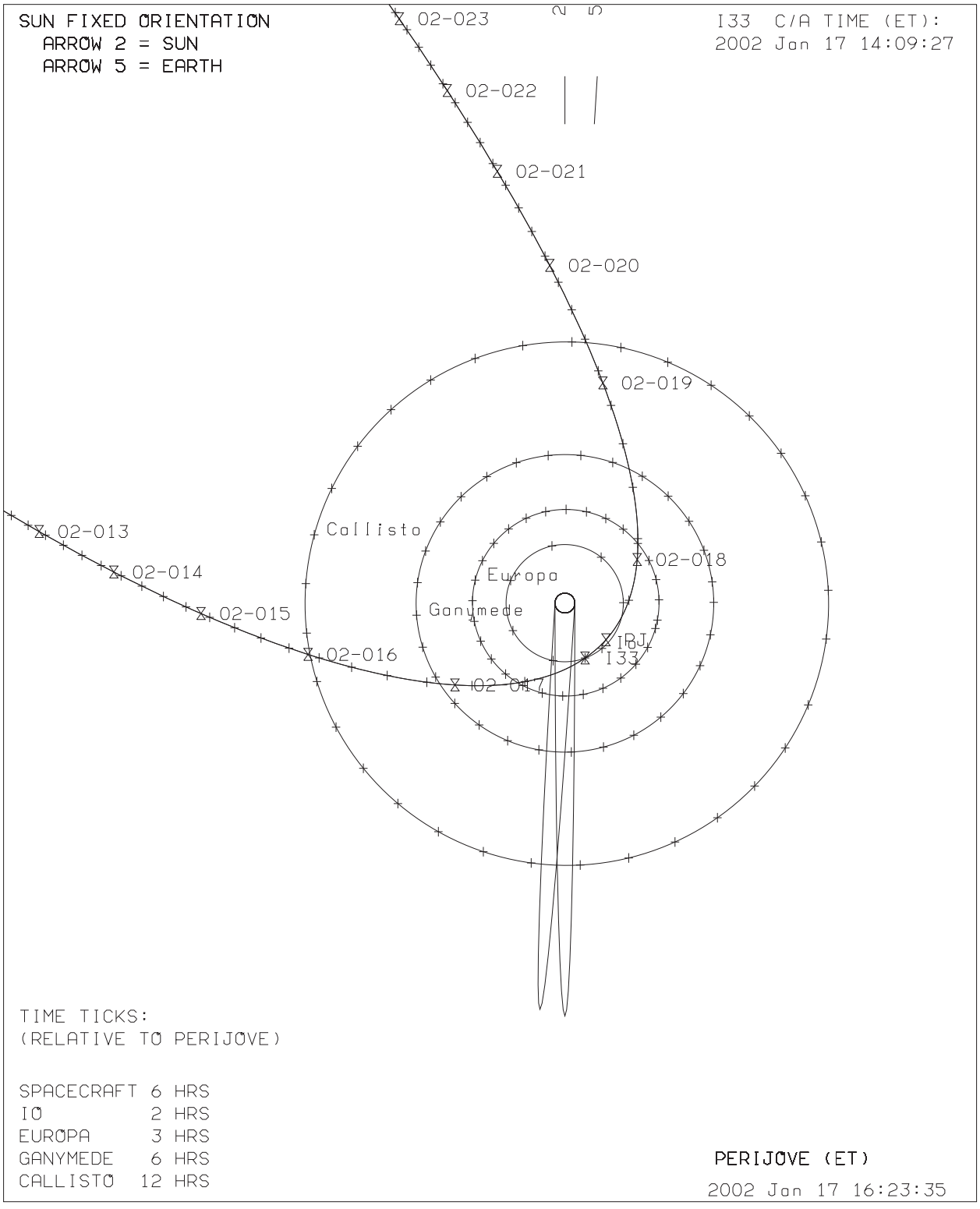
The figure on page 10 shows the spacecraft's groundtrack on Jupiter at Jupiter closest approach.

Jupiter 33: North Traj Pole View (Io 33 Apo to Apo)

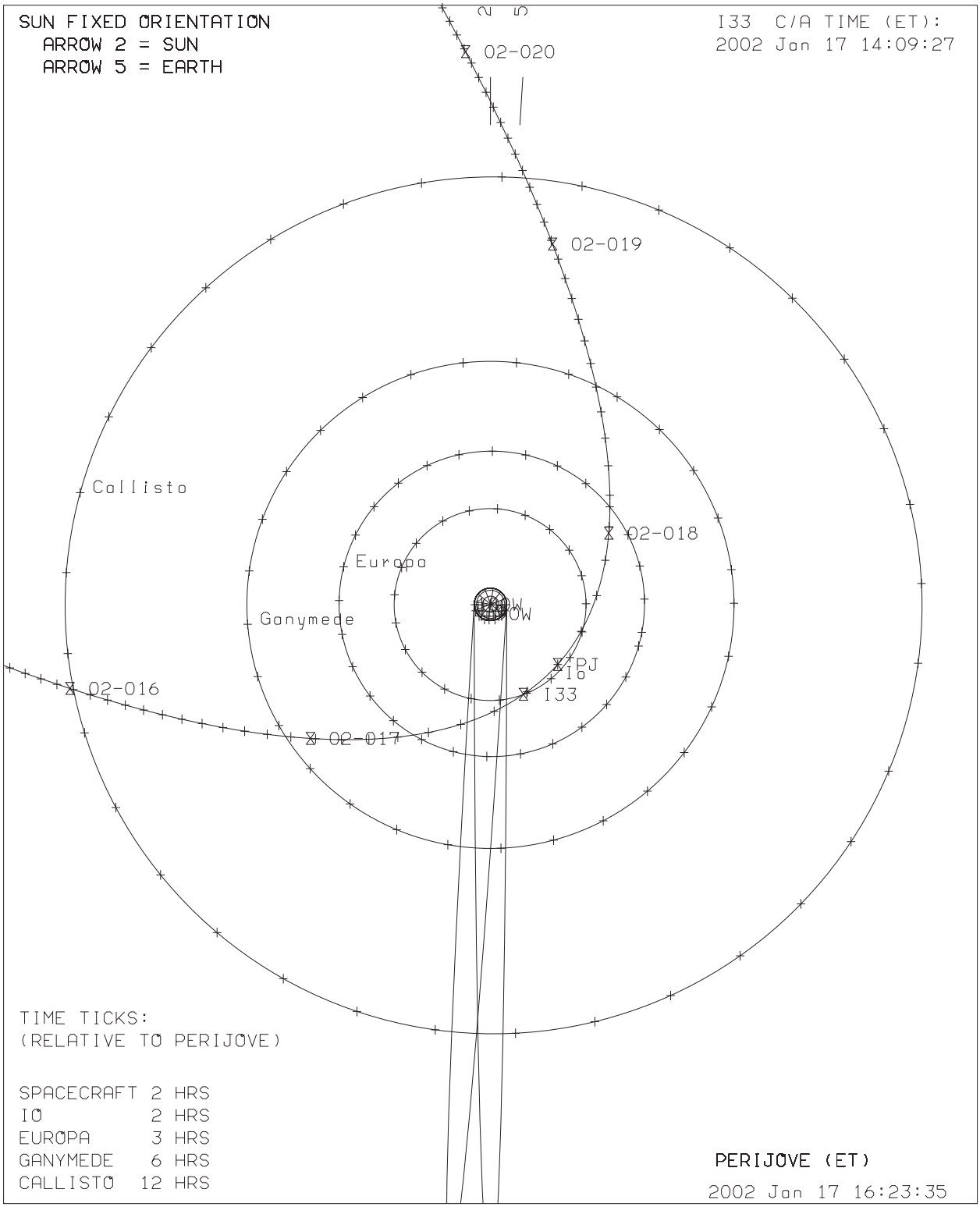


NAV Oct 23, 2001

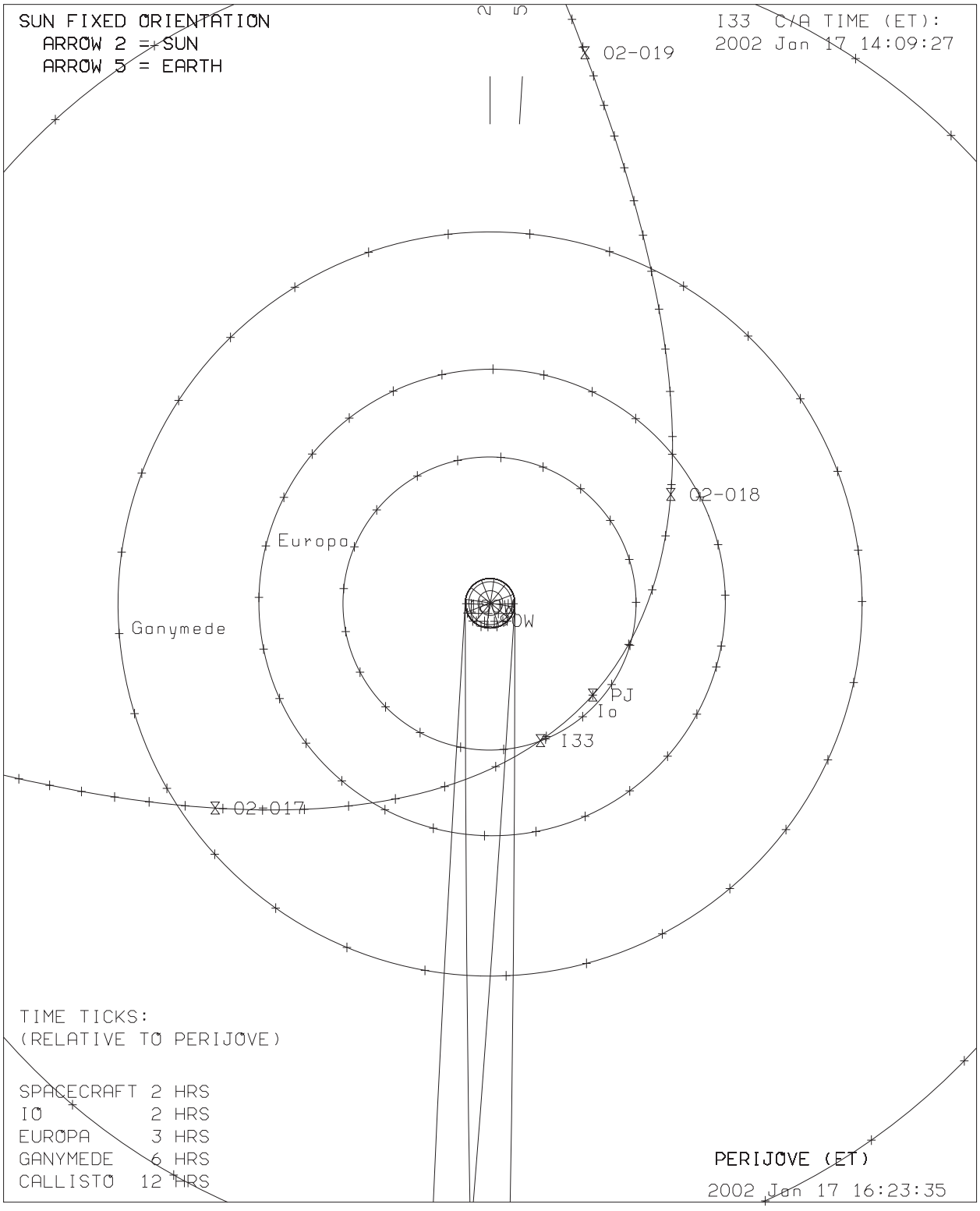
JUPITER 33: N. TRAJ. POLE VIEW (+/- 5 DAYS)



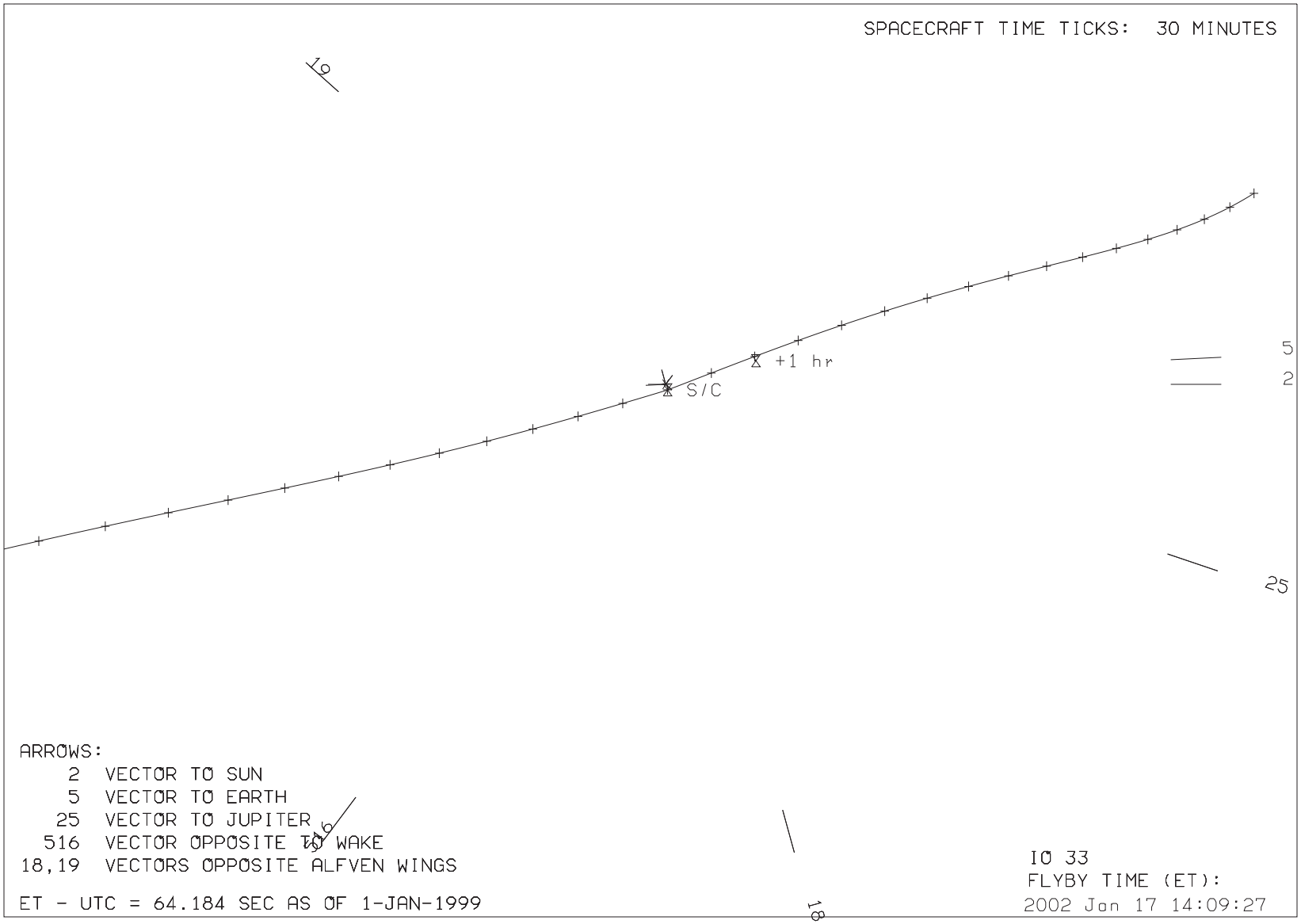
JUPITER 33: N. TRAJ. POLE VIEW (+/- 2 DAYS)



JUPITER 33: N. TRAJ. POLE VIEW (+/- 1 DAY)

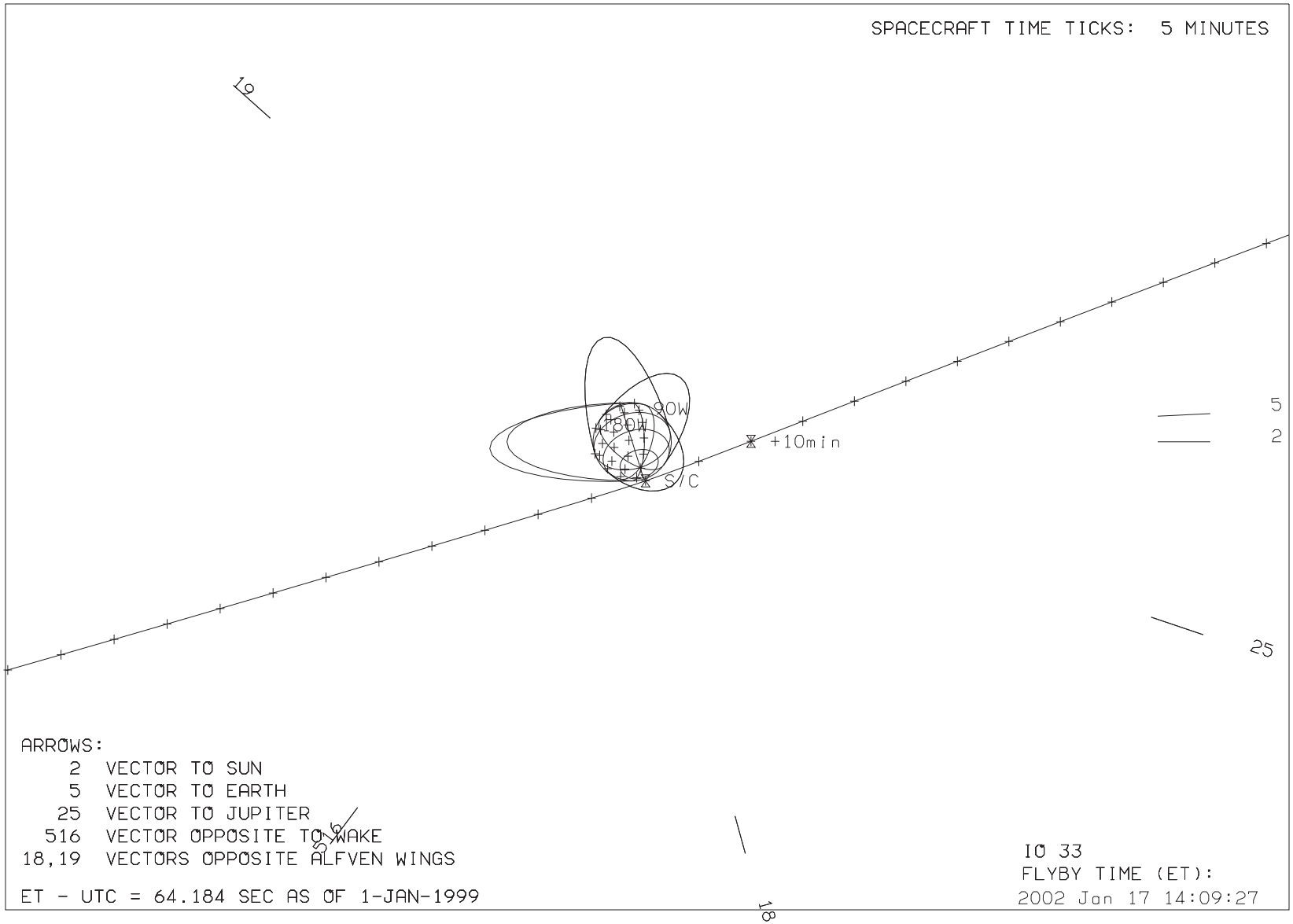


IO 33: N. TRAJ POLE VIEW (+/- 6 HRS)



NAV 10/23/01

IO 33: N. TRAJ POLE VIEW (+/- 1 HR)



NAV 10/23/01

IO 33: GROUNDTRACK AT CLOSEST APPROACH

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

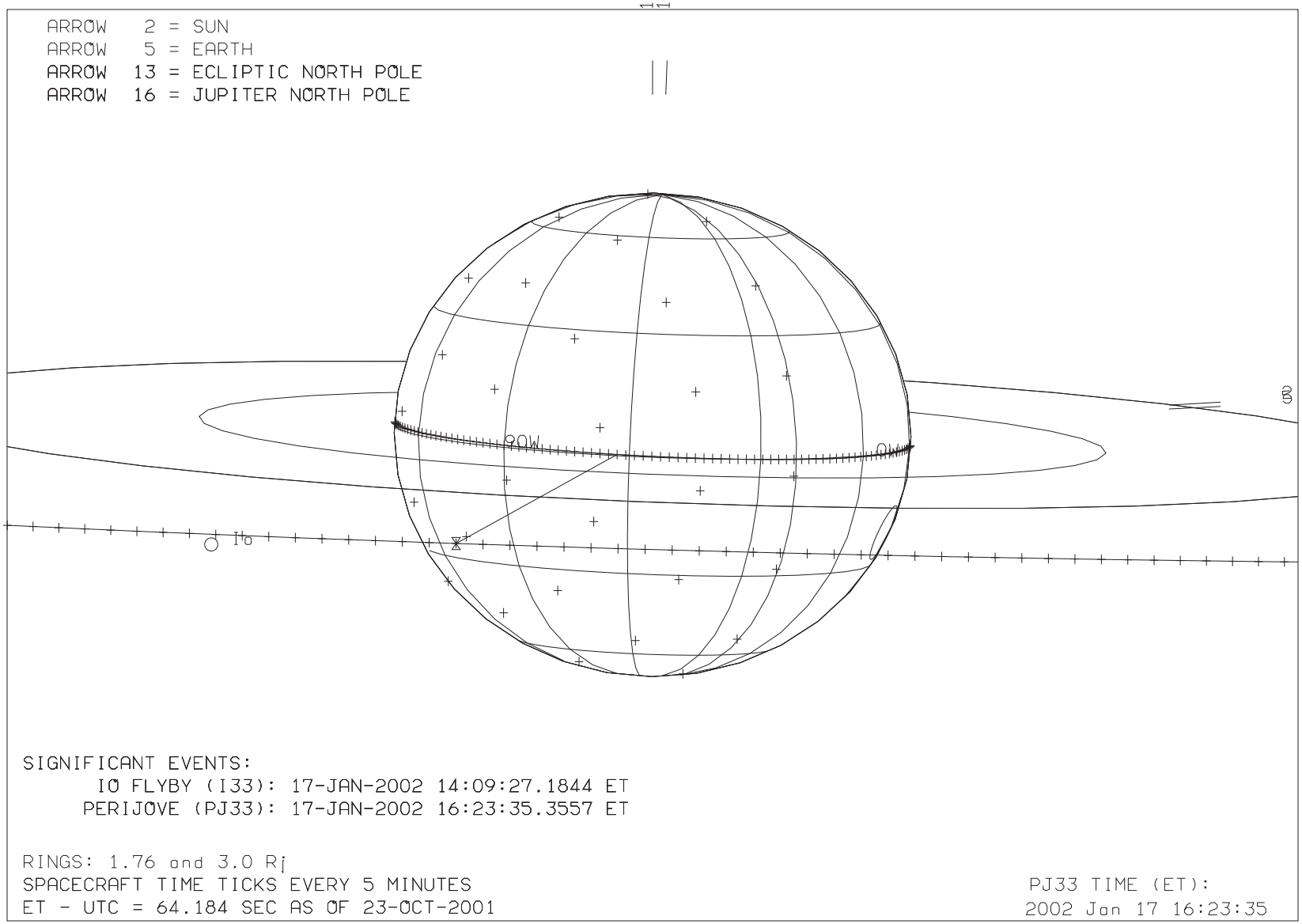
SIGNIFICANT EVENTS:
IO FLYBY (I33): 17-JAN-2002 14:09:27.1844 ET
PERIJOVE (PJ33): 17-JAN-2002 16:23:35.3557 ET

ET - UTC = 64.184 SEC AS OF 23-OCT-2001

IO FLYBY TIME (ET):
2002 Jan 17 14:09:27

NAV Oct. 23, 2001

JUPITER 33: GROUNDTRACK AT CLOSEST APPROACH



SIGNIFICANT EVENTS:
IO FLYBY (I33): 17-JAN-2002 14:09:27.1844 ET
PERIJOVE (PJ33): 17-JAN-2002 16:23:35.3557 ET

RINGS: 1.76 and 3.0 Rj
SPACECRAFT TIME TICKS EVERY 5 MINUTES
ET - UTC = 64.184 SEC AS OF 23-OCT-2001

PJ33 TIME (ET):
2002 Jan 17 16:23:35

NAV Oct. 23, 2001

Chapter 4 - NIMS Observation Summaries

Contents

Introduction to Chapter 4

This chapter summarizes the NIMS I33 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 I33 Sequence. The information in this summary is derived from the I33 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 I33 data. It is also derived from the I33 SEFs and PBTs. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry.

			Sequence:	I33AFE + I33ATB		Created: 03/12/02	Begin: 02-051/02:00:00 Finish: 02-021/13:00:00					
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1	2	15	01:59:59.866		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	1O0	4	0	6,385,573:76:0	
2	**2**	**15**	**02:00:00.000**	**20A3FA**	**37F1PR**	**Initial Condition**	**Radiator Flash Heater OFF (primary relay)**	**1O0**	**4**	**0**	**6,385,573:76:2**	
3	**2**	**15**	**02:00:00.000**	**20A3EW**	**37A**	**Initial Condition**	**NIMS Power ON**	**1O0**	**4**	**0**	**6,385,573:76:2**	
4	**2**	**15**	**02:00:00.000**	**20A3EX**	**37HR**	**Initial Condition**	**Replacement Heaters OFF**	**1O0**	**4**	**0**	**6,385,573:76:2**	
5	**2**	**15**	**02:00:00.000**	**20A3EY**	**37C1PR**	**Initial Condition**	**Optics Heater 1 OFF (primary relay)**	**1O0**	**4**	**0**	**6,385,573:76:2**	
6	**2**	**15**	**02:00:00.000**	**20A3EZ**	**37C2PR**	**Initial Condition**	**Optics Heater 2 OFF (primary relay)**	**1O0**	**4**	**0**	**6,385,573:76:2**	
7	**2**	**15**	**02:00:00.000**	**20A3FB**	**37F2PR**	**Initial Condition**	**Shield Flash Heater OFF (primary relay)**	**1O0**	**4**	**0**	**6,385,573:76:2**	
8	**2**	**15**	**02:00:00.000**	**20A3FD**	**40HRPR**	**Initial Condition**	**RCT Heater OFF (primary relay)**	**1O0**	**4**	**0**	**6,385,573:76:2**	
9	**2**	**15**	**02:00:00.000**	**20A3FE**	**40T1PR**	**Initial Condition**	**PCT Heater 1 OFF (primary relay)**	**1O0**	**4**	**0**	**6,385,573:76:2**	
10	**2**	**15**	**02:00:00.000**	**20A3FF**	**40T2R**	**Initial Condition**	**PCT Heater 2 OFF**	**1O0**	**4**	**0**	**6,385,573:76:2**	
11	2	15	02:01:56.533	488AA6A	6TMSED	NORM,EL6	Sci, Eng, and D/L Chan	1O0	4	0	6,385,575:69:0	
12	2	15	02:03:11.200	432JB431A6A	6RCDSL	DDSDSL,PLSDSL,EP	Record Deselect (DDS o	1O0	4	0	6,385,576:90:0	
13	2	15	02:03:11.866	432JB6A	6RTSL1		R/T Select of DDS and	1O0	4	0	6,385,577:00:0	
14	**2**	**15**	**02:03:11.866**	**432JB6B**	**6RTSL2**	**NIMNCG,AACSEL,RT**	**AACS SELECT**	**1O0**	**4**	**0**	**6,385,577:00:0**	
15	2	15	02:05:17.200	20OB6A	6HICON			1O0	4	0	6,385,579:06:0	
16	2	15	02:59:59.866	488AA6D	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,385,633:16:0	
17	2	15	03:11:05.866	432OT431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	1O0	4	0	6,385,644:14:0	
18	2	15	03:11:06.533	432OT6A	6RTSL1		R/T Select of DDS and	1O0	4	0	6,385,644:15:0	
19	2	15	03:45:58.533	488AA6E	6TMSED	FILL,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,385,678:59:0	
20	2	15	04:17:48.533	488AB6A	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,385,710:12:0	
21	2	15	08:43:00.533	488AB6B	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,385,972:38:0	
22	2	15	09:59:36.533	488AB6C	6TMSED	FILL,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,386,048:16:0	
23	2	15	10:31:48.533	488AC6A	6TMSED	FILL,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,386,080:02:0	
24	2	15	10:37:03.866	488AC6B	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,386,085:20:0	
25	2	15	14:37:08.533	488AC6C	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,386,322:60:0	
26	2	15	16:02:28.533	488AC6D	6TMSED	NORM,EH4	Sci, Eng, and D/L Chan	1O0	4	0	6,386,407:05:0	
27	2	15	16:25:56.533	488AC6E	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,386,430:24:0	
28	2	15	17:14:37.200	488AD6A	6TMSED	FILL,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,386,478:37:0	
29	2	15	17:48:43.800	488AD6B	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,386,512:13:0	
30	2	15	17:55:32.466	488AD6C	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,386,518:80:0	
31	2	16	03:46:01.800	488AE6A	6TMSED	FILL,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,387,102:80:0	
32	2	16	04:22:51.133	488AE6B	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,387,139:27:0	
33	2	16	09:35:00.466	480SB6A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	1O0	4	0	6,387,448:02:0	
34	2	16	09:36:20.466	480SB6B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	1O0	4	0	6,387,449:31:0	
35	2	16	10:04:04.466	488AF6A	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,476:70:0	
36	2	16	11:24:39.800	488AF6B	6TMSED	FILL,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,556:43:0	
37	2	16	11:57:08.466	488AF6C	6TMSED	FILL,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,387,588:54:0	
38	2	16	12:02:11.133	488AF6D	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,387,593:53:0	
39	2	16	12:19:59.800	20TO4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	6,387,611:18:0	
40	2	16	12:20:49.800	20TO4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	6,387,612:02:0	
41	2	16	12:20:55.800	20TO4E	7STAR	1,1235,23.9660,-	Star catalog update	1O0	4	0	6,387,612:11:0	
42	2	16	12:20:57.800	20TO4F	7STAR	2,9000,2.664,14.	Star catalog update	1O0	4	0	6,387,612:14:0	
43	2	16	12:20:59.800	20TO4G	7STAR	3,1235,23.9660,-	Star catalog update	1O0	4	0	6,387,612:17:0	
44	2	16	12:21:01.800	20TO4H	7STAR	4,9000,2.664,14.	Star catalog update	1O0	4	0	6,387,612:20:0	
45	2	16	12:21:03.800	20TO4I	7STAR	5,1235,23.9660,-	Star catalog update	1O0	4	0	6,387,612:23:0	
46	2	16	12:21:05.800	20TO4J	7STAR	6,9000,2.664,14.	Star catalog update	1O0	4	0	6,387,612:26:0	
47	2	16	12:25:02.466	432OE431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	1O0	4	0	6,387,616:17:0	
48	2	16	12:25:03.133	432OE6A	6RTSL1		R/T Select of DDS and	1O0	4	0	6,387,616:18:0	
49	2	16	12:37:40.466	488AF6E	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,628:62:0	
50	2	16	12:49:59.800	488AG6A	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,640:79:0	
51	2	16	12:58:27.133	488AG6B	6TMSED	FILL,EL5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,649:21:0	
52	2	16	13:03:16.466	488AG6C	6TMSED	FILL,EL2	Sci, Eng, and D/L Chan	1O0	4	0	6,387,654:00:0	
53	2	16	13:59:59.800	488AG6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	1O0	4	0	6,387,710:09:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	2	16	14:44:00.466	480SC6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	1O0	4	0	6,387,753:57:0	
55	2	16	14:50:40.466	480SC6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	1O0	4	0	6,387,760:20:0	
56	2	16	15:55:27.800	488AG6E	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	1O0	4	0	6,387,824:27:0	
57	2	16	16:00:20.466	488AH6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,387,829:11:0	
58	2	16	16:40:52.466	488AH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,869:19:0	
59	2	16	16:57:43.133		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	1O0	4	0	6,387,885:79:0	
60	2	16	16:57:43.133	465KA6A	6DMSC	P7,1	DMS Control Tape P/B 7.68kbps	1O0	4	0	6,387,885:79:0	
61	2	16	16:57:49.800		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	1O0	4	0	6,387,885:89:0	
62	2	16	16:57:51.200		DMS:	: *P_SLEW	P7, TRACK 1, FWD, TIC * 202.24 +/-	1O0	4	0	6,387,886:00:1	
63	2	16	16:57:51.200		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC 202.24 +/-	1O0	4	0	6,387,886:00:1	
64	2	16	17:14:40.466	488AH6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,902:58:0	
65	2	16	17:43:46.466	488AH6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,931:38:0	
66	2	16	18:07:59.800	488AH6E	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	1O0	4	0	6,387,955:34:0	
67	2	16	19:48:59.800	480SD6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	1O0	4	0	6,388,055:24:0	
68	2	16	19:55:39.800	480SD6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	1O0	4	0	6,388,061:78:0	
69	2	16	20:02:59.800	488AI6A	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,388,069:10:0	
70	2	16	20:52:31.133	465KA6B	6DMSC	RDY,1	DMS Control Tape stop	1O0	4	0	6,388,118:08:0	
71	2	16	20:52:31.133		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *3502.23 +/-	1O0	4	0	6,388,118:08:0	
72	2	16	20:52:32.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3502.29 +/-	1O0	4	0	6,388,118:09:8	
73	2	16	21:02:32.466	465KB6A	6DMST	2262	DMS Slew to TIC	1O0	4	0	6,388,128:00:0	
74	2	16	21:02:32.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3502.29 +/-	1O0	4	0	6,388,128:00:0	
75	2	16	21:02:32.466		DMS:	: *SLEW-TIC	P7, TRACK *2, *REV, TIC 3502.29 +/-	1O0	4	0	6,388,128:00:0	
76	2	16	21:02:33.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3502.41 +/-	1O0	4	0	6,388,128:02:1	
77	2	16	21:02:39.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3503.64 +/-	1O0	4	0	6,388,128:10:0	
78	2	16	21:02:40.333		DMS:	: *RUNUP	P7, TRACK *2, *REV, TIC *3503.70 +/-	1O0	4	0	6,388,128:11:8	
79	2	16	21:02:41.733		DMS:	: *AT_SPD	P7, TRACK 2, REV, TIC *3503.58 +/-	1O0	4	0	6,388,128:13:9	
80	2	16	22:30:49.266		DMS:	**: *RUNDOWN**	P7, TRACK 2, REV, TIC *2264.06 +/-	1O0	4	0	6,388,215:28:2	
81	2	16	22:30:50.466		DMS:	: *READY	RDY, TRACK 2, REV, TIC *2264.00 +/-	1O0	4	0	6,388,215:30:0	
82	2	16	22:51:44.466	465KC6A	6DMSC	RDY,1	DMS Control Tape stop	1O0	4	0	6,388,236:00:0	
83	2	16	22:51:44.466		DMS:	: READY	RDY, TRACK *1, *FWD, TIC 2264.00 +/-	1O0	4	0	6,388,236:00:0	
84	2	16	22:51:44.466	192GA4A	**7CONE**	**9.0,0.0**	Check S/P Position	1O0	4	0	6,388,236:00:0	
85	2	16	22:58:49.133	176GA6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	1O0	4	0	6,388,243:00:0	
86	2	16	23:01:03.800	176GA6B	6TMREC	**NRC**	NO RECORD Record Mode Change	1O0	4	0	6,388,245:20:0	
87	2	16	23:01:05.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2264.00 +/-	1O0	4	0	6,388,245:23:0	
88	2	16	23:01:05.800	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	1O0	4	0	6,388,245:23:0	
89	2	16	23:01:12.466		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2264.00 +/-	1O0	4	0	6,388,245:33:0	
90	2	16	23:01:13.866		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC *2264.12 +/-	1O0	4	0	6,388,245:35:1	
91	2	16	23:01:15.800		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2264.57 +/-	1O0	4	0	6,388,245:38:0	
92	2	16	23:01:27.133		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *2267.23 +/-	1O0	4	0	6,388,245:55:0	
93	2	16	23:01:27.133	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,388,245:55:0	
94	2	16	23:01:28.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2267.29 +/-	1O0	4	0	6,388,245:56:8	
95	2	16	23:03:52.466	192GA4B	**7CONE**	**9.0,90.0**	Check S/P Position	1O0	4	0	6,388,248:00:0	
96	2	16	23:19:01.800	165GB4A	7SCAN	NORM,248.529999,	Check S/P Position	1O0	4	0	6,388,262:90:0	
97	2	16	23:22:04.466	176GB6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	1O0	4	0	6,388,266:00:0	
98	2	16	23:22:55.800	117GB	**CSMOS**	GS	***** GROUP START CSMOS	1O0	4	0	6,388,266:77:0	
99	2	16	23:23:05.133	117GB105A106A4A	7STRP	0.0056,-0.0006,0	Slew =,0.11	1O0	4	0	6,388,267:00:0	
100	2	16	23:24:02.466	117GB105A106A4B	7STRP	-0.0063,0.0017,0	Slew =12.01	1O0	4	0	6,388,267:86:0	
101	2	16	23:24:15.800	117GB105A106A4C	7STRP	0.0056,-0.0006,0	Slew =,0.11	1O0	4	0	6,388,268:15:0	
102	2	16	23:25:13.133	117GB105A106A4D	7STRP	-0.0063,0.0017,0	Slew =12.01	1O0	4	0	6,388,269:10:0	
103	2	16	23:25:26.466	117GB105A106A4E	7STRP	0.0056,-0.0006,0	Slew =,0.11	1O0	4	0	6,388,269:30:0	
104	2	16	23:26:23.800	117GB105A106A4F	7STRP	-0.0063,0.0017,0	Slew =12.01	1O0	4	0	6,388,270:25:0	
105	2	16	23:26:37.133	117GB105A106A4G	7STRP	0.0056,-0.0006,0	Slew =,0.11	1O0	4	0	6,388,270:45:0	
106	2	16	23:27:34.466	117GB105A106A4H	7STRP	-0.0063,0.0017,0	Slew =12.01	1O0	4	0	6,388,271:40:0	
107	2	16	23:27:47.800	117GB105A106A4I	7STRP	0.0056,-0.0006,0	Slew =,0.11	1O0	4	0	6,388,271:60:0	
108	2	16	23:28:45.133	117GB105A106A4J	7STRP	-0.0063,0.0017,0	Slew =12.01	1O0	4	0	6,388,272:55:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	2	16	23:28:58.466	117GB105A106A4K	7STRP	0.0056,-0.0006,0	Slew =,0.11	1O0	4	0	6,388,272:75:0	
110	2	16	23:29:55.800	117GB105A106A4L	7STRP	-0.0063,0.0017,0	Slew =12.01	1O0	4	0	6,388,273:70:0	
111	2	16	23:30:09.133	117GB105A106A4M	7STRP	0.0056,-0.0006,0	Slew =,0.11	1O0	4	0	6,388,273:90:0	
112	2	16	23:31:06.466	117GB11A	**CSMOS**	GE	***** GROUP END CSMOS	1O0	4	0	6,388,274:85:0	
113	2	16	23:31:40.466	176GB6B	6TMREC	**NRC**	NO RECORD Record Mode Change	1O0	4	0	6,388,275:45:0	
114	2	16	23:31:42.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	1O0	4	0	6,388,275:48:0	
115	2	16	23:31:42.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2267.29 +/-	1O0	4	0	6,388,275:48:0	
116	2	16	23:31:49.133		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2267.29 +/-	1O0	4	0	6,388,275:58:0	
117	2	16	23:31:50.533		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC *2267.41 +/-	1O0	4	0	6,388,275:60:1	
118	2	16	23:31:52.466		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2267.86 +/-	1O0	4	0	6,388,275:63:0	
119	2	16	23:32:11.133	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,388,276:00:0	
120	2	16	23:32:11.133		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *2272.24 +/-	1O0	4	0	6,388,276:00:0	
121	2	16	23:32:12.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2272.30 +/-	1O0	4	0	6,388,276:01:8	
122	2	16	23:33:03.800	20WA4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	6,388,276:79:0	
123	2	17	01:02:59.800	480SE6A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	1O0	4	0	6,388,365:74:0	
124	2	17	01:04:19.800	480SE6B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	1O0	4	0	6,388,367:12:0	
125	2	17	04:07:48.400	488AJ6A	6TMSED	NORM,EH4	Sci, Eng, and D/L Chan	1O0	4	0	6,388,548:54:0	
126	2	17	04:48:20.400	488AJ6B	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,388,588:62:0	
127	2	17	05:01:04.400	488AJ6C	6TMSED	FILL,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,388,601:25:0	
128	2	17	05:27:54.400	488AJ6D	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan	1O0	4	0	6,388,627:74:0	
129	2	17	05:58:44.400	488AJ6E	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,388,658:28:0	
130	2	17	05:59:41.733	488AK6A	6TMSED	FILL,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,388,659:23:0	
131	2	17	06:26:00.400	480SF6A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	1O0	4	0	6,388,685:25:0	
132	2	17	06:27:20.400	480SF6B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	1O0	4	0	6,388,686:54:0	
133	2	17	06:28:47.733	488AK6B	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	1O0	4	0	6,388,688:03:0	
134	2	17	09:09:59.733	488AK6C	6TMSED	NORM,EL5	Sci, Eng, and D/L Chan	1O0	4	0	6,388,847:42:0	
135	2	17	09:59:59.733	488AK6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,388,896:83:0	
136	2	17	10:15:36.400	488AK6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,388,912:32:0	
137	2	17	10:57:24.400	488AL6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,388,953:63:0	
138	2	17	12:09:00.400	480SG6A	6MROH	44,23E8,0,A2	read from LLM2A44,23E8,0,A2	1O0	4	0	6,389,024:46:0	
139	2	17	12:15:40.400	480SG6B	6MROH	45,23E8,0,B2	read from LLM2B45,23E8,0,B2	1O0	4	0	6,389,031:09:0	
140	2	17	12:49:57.066	411JA6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	1O0	4	0	6,389,065:00:0	
141	2	17	12:49:57.066		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2272.30 +/-	1O0	4	0	6,389,065:00:0	
142	2	17	12:50:03.733		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2272.30 +/-	1O0	4	0	6,389,065:10:0	
143	2	17	12:50:05.133		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2272.42 +/-	1O0	4	0	6,389,065:12:1	
144	2	17	12:50:05.133		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 2272.42 +/-	1O0	4	0	6,389,065:12:1	
145	2	17	12:50:07.066	411JA6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	1O0	4	0	6,389,065:15:0	
146	2	17	12:52:08.400	411JA6C	6TMREC	**NRC**	NO RECORD Record Mode Change	1O0	4	0	6,389,067:15:0	
147	2	17	12:52:09.066		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *2301.46 +/-	1O0	4	0	6,389,067:16:0	
148	2	17	12:52:09.066	411JA6D	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,389,067:16:0	
149	2	17	12:52:10.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2301.52 +/-	1O0	4	0	6,389,067:17:8	
150	2	17	12:59:59.733	481UA4A	7VECT	BB1	Inert vect update UTC	1O0	4	0	6,389,074:85:0	
151	2	17	13:03:05.066	165GD4A	7SCAN	NORM,249.743999,	Check S/P Position	1O0	4	0	6,389,077:90:0	
152	2	17	13:06:07.733	176GD6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	1O0	4	0	6,389,081:00:0	
153	2	17	13:06:59.066	117GD	**CSMOS**	GS	***** GROUP START CSMOS	1O0	4	0	6,389,081:77:0	
154	2	17	13:07:08.400	117GD105A106A4A	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,082:00:0	
155	2	17	13:08:24.400	117GD105A106A4B	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,083:23:0	
156	2	17	13:08:40.400	117GD105A106A4C	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,083:47:0	
157	2	17	13:09:56.400	117GD105A106A4D	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,084:70:0	
158	2	17	13:10:12.400	117GD105A106A4E	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,085:03:0	
159	2	17	13:11:28.400	117GD105A106A4F	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,086:26:0	
160	2	17	13:11:44.400	117GD105A106A4G	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,086:50:0	
161	2	17	13:13:00.400	117GD105A106A4H	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,087:73:0	
162	2	17	13:13:16.400	117GD105A106A4I	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,088:06:0	
163	2	17	13:14:32.400	117GD105A106A4J	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,089:29:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	2	17	13:14:48.400	117GD105A106A4K	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,089	53:0
165	2	17	13:16:04.400	117GD105A106A4L	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,090	76:0
166	2	17	13:16:20.400	117GD105A106A4M	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,091	09:0
167	2	17	13:17:36.400	117GD105A106A4N	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,092	32:0
168	2	17	13:17:52.400	117GD105A106A4O	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,092	56:0
169	2	17	13:18:42.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	1O0	4	0	6,389,093	40:0
170	2	17	13:18:42.400		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2301.52 +/-	1O0	4	0	6,389,093	40:0
171	2	17	13:18:49.066		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2301.52 +/-	1O0	4	0	6,389,093	50:0
172	2	17	13:18:50.466		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC *2301.64 +/-	1O0	4	0	6,389,093	52:1
173	2	17	13:19:07.733		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2305.69 +/-	1O0	4	0	6,389,093	78:0
174	2	17	13:19:08.400	117GD105A106A4P	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,093	79:0
175	2	17	13:19:16.400	432OC431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	1O0	4	0	6,389,094	00:0
176	2	17	13:19:17.066	432OC6A	6RTSL1		R/T Select of DDS and	1O0	4	0	6,389,094	01:0
177	2	17	13:19:24.400	117GD105A106A4Q	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,094	12:0
178	2	17	13:19:30.400		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *2311.00 +/-	1O0	4	0	6,389,094	21:0
179	2	17	13:19:30.400	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,389,094	21:0
180	2	17	13:19:31.600		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2311.06 +/-	1O0	4	0	6,389,094	22:8
181	2	17	13:20:40.400	117GD105A106A4R	7STRP	0.0002,-0.012003	Slew =12.01	1O0	4	0	6,389,095	35:0
182	2	17	13:20:56.400	117GD105A106A4S	7STRP	0.002,0.010402,0	Slew =,0.34	1O0	4	0	6,389,095	59:0
183	2	17	13:22:12.400	117GD11A	**CSMOS**	GE	***** GROUP END CSMOS	1O0	4	0	6,389,096	82:0
184	2	17	13:22:48.400	176GD6B	6TMREC	**NRC**	NO RECORD Record Mode Change	1O0	4	0	6,389,097	45:0
185	2	17	13:22:50.400		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2311.06 +/-	1O0	4	0	6,389,097	48:0
186	2	17	13:22:50.400	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	1O0	4	0	6,389,097	48:0
187	2	17	13:22:57.066		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2311.06 +/-	1O0	4	0	6,389,097	58:0
188	2	17	13:22:58.466		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC *2311.18 +/-	1O0	4	0	6,389,097	60:1
189	2	17	13:23:00.400		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2311.64 +/-	1O0	4	0	6,389,097	63:0
190	2	17	13:23:13.066		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *2314.61 +/-	1O0	4	0	6,389,097	82:0
191	2	17	13:23:13.066	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,389,097	82:0
192	2	17	13:23:14.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2314.67 +/-	1O0	4	0	6,389,097	83:8
193	2	17	13:26:23.733	488AL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,389,101	04:0
194	2	17	13:29:22.400	165GE4A	7SCAN	NORM,246.132,-20	Check S/P Position	1O0	4	0	6,389,103	90:0
195	2	17	13:29:23.066	176GE6A	6TMREC	**BPT**	7.68 KBPS PPR BURST TO TAPE Record Mode C	1O0	4	0	6,389,104	00:0
196	2	17	13:30:14.400	117GE	**CSMOS**	GS	***** GROUP START CSMOS	1O0	4	0	6,389,104	77:0
197	2	17	13:30:23.733	117GE105A106A4A	7STRP	-0.026906,-0.011	Slew =,0.15	1O0	4	0	6,389,105	00:0
198	2	17	13:33:25.733	117GE11A	**CSMOS**	GE	***** GROUP END CSMOS	1O0	4	0	6,389,108	00:0
199	2	17	13:33:55.733	176GE6B	6TMREC	**NRC**	NO RECORD Record Mode Change	1O0	4	0	6,389,108	45:0
200	2	17	13:33:57.733	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	1O0	4	0	6,389,108	48:0
201	2	17	13:33:57.733		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2314.67 +/-	1O0	4	0	6,389,108	48:0
202	2	17	13:34:04.400		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2314.67 +/-	1O0	4	0	6,389,108	58:0
203	2	17	13:34:05.800		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC *2314.79 +/-	1O0	4	0	6,389,108	60:1
204	2	17	13:34:07.733		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2315.24 +/-	1O0	4	0	6,389,108	63:0
205	2	17	13:34:21.733	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,389,108	84:0
206	2	17	13:34:21.733		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *2318.52 +/-	1O0	4	0	6,389,108	84:0
207	2	17	13:34:22.933		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2318.58 +/-	1O0	4	0	6,389,108	85:8
208	2	17	13:34:25.733	165GF4A	7SCAN	NORM,249.054998,	Check S/P Position	1O0	4	0	6,389,108	90:0
209	2	17	13:36:17.066	175TA422A6A	6DMSC	R7,1	DMS Control Tape runup 7.68kbp	1O0	4	0	6,389,110	75:0
210	2	17	13:36:17.066		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2318.58 +/-	1O0	4	0	6,389,110	75:0
211	2	17	13:36:18.400	117GF	**CSMOS**	GS	***** GROUP START CSMOS	1O0	4	0	6,389,110	77:0
212	2	17	13:36:23.733		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2318.58 +/-	1O0	4	0	6,389,110	85:0
213	2	17	13:36:25.066	282NA431A6A	6RCSEL	DDSNCG,PLSSEL,EP	Record Select (DDS onl	1O0	4	0	6,389,110	87:0
214	2	17	13:36:25.066	175TA176A6A	6TMREC	**LPW**	7.68 KBPS LOW RATE SCI PWS RECORD Record	1O0	4	0	6,389,110	87:0
215	2	17	13:36:25.133		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 2318.70 +/-	1O0	4	0	6,389,110	87:1
216	2	17	13:36:25.133		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2318.70 +/-	1O0	4	0	6,389,110	87:1
217	2	17	13:36:27.733	431OA6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS onl	1O0	4	0	6,389,111	00:0
218	2	17	13:36:27.733	117GF105A106A4A	7STRP	0.014101,-0.0015	Slew =,0.31	1O0	4	0	6,389,111	00:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	2	17	13:37:17.733	117GF105A106A4B	7STRP	-0.009,0.002,0,0	Slew =12.01	1O0	4	0	6,389,111:75:0	
220	2	17	13:37:29.066	117GF105A106A4C	7STRP	0.014101,-0.0015	Slew =,0.31	1O0	4	0	6,389,112:01:0	
221	2	17	13:38:19.066	117GF105A106A4D	7STRP	-0.009,0.002,0,0	Slew =12.01	1O0	4	0	6,389,112:76:0	
222	2	17	13:38:30.400	117GF105A106A4E	7STRP	0.014101,-0.0015	Slew =,0.31	1O0	4	0	6,389,113:02:0	
223	2	17	13:39:20.400	117GF105A106A4F	7STRP	-0.009,0.002,0,0	Slew =12.01	1O0	4	0	6,389,113:77:0	
224	2	17	13:39:25.733	428JA6A	6RCCLR			1O0	4	0	6,389,113:85:0	
225	2	17	13:39:26.400	428JA6B	6RCSET	12		1O0	4	0	6,389,113:86:0	
226	2	17	13:39:31.733	117GF105A106A4G	7STRP	0.014101,-0.0015	Slew =,0.31	1O0	4	0	6,389,114:03:0	
227	2	17	13:40:21.733	117GF105A106A4H	7STRP	-0.009,0.002,0,0	Slew =12.01	1O0	4	0	6,389,114:78:0	
228	2	17	13:40:33.066	117GF105A106A4I	7STRP	0.014101,-0.0015	Slew =,0.31	1O0	4	0	6,389,115:04:0	
229	**2**	**17**	**13:41:10.000**	**I33_SC_SAFE01**		**I33_SC_SAFE01**					: :	
230	**2**	**17**	**13:47:39.000**	**33NNMARDUK01-**		**-----START------**					: :	
231	**2**	**17**	**13:50:39.166**	**33NNMARDUK01-**		**-----STOP-------**					: :	
232	**2**	**17**	**13:51:33.000**	**33INMARDUK01-**		**-----START------**					: :	
233	**2**	**17**	**14:02:42.433**	**33INMARDUK01-**		**-----STOP-------**					: :	
234	**2**	**17**	**14:15:33.633**	**33NNKANEHE01-**		**-----START------**					: :	
235	**2**	**17**	**14:17:47.833**	**33NNKANEHE01-**		**-----STOP-------**					: :	
236	**2**	**17**	**14:17:54.300**	**33INKANEHE01-**		**-----START------**					: :	
237	**2**	**17**	**14:24:15.000**	**33INKANEHE01-**		**-----STOP-------**					: :	
238	**2**	**17**	**14:34:26.333**	**33NNMOSAIC01-**		**-----START------**					: :	
239	**2**	**17**	**14:36:00.500**	**33NNMOSAIC01-**		**-----STOP-------**					: :	
240	**2**	**17**	**14:36:33.000**	**33INMOSAIC01-**		**-----START------**					: :	
241	**2**	**17**	**14:53:28.300**	**33INMOSAIC01-**		**-----STOP-------**					: :	
242	**2**	**17**	**15:15:37.000**	**33NNMOSAIC02-**		**-----START------**					: :	
243	**2**	**17**	**15:17:27.800**	**33NNMOSAIC02-**		**-----STOP-------**					: :	
244	**2**	**17**	**15:17:33.000**	**33INMOSAIC02-**		**-----START------**					: :	
245	**2**	**17**	**15:36:51.100**	**33INMOSAIC02-**		**-----STOP-------**					: :	
246	**2**	**17**	**15:37:51.633**	**33NNREGION01-**		**-----START------**					: :	
247	**2**	**17**	**15:38:47.000**	**33INREGION01-**		**-----START------**					: :	
248	**2**	**17**	**15:40:51.833**	**33NNREGION01-**		**-----STOP-------**					: :	
249	**2**	**17**	**16:30:39.100**	**33INREGION01-**		**-----STOP-------**					: :	
250	**2**	**17**	**19:06:12.300**	**33NNGLOBAL01-**		**-----START------**					: :	
251	**2**	**17**	**19:07:04.000**	**33NNGLOBAL01-**		**-----STOP-------**					: :	
252	**2**	**17**	**19:07:04.300**	**33INGLOBAL01-**		**-----START------**					: :	
253	**2**	**17**	**20:06:47.000**	**33INGLOBAL01-**		**-----STOP-------**					: :	
254	**2**	**18**	**00:06:30.300**	**33NNGLOBAL02-**		**-----START------**					: :	
255	**2**	**18**	**00:08:17.800**	**33NNGLOBAL02-**		**-----STOP-------**					: :	
256	**2**	**18**	**00:09:04.333**	**33INGLOBAL02-**		**-----START------**					: :	
257	**2**	**18**	**00:27:49.700**	**33INGLOBAL02-**		**-----STOP-------**					: :	
258	2	18	03:59:59.733		DMS:	: READY	RDY, TRACK 2, REV, TIC 2387.00 +/-				6,389,965:04:0	
259	**2**	**18**	**04:00:00.000**	**20A3FB**	**37F2PR**	**CMD,37F2PR,20A3F**	**Shield Flash Heater OFF (primary relay)**				**6,389,965:04:4**	
260	**2**	**18**	**04:00:00.000**	**20A3EW**	**37AR**	**CMD,37AR,20A3EW,**	**NIMS Power OFF**				**6,389,965:04:4**	
261	**2**	**18**	**04:00:00.000**	**20A3FF**	**40T2R**	**CMD,40T2R,20A3FF**	**PCT Heater 2 OFF**				**6,389,965:04:4**	
262	**2**	**18**	**04:00:00.000**	**20A3FE**	**40T1PR**	**CMD,40T1PR,20A3F**	**PCT Heater 1 OFF (primary relay)**				**6,389,965:04:4**	
263	**2**	**18**	**04:00:00.000**	**20A3FA**	**37F1PR**	**CMD,37F1PR,20A3F**	**Radiator Flash Heater OFF (primary relay)**				**6,389,965:04:4**	
264	**2**	**18**	**04:00:00.000**	**20A3EZ**	**37C2PR**	**CMD,37C2PR,20A3E**	**Optics Heater 2 OFF (primary relay)**				**6,389,965:04:4**	
265	**2**	**18**	**04:00:00.000**	**20A3EY**	**37C1PR**	**CMD,37C1PR,20A3E**	**Optics Heater 1 OFF (primary relay)**				**6,389,965:04:4**	
266	**2**	**18**	**04:00:00.000**	**20A3FD**	**40HRPR**	**CMD,40HRPR,20A3F**	**RCT Heater OFF (primary relay)**				**6,389,965:04:4**	
267	**2**	**18**	**04:00:00.000**	**20A3EX**	**37H**	**CMD,37H,20A3EX,,**	**Replacement Heaters ON**				**6,389,965:04:4**	
268	2	18	04:00:20.400	20QR6E	6TMSED	NORM,EH6	Sci, Eng, and D/L Chan				6,389,965:35:0	
269	2	18	04:03:03.733	282NB431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o				6,389,968:07:0	
270	2	18	04:03:52.400	282NB432A431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o				6,389,968:80:0	
271	2	18	04:03:53.066	282NB432A6A	6RTSL1		R/T Select of DDS and				6,389,968:81:0	
272	**2**	**18**	**04:19:11.733**	**20ZU3Q**	**37HR**	**1**	**Replacement Heaters OFF**				**6,389,984:03:0**	
273	**2**	**18**	**04:19:13.733**	**20ZU3S**	**37HR**	**2**	**Replacement Heaters OFF**				**6,389,984:06:0**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	**2**	**18**	**04:19:39.733**	**20ZU3R**	**37A**	**1**	**NIMS Power ON**	**260**	**4**	**0**	**6,389,984:45:0**	
275	**2**	**18**	**04:19:41.733**	**20ZU3T**	**37A**	**2**	**NIMS Power ON**	**260**	**4**	**0**	**6,389,984:48:0**	
276	**2**	**18**	**04:21:41.066**	**20ZU4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**6,389,986:45:0**	
277	**2**	**18**	**04:25:34.400**	**20DZ5A**	**37PL**		**Program Load (halts microprocessor & unwri**		**4**	**0**	**6,389,990:31:0**	
278	**2**	**18**	**04:25:37.733**	**20DZ5B**	**37MRL**		**Memory Realocate (software operates from R**		**4**	**0**	**6,389,990:36:0**	
279	**2**	**18**	**04:25:41.066**	**20DZ6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**		**4**	**0**	**6,389,990:41:0**	
280	**2**	**18**	**04:25:51.066**	**20DZ6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**		**4**	**0**	**6,389,990:56:0**	
281	**2**	**18**	**04:26:01.066**	**20DZ5C**	**37IRT**		**Instrument Reset (goes into POR state)**		**4**	**0**	**6,389,990:71:0**	
282	**2**	**18**	**04:26:04.400**	**20DZ5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**6,389,990:76:0**	
283	**2**	**18**	**04:27:08.400**	**20DZ4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**6,389,991:81:0**	
284	2	18	05:05:24.400	20IF6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2R0	4	0	6,390,029:67:0	
285	2	18	05:17:56.400	165JY4A	7SCAN	NORM,53.967,20.8	Check S/P Position	2R0	4	0	6,390,042:12:0	
286	2	18	05:21:49.733		DMS:	: *E4-DELAY	RDY, TRACK *1, *FWD, TIC 2387.00 +/-	2R0	4	0	6,390,045:89:0	
287	2	18	05:21:49.733	175JY422A6A	6DMSC	R806,1	DMS Control	2R0	4	0	6,390,045:89:0	
288	2	18	05:21:56.400		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 2387.00 +/-	2R0	4	0	6,390,046:08:0	
289	2	18	05:21:58.400	165JY4B	7VECT		Inert vect update UTC	2R0	4	0	6,390,046:11:0	
290	2	18	05:22:01.066	175JY176A6A	6TMREC	**IM8**	806.4 KBPS IMAGE RECORD Record Mode Chang	2R0	4	0	6,390,046:15:0	
291	2	18	05:22:01.666		DMS:	: *AT_SPD	R806, TRACK 1, FWD, TIC 2453.00 +/-	2R0	4	0	6,390,046:15:9	
292	2	18	05:22:01.666		DMS:	**: *RECORD**	R806, TRACK 1, FWD, TIC *2453.00 +/-	2R0	4	0	6,390,046:15:9	
293	2	18	05:22:04.400	175JY422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0	6,390,046:20:0	
294	2	18	05:22:04.400		DMS:	**: *RUNDOWN**	R806, TRACK 1, FWD, TIC *2520.27 +/-	2R0	4	0	6,390,046:20:0	
295	2	18	05:22:07.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2531.77 +/-	2R0	4	0	6,390,046:24:1	
296	2	18	05:40:03.733	20WC4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2R0	4	0	6,390,064:01:0	
297	2	18	07:12:00.400	480SJ6A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	2R0	4	0	6,390,154:86:0	
298	2	18	07:13:20.400	480SJ6B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	2R0	4	0	6,390,156:24:0	
299	2	18	07:32:25.066	20MD6A	6CKSUM	MAG,4040,46F0		2R0	4	0	6,390,175:12:0	
300	2	18	07:33:21.733	480MA6	6MROH	12	read from LLM1A12,2282,0,A1	2R0	4	0	6,390,176:06:0	
301	2	18	07:33:21.733	480MA6A	6MROH	12,2282,0,A10	read from LLM1A12,2282,0,A1	2R0	4	0	6,390,176:06:0	
302	2	18	07:53:56.400	488AP6A	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,390,196:38:0	
303	2	18	11:42:12.400	488AP6B	6TMSED	NORM,EH4	Sci, Eng, and D/L Chan	2R0	4	0	6,390,422:16:0	
304	2	18	11:59:59.733	20TS4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2R0	4	0	6,390,439:70:0	
305	2	18	12:00:49.733	20TS4B	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	6,390,440:54:0	
306	2	18	12:00:57.733	20TS4F	7STAR	1,1235,23.9660,-	Star catalog update	2R0	4	0	6,390,440:66:0	
307	2	18	12:00:59.733	20TS4G	7STAR	2,333,138.16	Star catalog update	2R0	4	0	6,390,440:69:0	
308	2	18	12:01:01.733	20TS4H	7STAR	3,167,345.57	Star catalog update	2R0	4	0	6,390,440:72:0	
309	2	18	12:01:03.733	20TS4I	7STAR	4,0,0.0,0.0	Star catalog update	2R0	4	0	6,390,440:75:0	
310	2	18	12:01:05.733	20TS4J	7STAR	5,0,0.0,0.0	Star catalog update	2R0	4	0	6,390,440:78:0	
311	2	18	12:01:07.733	20TS4K	7STAR	6,0,0.0,0.0	Star catalog update	2R0	4	0	6,390,440:81:0	
312	2	18	12:05:02.400	432OZ431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R0	4	0	6,390,444:69:0	
313	2	18	12:05:03.066	432OZ6A	6RTSL1		R/T Select of DDS and	2R0	4	0	6,390,444:70:0	
314	2	18	12:12:04.400	488AP6C	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,390,451:65:0	
315	2	18	12:45:00.400	480SK6A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	2R0	4	0	6,390,484:26:0	
316	2	18	12:46:20.400	480SK6B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	2R0	4	0	6,390,485:55:0	
317	2	18	13:09:39.733	488AP6D	6TMSED	FILL,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,390,508:61:0	
318	2	18	13:51:11.000	20IG6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2R0	4	0	6,390,549:67:0	
319	2	18	13:53:45.666	488AP6E	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,390,552:26:0	
320	2	18	14:02:42.333	165JZ4A	7SCAN	NORM,76.304999,2	Check S/P Position	2R0	4	0	6,390,561:12:0	
321	2	18	14:06:35.666		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2531.77 +/-	2R0	4	0	6,390,564:89:0	
322	2	18	14:06:35.666	175JZ422A6A	6DMSC	R806,1	DMS Control	2R0	4	0	6,390,564:89:0	
323	2	18	14:06:42.333		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 2531.77 +/-	2R0	4	0	6,390,565:08:0	
324	2	18	14:06:44.333	165JZ4B	7VECT		Inert vect update UTC	2R0	4	0	6,390,565:11:0	
325	2	18	14:06:47.000	175JZ176A6A	6TMREC	**IM8**	806.4 KBPS IMAGE RECORD Record Mode Chang	2R0	4	0	6,390,565:15:0	
326	2	18	14:06:47.600		DMS:	: *AT_SPD	R806, TRACK 1, FWD, TIC 2597.77 +/-	2R0	4	0	6,390,565:15:9	
327	2	18	14:06:47.600		DMS:	**: *RECORD**	R806, TRACK 1, FWD, TIC *2597.77 +/-	2R0	4	0	6,390,565:15:9	
328	2	18	14:06:50.333		DMS:	**: *RUNDOWN**	R806, TRACK 1, FWD, TIC *2665.03 +/-	2R0	4	0	6,390,565:20:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
329	2	18	14:06:50.333	175JZ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0	6,390,565:20:0
330	2	18	14:06:53.066		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2676.53 +/-	2R0	4	0	6,390,565:24:1
331	2	18	15:00:57.000	20IH6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2R0	4	0	6,390,618:67:0
332	2	18	15:12:19.666	165IN4A	7SCAN	NORM,87.042999,2	Check S/P Position	2R0	4	0	6,390,629:90:0
333	2	18	15:13:24.333	488AQ6A	6TMSED	NORM,EH4	Sci, Eng, and D/L Chan	2R0	4	0	6,390,631:05:0
334	2	18	15:16:15.000	118IN	**SMOS**	GS		2R0	4	0	6,390,633:79:0
335	2	18	15:16:21.666	165IN4B	7VECT		Inert vect update UTC	2R0	4	0	6,390,633:89:0
336	2	18	15:16:25.000	118IN110A111A4A	7STRP	-0.002,0.0,26,0,	Slew =,1.01	2R0	4	0	6,390,634:03:0
337	2	18	15:16:39.000	175IN422A6A	6DMSC	R806,1	DMS Control	2R0	4	0	6,390,634:24:0
338	2	18	15:16:39.000		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2676.53 +/-	2R0	4	0	6,390,634:24:0
339	2	18	15:16:45.666		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 2676.53 +/-	2R0	4	0	6,390,634:34:0
340	2	18	15:16:50.333	175IN176A6A	6TMREC	**IM8**	806.4 KBPS IMAGE RECORD Record Mode Chang	2R0	4	0	6,390,634:41:0
341	2	18	15:16:50.933		DMS:	: *AT_SPD	R806, TRACK 1, FWD, TIC 2742.53 +/- 1	2R0	4	0	6,390,634:41:9
342	2	18	15:16:50.933		DMS:	**: *RECORD**	R806, TRACK 1, FWD, TIC *2742.53 +/-	2R0	4	0	6,390,634:41:9
343	2	18	15:16:51.000	118IN11A	**SMOS**	GE		2R0	4	0	6,390,634:42:0
344	2	18	15:16:54.333	175IN422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0	6,390,634:47:0
345	2	18	15:16:54.333		DMS:	**: *RUNDOWN**	R806, TRACK 1, FWD, TIC *2826.20 +/- 1	2R0	4	0	6,390,634:47:0
346	2	18	15:16:57.066		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2837.70 +/- 1	2R0	4	0	6,390,634:51:1
347	2	18	15:30:04.333	20WD4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2R0	4	0	6,390,647:49:0
348	2	18	16:55:48.333	488AQ6B	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,390,732:30:0
349	2	18	16:59:39.666	488AQ6C	6TMSED	FILL,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,390,736:13:0
350	2	18	17:38:00.333	480SL6A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	2R0	4	0	6,390,774:06:0
351	2	18	17:39:20.333	480SL6B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	2R0	4	0	6,390,775:35:0
352	2	18	17:43:45.666	488AQ6D	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,390,779:69:0
353	2	18	17:55:04.333	20UP4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2R0	4	0	6,390,790:86:0
354	2	18	17:55:54.333	20UP4B	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	6,390,791:70:0
355	2	18	18:27:00.333	20RM4I	**7MODE**	**INT**	AACS INERTIAL MODE	2R0	4	0	6,390,822:48:0
356	2	18	18:42:00.333	20RM4K	7SLEW	INIT,POS,17.45	Stator movement	2R0	4	0	6,390,837:33:0
357	2	18	18:54:00.333	20RM4L	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	6,390,849:21:0
358	2	18	19:01:00.333	20RM4M	7SLEW	INIT,NEG,17.45	Stator movement	2R0	4	0	6,390,856:14:0
359	2	18	19:13:00.333	20RM4N	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	6,390,868:02:0
360	2	18	19:25:00.333	20RM4AH	**7MODE**	**CRU**	AACS CRUISE MODE	2R0	4	0	6,390,879:81:0
361	2	18	22:58:00.333	480SM6A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	2R0	4	0	6,391,090:50:0
362	2	18	22:59:20.333	480SM6B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	2R0	4	0	6,391,091:79:0
363	2	19	02:19:39.666	488AR6A	6TMSED	FILL,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,391,289:90:0
364	2	19	02:58:45.666	488AR6B	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,391,328:60:0
365	2	19	11:33:40.333	488AS6A	6TMSED	NORM,EH4	Sci, Eng, and D/L Chan	2R0	4	0	6,391,837:83:0
366	2	19	12:03:32.333	488AS6B	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	2R0	4	0	6,391,867:41:0
367	2	19	13:00:00.333	488AS6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2R0	4	0	6,391,923:27:0
368	2	19	13:04:39.666	488AS6D	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	2R0	4	0	6,391,927:82:0
369	2	19	13:43:45.666	488AS6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2R0	4	0	6,391,966:52:0
370	2	19	15:07:00.333	488AT6A	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	2R0	4	0	6,392,048:82:0
371	2	19	16:53:55.000	488AT6B	6TMSED	FILL,AH4	Sci, Eng, and D/L Chan	2R0	4	0	6,392,154:58:0
372	2	19	16:55:48.333	488AT6C	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	2R0	4	0	6,392,156:46:0
373	2	19	17:38:45.666	488AT6D	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2R0	4	0	6,392,198:90:0
374	**2**	**19**	**23:37:02.166**	**33NNGLOBAL01-**		**-----START------**		**2R0**	**4**	**0**	**: :**
375	**2**	**19**	**23:37:06.266**	**20DH5A**	**37PL**		**Program Load (halts microprocessor & unwri**		**4**	**0**	**6,392,553:36:0**
376	**2**	**19**	**23:37:09.600**	**20DH5B**	**37MRL**		**Memory Realocate (software operates from R**		**4**	**0**	**6,392,553:41:0**
377	**2**	**19**	**23:37:12.933**	**20DH6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**		**4**	**0**	**6,392,553:46:0**
378	**2**	**19**	**23:37:22.933**	**20DH6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**		**4**	**0**	**6,392,553:61:0**
379	**2**	**19**	**23:37:32.933**	**20DH5C**	**37IRT**		**Instrument Reset (goes into POR state)**		**4**	**0**	**6,392,553:76:0**
380	**2**	**19**	**23:37:36.266**	**20DH5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**6,392,553:81:0**
381	**2**	**19**	**23:38:36.933**	**20DH4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**6,392,554:81:0**
382	**2**	**19**	**23:40:02.366**	**33NNGLOBAL01-**		**-----STOP-------**		**2R0**	**4**	**0**	**: :**
383	**2**	**19**	**23:40:40.166**	**33JNGLOBAL01-**		**-----START------**		**2R0**	**4**	**0**	**: :**

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	**2**	**19**	**23:40:40.266**	**127DH4A**	**37IOP**	**7,0**	**Fixed Map, Grating Start Position =00**	**2R7**	**4**	**0**	**6,392,556:84:0**	
385	2	19	23:40:40.266	127DH	NIMSTAB	GS	%%%%% GROUP START TAB	2R7	4	0	6,392,556:84:0	
386	**2**	**19**	**23:40:40.933**	**127DH4B**	**37ETB**	**07,C7,18,3C,D7,0**	**Loads wavelength edit table**	**2R7**	**4**	**0**	**6,392,556:85:0**	
387	2	19	23:40:48.933	127DH11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R7	4	0	6,392,557:06:0	
388	2	19	23:42:45.600	165DH4A	**7SCAN**	**NORM,107.125,22.**	**Check S/P Position**	2R7	4	0	6,392,558:90:0	
389	2	19	23:46:39.600	117DH	**CSMOS**	GS	***** GROUP START CSMOS	2R7	4	0	6,392,562:77:0	
390	2	19	23:46:40.266	175DH422A6A	6DMSC	R7,1	DMS Control Tape runup 7.68kbp	2R7	4	0	6,392,562:78:0	
391	2	19	23:46:40.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2837.70 +/- 1	2R7	4	0	6,392,562:78:0	
392	2	19	23:46:46.933		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2837.70 +/- 1	2R7	4	0	6,392,562:88:0	
393	2	19	23:46:48.266	175DH176A6A	6TMREC	**LPU**	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	2R7	4	0	6,392,562:90:0	
394	2	19	23:46:48.333		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 2837.82 +/- 1	2R7	4	0	6,392,562:90:1	
395	2	19	23:46:48.333		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2837.82 +/- 1	2R7	4	0	6,392,562:90:1	
396	2	19	23:46:48.933	117DH105A106A4A	7STRP	0.058567,0.0,0,0	Slew =,0.76	2R7	4	0	6,392,563:00:0	
397	**2**	**19**	**23:46:52.933**	**33JNGLOBAL01-**	**NIMPBK**	**301DH**	**JUPITER GLOBAL OBSERVATION**	**2R7**	**4**	**0**	**: :**	
398	2	19	23:48:45.600	117DH105A106A4B	7STRP	-0.057965,-0.007	Slew =12.01	2R7	4	0	6,392,564:84:0	
399	2	19	23:49:02.933	117DH105A106A4C	7STRP	0.058567,0.0,0,0	Slew =,0.76	2R7	4	0	6,392,565:19:0	
400	2	19	23:50:59.600	117DH105A106B4A	7STRP	-0.057965,-0.007	Slew =12.01	2R7	4	0	6,392,567:12:0	
401	2	19	23:51:14.933	117DH105A106B4B	7STRP	0.058567,0.0,0,0	Slew =,0.76	2R7	4	0	6,392,567:35:0	
402	2	19	23:53:30.266	117DH105A106C4A	7STRP	-0.058667,-0.007	Slew =12.01	2R7	4	0	6,392,569:56:0	
403	2	19	23:53:45.600	117DH105A106C4B	7STRP	0.059972,0.0,0,0	Slew =,0.76	2R7	4	0	6,392,569:79:0	
404	2	19	23:56:46.266	117DH105A106D4A	7STRP	-0.059069,-0.007	Slew =12.01	2R7	4	0	6,392,572:77:0	
405	2	19	23:57:06.933	117DH105A106D4B	7STRP	0.05957,0.0,0,0,	Slew =,0.76	2R7	4	0	6,392,573:17:0	
406	2	20	00:01:22.266	117DH105A106D4C	7STRP	-0.059069,-0.007	Slew =12.01	2R7	4	0	6,392,577:36:0	
407	2	20	00:01:42.933	117DH105A106D4D	7STRP	0.05957,0.0,0,0,	Slew =,0.76	2R7	4	0	6,392,577:67:0	
408	2	20	00:05:58.266	117DH105A106E4A	7STRP	-0.053551,-0.007	Slew =12.01	2R7	4	0	6,392,581:86:0	
409	2	20	00:06:20.266	117DH105A106E4B	7STRP	0.045531,0.0,0,0	Slew =,0.76	2R7	4	0	6,392,582:28:0	
410	**2**	**20**	**00:07:17.700**	**33JNGLOBAL01-**		**-----STOP-------**		**2R7**	**4**	**0**	**: :**	
411	2	20	00:10:00.933	117DH11A	**CSMOS**	GE	***** GROUP END CSMOS	2R7	4	0	6,392,585:86:0	
412	2	20	00:10:04.266	175DH422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R7	4	0	6,392,586:00:0	
413	**2**	**20**	**00:10:04.266**	**33JNGLOBAL01-**	**DESELC**	**300DH**	**JUPITER GLOBAL OBSERVATION**	**2R7**	**4**	**0**	**: :**	
414	2	20	00:10:04.266		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *3164.99 +/- 1	2R7	4	0	6,392,586:00:0	
415	2	20	00:10:04.266	175DH6A	6TMREC	**NRC**	NO RECORD Record Mode Change	2R7	4	0	6,392,586:00:0	
416	2	20	00:10:05.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3165.05 +/- 1	2R7	4	0	6,392,586:01:8	
417	2	20	02:40:00.266	488AU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R7	4	0	6,392,734:26:0	
418	**2**	**20**	**02:56:13.500**	**33NNGLOBAL02-**		**-----START------**		**2R7**	**4**	**0**	**: :**	
419	**2**	**20**	**02:56:17.600**	**20DI5A**	**37PL**		**Program Load (halts microprocessor & unwri**		**4**	**0**	**6,392,750:36:0**	
420	**2**	**20**	**02:56:20.933**	**20DI5B**	**37MRL**		**Memory Realocate (software operates from R**		**4**	**0**	**6,392,750:41:0**	
421	**2**	**20**	**02:56:24.266**	**20DI6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**		**4**	**0**	**6,392,750:46:0**	
422	**2**	**20**	**02:56:34.266**	**20DI6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**		**4**	**0**	**6,392,750:61:0**	
423	**2**	**20**	**02:56:44.266**	**20DI5C**	**37IRT**		**Instrument Reset (goes into POR state)**		**4**	**0**	**6,392,750:76:0**	
424	**2**	**20**	**02:56:47.600**	**20DI5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**6,392,750:81:0**	
425	**2**	**20**	**02:57:48.266**	**20DI4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**6,392,751:81:0**	
426	**2**	**20**	**02:58:50.833**	**33JNGLOBAL02-**		**-----START------**		**2R0**	**4**	**0**	**: :**	
427	2	20	02:58:50.933	127DI	NIMSTAB	GS	%%%%% GROUP START TAB	2R0	4	0	6,392,752:84:0	
428	**2**	**20**	**02:58:50.933**	**127DI4A**	**37IOP**	**7,0**	**Fixed Map, Grating Start Position =00**	**2R7**	**4**	**0**	**6,392,752:84:0**	
429	**2**	**20**	**02:58:51.600**	**127DI4B**	**37ETB**	**07,C7,18,3C,D7,0**	**Loads wavelength edit table**	**2R7**	**4**	**0**	**6,392,752:85:0**	
430	2	20	02:58:59.600	127DI11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R7	4	0	6,392,753:06:0	
431	**2**	**20**	**02:59:13.700**	**33NNGLOBAL02-**		**-----STOP-------**		**2R7**	**4**	**0**	**: :**	
432	2	20	03:02:57.600	165DI4A	**7SCAN**	**NORM,108.308,22.**	**Check S/P Position**	2R7	4	0	6,392,756:90:0	
433	2	20	03:06:51.600	117DI	**CSMOS**	GS	***** GROUP START CSMOS	2R7	4	0	6,392,760:77:0	
434	2	20	03:06:52.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3165.05 +/- 1	2R7	4	0	6,392,760:78:0	
435	2	20	03:06:52.266	175DI422A6A	6DMSC	R7,1	DMS Control Tape runup 7.68kbp	2R7	4	0	6,392,760:78:0	
436	2	20	03:06:58.933		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 3165.05 +/- 1	2R7	4	0	6,392,760:88:0	
437	2	20	03:07:00.266	175DI176A6A	6TMREC	**LPU**	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	2R7	4	0	6,392,760:90:0	
438	2	20	03:07:00.333		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 3165.17 +/- 1	2R7	4	0	6,392,760:90:1	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	2	20	03:07:00.333		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *3165.17 +/- 1	2R7	4	0	6,392,760:90:1	
440	**2**	**20**	**03:07:00.933**	**33JNGLOBAL02-**	**NIMPBK**	**301DI**	**JUPITER GLOBAL OBSERVATION**	**2R7**	**4**	**0**	**: :**	
441	2	20	03:07:00.933	117DI105A106A4A	7STRP	0.058065,-0.0008	Slew =,0.76	2R7	4	0	6,392,761:00:0	
442	2	20	03:08:48.933	117DI105A106A4B	7STRP	-0.057563,-0.006	Slew =12.01	2R7	4	0	6,392,762:71:0	
443	2	20	03:09:06.266	117DI105A106A4C	7STRP	0.058065,-0.0008	Slew =,0.76	2R7	4	0	6,392,763:06:0	
444	2	20	03:10:54.266	117DI105A106A4D	7STRP	-0.057563,-0.006	Slew =12.01	2R7	4	0	6,392,764:77:0	
445	2	20	03:11:11.600	117DI105A106A4E	7STRP	0.058065,-0.0008	Slew =,0.76	2R7	4	0	6,392,765:12:0	
446	2	20	03:12:59.600	117DI105A106B4A	7STRP	-0.057563,-0.006	Slew =12.01	2R7	4	0	6,392,766:83:0	
447	2	20	03:13:16.933	117DI105A106B4B	7STRP	0.058065,-0.0008	Slew =,0.76	2R7	4	0	6,392,767:18:0	
448	2	20	03:16:34.266	117DI105A106B4C	7STRP	-0.057563,-0.006	Slew =12.01	2R7	4	0	6,392,770:41:0	
449	2	20	03:16:51.600	117DI105A106B4D	7STRP	0.058065,-0.0008	Slew =,0.76	2R7	4	0	6,392,770:67:0	
450	2	20	03:20:08.933	117DI105A106B4E	7STRP	-0.057563,-0.006	Slew =12.01	2R7	4	0	6,392,773:90:0	
451	2	20	03:20:26.266	117DI105A106B4F	7STRP	0.058065,-0.0008	Slew =,0.76	2R7	4	0	6,392,774:25:0	
452	2	20	03:23:43.600	117DI105A106C4A	7STRP	-0.053551,-0.006	Slew =12.01	2R7	4	0	6,392,777:48:0	
453	2	20	03:24:04.933	117DI105A106C4B	7STRP	0.048037,-0.0008	Slew =,0.76	2R7	4	0	6,392,777:80:0	
454	2	20	03:27:10.933	117DI11A	**CSMOS**	GE	***** GROUP END CSMOS	2R7	4	0	6,392,780:86:0	
455	2	20	03:27:14.266		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *3449.69 +/- 1	2R7	4	0	6,392,781:00:0	
456	**2**	**20**	**03:27:14.266**	**33JNGLOBAL02-**	**DESELC**	**300DI**	**JUPITER GLOBAL OBSERVATION**	**2R7**	**4**	**0**	**: :**	
457	2	20	03:27:14.266	175DI422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R7	4	0	6,392,781:00:0	
458	2	20	03:27:14.266	175DI6A	6TMREC	**NRC**	NO RECORD Record Mode Change	2R7	4	0	6,392,781:00:0	
459	2	20	03:27:15.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3449.75 +/- 1	2R7	4	0	6,392,781:01:8	
460	**2**	**20**	**03:27:29.700**	**33JNGLOBAL02-**		**-----STOP-------**		**2R7**	**4**	**0**	**: :**	
461	**2**	**20**	**03:39:20.933**	**432SA6A**	**6RTDS2**	**NIMNCG,AACNCG,RT**	**R/T ENG DESLECT**	**2R7**	**4**	**0**	**6,392,792:89:0**	
462	2	20	03:48:36.266	488AU6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R7	4	0	6,392,802:12:0	
463	2	20	03:56:28.266	488AU6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R7	4	0	6,392,809:83:0	
464	2	20	04:05:40.266	488AU6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R7	4	0	6,392,819:01:0	
465	**2**	**20**	**06:16:25.500**	**33NNGLOBAL03-**		**-----START------**		**2R7**	**4**	**0**	**: :**	
466	**2**	**20**	**06:16:29.600**	**20DJ5A**	**37PL**		**Program Load (halts microprocessor & unwri**		**4**	**0**	**6,392,948:36:0**	
467	**2**	**20**	**06:16:32.933**	**20DJ5B**	**37MRL**		**Memory Realocate (software operates from R**		**4**	**0**	**6,392,948:41:0**	
468	**2**	**20**	**06:16:36.266**	**20DJ6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**		**4**	**0**	**6,392,948:46:0**	
469	**2**	**20**	**06:16:46.266**	**20DJ6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**		**4**	**0**	**6,392,948:61:0**	
470	**2**	**20**	**06:16:56.266**	**20DJ5C**	**37IRT**		**Instrument Reset (goes into POR state)**		**4**	**0**	**6,392,948:76:0**	
471	**2**	**20**	**06:16:59.600**	**20DJ5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**6,392,948:81:0**	
472	**2**	**20**	**06:18:00.266**	**20DJ4A**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**6,392,949:81:0**	
473	**2**	**20**	**06:19:02.833**	**33JNGLOBAL03-**		**-----START------**		**2R0**	**4**	**0**	**: :**	
474	2	20	06:19:02.933	127DJ	NIMSTAB	GS	%%%%% GROUP START TAB	2R0	4	0	6,392,950:84:0	
475	**2**	**20**	**06:19:02.933**	**127DJ4A**	**37IOP**	**7,0**	**Fixed Map, Grating Start Position =00**	**2R7**	**4**	**0**	**6,392,950:84:0**	
476	**2**	**20**	**06:19:03.600**	**127DJ4B**	**37ETB**	**07,C7,18,3C,D7,0**	**Loads wavelength edit table**	**2R7**	**4**	**0**	**6,392,950:85:0**	
477	2	20	06:19:11.600	127DJ11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R7	4	0	6,392,951:06:0	
478	**2**	**20**	**06:19:25.700**	**33NNGLOBAL03-**		**-----STOP-------**		**2R7**	**4**	**0**	**: :**	
479	2	20	06:24:10.266	165DM4A	**7SCAN**	**NORM,109.374,22.**	**Check S/P Position**	2R7	4	0	6,392,955:90:0	
480	2	20	06:28:04.266	117DM	**CSMOS**	GS	***** GROUP START CSMOS	2R7	4	0	6,392,959:77:0	
481	2	20	06:28:04.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3449.75 +/- 1	2R7	4	0	6,392,959:78:0	
482	2	20	06:28:04.933	175DJ422A6A	6DMSC	R7,1	DMS Control Tape runup 7.68kbp	2R7	4	0	6,392,959:78:0	
483	2	20	06:28:11.600		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 3449.75 +/- 1	2R7	4	0	6,392,959:88:0	
484	2	20	06:28:12.933	175DJ176A6A	6TMREC	**LPU**	7.68 KBPS NIMS-UVS-PPR RECORD Record Mode	2R7	4	0	6,392,959:90:0	
485	2	20	06:28:13.000		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *3449.87 +/- 1	2R7	4	0	6,392,959:90:1	
486	2	20	06:28:13.000		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 3449.87 +/- 1	2R7	4	0	6,392,959:90:1	
487	2	20	06:28:13.600	117DM105A106A4A	7STRP	0.05656,-0.0011,	Slew =,0.76	2R7	4	0	6,392,960:00:0	
488	**2**	**20**	**06:28:14.933**	**33JNGLOBAL03-**	**NIMPBK**	**301DJ**	**JUPITER GLOBAL OBSERVATION**	**2R7**	**4**	**0**	**: :**	
489	2	20	06:30:02.933	117DM105A106A4B	7STRP	-0.056059,-0.006	Slew =12.01	2R7	4	0	6,392,961:73:0	
490	2	20	06:30:20.266	117DM105A106A4C	7STRP	0.05656,-0.0011,	Slew =,0.76	2R7	4	0	6,392,962:08:0	
491	2	20	06:32:09.600	117DM105A106A4D	7STRP	-0.056059,-0.006	Slew =12.01	2R7	4	0	6,392,963:81:0	
492	2	20	06:32:26.933	117DM105A106A4E	7STRP	0.05656,-0.0011,	Slew =,0.76	2R7	4	0	6,392,964:16:0	
493	2	20	06:34:16.266	117DM105A106A4F	7STRP	-0.056059,-0.006	Slew =12.01	2R7	4	0	6,392,965:89:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	2	20	06:34:33.600	117DM105A106A4G	7STRP	0.05656,-0.0011,	Slew =,0.76	2R7	4	0	6,392,966:24:0	
495	2	20	06:36:22.933	117DM105A106B4A	7STRP	-0.055557,-0.006	Slew =12.01	2R7	4	0	6,392,968:06:0	
496	2	20	06:36:40.266	117DM105A106B4B	7STRP	0.056059,-0.0011	Slew =,0.76	2R7	4	0	6,392,968:32:0	
497	2	20	06:39:22.933	117DM105A106B4C	7STRP	-0.055557,-0.006	Slew =12.01	2R7	4	0	6,392,971:03:0	
498	2	20	06:39:40.266	117DM105A106B4D	7STRP	0.056059,-0.0011	Slew =,0.76	2R7	4	0	6,392,971:29:0	
499	2	20	06:42:22.933	117DM105A106C4A	7STRP	-0.052548,-0.006	Slew =12.01	2R7	4	0	6,392,974:00:0	
500	2	20	06:42:44.266	117DM105A106C4B	7STRP	0.048037,-0.0011	Slew =,0.76	2R7	4	0	6,392,974:32:0	
501	2	20	06:45:22.933	117DM11A	**CSMOS**	GE	***** GROUP END CSMOS	2R7	4	0	6,392,976:88:0	
502	**2**	**20**	**06:45:24.933**	**33JNGLOBAL03-**	**DESELC**	**300DJ**	**JUPITER GLOBAL OBSERVATION**	**2R7**	**4**	**0**	**: :**	
503	2	20	06:45:24.933		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *3691.73 +/- 1	2R7	4	0	6,392,977:00:0	
504	2	20	06:45:24.933	175DJ6A	6TMREC	**NRC**	NO RECORD Record Mode Change	2R7	4	0	6,392,977:00:0	
505	2	20	06:45:24.933	175DJ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R7	4	0	6,392,977:00:0	
506	2	20	06:45:26.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3691.79 +/- 1	2R7	4	0	6,392,977:01:8	
507	**2**	**20**	**06:48:42.366**	**33JNGLOBAL03-**		**-----STOP-------**		**2R7**	**4**	**0**	**: :**	
508	2	20	07:00:04.266	20WE4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2R7	4	0	6,392,991:45:0	
509	**2**	**20**	**08:27:06.833**	**33NNRELOAD01-**		**-----START------**		**2R7**	**4**	**0**	**: :**	
510	**2**	**20**	**08:27:12.266**	**20FN5A**	**37PL**		**Program Load (halts microprocessor & unwri**		**4**	**0**	**6,393,077:61:0**	
511	**2**	**20**	**08:27:15.600**	**20FN5B**	**37MRL**		**Memory Realocate (software operates from R**		**4**	**0**	**6,393,077:66:0**	
512	**2**	**20**	**08:27:18.933**	**20FN6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**		**4**	**0**	**6,393,077:71:0**	
513	**2**	**20**	**08:27:28.933**	**20FN6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**		**4**	**0**	**6,393,077:86:0**	
514	**2**	**20**	**08:27:42.933**	**20FN5C**	**37IRT**		**Instrument Reset (goes into POR state)**		**4**	**0**	**6,393,078:16:0**	
515	**2**	**20**	**08:27:46.266**	**20FN5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**6,393,078:21:0**	
516	**2**	**20**	**08:28:26.266**	**20FN4A**	**37IST**	**1,2,0,OFF,0,1,0**	**Chopper ON, Sync, Chopper (Ref)Gain State**	**2R0**	**4**	**0**	**6,393,078:81:0**	
517	**2**	**20**	**08:29:28.933**	**127FN4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**2R3**	**4**	**0**	**6,393,079:84:0**	
518	2	20	08:29:28.933	127FN	NIMSTAB	GS	%%%%% GROUP START TAB	2R3	4	0	6,393,079:84:0	
519	**2**	**20**	**08:29:29.600**	**127FN4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**2R3**	**4**	**0**	**6,393,079:85:0**	
520	2	20	08:29:37.600	127FN11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R3	4	0	6,393,080:06:0	
521	**2**	**20**	**08:31:07.033**	**33NNRELOAD01-**		**-----STOP-------**		**2R3**	**4**	**0**	**: :**	
522	**2**	**20**	**08:34:32.166**	**33NNCHOPOF01-**		**-----START------**		**2R3**	**4**	**0**	**: :**	
523	**2**	**20**	**08:34:32.266**	**127FO4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**2R0**	**4**	**0**	**6,393,084:84:0**	
524	2	20	08:34:32.266	127FO	NIMSTAB	GS	%%%%% GROUP START TAB	2R0	4	0	6,393,084:84:0	
525	**2**	**20**	**08:34:32.933**	**127FO4B**	**37ETB**	**04,C4,02,00,00**	**Loads wavelength edit table**	**2R0**	**4**	**0**	**6,393,084:85:0**	
526	2	20	08:34:40.933	127FO11A	NIMSTAB	GE	%%%%% GROUP END TAB	2R0	4	0	6,393,085:06:0	
527	2	20	08:37:34.266	125FN	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	6,393,087:84:0	
528	**2**	**20**	**08:37:34.266**	**125FN4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**260**	**4**	**0**	**6,393,087:84:0**	
529	**2**	**20**	**08:38:34.933**	**125FN4B**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**2O0**	**4**	**0**	**6,393,088:84:0**	
530	2	20	08:39:35.600	125FN11A	NIMSINIT	GE	##### GROUP END INIT	2O0	4	0	6,393,089:84:0	
531	**2**	**20**	**08:39:35.600**	**125FN4C**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**2O0**	**4**	**0**	**6,393,089:84:0**	
532	**2**	**20**	**08:39:35.700**	**33NNCHOPOF01-**		**-----STOP-------**		**2O0**	**4**	**0**	**: :**	
533	2	20	11:03:14.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3691.79 +/- 1	2O0	4	0	6,393,232:00:0	
534	2	20	11:03:14.933	411JB6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,393,232:00:0	
535	2	20	11:03:21.600		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 3691.79 +/- 1	2O0	4	0	6,393,232:10:0	
536	2	20	11:03:23.000		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 3691.91 +/- 1	2O0	4	0	6,393,232:12:1	
537	2	20	11:03:23.000		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *3691.91 +/- 1	2O0	4	0	6,393,232:12:1	
538	2	20	11:03:24.933	411JB6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,393,232:15:0	
539	2	20	11:05:26.266	411JB6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,393,234:15:0	
540	2	20	11:05:26.933	411JB6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,234:16:0	
541	2	20	11:05:26.933		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *3720.96 +/- 1	2O0	4	0	6,393,234:16:0	
542	2	20	11:05:28.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3721.02 +/- 1	2O0	4	0	6,393,234:17:8	
543	2	20	18:23:04.933	411JC6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,393,667:00:0	
544	2	20	18:23:04.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3721.02 +/- 1	2O0	4	0	6,393,667:00:0	
545	2	20	18:23:11.600		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 3721.02 +/- 1	2O0	4	0	6,393,667:10:0	
546	2	20	18:23:13.000		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 3721.14 +/- 1	2O0	4	0	6,393,667:12:1	
547	2	20	18:23:13.000		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *3721.14 +/- 1	2O0	4	0	6,393,667:12:1	
548	2	20	18:23:14.933	411JC6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,393,667:15:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	**2**	**20**	**18:24:05.600**	**432SB6A**	**6RTSL2**	**NIMNCG,AACNCG,RT**	**R/T ENG SELECT**	**2O0**	**4**	**0**	**6,393,668:00:0**	
550	2	20	18:25:16.266	411JC6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,393,669:15:0	
551	2	20	18:25:16.933	411JC6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,669:16:0	
552	2	20	18:25:16.933		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *3750.18 +/- 1	2O0	4	0	6,393,669:16:0	
553	2	20	18:25:18.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3750.24 +/- 1	2O0	4	0	6,393,669:17:8	
554	2	20	18:53:08.933	20II6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,696:67:0	
555	2	20	19:05:32.266	165IO4A	7SCAN	NORM,112.32,22.6	Check S/P Position	2O0	4	0	6,393,708:90:0	
556	2	20	19:09:28.266	175IO422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,712:80:0	
557	2	20	19:09:28.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3750.24 +/- 1	2O0	4	0	6,393,712:80:0	
558	2	20	19:09:34.266	165IO4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,712:89:0	
559	2	20	19:09:34.933		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 3750.24 +/- 1	2O0	4	0	6,393,712:90:0	
560	2	20	19:09:38.266	175IO176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,713:04:0	
561	2	20	19:09:38.933		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *3756.54 +/- 1	2O0	4	0	6,393,713:05:0	
562	2	20	19:09:38.933		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 3756.54 +/- 1	2O0	4	0	6,393,713:05:0	
563	2	20	19:10:06.266		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *3852.64 +/- 1	2O0	4	0	6,393,713:46:0	
564	2	20	19:10:06.266	175IO422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,713:46:0	
565	2	20	19:10:07.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3853.64 +/- 1	2O0	4	0	6,393,713:47:8	
566	2	20	19:23:28.933	20IJ6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,726:67:0	
567	2	20	19:34:51.600	165IP4A	7SCAN	NORM,112.436999,	Check S/P Position	2O0	4	0	6,393,737:90:0	
568	2	20	19:38:47.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3853.64 +/- 1	2O0	4	0	6,393,741:80:0	
569	2	20	19:38:47.600	175IP422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,741:80:0	
570	2	20	19:38:53.600	165IP4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,741:89:0	
571	2	20	19:38:54.266		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 3853.64 +/- 1	2O0	4	0	6,393,741:90:0	
572	2	20	19:38:57.600	175IP176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,742:04:0	
573	2	20	19:38:58.266		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *3859.94 +/- 1	2O0	4	0	6,393,742:05:0	
574	2	20	19:38:58.266		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 3859.94 +/- 1	2O0	4	0	6,393,742:05:0	
575	2	20	19:39:25.600		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *3956.03 +/- 1	2O0	4	0	6,393,742:46:0	
576	2	20	19:39:25.600	175IP422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,742:46:0	
577	2	20	19:39:26.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3957.03 +/- 1	2O0	4	0	6,393,742:47:8	
578	2	20	19:52:48.266	20IK6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,755:67:0	
579	2	20	20:04:10.933	165IQ4A	7SCAN	NORM,112.552999,	Check S/P Position	2O0	4	0	6,393,766:90:0	
580	2	20	20:08:06.933	175IQ422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,770:80:0	
581	2	20	20:08:06.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3957.03 +/- 1	2O0	4	0	6,393,770:80:0	
582	2	20	20:08:12.933	165IQ4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,770:89:0	
583	2	20	20:08:13.600		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 3957.03 +/- 1	2O0	4	0	6,393,770:90:0	
584	2	20	20:08:16.933	175IQ176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,771:04:0	
585	2	20	20:08:17.600		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *3963.33 +/- 1	2O0	4	0	6,393,771:05:0	
586	2	20	20:08:17.600		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 3963.33 +/- 1	2O0	4	0	6,393,771:05:0	
587	2	20	20:08:44.933	175IQ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,771:46:0	
588	2	20	20:08:44.933		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4059.42 +/- 1	2O0	4	0	6,393,771:46:0	
589	2	20	20:08:46.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4060.42 +/- 1	2O0	4	0	6,393,771:47:8	
590	2	20	20:25:09.600	20IL6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,787:67:0	
591	2	20	20:36:32.266	165IR4A	7SCAN	NORM,111.511,22.	Check S/P Position	2O0	4	0	6,393,798:90:0	
592	2	20	20:40:28.266	175IR422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,802:80:0	
593	2	20	20:40:28.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4060.42 +/- 1	2O0	4	0	6,393,802:80:0	
594	2	20	20:40:34.266	165IR4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,802:89:0	
595	2	20	20:40:34.933		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4060.42 +/- 1	2O0	4	0	6,393,802:90:0	
596	2	20	20:40:38.266	175IR176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,803:04:0	
597	2	20	20:40:38.933		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4066.72 +/- 1	2O0	4	0	6,393,803:05:0	
598	2	20	20:40:38.933		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4066.72 +/- 1	2O0	4	0	6,393,803:05:0	
599	2	20	20:41:06.266	175IR422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,803:46:0	
600	2	20	20:41:06.266		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4162.82 +/- 1	2O0	4	0	6,393,803:46:0	
601	2	20	20:41:07.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4163.82 +/- 1	2O0	4	0	6,393,803:47:8	
602	2	20	20:54:28.933	20IM6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,816:67:0	
603	2	20	21:05:51.600	165IS4A	7SCAN	NORM,111.625,22.	Check S/P Position	2O0	4	0	6,393,827:90:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	2	20	21:09:47.600	175IS422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,831	80:0
605	2	20	21:09:47.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4163.82 +/- 1	2O0	4	0	6,393,831	80:0
606	2	20	21:09:53.600	165IS4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,831	89:0
607	2	20	21:09:54.266		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4163.82 +/- 1	2O0	4	0	6,393,831	90:0
608	2	20	21:09:57.600	175IS176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,832	04:0
609	2	20	21:09:58.266		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4170.12 +/- 1	2O0	4	0	6,393,832	05:0
610	2	20	21:09:58.266		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4170.12 +/- 1	2O0	4	0	6,393,832	05:0
611	2	20	21:10:25.600		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4266.21 +/- 1	2O0	4	0	6,393,832	46:0
612	2	20	21:10:25.600	175IS422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,832	46:0
613	2	20	21:10:26.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4267.21 +/- 1	2O0	4	0	6,393,832	47:8
614	2	20	21:23:48.266	20IN6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,845	67:0
615	2	20	21:35:10.933	165IT4A	7SCAN	NORM,111.738999,	Check S/P Position	2O0	4	0	6,393,856	90:0
616	2	20	21:39:06.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4267.21 +/- 1	2O0	4	0	6,393,860	80:0
617	2	20	21:39:06.933	175IT422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,860	80:0
618	2	20	21:39:12.933	165IT4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,860	89:0
619	2	20	21:39:13.600		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4267.21 +/- 1	2O0	4	0	6,393,860	90:0
620	2	20	21:39:16.933	175IT176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,861	04:0
621	2	20	21:39:17.600		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4273.51 +/- 1	2O0	4	0	6,393,861	05:0
622	2	20	21:39:17.600		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4273.51 +/- 1	2O0	4	0	6,393,861	05:0
623	2	20	21:39:44.933	175IT422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,861	46:0
624	2	20	21:39:44.933		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4369.61 +/- 1	2O0	4	0	6,393,861	46:0
625	2	20	21:39:46.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4370.61 +/- 1	2O0	4	0	6,393,861	47:8
626	2	20	21:54:24.266	465KG6A	6DMSC	RDY,1	DMS Control Tape stop	2O0	4	0	6,393,876	00:0
627	2	20	21:56:09.600	20IO6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,877	67:0
628	2	20	22:07:32.266	165IU4A	7SCAN	NORM,110.759999,	Check S/P Position	2O0	4	0	6,393,888	90:0
629	2	20	22:11:28.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4370.61 +/- 1	2O0	4	0	6,393,892	80:0
630	2	20	22:11:28.266	175IU422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,892	80:0
631	2	20	22:11:34.266	165IU4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,892	89:0
632	2	20	22:11:34.933		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4370.61 +/- 1	2O0	4	0	6,393,892	90:0
633	2	20	22:11:38.266	175IU176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,893	04:0
634	2	20	22:11:38.933		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4376.91 +/- 1	2O0	4	0	6,393,893	05:0
635	2	20	22:11:38.933		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4376.91 +/- 1	2O0	4	0	6,393,893	05:0
636	2	20	22:12:04.933		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4468.31 +/- 1	2O0	4	0	6,393,893	44:0
637	2	20	22:12:04.933	175IU422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,893	44:0
638	2	20	22:12:06.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4469.31 +/- 1	2O0	4	0	6,393,893	45:8
639	2	20	22:25:28.933	20IP6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,906	67:0
640	2	20	22:36:51.600	165IV4A	7SCAN	NORM,110.870999,	Check S/P Position	2O0	4	0	6,393,917	90:0
641	2	20	22:40:47.600	175IV422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,921	80:0
642	2	20	22:40:47.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4469.31 +/- 1	2O0	4	0	6,393,921	80:0
643	2	20	22:40:53.600	165IV4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,921	89:0
644	2	20	22:40:54.266		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4469.31 +/- 1	2O0	4	0	6,393,921	90:0
645	2	20	22:40:57.600	175IV176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,922	04:0
646	2	20	22:40:58.266		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4475.61 +/- 1	2O0	4	0	6,393,922	05:0
647	2	20	22:40:58.266		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4475.61 +/- 1	2O0	4	0	6,393,922	05:0
648	2	20	22:41:24.266		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4567.02 +/- 1	2O0	4	0	6,393,922	44:0
649	2	20	22:41:24.266	175IV422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,922	44:0
650	2	20	22:41:25.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4568.02 +/- 1	2O0	4	0	6,393,922	45:8
651	2	20	22:54:48.266	20IQ6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,393,935	67:0
652	2	20	23:06:10.933	165IW4A	7SCAN	NORM,110.981999,	Check S/P Position	2O0	4	0	6,393,946	90:0
653	2	20	23:10:06.933	175IW422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,393,950	80:0
654	2	20	23:10:06.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4568.02 +/- 1	2O0	4	0	6,393,950	80:0
655	2	20	23:10:12.933	165IW4B	7VECT		Inert vect update UTC	2O0	4	0	6,393,950	89:0
656	2	20	23:10:13.600		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4568.02 +/- 1	2O0	4	0	6,393,950	90:0
657	2	20	23:10:16.933	175IW176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,393,951	04:0
658	2	20	23:10:17.600		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4574.32 +/- 2	2O0	4	0	6,393,951	05:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	2	20	23:10:17.600		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4574.32 +/- 1	2O0	4	0	6,393,951:05:0	
660	2	20	23:10:43.600		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4665.72 +/- 2	2O0	4	0	6,393,951:44:0	
661	2	20	23:10:43.600	175IW422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,393,951:44:0	
662	2	20	23:10:44.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4666.72 +/- 2	2O0	4	0	6,393,951:45:8	
663	2	21	01:36:50.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4666.72 +/- 2	2O0	4	0	6,394,096:00:0	
664	2	21	01:36:50.933	411JD6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,394,096:00:0	
665	2	21	01:36:57.600		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 4666.72 +/- 2	2O0	4	0	6,394,096:10:0	
666	2	21	01:36:59.000		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 4666.84 +/- 2	2O0	4	0	6,394,096:12:1	
667	2	21	01:36:59.000		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *4666.84 +/- 2	2O0	4	0	6,394,096:12:1	
668	2	21	01:37:00.933	411JD6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,394,096:15:0	
669	2	21	01:39:02.266	411JD6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,394,098:15:0	
670	2	21	01:39:02.933	411JD6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,098:16:0	
671	2	21	01:39:02.933		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *4695.89 +/- 2	2O0	4	0	6,394,098:16:0	
672	2	21	01:39:04.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4695.95 +/- 2	2O0	4	0	6,394,098:17:8	
673	2	21	04:54:45.600	20IR6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,291:67:0	
674	2	21	05:06:08.266	165IX4A	7SCAN	NORM,114.375,22.	Check S/P Position	2O0	4	0	6,394,302:90:0	
675	2	21	05:10:04.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4695.95 +/- 2	2O0	4	0	6,394,306:80:0	
676	2	21	05:10:04.266	175IX422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,306:80:0	
677	2	21	05:10:10.266	165IX4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,306:89:0	
678	2	21	05:10:10.933		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4695.95 +/- 2	2O0	4	0	6,394,306:90:0	
679	2	21	05:10:14.266	175IX176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,307:04:0	
680	2	21	05:10:14.933		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4702.25 +/- 2	2O0	4	0	6,394,307:05:0	
681	2	21	05:10:14.933		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4702.25 +/- 2	2O0	4	0	6,394,307:05:0	
682	2	21	05:10:40.266	175IX422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,307:43:0	
683	2	21	05:10:40.266		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4791.31 +/- 2	2O0	4	0	6,394,307:43:0	
684	2	21	05:10:41.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4792.31 +/- 2	2O0	4	0	6,394,307:44:8	
685	2	21	05:24:04.933	20IS6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,320:67:0	
686	2	21	05:35:27.600	165IY4A	7SCAN	NORM,114.473,22.	Check S/P Position	2O0	4	0	6,394,331:90:0	
687	2	21	05:39:23.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4792.31 +/- 2	2O0	4	0	6,394,335:80:0	
688	2	21	05:39:23.600	175IY422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,335:80:0	
689	2	21	05:39:29.600	165IY4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,335:89:0	
690	2	21	05:39:30.266		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4792.31 +/- 2	2O0	4	0	6,394,335:90:0	
691	2	21	05:39:33.600	175IY176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,336:04:0	
692	2	21	05:39:34.266		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4798.61 +/- 2	2O0	4	0	6,394,336:05:0	
693	2	21	05:39:34.266		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4798.61 +/- 2	2O0	4	0	6,394,336:05:0	
694	2	21	05:39:59.600	175IY422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,336:43:0	
695	2	21	05:39:59.600		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4887.68 +/- 2	2O0	4	0	6,394,336:43:0	
696	2	21	05:40:00.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4888.68 +/- 2	2O0	4	0	6,394,336:44:8	
697	2	21	05:53:24.266	20IT6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,349:67:0	
698	2	21	06:04:46.933	165IZ4A	7SCAN	NORM,114.570999,	Check S/P Position	2O0	4	0	6,394,360:90:0	
699	2	21	06:08:42.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4888.68 +/- 2	2O0	4	0	6,394,364:80:0	
700	2	21	06:08:42.933	175IZ422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,364:80:0	
701	2	21	06:08:48.933	165IZ4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,364:89:0	
702	2	21	06:08:49.600		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4888.68 +/- 2	2O0	4	0	6,394,364:90:0	
703	2	21	06:08:52.933	175IZ176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,365:04:0	
704	2	21	06:08:53.600		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4894.98 +/- 2	2O0	4	0	6,394,365:05:0	
705	2	21	06:08:53.600		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4894.98 +/- 2	2O0	4	0	6,394,365:05:0	
706	2	21	06:09:18.933		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *4984.04 +/- 2	2O0	4	0	6,394,365:43:0	
707	2	21	06:09:18.933	175IZ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,365:43:0	
708	2	21	06:09:20.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4985.04 +/- 2	2O0	4	0	6,394,365:44:8	
709	2	21	06:25:45.600	20IU6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,381:67:0	
710	2	21	06:37:08.266	165JA4A	7SCAN	NORM,113.665999,	Check S/P Position	2O0	4	0	6,394,392:90:0	
711	2	21	06:41:04.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 4985.04 +/- 2	2O0	4	0	6,394,396:80:0	
712	2	21	06:41:04.266	175JA422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,396:80:0	
713	2	21	06:41:10.266	165JA4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,396:89:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	2	21	06:41:10.933		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 4985.04 +/- 2	2O0	4	0	6,394,396:90:0	
715	2	21	06:41:14.266	175JA176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,397:04:0	
716	2	21	06:41:14.933		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 4991.34 +/- 2	2O0	4	0	6,394,397:05:0	
717	2	21	06:41:14.933		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *4991.34 +/- 2	2O0	4	0	6,394,397:05:0	
718	2	21	06:41:41.600	175JA422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,397:45:0	
719	2	21	06:41:41.600		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5085.09 +/- 2	2O0	4	0	6,394,397:45:0	
720	2	21	06:41:42.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5086.09 +/- 2	2O0	4	0	6,394,397:46:8	
721	2	21	06:42:04.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5086.09 +/- 2	2O0	4	0	6,394,397:80:0	
722	2	21	06:42:04.933	175JG422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,397:80:0	
723	2	21	06:42:11.600		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 5086.09 +/- 2	2O0	4	0	6,394,397:90:0	
724	2	21	06:42:14.933	175JG176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,398:04:0	
725	2	21	06:42:15.600		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *5092.39 +/- 2	2O0	4	0	6,394,398:05:0	
726	2	21	06:42:15.600		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 5092.39 +/- 2	2O0	4	0	6,394,398:05:0	
727	2	21	06:42:42.266	175JG422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,398:45:0	
728	2	21	06:42:42.266		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5186.14 +/- 2	2O0	4	0	6,394,398:45:0	
729	2	21	06:42:43.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5187.14 +/- 2	2O0	4	0	6,394,398:46:8	
730	2	21	06:54:04.266	20IV6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,409:67:0	
731	2	21	07:06:27.600	165JB4A	7SCAN	NORM,113.761999,	Check S/P Position	2O0	4	0	6,394,421:90:0	
732	2	21	07:10:23.600	175JB422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,425:80:0	
733	2	21	07:10:23.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5187.14 +/- 2	2O0	4	0	6,394,425:80:0	
734	2	21	07:10:29.600	165JB4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,425:89:0	
735	2	21	07:10:30.266		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 5187.14 +/- 2	2O0	4	0	6,394,425:90:0	
736	2	21	07:10:33.600	175JB176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,426:04:0	
737	2	21	07:10:34.266		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 5193.44 +/- 2	2O0	4	0	6,394,426:05:0	
738	2	21	07:10:34.266		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *5193.44 +/- 2	2O0	4	0	6,394,426:05:0	
739	2	21	07:11:00.933	175JB422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,426:45:0	
740	2	21	07:11:00.933		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5287.19 +/- 2	2O0	4	0	6,394,426:45:0	
741	2	21	07:11:02.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5288.19 +/- 2	2O0	4	0	6,394,426:46:8	
742	2	21	07:11:24.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5288.19 +/- 2	2O0	4	0	6,394,426:80:0	
743	2	21	07:11:24.266	175JH422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,426:80:0	
744	2	21	07:11:30.933		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 5288.19 +/- 2	2O0	4	0	6,394,426:90:0	
745	2	21	07:11:34.266	175JH176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,427:04:0	
746	2	21	07:11:34.933		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *5294.49 +/- 2	2O0	4	0	6,394,427:05:0	
747	2	21	07:11:34.933		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 5294.49 +/- 2	2O0	4	0	6,394,427:05:0	
748	2	21	07:12:01.600	175JH422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,427:45:0	
749	2	21	07:12:01.600		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5388.24 +/- 2	2O0	4	0	6,394,427:45:0	
750	2	21	07:12:02.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5389.24 +/- 2	2O0	4	0	6,394,427:46:8	
751	2	21	07:23:23.600	20IW6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,438:67:0	
752	2	21	07:35:46.933	165JC4A	7SCAN	NORM,113.856999,	Check S/P Position	2O0	4	0	6,394,450:90:0	
753	2	21	07:39:42.933	175JC422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,454:80:0	
754	2	21	07:39:42.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5389.24 +/- 2	2O0	4	0	6,394,454:80:0	
755	2	21	07:39:48.933	165JC4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,454:89:0	
756	2	21	07:39:49.600		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 5389.24 +/- 2	2O0	4	0	6,394,454:90:0	
757	2	21	07:39:52.933	175JC176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,455:04:0	
758	2	21	07:39:53.600		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 5395.54 +/- 2	2O0	4	0	6,394,455:05:0	
759	2	21	07:39:53.600		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *5395.54 +/- 2	2O0	4	0	6,394,455:05:0	
760	2	21	07:40:19.600		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5486.95 +/- 2	2O0	4	0	6,394,455:44:0	
761	2	21	07:40:19.600	175JC422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,455:44:0	
762	2	21	07:40:20.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5487.95 +/- 2	2O0	4	0	6,394,455:45:8	
763	2	21	07:40:43.600	175JI422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,455:80:0	
764	2	21	07:40:43.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5487.95 +/- 2	2O0	4	0	6,394,455:80:0	
765	2	21	07:40:50.266		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 5487.95 +/- 2	2O0	4	0	6,394,455:90:0	
766	2	21	07:40:53.600	175JI176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,456:04:0	
767	2	21	07:40:54.266		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 5494.25 +/- 2	2O0	4	0	6,394,456:05:0	
768	2	21	07:40:54.266		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *5494.25 +/- 2	2O0	4	0	6,394,456:05:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	2	21	07:41:20.266	175JI422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,456	44:0
770	2	21	07:41:20.266		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5585.65 +/- 2	2O0	4	0	6,394,456	44:0
771	2	21	07:41:21.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5586.65 +/- 2	2O0	4	0	6,394,456	45:8
772	2	21	07:55:44.933	20IX6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,470	67:0
773	2	21	08:08:08.266	165JD4A	7SCAN	NORM,112.957,22.	Check S/P Position	2O0	4	0	6,394,482	90:0
774	2	21	08:12:04.266	175JD422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,486	80:0
775	2	21	08:12:04.266		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5586.65 +/- 2	2O0	4	0	6,394,486	80:0
776	2	21	08:12:10.266	165JD4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,486	89:0
777	2	21	08:12:10.933		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 5586.65 +/- 2	2O0	4	0	6,394,486	90:0
778	2	21	08:12:14.266	175JD176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,487	04:0
779	2	21	08:12:14.933		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 5592.95 +/- 2	2O0	4	0	6,394,487	05:0
780	2	21	08:12:14.933		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *5592.95 +/- 2	2O0	4	0	6,394,487	05:0
781	2	21	08:12:40.266	175JD422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,487	43:0
782	2	21	08:12:40.266		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5682.01 +/- 2	2O0	4	0	6,394,487	43:0
783	2	21	08:12:41.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5683.01 +/- 2	2O0	4	0	6,394,487	44:8
784	2	21	08:26:04.933	20IY6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,500	67:0
785	2	21	08:37:27.600	165JE4A	7SCAN	NORM,113.049999,	Check S/P Position	2O0	4	0	6,394,511	90:0
786	2	21	08:41:23.600	175JE422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,515	80:0
787	2	21	08:41:23.600		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5683.01 +/- 2	2O0	4	0	6,394,515	80:0
788	2	21	08:41:29.600	165JE4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,515	89:0
789	2	21	08:41:30.266		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 5683.01 +/- 2	2O0	4	0	6,394,515	90:0
790	2	21	08:41:33.600	175JE176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,516	04:0
791	2	21	08:41:34.266		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *5689.31 +/- 2	2O0	4	0	6,394,516	05:0
792	2	21	08:41:34.266		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 5689.31 +/- 2	2O0	4	0	6,394,516	05:0
793	2	21	08:41:59.600		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5778.38 +/- 2	2O0	4	0	6,394,516	43:0
794	2	21	08:41:59.600	175JE422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,516	43:0
795	2	21	08:42:00.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5779.38 +/- 2	2O0	4	0	6,394,516	44:8
796	2	21	08:48:19.600	488AV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,394,522	67:0
797	2	21	08:55:24.266	20IZ6B	6MCOPY	HLM1A,E700,B1A1A	HLM1A,E700,B1A1A,5D2F,5DC	2O0	4	0	6,394,529	67:0
798	2	21	09:06:46.933	165JF4A	7SCAN	NORM,113.143,22.	Check S/P Position	2O0	4	0	6,394,540	90:0
799	2	21	09:10:42.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5779.38 +/- 2	2O0	4	0	6,394,544	80:0
800	2	21	09:10:42.933	175JF422A6A	6DMSC	R115,1	DMS Control	2O0	4	0	6,394,544	80:0
801	2	21	09:10:48.933	165JF4B	7VECT		Inert vect update UTC	2O0	4	0	6,394,544	89:0
802	2	21	09:10:49.600		DMS:	: *RUNUP	R115, TRACK 1, FWD, TIC 5779.38 +/- 2	2O0	4	0	6,394,544	90:0
803	2	21	09:10:52.933	175JF176A6A	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	2O0	4	0	6,394,545	04:0
804	2	21	09:10:53.600		DMS:	: *AT_SPD	R115, TRACK 1, FWD, TIC 5785.68 +/- 2	2O0	4	0	6,394,545	05:0
805	2	21	09:10:53.600		DMS:	**: *RECORD**	R115, TRACK 1, FWD, TIC *5785.68 +/- 2	2O0	4	0	6,394,545	05:0
806	2	21	09:11:18.933	175JF422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,545	43:0
807	2	21	09:11:18.933		DMS:	**: *RUNDOWN**	R115, TRACK 1, FWD, TIC *5874.74 +/- 2	2O0	4	0	6,394,545	43:0
808	2	21	09:11:20.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5875.74 +/- 2	2O0	4	0	6,394,545	44:8
809	2	21	09:15:44.933	175KA422A6A	6DMSC	R7,1	DMS Control Tape runup 7.68kbp	2O0	4	0	6,394,549	78:0
810	2	21	09:15:44.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 5875.74 +/- 2	2O0	4	0	6,394,549	78:0
811	2	21	09:15:51.600		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 5875.74 +/- 2	2O0	4	0	6,394,549	88:0
812	2	21	09:15:52.933	175KA176A6A	6TMREC	**LPW**	7.68 KBPS LOW RATE SCI PWS RECORD Record	2O0	4	0	6,394,549	90:0
813	2	21	09:15:53.000		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 5875.86 +/- 2	2O0	4	0	6,394,549	90:1
814	2	21	09:15:53.000		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *5875.86 +/- 2	2O0	4	0	6,394,549	90:1
815	2	21	09:16:00.266	175KA422A6B	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,394,550	10:0
816	2	21	09:16:00.266		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *5877.56 +/- 2	2O0	4	0	6,394,550	10:0
817	2	21	09:16:01.466		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5877.62 +/- 2	2O0	4	0	6,394,550	11:8
818	2	21	09:17:01.600	20KB4B	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	6,394,551	11:0
819	2	21	09:59:41.533	488AV6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,394,593	29:0
820	2	21	10:28:47.533	488AV6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,394,622	09:0
821	**2**	**21**	**13:00:00.000**	**20A3FB**	**37F2PR**	**Final Condition**	**Shield Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771**	**58:7**
822	**2**	**21**	**13:00:00.000**	**20A3FA**	**37F1PR**	**Final Condition**	**Radiator Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771**	**58:7**
823	**2**	**21**	**13:00:00.000**	**20A3EZ**	**37C2PR**	**Final Condition**	**Optics Heater 2 OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771**	**58:7**

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	**2**	**21**	**13:00:00.000**	**20A3EY**	**37C1PR**	**Final Condition**	**Optics Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**	
825	**2**	**21**	**13:00:00.000**	**20A3EX**	**37HR**	**Final Condition**	**Replacement Heaters OFF**	**2O0**	**4**	**0**	**6,394,771:58:7**	
826	**2**	**21**	**13:00:00.000**	**20A3FD**	**40HRPR**	**Final Condition**	**RCT Heater OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**	
827	**2**	**21**	**13:00:00.000**	**20A3FE**	**40T1PR**	**Final Condition**	**PCT Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**	
828	**2**	**21**	**13:00:00.000**	**20A3EW**	**37A**	**Final Condition**	**NIMS Power ON**	**2O0**	**4**	**0**	**6,394,771:58:7**	
829	**2**	**21**	**13:00:00.000**	**20A3FF**	**40T2R**	**Final Condition**	**PCT Heater 2 OFF**	**2O0**	**4**	**0**	**6,394,771:58:7**	
830	2	21	13:00:00.200		DMS:	: READY	RDY, TRACK 1, FWD, TIC 5877.62 +/- 2	2O0	4	0	6,394,771:59:0	

			Sequence:	I33BED + BEG + BCAL		Created: 03/12/02	Begin: 02-021/13:00:00 Finish: 02-092/03:00:00				
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
1	**2**	**21**	**13:00:00.000**	**20A3EW**	**37A**	**Initial Condition**	**NIMS Power ON**	**2O0**	**4**	**0**	**6,394,771:58:7**
2	**2**	**21**	**13:00:00.000**	**20A3EX**	**37HR**	**Initial Condition**	**Replacement Heaters OFF**	**2O0**	**4**	**0**	**6,394,771:58:7**
3	**2**	**21**	**13:00:00.000**	**20A3EY**	**37C1PR**	**Initial Condition**	**Optics Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**
4	**2**	**21**	**13:00:00.000**	**20A3EZ**	**37C2PR**	**Initial Condition**	**Optics Heater 2 OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**
5	**2**	**21**	**13:00:00.000**	**20A3FA**	**37F1PR**	**Initial Condition**	**Radiator Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**
6	**2**	**21**	**13:00:00.000**	**20A3FB**	**37F2PR**	**Initial Condition**	**Shield Flash Heater OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**
7	**2**	**21**	**13:00:00.000**	**20A3FD**	**40HRPR**	**Initial Condition**	**RCT Heater OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**
8	**2**	**21**	**13:00:00.000**	**20A3FE**	**40T1PR**	**Initial Condition**	**PCT Heater 1 OFF (primary relay)**	**2O0**	**4**	**0**	**6,394,771:58:7**
9	**2**	**21**	**13:00:00.000**	**20A3FF**	**40T2R**	**Initial Condition**	**PCT Heater 2 OFF**	**2O0**	**4**	**0**	**6,394,771:58:7**
10	2	21	13:00:00.200		DMS:	: READY	RDY, TRACK 1, FWD, TIC 1880.85 +/- 9	2O0	4	0	6,394,771:59:0
11	2	21	13:01:08.200	488AA6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,394,772:70:0
12	**2**	**21**	**13:01:20.866**	**432JB6B**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**2O0**	**4**	**0**	**6,394,772:89:0**
13	2	21	13:01:21.533	432JB431A6A	6RCDSL	DDSNCG,PLSDSL,EP	Record Deselect (DDS o	2O0	4	0	6,394,772:90:0
14	**2**	**21**	**13:01:22.200**	**432JB6D**	**6RTSL2**	**NIMNCG,AACSEL,RT**	**AACS SELECT**	**2O0**	**4**	**0**	**6,394,773:00:0**
15	2	21	13:01:22.200	432JB6C	6RTSL1		R/T Select of DDS and	2O0	4	0	6,394,773:00:0
16	2	21	13:30:50.866	432OT431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2O0	4	0	6,394,802:14:0
17	2	21	13:30:51.533	432OT6A	6RTSL1		R/T Select of DDS and	2O0	4	0	6,394,802:15:0
18	2	21	15:17:40.200	488AA6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,394,907:73:0
19	2	21	15:26:26.200	488AA6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,394,916:43:0
20	2	21	16:15:05.533	488AB6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,394,964:54:0
21	2	21	16:25:56.200	488AB6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,394,975:29:0
22	2	21	16:39:41.533	488AB6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,394,988:84:0
23	2	21	17:08:47.533	488AB6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,395,017:64:0
24	2	21	17:24:41.533	488AB6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,395,033:39:0
25	2	21	17:53:47.533	488AC6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,395,062:19:0
26	2	21	19:40:04.200	488AC6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,395,167:29:0
27	2	21	19:53:00.200	488AC6C	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	2O0	4	0	6,395,180:10:0
28	2	22	00:23:48.200	488AD6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	6,395,447:85:0
29	2	22	01:00:00.200	481UA4A	7VECT		Inert vect update UTC	2O0	4	0	6,395,483:67:0
30	2	22	01:01:00.200	488AD6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,395,484:66:0
31	2	22	01:15:00.200	488AD6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,395,498:52:0
32	2	22	01:36:05.533	488AD6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,395,519:39:0
33	2	22	02:07:55.533	488AD6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,395,550:83:0
34	2	22	03:02:00.200	20UU4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	6,395,604:36:0
35	2	22	03:03:00.200	20UU4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2O0	4	0	6,395,605:35:0
36	2	22	03:05:00.200	20UU4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	6,395,607:33:0
37	2	22	03:10:30.200	20UU4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2O0	4	0	6,395,612:73:0
38	2	22	03:10:30.866	20UU4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2O0	4	0	6,395,612:74:0
39	2	22	03:10:50.866	20UU4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2O0	4	0	6,395,613:13:0
40	2	22	03:10:51.533	20UU4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2O0	4	0	6,395,613:14:0
41	2	22	03:11:11.533	20UU4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	6,395,613:44:0
42	2	22	03:11:12.200	20UU4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	6,395,613:45:0
43	2	22	03:11:22.200	20UU4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2O0	4	0	6,395,613:60:0
44	2	22	03:11:22.866	20UU4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2O0	4	0	6,395,613:61:0
45	2	22	03:11:32.866	20UU4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2O0	4	0	6,395,613:76:0
46	2	22	03:11:33.533	20UU4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2O0	4	0	6,395,613:77:0
47	2	22	03:13:20.200	20UU4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2O0	4	0	6,395,615:55:0
48	2	22	03:13:20.866	20UU4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2O0	4	0	6,395,615:56:0
49	2	22	03:13:40.866	20UU4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2O0	4	0	6,395,615:86:0
50	2	22	03:13:41.533	20UU4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2O0	4	0	6,395,615:87:0
51	2	22	03:14:01.533	20UU4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	6,395,616:26:0
52	2	22	03:14:02.200	20UU4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	6,395,616:27:0
53	2	22	03:14:12.200	20UU4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2O0	4	0	6,395,616:42:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	2	22	03:14:12.866	20UU4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2O0	4	0	6,395,616	43:0
55	2	22	03:14:22.866	20UU4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2O0	4	0	6,395,616	58:0
56	2	22	03:14:23.533	20UU4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2O0	4	0	6,395,616	59:0
57	2	22	03:15:20.200	20UU4Z	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	6,395,617	53:0
58	2	22	03:36:00.200	432OZ431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2O0	4	0	6,395,638	02:0
59	2	22	03:36:00.866	432OZ6A	6RTSL1		R/T Select of DDS and	2O0	4	0	6,395,638	03:0
60	2	22	03:40:04.200	20UG4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	6,395,642	04:0
61	2	22	03:40:54.200	20UG4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	6,395,642	79:0
62	2	22	07:45:34.866	488AE6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,395,884	78:0
63	2	22	09:07:24.200	488AE6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,395,965	71:0
64	2	22	15:21:56.200	488AF6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,396,336	18:0
65	2	22	15:34:11.533	488AF6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,396,348	29:0
66	2	22	15:41:08.200	488AF6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,396,355	17:0
67	2	22	22:41:34.133	411JA6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,396,771	00:0
68	2	22	22:41:34.133		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 1880.85 +/- 9	2O0	4	0	6,396,771	00:0
69	2	22	22:41:40.800		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 1880.85 +/- 9	2O0	4	0	6,396,771	10:0
70	2	22	22:41:42.200		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 1880.97 +/- 9	2O0	4	0	6,396,771	12:1
71	2	22	22:41:42.200		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *1880.97 +/- 9	2O0	4	0	6,396,771	12:1
72	2	22	22:41:44.133	411JA6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,396,771	15:0
73	2	22	22:43:45.466	411JA6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,396,773	15:0
74	2	22	22:43:46.133		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *1910.02 +/- 9	2O0	4	0	6,396,773	16:0
75	2	22	22:43:46.133	411JA6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,396,773	16:0
76	2	22	22:43:47.333		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *1910.08 +/- 9	2O0	4	0	6,396,773	17:8
77	2	23	05:32:22.133	488AG6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,397,177	26:0
78	2	23	10:20:32.800	488AG6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,397,462	27:0
79	2	23	10:25:24.133	488AG6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,397,467	09:0
80	2	23	17:27:56.800	411JB6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,397,885	00:0
81	2	23	17:27:56.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 1910.08 +/- 9	2O0	4	0	6,397,885	00:0
82	2	23	17:28:03.466		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 1910.08 +/- 9	2O0	4	0	6,397,885	10:0
83	2	23	17:28:04.866		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 1910.20 +/- 9	2O0	4	0	6,397,885	12:1
84	2	23	17:28:04.866		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *1910.20 +/- 9	2O0	4	0	6,397,885	12:1
85	2	23	17:28:06.800	411JB6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,397,885	15:0
86	2	23	17:30:08.133	411JB6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,397,887	15:0
87	2	23	17:30:08.800		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *1939.25 +/- 9	2O0	4	0	6,397,887	16:0
88	2	23	17:30:08.800	411JB6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,397,887	16:0
89	2	23	17:30:10.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *1939.31 +/- 9	2O0	4	0	6,397,887	17:8
90	2	24	00:35:38.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 1939.31 +/- 9	2O0	4	0	6,398,308	00:0
91	2	24	00:35:38.800	411JC6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,398,308	00:0
92	2	24	00:35:45.466		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 1939.31 +/- 9	2O0	4	0	6,398,308	10:0
93	2	24	00:35:46.866		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 1939.43 +/- 9	2O0	4	0	6,398,308	12:1
94	2	24	00:35:46.866		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *1939.43 +/- 9	2O0	4	0	6,398,308	12:1
95	2	24	00:35:48.800	411JC6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,398,308	15:0
96	2	24	00:37:50.133	411JC6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,398,310	15:0
97	2	24	00:37:50.800	411JC6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,398,310	16:0
98	2	24	00:37:50.800		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *1968.47 +/- 9	2O0	4	0	6,398,310	16:0
99	2	24	00:37:52.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *1968.53 +/- 9	2O0	4	0	6,398,310	17:8
100	2	24	05:46:26.733	488AH6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,398,615	35:0
101	2	24	08:47:16.066	488AH6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,398,794	20:0
102	2	24	11:23:00.066	488AH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,398,948	22:0
103	2	24	11:51:58.066	488AI6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,398,976	81:0
104	2	24	11:52:52.066	488AI6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,398,977	71:0
105	2	24	12:01:24.066	488AI6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,398,986	20:0
106	2	24	16:58:12.733	488AI6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,399,279	70:0
107	2	24	17:15:00.066	488AI6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,399,296	34:0
108	2	24	18:11:10.733	488AJ6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,399,351	85:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	2	24	18:38:00.066	488AJ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,399,378	42:0
110	2	25	02:06:12.066	488AK6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,399,821	67:0
111	2	25	03:52:34.733	488AK6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,399,926	86:0
112	2	25	04:17:08.066	488AK6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,399,951	21:0
113	2	25	04:26:06.066	488AK6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,399,960	09:0
114	2	25	04:27:00.066	488AK6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,399,960	90:0
115	2	25	09:47:32.066		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 1968.53 +/- 9	2O0	4	0	6,400,278	00:0
116	2	25	09:47:32.066	411JD6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,400,278	00:0
117	2	25	09:47:38.733		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 1968.53 +/- 9	2O0	4	0	6,400,278	10:0
118	2	25	09:47:40.133		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 1968.65 +/- 9	2O0	4	0	6,400,278	12:1
119	2	25	09:47:40.133		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *1968.65 +/- 9	2O0	4	0	6,400,278	12:1
120	2	25	09:47:42.066	411JD6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,400,278	15:0
121	2	25	09:49:43.400	411JD6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,400,280	15:0
122	2	25	09:49:44.066	411JD6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,400,280	16:0
123	2	25	09:49:44.066		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *1997.70 +/- 9	2O0	4	0	6,400,280	16:0
124	2	25	09:49:45.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *1997.76 +/- 9	2O0	4	0	6,400,280	17:8
125	2	25	16:55:14.000	411JE6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,400,701	00:0
126	2	25	16:55:14.000		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 1997.76 +/- 9	2O0	4	0	6,400,701	00:0
127	2	25	16:55:20.666		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 1997.76 +/- 9	2O0	4	0	6,400,701	10:0
128	2	25	16:55:22.066		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 1997.88 +/- 9	2O0	4	0	6,400,701	12:1
129	2	25	16:55:22.066		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *1997.88 +/- 9	2O0	4	0	6,400,701	12:1
130	2	25	16:55:24.000	411JE6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,400,701	15:0
131	2	25	16:57:25.333	411JE6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,400,703	15:0
132	2	25	16:57:26.000		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *2026.93 +/- 9	2O0	4	0	6,400,703	16:0
133	2	25	16:57:26.000	411JE6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,400,703	16:0
134	2	25	16:57:27.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2026.99 +/- 9	2O0	4	0	6,400,703	17:8
135	2	25	19:32:16.000	488AL6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,400,856	28:0
136	2	25	20:46:13.333	488AL6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,400,929	41:0
137	2	25	21:13:03.333	488AL6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,400,955	90:0
138	2	26	00:01:54.000	431ZL6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2O0	4	0	6,401,122	89:0
139	2	26	00:01:55.333	432ZL6A	6RTSL1		R/T Select of DDS and	2O0	4	0	6,401,123	00:0
140	2	26	00:06:02.000	20ZM6A	6EUVON			2O0	4	0	6,401,127	06:0
141	2	26	00:06:58.666	431ZM6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS onl	2O0	4	0	6,401,128	00:0
142	2	26	02:42:28.000	488AM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,401,281	71:0
143	2	26	04:03:32.000	488AM6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,401,361	87:0
144	2	26	04:20:36.000	488AM6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,401,378	76:0
145	2	26	04:22:38.000	488AM6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,401,380	77:0
146	2	26	04:47:10.666	488AM6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,401,405	11:0
147	2	26	09:08:36.000	488AN6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,401,663	61:0
148	2	26	09:20:25.333	488AN6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,401,675	33:0
149	2	26	16:27:45.333		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2026.99 +/- 9	2O0	4	0	6,402,098	00:0
150	2	26	16:27:45.333	411JF6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	2O0	4	0	6,402,098	00:0
151	2	26	16:27:52.000		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 2026.99 +/- 9	2O0	4	0	6,402,098	10:0
152	2	26	16:27:53.400		DMS:	: *AT_SPD	R7, TRACK 1, FWD, TIC 2027.11 +/- 9	2O0	4	0	6,402,098	12:1
153	2	26	16:27:53.400		DMS:	**: *RECORD**	R7, TRACK 1, FWD, TIC *2027.11 +/- 9	2O0	4	0	6,402,098	12:1
154	2	26	16:27:55.333	411JF6B	6TMREC	**BDT**	7.68 KBPS BUFFER DUMP TO TAPE Record Mode	2O0	4	0	6,402,098	15:0
155	2	26	16:29:56.666	411JF6C	6TMREC	**NRC**	NO RECORD Record Mode Change	2O0	4	0	6,402,100	15:0
156	2	26	16:29:57.333	411JF6D	6DMSC	RDY,0	DMS Control Tape stop	2O0	4	0	6,402,100	16:0
157	2	26	16:29:57.333		DMS:	**: *RUNDOWN**	R7, TRACK 1, FWD, TIC *2056.15 +/- 9	2O0	4	0	6,402,100	16:0
158	2	26	16:29:58.533		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *2056.21 +/- 9	2O0	4	0	6,402,100	17:8
159	2	26	22:17:13.333	488AO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,402,443	57:0
160	2	27	03:37:55.933	488AO6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,402,760	74:0
161	2	27	04:07:47.933	488AO6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,402,790	32:0
162	2	27	09:08:35.933	488AP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,403,087	77:0
163	2	27	11:12:19.933	488AP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,403,210	20:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	2	27	11:13:58.600	488AP6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,403,211:77:0	
165	2	27	11:20:51.933	488AP6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,403,218:60:0	
166	2	27	21:42:09.933	488AQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,403,833:12:0	
167	2	27	22:56:19.933	488AQ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,403,906:44:0	
168	2	27	23:23:09.266	488AQ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,403,933:01:0	
169	2	28	00:25:03.933	20UA4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	6,403,994:22:0	
170	2	28	00:25:53.933	20UA4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	6,403,995:06:0	
171	2	28	00:29:52.600	176UA6A	6TMREC	**IPB**	INITIATE PLAYBACK (PB CONTROL) Record Mod	2O0	4	0	6,403,999:00:0	
172	2	28	02:31:47.933	488AQ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,404,119:53:0	
173	2	28	03:52:51.933	488AR6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,404,199:69:0	
174	2	28	03:56:09.933	488AR6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,404,203:02:0	
175	2	28	04:05:39.933	488AR6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,404,212:38:0	
176	2	28	04:11:15.933	488AR6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,404,217:87:0	
177	2	28	04:12:43.933	488AR6E	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,404,219:37:0	
178	2	28	04:37:16.600	488AS6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,404,243:62:0	
179	2	28	09:02:11.933	488AS6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,404,505:63:0	
180	2	28	10:40:18.600	488AT6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,404,602:66:0	
181	2	28	21:32:07.200	488AU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,405,247:34:0	
182	2	28	22:46:23.866	488AU6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,405,320:76:0	
183	2	28	23:13:13.200	488AU6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,405,347:33:0	
184	2	29	02:27:31.866	488AU6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,405,539:49:0	
185	2	29	02:48:14.533	488AU6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,405,560:02:0	
186	2	29	02:53:07.866	488AV6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	6,405,564:78:0	
187	2	29	07:45:05.866	488AV6B	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	2O0	4	0	6,405,853:56:0	
188	2	29	07:49:39.866	488AV6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,405,858:12:0	
189	2	29	08:45:01.200	488AV6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,405,912:80:0	
190	2	29	09:10:43.866	488AW6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,405,938:28:0	
191	2	29	09:13:21.866	488AW6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,405,940:83:0	
192	2	29	11:52:59.866	488AW6C	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	2O0	4	0	6,406,098:72:0	
193	2	29	11:56:14.533	176UQ6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	6,406,102:00:0	
194	2	29	12:05:59.866	20RA4C	7STAT	5.00,275.58,-23.	Stator inertial point	2O0	4	0	6,406,111:59:0	
195	2	29	12:06:11.866	20RA6D	6MROH	7,6744,0,A10	read from AACSA7,6744,0,A10	2O0	4	0	6,406,111:77:0	
196	2	29	12:25:01.866	490UA412A4B	**7MODE**	**INT**	AACS INERTIAL MODE	2O0	4	0	6,406,130:43:0	
197	2	29	12:29:59.866	490UA412A4D	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	6,406,135:35:0	
198	2	29	12:30:19.866	20RA4D	7STAT	17.45,275.58,-23	Stator inertial point	2O0	4	0	6,406,135:65:0	
199	2	29	12:34:09.866	490UA412A4E	7VECT		Inert vect update UTC	2O0	4	0	6,406,139:46:0	
200	2	29	12:34:13.866	490UA412A4F	7TURN	2,RTH	ALERT Thruster	2O0	4	0	6,406,139:52:0	
201	2	29	12:38:01.866	490UA412A406A4A	7STAR	1,1235,23.966,-5	Star catalog update	2O0	4	0	6,406,143:30:0	
202	2	29	12:38:03.866	490UA412A406A4B	7STAR	2,333,138.16	Star catalog update	2O0	4	0	6,406,143:33:0	
203	2	29	12:38:05.866	490UA412A406A4C	7STAR	3,110,186.82	Star catalog update	2O0	4	0	6,406,143:36:0	
204	2	29	12:38:07.866	490UA412A406A4D	7STAR	4,185,345.57	Star catalog update	2O0	4	0	6,406,143:39:0	
205	2	29	12:38:09.866	490UA412A406A4E	7STAR	5,0,0.0,0.0	Star catalog update	2O0	4	0	6,406,143:42:0	
206	2	29	12:38:11.866	490UA412A406A4F	7STAR	6,0,0.0,0.0	Star catalog update	2O0	4	0	6,406,143:45:0	
207	2	29	12:48:05.866	20RA4F	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	6,406,153:26:0	
208	2	29	12:56:09.866	490UA412A4G	**7MODE**	**CRU**	AACS CRUISE MODE	2O0	4	0	6,406,161:24:0	
209	2	29	13:37:23.866	488AW6D	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2O0	4	0	6,406,202:04:0	
210	2	29	14:30:03.866	20UB4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	6,406,254:12:0	
211	2	29	14:30:53.866	20UB4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	6,406,254:87:0	
212	2	29	14:30:59.866	488AW6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,406,255:05:0	
213	2	29	14:32:57.866	176UB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2O0	4	0	6,406,257:00:0	
214	2	29	15:02:43.866	488AX6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,406,286:40:0	
215	2	29	15:11:05.200	488AX6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,406,294:64:0	
216	2	29	15:19:47.866	488AX6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,406,303:29:0	
217	2	29	20:47:03.200	488AX6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,406,626:89:0	
218	2	30	02:55:13.800	488AY6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,406,991:10:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	2	30	02:59:31.800	488AY6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,406,995:33:0	
220	2	30	04:31:09.133	488AY6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,407,085:89:0	
221	2	30	08:47:15.800	488AY6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,407,339:25:0	
222	2	30	09:45:12.466	488AZ6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,407,396:53:0	
223	2	30	09:51:15.800	488AZ6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,407,402:52:0	
224	2	30	11:41:07.800	488AZ6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,407,511:21:0	
225	2	30	13:18:11.800	488AZ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,407,607:21:0	
226	2	30	14:58:27.800	488AZ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,407,706:36:0	
227	2	30	15:06:59.800	488BA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,407,714:76:0	
228	2	30	15:12:51.800	488BA6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,407,720:58:0	
229	2	30	15:17:39.800	488BA6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2O0	4	0	6,407,725:35:0	
230	2	30	15:32:35.800	488BA6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,407,740:14:0	
231	2	30	20:07:00.466	488BA6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,408,011:50:0	
232	2	30	21:21:29.800	488BB6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,408,085:20:0	
233	2	30	21:48:19.133	488BB6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,408,111:68:0	
234	2	31	02:12:35.800	488BB6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,408,373:11:0	
235	2	31	03:42:11.800	488BC6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,408,461:67:0	
236	2	31	03:56:00.466	488BC6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,408,475:36:0	
237	2	31	04:05:39.800	488BC6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,408,484:86:0	
238	2	31	05:46:05.133	488BC6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,408,584:24:0	
239	2	31	08:42:59.733	488BC6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,408,759:21:0	
240	2	31	10:53:07.733	488BD6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,408,887:85:0	
241	2	31	11:13:45.733	488BD6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,408,908:31:0	
242	2	31	11:20:51.733	488BD6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,408,915:33:0	
243	**2**	**31**	**12:59:33.733**	**432JF6B**	**6RTDS2**	**NIMNCG,AACDSL,RT**	**AACS DESELECT**	**2O0**	**4**	**0**	**6,409,012:89:0**	
244	2	31	13:02:37.066	431MA6A	6RCSEL	DDSSEL,PLSNCG,EP	Record Select (DDS onl	2O0	4	0	6,409,016:00:0	
245	2	32	00:26:56.400	488BE6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,409,692:73:0	
246	2	32	01:14:59.733	488BE6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,409,740:30:0	
247	2	32	08:32:19.733	488BF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,410,172:78:0	
248	2	32	08:45:04.400	488BF6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,410,185:42:0	
249	2	32	08:49:23.733	488BF6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,410,189:67:0	
250	2	32	10:11:01.066	488BF6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	2O0	4	0	6,410,270:42:0	
251	**2**	**32**	**11:59:59.700**	**33NNRCTRLT01-**		**-----START------**		**2O0**	**4**	**0**	**: :**	
252	2	32	12:10:52.400	176XU6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2O0	4	0	6,410,389:00:0	
253	2	32	12:14:09.066	20XE4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2O0	4	0	6,410,392:22:0	
254	2	32	12:18:15.733	20DA4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2O0	4	0	6,410,396:28:0	
255	2	32	12:19:05.733	20DA4B	7SLEW	DIS,POS,0.0	Stator movement	2O0	4	0	6,410,397:12:0	
256	**2**	**32**	**12:21:59.733**	**185XE10A3A**	**40HRP**	**1**	**RCT Heater ON (primary relay)**	**2O0**	**4**	**0**	**6,410,400:00:0**	
257	**2**	**32**	**12:22:05.066**	**185XE10B3A**	**40HRP**	**2**	**RCT Heater ON (primary relay)**	**2O0**	**4**	**0**	**6,410,400:08:0**	
258	2	32	13:07:31.733	488BF6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,410,445:03:0	
259	2	32	14:47:47.733	488BG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,410,544:18:0	
260	2	32	14:56:51.733	488BG6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2O0	4	0	6,410,553:15:0	
261	2	32	14:58:27.733	488BG6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2O0	4	0	6,410,554:68:0	
262	2	32	15:06:59.733	488BG6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,410,563:17:0	
263	2	32	19:11:52.333	488BG6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,410,805:34:0	
264	2	32	20:26:37.666	488BH6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,410,879:28:0	
265	2	32	20:53:27.000	488BH6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2O0	4	0	6,410,905:76:0	
266	**2**	**33**	**00:13:45.666**	**20DC5A**	**37PL**		**Program Load (halts microprocessor & unwri**		**4**	**0**	**6,411,103:86:0**	
267	**2**	**33**	**00:13:53.000**	**20DC5B**	**37MRL**		**Memory Realocate (software operates from R**		**4**	**0**	**6,411,104:06:0**	
268	**2**	**33**	**00:14:01.000**	**20DC6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**		**4**	**0**	**6,411,104:18:0**	
269	**2**	**33**	**00:14:11.000**	**20DC6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**		**4**	**0**	**6,411,104:33:0**	
270	**2**	**33**	**00:14:21.000**	**20DC5C**	**37IRT**		**Instrument Reset (goes into POR state)**		**4**	**0**	**6,411,104:48:0**	
271	**2**	**33**	**00:14:22.333**	**20DC5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**6,411,104:50:0**	
272	2	33	00:16:46.333	125XE	NIMSINIT	GS	##### GROUP START INIT	260	4	0	6,411,106:84:0	
273	**2**	**33**	**00:16:46.333**	**125XE4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**260**	**4**	**0**	**6,411,106:84:0**	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
274	**2**	**33**	**00:17:47.000**	**125XE4B**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**6,411,107:84:0**
275	**2**	**33**	**00:18:47.666**	**125XE4C**	**37IST**	**0,2,0,OFF,0,1,3**	**Gain State 1**	**1R0**	**4**	**0**	**6,411,108:84:0**
276	2	33	00:19:48.333	125XE11A	NIMSINIT	GE	##### GROUP END INIT	1R0	4	0	6,411,109:84:0
277	**2**	**33**	**00:19:48.333**	**125XE4D**	**37MB**	**1B,1B,0,0,0,0**	**Selects mirror (spatial) edit table**	**1R0**	**4**	**0**	**6,411,109:84:0**
278	2	33	00:21:49.666	127XE	NIMSTAB	GS	%%%%% GROUP START TAB	1R0	4	0	6,411,111:84:0
279	**2**	**33**	**00:21:49.666**	**127XE4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**1R3**	**4**	**0**	**6,411,111:84:0**
280	**2**	**33**	**00:21:50.333**	**127XE4B**	**37ETB**	**0A,CA,18,03,FF,1**	**Loads wavelength edit table**	**1R3**	**4**	**0**	**6,411,111:85:0**
281	2	33	00:22:09.666	127XE11A	NIMSTAB	GE	%%%%% GROUP END TAB	1R3	4	0	6,411,112:23:0
282	**2**	**33**	**00:27:35.000**	**185XE10C3A**	**40HRPR**	**1**	**RCT Heater OFF (primary relay)**	**1R3**	**4**	**0**	**6,411,117:56:0**
283	**2**	**33**	**00:27:40.333**	**185XE10D3A**	**40HRPR**	**2**	**RCT Heater OFF (primary relay)**	**1R3**	**4**	**0**	**6,411,117:64:0**
284	2	33	00:32:01.000	192XE4A	**7CONE**	**17.0,0.0**	Check S/P Position	1R3	4	0	6,411,122:00:0
285	**2**	**33**	**00:32:21.000**	**432XE6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**1R3**	**4**	**0**	**6,411,122:30:0**
286	**2**	**33**	**00:40:25.000**	**432XF6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**1R3**	**4**	**0**	**6,411,130:28:0**
287	2	33	00:44:09.000	192XE4B	**7CONE**	**17.0,119.7**	Check S/P Position	1R3	4	0	6,411,134:00:0
288	**2**	**33**	**00:46:30.333**	**432XU6A**	**6RTSL2**	**NIMSEL,AACNCG,RT**	**NIMS R/T SELECT**	**1R3**	**4**	**0**	**6,411,136:30:0**
289	**2**	**33**	**00:48:30.333**	**432XV6A**	**6RTDS2**	**NIMDSL,AACNCG,RT**	**NIMS R/T DESELECT**	**1R3**	**4**	**0**	**6,411,138:28:0**
290	2	33	00:50:13.000	192XE4C	**7CONE**	**17.0,153.0**	Check S/P Position	1R3	4	0	6,411,140:00:0
291	**2**	**33**	**00:57:13.000**	**127XF4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**1R0**	**4**	**0**	**6,411,146:84:0**
292	2	33	00:57:13.000	127XF	NIMSTAB	GS	%%%%% GROUP START TAB	1R0	4	0	6,411,146:84:0
293	**2**	**33**	**00:57:13.666**	**127XF4B**	**37ETB**	**04,C4,02,00,00**	**Loads wavelength edit table**	**1R0**	**4**	**0**	**6,411,146:85:0**
294	2	33	00:57:33.000	127XF11A	NIMSTAB	GE	%%%%% GROUP END TAB	1R0	4	0	6,411,147:23:0
295	**2**	**33**	**01:00:15.000**	**125XF4A**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**1R0**	**4**	**0**	**6,411,149:84:0**
296	2	33	01:00:15.000	125XF	NIMSINIT	GS	##### GROUP START INIT	1R0	4	0	6,411,149:84:0
297	**2**	**33**	**01:01:15.666**	**125XF4B**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**160**	**4**	**0**	**6,411,150:84:0**
298	2	33	01:02:16.333	125XF11A	NIMSINIT	GE	##### GROUP END INIT	160	4	0	6,411,151:84:0
299	**2**	**33**	**01:02:16.333**	**125XF4C**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**1O0**	**4**	**0**	**6,411,151:84:0**
300	2	33	01:18:51.000	20DB4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	6,411,168:29:0
301	2	33	01:19:41.000	20DB4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	6,411,169:13:0
302	2	33	01:21:33.666	176XF6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	6,411,171:00:0
303	**2**	**33**	**01:21:34.400**	**33NNRCTRLT01-**		**-----STOP-------**		**1O0**	**4**	**0**	**: :**
304	2	33	02:01:55.666	488BH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,411,210:84:0
305	2	33	03:31:31.666	488BI6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,411,299:49:0
306	2	33	03:40:52.333	488BI6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,411,308:71:0
307	2	33	03:50:43.666	488BI6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,411,318:48:0
308	2	33	20:51:48.333	488BJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,412,328:35:0
309	2	34	02:57:23.666	488BK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,412,689:87:0
310	2	34	03:28:34.333	488BK6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,412,720:72:0
311	2	34	03:35:47.666	488BK6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,412,727:85:0
312	2	34	07:10:52.933	488BK6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,412,940:60:0
313	2	34	08:17:23.600	488BK6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,413,006:40:0
314	2	34	10:38:11.600	488BL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,413,145:63:0
315	2	34	10:58:33.600	488BL6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,413,165:76:0
316	2	34	11:05:55.600	488BL6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,413,173:11:0
317	2	34	19:16:44.266	488BM6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,413,658:49:0
318	2	35	02:53:07.600	488BN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,414,109:83:0
319	2	35	03:36:34.933	488BN6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,414,152:81:0
320	2	35	03:37:55.600	488BN6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,414,154:20:0
321	2	35	03:46:27.600	488BN6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,414,162:60:0
322	2	35	10:55:47.600	488BO6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,414,587:25:0
323	2	35	12:48:19.600	488BO6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,414,698:52:0
324	2	35	14:32:51.533	488BO6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,414,801:87:0
325	2	35	14:41:02.200	488BO6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,414,810:04:0
326	2	35	14:41:23.533	488BO6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,414,810:36:0
327	2	35	14:49:55.533	488BP6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,414,818:76:0
328	2	35	22:11:39.533	488BQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,415,255:65:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	2	36	01:41:51.533	488BQ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,415,463:55:0	
330	2	36	02:08:41.533	488BQ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,415,490:13:0	
331	2	36	09:42:43.533	488BR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,415,939:17:0	
332	2	36	10:42:27.533	488BR6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,415,998:24:0	
333	2	36	11:53:16.866	488BR6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,416,068:28:0	
334	2	36	12:17:49.533	488BR6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,416,092:53:0	
335	2	36	12:37:39.533	488BR6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,416,112:18:0	
336	2	36	14:26:27.533	488BS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,416,219:73:0	
337	2	36	14:38:23.533	488BS6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,416,231:55:0	
338	2	36	14:45:39.533	488BS6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,416,238:72:0	
339	2	36	19:36:35.533	488BS6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,416,526:48:0	
340	2	37	02:42:27.466	488BT6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,416,947:65:0	
341	2	37	02:53:21.466	488BT6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,416,958:45:0	
342	2	37	02:59:31.466	488BT6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,416,964:54:0	
343	2	37	05:45:40.133	488BT6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,417,128:83:0	
344	2	37	07:51:47.466	488BT6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,417,253:59:0	
345	2	37	10:21:07.466	488BU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,417,401:31:0	
346	2	37	10:43:19.466	488BU6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,417,423:27:0	
347	2	37	10:50:59.466	488BU6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,417,430:80:0	
348	2	37	16:56:31.466	488BV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,417,792:36:0	
349	2	37	18:11:59.466	488BV6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,417,867:03:0	
350	2	37	18:38:49.466	488BV6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,417,893:52:0	
351	2	38	01:27:47.466	488BW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,418,298:04:0	
352	2	38	01:43:16.800	488BW6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,418,313:33:0	
353	2	38	01:49:07.466	488BW6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,418,319:13:0	
354	2	38	04:55:36.133	488BW6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,418,503:52:0	
355	2	38	07:41:07.466	488BX6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,418,667:25:0	
356	2	38	10:16:51.400	488BX6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,418,821:27:0	
357	2	38	10:18:14.733	488BX6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,418,822:61:0	
358	2	38	10:25:23.400	488BX6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,418,829:67:0	
359	2	38	10:40:34.066	488BX6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,418,844:68:0	
360	2	38	12:26:59.400	488BY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,418,950:00:0	
361	2	38	14:17:55.400	488BY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,419,059:65:0	
362	2	38	14:32:50.733	488BY6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,419,074:43:0	
363	2	38	14:32:51.400	488BY6D	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	1O0	4	0	6,419,074:44:0	
364	2	38	15:02:43.400	488BY6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,419,104:02:0	
365	2	38	22:26:25.400	488BZ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,419,542:77:0	
366	2	39	02:31:47.400	488BZ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,419,785:47:0	
367	2	39	03:13:11.400	488BZ6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,419,826:42:0	
368	2	39	03:20:51.400	488BZ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,419,834:04:0	
369	2	39	22:16:20.000	488CA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,420,957:04:0	
370	2	39	23:32:09.333	488CA6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,421,032:03:0	
371	2	39	23:58:59.333	488CA6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,421,058:52:0	
372	2	40	01:12:51.333	488CA6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,421,131:57:0	
373	2	40	02:50:59.333	488CA6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,421,228:62:0	
374	2	40	03:05:20.000	488CB6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,421,242:79:0	
375	2	40	03:14:27.333	488CB6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,421,251:81:0	
376	2	40	05:40:24.666	488CB6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,421,396:22:0	
377	2	40	07:26:11.333	488CB6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,421,500:78:0	
378	2	40	10:06:11.333	488CC6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,421,659:09:0	
379	2	40	10:13:04.666	488CC6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,421,665:83:0	
380	2	40	10:18:59.333	488CC6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,421,671:69:0	
381	2	40	19:31:16.000	488CD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,422,217:88:0	
382	2	41	02:21:07.333	488CE6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,422,623:29:0	
383	2	41	03:03:01.333	488CE6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,422,664:69:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	2	41	03:10:11.333	488CE6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,422,671	77:0
385	2	41	04:11:14.000	488CE6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,422,732	20:0
386	2	41	05:27:16.666	488CE6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,422,807	39:0
387	2	41	05:54:06.000	488CF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,422,833	87:0
388	2	41	09:12:51.266	488CF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,423,030	48:0
389	2	41	10:21:07.266	488CF6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,423,098	04:0
390	2	41	10:25:13.266	488CF6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,423,102	09:0
391	2	41	21:48:50.600	488CG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,423,778	19:0
392	2	41	21:58:43.266	488CG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,423,787	89:0
393	2	41	22:24:19.266	488CG6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,423,813	27:0
394	2	42	01:14:59.266	488CG6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,423,982	08:0
395	2	42	07:02:43.266	488CH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,424,326	00:0
396	2	42	09:57:39.266	488CH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,424,499	01:0
397	2	42	10:16:51.266	488CH6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,424,518	00:0
398	2	42	11:50:43.266	488CH6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,424,610	76:0
399	2	42	13:56:35.266	488CI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,424,735	29:0
400	2	42	14:10:41.933	488CI6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,424,749	25:0
401	2	42	14:11:31.266	488CI6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,424,750	08:0
402	2	42	14:20:03.266	488CI6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,424,758	48:0
403	2	42	22:06:04.533	488CJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,425,219	39:0
404	2	42	23:22:25.866	488CJ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,425,294	86:0
405	2	42	23:49:15.200	488CJ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,425,321	43:0
406	2	43	00:47:15.200	488CJ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,425,378	76:0
407	2	43	01:40:35.200	488CJ6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,425,431	53:0
408	2	43	03:03:49.866	488CK6A	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,425,513	83:0
409	2	43	03:28:22.533	488CK6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,425,538	17:0
410	2	43	03:56:29.866	176UO6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	6,425,566	00:0
411	2	43	04:01:59.866	20UZ4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	6,425,571	40:0
412	2	43	04:02:59.866	20UZ4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	1O0	4	0	6,425,572	39:0
413	2	43	04:04:59.866	20UZ4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	6,425,574	37:0
414	2	43	04:10:29.866	20UZ4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	1O0	4	0	6,425,579	77:0
415	2	43	04:10:30.533	20UZ4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	1O0	4	0	6,425,579	78:0
416	2	43	04:10:50.533	20UZ4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	1O0	4	0	6,425,580	17:0
417	2	43	04:10:51.200	20UZ4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	1O0	4	0	6,425,580	18:0
418	2	43	04:11:11.200	20UZ4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	1O0	4	0	6,425,580	48:0
419	2	43	04:11:11.866	20UZ4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	1O0	4	0	6,425,580	49:0
420	2	43	04:11:21.866	20UZ4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	1O0	4	0	6,425,580	64:0
421	2	43	04:11:22.533	20UZ4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	1O0	4	0	6,425,580	65:0
422	2	43	04:11:32.533	20UZ4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	1O0	4	0	6,425,580	80:0
423	2	43	04:11:33.200	20UZ4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	1O0	4	0	6,425,580	81:0
424	2	43	04:13:19.866	20UZ4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	1O0	4	0	6,425,582	59:0
425	2	43	04:13:20.533	20UZ4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	1O0	4	0	6,425,582	60:0
426	2	43	04:13:40.533	20UZ4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	1O0	4	0	6,425,582	90:0
427	2	43	04:13:41.200	20UZ4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	1O0	4	0	6,425,583	00:0
428	2	43	04:14:01.200	20UZ4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	1O0	4	0	6,425,583	30:0
429	2	43	04:14:01.866	20UZ4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	1O0	4	0	6,425,583	31:0
430	2	43	04:14:11.866	20UZ4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	1O0	4	0	6,425,583	46:0
431	2	43	04:14:12.533	20UZ4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	1O0	4	0	6,425,583	47:0
432	2	43	04:14:22.533	20UZ4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	1O0	4	0	6,425,583	62:0
433	2	43	04:14:23.200	20UZ4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	1O0	4	0	6,425,583	63:0
434	2	43	04:15:19.866	20UZ4Z	**7MODE**	**CRU**	AACS CRUISE MODE	1O0	4	0	6,425,584	57:0
435	2	43	04:40:03.866	20UJ4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	6,425,609	08:0
436	2	43	04:40:53.866	20UJ4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	6,425,609	83:0
437	2	43	04:41:59.866	176UR6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	6,425,611	00:0
438	2	43	06:52:03.200	488CK6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,425,739	57:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	2	43	08:04:12.533	488CK6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,425,810:90:0	
440	2	43	08:08:51.200	488CK6E	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,425,815:53:0	
441	2	43	11:15:07.866	488CL6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,425,999:74:0	
442	2	43	11:46:27.200	488CL6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,426,030:72:0	
443	2	43	13:52:19.200	488CL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,426,155:25:0	
444	2	43	14:07:15.200	488CL6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,426,170:04:0	
445	2	43	14:10:02.533	488CL6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,426,172:73:0	
446	2	43	14:20:03.200	488CM6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,426,182:64:0	
447	2	44	01:15:58.533	488CN6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,426,831:38:0	
448	2	44	02:32:31.800	488CN6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,426,907:12:0	
449	2	44	02:59:21.133	488CN6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,426,933:60:0	
450	2	44	08:51:31.133	488CO6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,427,281:87:0	
451	2	44	09:54:15.133	176VA6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	6,427,344:00:0	
452	2	44	10:02:20.466	465WA6A	6DMST	5050	DMS Slew to TIC	1O0	4	0	6,427,352:00:0	
453	2	44	10:02:20.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2056.21 +/- 9	1O0	4	0	6,427,352:00:0	
454	2	44	10:02:20.466		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 2056.21 +/- 9	1O0	4	0	6,427,352:00:0	
455	2	44	10:02:27.133		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 2056.21 +/- 9	1O0	4	0	6,427,352:10:0	
456	2	44	10:02:28.533		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *2056.33 +/- 9	1O0	4	0	6,427,352:12:1	
457	2	44	10:06:11.133	488CO6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,427,355:73:0	
458	2	44	10:09:57.133	488CO6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,427,359:48:0	
459	2	44	10:18:59.133	488CO6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,427,368:42:0	
460	2	44	13:35:11.933		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *5047.94 +/- 9	1O0	4	0	6,427,562:47:2	
461	2	44	13:35:13.133		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5048.00 +/- 9	1O0	4	0	6,427,562:49:0	
462	2	44	15:40:55.133	488CP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,427,686:78:0	
463	2	44	16:00:04.466		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 5048.00 +/- 9	1O0	4	0	6,427,705:73:0	
464	2	44	16:00:04.466	465WB6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	1O0	4	0	6,427,705:73:0	
465	2	44	16:00:05.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5048.12 +/- 9	1O0	4	0	6,427,705:75:1	
466	2	44	16:00:11.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5049.35 +/- 9	1O0	4	0	6,427,705:83:0	
467	2	44	16:00:12.333		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *5049.41 +/- 9	1O0	4	0	6,427,705:84:8	
468	2	44	16:00:16.200		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 5043.91 +/- 9	1O0	4	0	6,427,705:90:6	
469	2	44	16:00:16.200		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *5043.91 +/- 9	1O0	4	0	6,427,705:90:6	
470	2	44	16:25:56.466	465WB6B	6DMSC	RDY,4	DMS Control Tape stop	1O0	4	0	6,427,731:35:0	
471	2	44	16:25:56.466		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 305.79 +/- 9	1O0	4	0	6,427,731:35:0	
472	2	44	16:25:57.666		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 304.99 +/- 9	1O0	4	0	6,427,731:36:8	
473	2	44	18:26:46.466	465WC6A	6DTRN	CMD,6DTRN,465WC6	DMS TRACK TURNAROUND	1O0	4	0	6,427,850:81:0	
474	2	44	18:26:46.466		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 304.99 +/- 9	1O0	4	0	6,427,850:81:0	
475	2	44	18:26:46.466		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 304.99 +/- 9	1O0	4	0	6,427,850:81:0	
476	2	44	18:26:47.866		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 305.11 +/- 9	1O0	4	0	6,427,850:83:1	
477	2	44	18:26:53.133		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 306.34 +/- 9	1O0	4	0	6,427,851:00:0	
478	2	44	18:26:54.333		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 306.40 +/- 9	1O0	4	0	6,427,851:01:8	
479	2	44	18:26:55.733		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 306.28 +/- 9	1O0	4	0	6,427,851:03:9	
480	2	44	18:34:09.133	488CP6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	1O0	4	0	6,427,858:17:0	
481	2	44	18:34:29.733		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/- 9	1O0	4	0	6,427,858:47:9	
482	2	44	18:34:30.933		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/- 9	1O0	4	0	6,427,858:49:7	
483	2	44	18:34:30.933		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/- 9	1O0	4	0	6,427,858:49:7	
484	2	44	18:34:32.333		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	1O0	4	0	6,427,858:51:8	
485	2	44	18:34:44.333		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	1O0	4	0	6,427,858:69:8	
486	2	44	18:34:45.533		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	1O0	4	0	6,427,858:71:6	
487	2	44	18:40:51.800	465WD6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	1O0	4	0	6,427,864:75:0	
488	2	44	18:40:51.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	1O0	4	0	6,427,864:75:0	
489	2	44	18:40:58.466		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	1O0	4	0	6,427,864:85:0	
490	2	44	18:41:02.333		DMS:	: *P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	1O0	4	0	6,427,864:90:8	
491	2	44	18:41:02.333		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	1O0	4	0	6,427,864:90:8	
492	2	44	19:12:45.800	465WD6B	6DMSC	RDY,1	DMS Control Tape stop	1O0	4	0	6,427,896:34:0	
493	2	44	19:12:45.800		DMS:	**: *RUNDOWN**	P100, TRACK 1, FWD, TIC *6063.01 +/-	1O0	4	0	6,427,896:34:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM MF I
494	2	44	19:12:47.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	1O0	4	0	6,427,896:35:8
495	2	44	19:28:21.800	465WE6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	1O0	4	0	6,427,911:73:0
496	2	44	19:28:21.800		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	1O0	4	0	6,427,911:73:0
497	2	44	19:28:23.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	1O0	4	0	6,427,911:75:1
498	2	44	19:28:28.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	1O0	4	0	6,427,911:83:0
499	2	44	19:28:29.666		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	1O0	4	0	6,427,911:84:8
500	2	44	19:28:33.533		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	1O0	4	0	6,427,911:90:6
501	2	44	19:28:33.533		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	1O0	4	0	6,427,911:90:6
502	2	44	20:00:29.800		DMS:	**: *RUNDOWN**	P100, TRACK 2, REV, TIC * 164.96 +/-	1O0	4	0	6,427,943:53:0
503	2	44	20:00:29.800	465WF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	1O0	4	0	6,427,943:53:0
504	2	44	20:00:31.000		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	1O0	4	0	6,427,943:54:8
505	2	44	20:00:34.866		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	1O0	4	0	6,427,943:60:6
506	2	44	20:00:34.866		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	1O0	4	0	6,427,943:60:6
507	2	44	20:32:30.466		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC *6062.38 +/-	1O0	4	0	6,427,975:22:0
508	2	44	20:32:30.466	465WF6B	6DMSC	RDY,3	DMS Control Tape stop	1O0	4	0	6,427,975:22:0
509	2	44	20:32:31.666		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	1O0	4	0	6,427,975:23:8
510	2	44	20:47:13.800		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	1O0	4	0	6,427,989:73:0
511	2	44	20:47:13.800	465WG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	1O0	4	0	6,427,989:73:0
512	2	44	20:47:15.200		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	1O0	4	0	6,427,989:75:1
513	2	44	20:47:20.466		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	1O0	4	0	6,427,989:83:0
514	2	44	20:47:21.666		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	1O0	4	0	6,427,989:84:8
515	2	44	20:47:25.533		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	1O0	4	0	6,427,989:90:6
516	2	44	20:47:25.533		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	1O0	4	0	6,427,989:90:6
517	2	44	21:19:21.133		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 166.38 +/-	1O0	4	0	6,428,021:52:0
518	2	44	21:19:21.133	465WH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	1O0	4	0	6,428,021:52:0
519	2	44	21:19:22.333		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	1O0	4	0	6,428,021:53:8
520	2	44	21:19:26.200		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	1O0	4	0	6,428,021:59:6
521	2	44	21:19:26.200		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	1O0	4	0	6,428,021:59:6
522	2	44	21:20:27.133		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC * 358.52 +/-	1O0	4	0	6,428,022:60:0
523	2	44	21:20:27.133	465WH6B	6DMSC	RDY,3	DMS Control Tape stop	1O0	4	0	6,428,022:60:0
524	2	44	21:20:28.333		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	1O0	4	0	6,428,022:61:8
525	2	44	21:20:59.133	488CP6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,428,023:17:0
526	2	44	21:34:57.133		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	1O0	4	0	6,428,037:00:0
527	2	44	21:34:57.133	465WI6A	6DMSC	RDY,4	DMS Control Tape stop	1O0	4	0	6,428,037:00:0
528	2	44	21:35:51.133	465WJ6A	6DTRN	CMD,6DTRN,465WJ6	DMS TRACK TURNAROUND	1O0	4	0	6,428,037:81:0
529	2	44	21:35:51.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	1O0	4	0	6,428,037:81:0
530	2	44	21:35:51.133		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	1O0	4	0	6,428,037:81:0
531	2	44	21:35:52.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	1O0	4	0	6,428,037:83:1
532	2	44	21:35:57.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	1O0	4	0	6,428,038:00:0
533	2	44	21:35:59.000		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	1O0	4	0	6,428,038:01:8
534	2	44	21:36:00.400		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	1O0	4	0	6,428,038:03:9
535	2	44	21:47:26.200		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	1O0	4	0	6,428,049:31:6
536	2	44	21:47:27.400		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	1O0	4	0	6,428,049:33:4
537	2	44	21:47:27.400		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	1O0	4	0	6,428,049:33:4
538	2	44	21:47:28.800		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	1O0	4	0	6,428,049:35:5
539	2	44	21:47:40.800		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	1O0	4	0	6,428,049:53:5
540	2	44	21:47:42.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	1O0	4	0	6,428,049:55:3
541	2	44	22:04:16.466	176VB6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	6,428,066:00:0
542	2	44	22:59:03.800	488CQ6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,428,120:17:0
543	2	44	23:04:51.133	488CQ6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,428,125:83:0
544	2	45	01:54:59.133	488CQ6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	1O0	4	0	6,428,294:16:0
545	2	45	06:22:11.133	488CR6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,428,558:40:0
546	2	45	09:40:35.133	488CR6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,428,754:60:0
547	2	45	10:12:37.800	488CR6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,428,786:32:0
548	2	45	10:18:59.133	488CR6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,428,792:58:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters		Description	GCM	GO	GS	RIM	MF I
549	2	45	22:00:48.400	488CS6A	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,429,486:68:0	
550	2	45	23:17:42.400	488CS6B	6TMSED	FILL,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,429,562:73:0	
551	2	45	23:44:32.400	488CS6C	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,429,589:31:0	
552	2	46	00:21:39.066	488CS6D	6TMSED	NORM,AL5		Sci, Eng, and D/L Chan	1O0	4	0	6,429,626:04:0	
553	2	46	02:21:07.066	488CS6E	6TMSED	NORM,AL4		Sci, Eng, and D/L Chan	1O0	4	0	6,429,744:18:0	
554	2	46	02:39:48.400	488CT6A	6TMSED	FILL,AL4		Sci, Eng, and D/L Chan	1O0	4	0	6,429,762:62:0	
555	2	46	02:48:51.066	488CT6B	6TMSED	FILL,AL7		Sci, Eng, and D/L Chan	1O0	4	0	6,429,771:57:0	
556	2	46	05:39:53.066	488CT6C	6TMSED	NORM,AL7		Sci, Eng, and D/L Chan	1O0	4	0	6,429,940:71:0	
557	2	46	06:00:51.066	488CT6D	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,429,961:47:0	
558	2	46	09:36:19.066	488CU6A	6TMSED	NORM,AL5		Sci, Eng, and D/L Chan	1O0	4	0	6,430,174:56:0	
559	2	46	10:02:32.400	488CU6B	6TMSED	FILL,AL5		Sci, Eng, and D/L Chan	1O0	4	0	6,430,200:50:0	
560	2	46	10:08:19.066	488CU6C	6TMSED	FILL,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,430,206:24:0	
561	2	46	20:40:42.400	488CV6A	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,430,831:64:0	
562	2	46	21:57:47.733	488CV6B	6TMSED	FILL,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,430,907:86:0	
563	2	46	22:24:37.000	488CV6C	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,430,934:43:0	
564	2	47	00:15:15.000	488CV6D	6TMSED	NORM,AL5		Sci, Eng, and D/L Chan	1O0	4	0	6,431,043:81:0	
565	2	47	02:16:51.000	488CV6E	6TMSED	NORM,AL4		Sci, Eng, and D/L Chan	1O0	4	0	6,431,164:14:0	
566	2	47	02:44:42.333	488CW6A	6TMSED	FILL,AL4		Sci, Eng, and D/L Chan	1O0	4	0	6,431,191:64:0	
567	2	47	02:53:07.000	488CW6B	6TMSED	FILL,AL7		Sci, Eng, and D/L Chan	1O0	4	0	6,431,200:02:0	
568	2	47	04:09:47.000	488CW6C	6TMSED	NORM,AL7		Sci, Eng, and D/L Chan	1O0	4	0	6,431,275:77:0	
569	2	47	05:35:15.000	488CW6D	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,431,360:34:0	
570	2	47	09:32:03.000	488CX6A	6TMSED	NORM,AL5		Sci, Eng, and D/L Chan	1O0	4	0	6,431,594:52:0	
571	2	47	10:02:26.333	488CX6B	6TMSED	FILL,AL5		Sci, Eng, and D/L Chan	1O0	4	0	6,431,624:57:0	
572	2	47	10:08:19.000	488CX6C	6TMSED	FILL,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,431,630:40:0	
573	2	47	19:20:37.000	488CY6A	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan	1O0	4	0	6,432,176:61:0	
574	**2**	**47**	**20:50:56.300**	**33_SC_SAFE02**		**-----START------**			**1O0**	**4**	**0**	**: :**	
575	**2**	**47**	**20:50:57.300**	**33_SC_SAFE02**		**-----STOP-------**			**1O0**	**4**	**0**	**: :**	
576	**2**	**53**	**01:30:00.000**	**20A3EX**	**37H**	**CMD,37H,20A3EX,,**		**Replacement Heaters ON**	**1O0**	**4**	**0**	**6,439,662:79:9**	
577	**2**	**53**	**01:30:00.000**	**20A3EW**	**37AR**	**CMD,37AR,20A3EW,**		**NIMS Power OFF**				**6,439,662:79:9**	
578	**2**	**53**	**01:30:00.000**	**20A3EY**	**37C1PR**	**CMD,37C1PR,20A3E**		**Optics Heater 1 OFF (primary relay)**				**6,439,662:79:9**	
579	**2**	**53**	**01:30:00.000**	**20A3EZ**	**37C2PR**	**CMD,37C2PR,20A3E**		**Optics Heater 2 OFF (primary relay)**				**6,439,662:79:9**	
580	**2**	**53**	**01:30:00.000**	**20A3FA**	**37F1PR**	**CMD,37F1PR,20A3F**		**Radiator Flash Heater OFF (primary relay)**				**6,439,662:79:9**	
581	**2**	**53**	**01:30:00.000**	**20A3FB**	**37F2PR**	**CMD,37F2PR,20A3F**		**Shield Flash Heater OFF (primary relay)**				**6,439,662:79:9**	
582	**2**	**53**	**01:30:00.000**	**20A3FD**	**40HRPR**	**CMD,40HRPR,20A3F**		**RCT Heater OFF (primary relay)**				**6,439,662:79:9**	
583	**2**	**53**	**01:30:00.000**	**20A3FE**	**40T1PR**	**CMD,40T1PR,20A3F**		**PCT Heater 1 OFF (primary relay)**				**6,439,662:79:9**	
584	**2**	**53**	**01:30:00.000**	**20A3FF**	**40T2R**	**CMD,40T2R,20A3FF**		**PCT Heater 2 OFF**				**6,439,662:79:9**	
585	2	53	01:30:00.066		DMS:	: READY		RDY, TRACK 1, FWD, TIC 3802.00 +/-				6,439,662:80:0	
586	2	53	01:31:00.066	488XH6A	6TMSED	NORM,AL6		Sci, Eng, and D/L Chan				6,439,663:79:0	
587	2	53	01:43:25.400	488XH6B	6TMSED	FILL,AL6		Sci, Eng, and D/L Chan				6,439,676:14:0	
588	**2**	**53**	**01:53:24.733**	**20ZU3Q**	**37HR**		**1**	**Replacement Heaters OFF**				**6,439,686:03:0**	
589	**2**	**53**	**01:53:26.733**	**20ZU3S**	**37HR**		**2**	**Replacement Heaters OFF**				**6,439,686:06:0**	
590	**2**	**53**	**01:53:52.733**	**20ZU3R**	**37A**		**1**	**NIMS Power ON**	**260**	**4**	**0**	**6,439,686:45:0**	
591	**2**	**53**	**01:53:54.733**	**20ZU3T**	**37A**		**2**	**NIMS Power ON**	**260**	**4**	**0**	**6,439,686:48:0**	
592	**2**	**53**	**01:55:54.066**	**20ZU4A**	**37IST**	**1,2,0,OFF,0,0,0**		**Chopper ON, Sync, Chopper (Ref)**	**260**	**4**	**0**	**6,439,688:45:0**	
593	**2**	**53**	**01:59:47.400**	**20DZ5A**	**37PL**			**Program Load (halts microprocessor & unwri**		**4**	**0**	**6,439,692:31:0**	
594	**2**	**53**	**01:59:50.733**	**20DZ5B**	**37MRL**			**Memory Realocate (software operates from R**		**4**	**0**	**6,439,692:36:0**	
595	**2**	**53**	**01:59:54.066**	**20DZ6A**	**6MCOPY**	**NIMS**		**NIMS,1000,LLM1A,7300,77F7**		**4**	**0**	**6,439,692:41:0**	
596	**2**	**53**	**02:00:04.066**	**20DZ6B**	**6MCOPY**	**NIMS**		**NIMS,1598,LLM1A,77F8,781D**		**4**	**0**	**6,439,692:56:0**	
597	**2**	**53**	**02:00:14.066**	**20DZ5C**	**37IRT**			**Instrument Reset (goes into POR state)**		**4**	**0**	**6,439,692:71:0**	
598	**2**	**53**	**02:00:17.400**	**20DZ5D**	**37MN**			**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**6,439,692:76:0**	
599	**2**	**53**	**02:01:21.400**	**20DZ4A**	**37IST**	**1,2,0,OFF,0,0,0**		**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**6,439,693:81:0**	
600	2	53	02:06:31.400		DMS:	: *E4-DELAY		RDY, TRACK 1, FWD, TIC 3802.00 +/-	2R0	4	0	6,439,699:00:0	
601	2	53	02:06:31.400		DMS:	: *SLEW-TIC		P7, TRACK 1, FWD, TIC 3802.00 +/-	2R0	4	0	6,439,699:00:0	
602	2	53	02:06:31.400	465XB6A	6DMST		3925	DMS Slew to TIC	2R0	4	0	6,439,699:00:0	
603	2	53	02:06:38.066		DMS:	: *RUNUP		P7, TRACK 1, FWD, TIC 3802.00 +/-	2R0	4	0	6,439,699:10:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	2	53	02:06:39.466		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *3802.12 +/-	2R0	4	0	6,439,699:12:1	
605	2	53	02:10:15.400	488XH6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,439,702:63:0	
606	2	53	02:15:14.200		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *3922.94 +/-	2R0	4	0	6,439,707:56:2	
607	2	53	02:15:15.400		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3923.00 +/-	2R0	4	0	6,439,707:58:0	
608	2	53	02:17:38.733	465XC6A	6DMSC	RDY,4	DMS Control Tape stop	2R0	4	0	6,439,710:00:0	
609	2	53	02:17:38.733		DMS:	: READY	RDY, TRACK *4, *REV, TIC 3923.00 +/-	2R0	4	0	6,439,710:00:0	
610	2	53	02:18:47.400	20UG4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2R0	4	0	6,439,711:12:0	
611	2	53	02:19:33.400	20UG4B	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	6,439,711:81:0	
612	2	53	02:21:41.400	176XA6A	6TMREC	**IPB**	INITIATE PLAYBACK (PB CONTROL) Record Mod	2R0	4	0	6,439,714:00:0	
613	2	53	02:31:46.733	431ZL6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R0	4	0	6,439,723:89:0	
614	2	53	02:31:48.066	432ZL6A	6RTSL1		R/T Select of DDS and	2R0	4	0	6,439,724:00:0	
615	2	53	02:35:54.733	20ZM6A	6EUVON			2R0	4	0	6,439,728:06:0	
616	2	53	02:36:51.400	431ZM6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS onl	2R0	4	0	6,439,729:00:0	
617	2	53	07:49:38.733	488DI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,440,038:32:0	
618	2	53	08:56:49.400	488DI6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,440,104:72:0	
619	2	53	09:04:18.733	488DI6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,440,112:18:0	
620	2	53	18:25:00.066	488DJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,440,666:66:0	
621	2	54	00:00:50.733	488DJ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,440,998:80:0	
622	2	54	01:06:26.666	488DK6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,441,063:69:0	
623	2	54	01:59:46.666	488DK6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,441,116:46:0	
624	2	54	05:52:36.666	488DK6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,441,346:71:0	
625	2	54	06:17:54.666	488DK6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,441,371:73:0	
626	2	54	07:07:10.666	488DL6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,441,420:48:0	
627	2	54	07:36:16.666	488DL6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,441,449:28:0	
628	2	54	12:50:26.666	488DL6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,441,760:02:0	
629	2	54	13:22:45.333	488DM6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,441,791:89:0	
630	2	54	13:24:34.666	488DM6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	2R0	4	0	6,441,793:71:0	
631	2	54	13:39:30.666	488DM6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,441,808:50:0	
632	2	54	23:09:52.000	488DN6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,442,372:58:0	
633	2	55	08:45:06.666	488DO6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,442,941:51:0	
634	2	55	09:26:36.666	488DO6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,442,982:55:0	
635	2	55	09:34:10.666	488DO6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,442,990:08:0	
636	2	56	16:24:39.933	488DP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,444,820:22:0	
637	2	57	00:45:06.533	488DQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,445,315:17:0	
638	2	57	01:51:14.533	488DQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,445,380:54:0	
639	2	57	01:53:38.533	488DQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,445,382:88:0	
640	2	57	02:04:02.533	488DQ6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,445,393:23:0	
641	2	57	05:40:30.533	488DQ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,445,607:31:0	
642	2	57	06:02:58.533	488DR6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,445,629:51:0	
643	2	57	12:39:46.533	488DS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,446,022:00:0	
644	2	57	13:05:22.533	488DS6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,446,047:29:0	
645	2	57	13:10:09.866	488DS6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,446,052:05:0	
646	2	57	13:16:02.533	488DS6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	2R0	4	0	6,446,057:79:0	
647	2	57	13:52:18.533	488DS6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,446,093:67:0	
648	2	57	20:42:12.533	488DT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,446,499:12:0	
649	2	57	21:13:54.533	488DT6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,446,530:44:0	
650	2	57	22:02:34.533	488DT6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,446,578:56:0	
651	2	57	22:31:40.533	488DT6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,446,607:36:0	
652	2	57	22:52:02.533	488DT6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,446,627:49:0	
653	2	58	07:09:06.466	488DU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,447,119:13:0	
654	2	58	07:36:16.466	488DU6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,447,146:01:0	
655	2	58	07:43:14.466	488DU6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,447,152:82:0	
656	2	58	20:54:25.133	488DV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,447,935:35:0	
657	2	59	00:34:26.466	488DV6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,448,152:90:0	
658	2	59	01:40:34.466	488DV6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,448,218:36:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	2	59	01:43:25.133	488DV6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,448,221:19:0	
660	2	59	01:53:22.466	488DV6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,448,231:05:0	
661	2	59	05:29:23.133	488DW6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,448,444:63:0	
662	2	59	08:25:54.466	488DW6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,448,619:25:0	
663	2	59	09:09:16.466	488DW6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,448,662:15:0	
664	2	59	09:10:42.466	488DW6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,448,663:53:0	
665	2	59	09:19:14.466	488DW6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,448,672:02:0	
666	2	60	00:24:17.066	488DX6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,449,567:11:0	
667	2	60	01:44:12.400	488DX6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,449,646:15:0	
668	2	60	02:11:02.400	488DX6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,449,672:64:0	
669	2	60	06:54:10.400	488DY6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,449,952:66:0	
670	2	60	08:45:06.400	488DY6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,450,062:40:0	
671	2	60	09:03:16.400	488DY6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,450,080:37:0	
672	2	60	09:12:50.400	488DY6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,450,089:79:0	
673	2	60	18:09:12.400	488DZ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,450,620:31:0	
674	2	61	00:19:30.400	488EA6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,450,986:52:0	
675	2	61	01:29:54.400	488EA6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,451,056:18:0	
676	2	61	08:15:14.333	488EB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,451,457:07:0	
677	2	61	08:55:33.666	488EB6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,451,496:87:0	
678	2	61	09:00:02.333	488EB6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,451,501:35:0	
679	2	61	12:46:47.666	488EB6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,451,725:59:0	
680	2	61	13:07:30.333	488EB6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,451,746:12:0	
681	2	61	14:17:54.333	488EC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,451,815:69:0	
682	2	61	17:41:38.333	488EC6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,452,017:23:0	
683	2	61	17:44:50.333	488EC6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,452,020:38:0	
684	2	62	12:41:40.266	488ED6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,453,144:69:0	
685	2	62	13:07:30.266	488ED6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,453,170:28:0	
686	2	62	14:17:54.266	488ED6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,453,239:85:0	
687	2	63	00:04:34.266	488EE6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,453,820:14:0	
688	2	63	01:19:14.266	488EE6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,453,894:00:0	
689	2	63	01:27:56.933	488EE6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,453,902:56:0	
690	2	63	01:36:18.266	488EE6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,453,910:80:0	
691	2	63	21:53:50.266	488EF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,455,115:03:0	
692	2	64	00:00:18.200	488EF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,455,240:10:0	
693	2	64	00:23:46.200	488EF6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,455,263:29:0	
694	2	64	01:44:40.866	488EF6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,455,343:31:0	
695	2	64	02:11:30.200	488EF6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,455,369:79:0	
696	2	64	06:13:38.200	488EG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,455,609:31:0	
697	2	64	08:19:30.200	488EG6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,455,733:75:0	
698	2	64	08:47:48.200	488EG6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,455,761:74:0	
699	2	64	08:57:54.200	488EG6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,455,771:73:0	
700	2	64	22:53:42.200	488EH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,456,598:38:0	
701	2	64	23:53:54.200	488EH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,456,657:87:0	
702	2	65	01:06:26.200	488EH6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,456,729:63:0	
703	2	65	01:14:58.200	488EH6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,456,738:12:0	
704	2	65	07:49:38.200	488EI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,457,128:42:0	
705	2	65	08:40:26.800	488EI6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,457,178:65:0	
706	2	65	16:54:30.800	488EJ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,457,667:32:0	
707	2	65	18:13:30.800	488EJ6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,457,745:44:0	
708	2	65	18:42:36.800	488EJ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,457,774:24:0	
709	2	66	00:23:46.133	488EK6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,458,111:61:0	
710	2	66	01:12:35.466	488EK6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,458,159:87:0	
711	2	66	01:21:22.133	488EK6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,458,168:58:0	
712	2	66	04:18:33.466	488EK6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,458,343:80:0	
713	2	66	06:52:22.133	176US6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2R0	4	0	6,458,496:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	2	66	07:02:00.133	20UX4B	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	6,458,505	48:0
715	2	66	07:03:00.133	20UX4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	2R0	4	0	6,458,506	47:0
716	2	66	07:05:00.133	20UX4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2R0	4	0	6,458,508	45:0
717	2	66	07:10:30.133	20UX4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	2R0	4	0	6,458,513	85:0
718	2	66	07:10:30.800	20UX4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	2R0	4	0	6,458,513	86:0
719	2	66	07:10:50.800	20UX4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	2R0	4	0	6,458,514	25:0
720	2	66	07:10:51.466	20UX4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	2R0	4	0	6,458,514	26:0
721	2	66	07:11:11.466	20UX4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2R0	4	0	6,458,514	56:0
722	2	66	07:11:12.133	20UX4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2R0	4	0	6,458,514	57:0
723	2	66	07:11:22.133	20UX4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	2R0	4	0	6,458,514	72:0
724	2	66	07:11:22.800	20UX4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	2R0	4	0	6,458,514	73:0
725	2	66	07:11:32.800	20UX4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	2R0	4	0	6,458,514	88:0
726	2	66	07:11:33.466	20UX4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	2R0	4	0	6,458,514	89:0
727	2	66	07:13:20.133	20UX4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	2R0	4	0	6,458,516	67:0
728	2	66	07:13:20.800	20UX4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	2R0	4	0	6,458,516	68:0
729	2	66	07:13:40.800	20UX4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	2R0	4	0	6,458,517	07:0
730	2	66	07:13:41.466	20UX4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	2R0	4	0	6,458,517	08:0
731	2	66	07:14:01.466	20UX4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2R0	4	0	6,458,517	38:0
732	2	66	07:14:02.133	20UX4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2R0	4	0	6,458,517	39:0
733	2	66	07:14:12.133	20UX4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	2R0	4	0	6,458,517	54:0
734	2	66	07:14:12.800	20UX4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	2R0	4	0	6,458,517	55:0
735	2	66	07:14:22.800	20UX4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	2R0	4	0	6,458,517	70:0
736	2	66	07:14:23.466	20UX4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	2R0	4	0	6,458,517	71:0
737	2	66	07:15:20.133	20UX4Z	**7MODE**	**CRU**	AACS CRUISE MODE	2R0	4	0	6,458,518	65:0
738	2	66	07:40:04.133	20UY4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	2R0	4	0	6,458,543	16:0
739	2	66	07:40:54.133	20UY4B	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	6,458,544	00:0
740	2	66	07:43:14.133	488EL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,458,546	28:0
741	2	66	07:44:56.800	176UT6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2R0	4	0	6,458,548	00:0
742	2	66	08:38:02.800	488EL6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,458,600	47:0
743	2	66	08:38:42.133	488EL6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,458,601	15:0
744	2	66	08:47:14.133	488EL6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,458,609	55:0
745	2	67	00:23:27.400	488EM6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,459,535	49:0
746	2	67	07:38:58.066	488EN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,459,966	24:0
747	2	67	08:34:26.066	488EN6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,460,021	11:0
748	2	67	08:37:26.066	488EN6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,460,024	08:0
749	2	67	08:47:14.066	488EN6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,460,033	71:0
750	2	67	17:59:15.400	488EO6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,460,579	67:0
751	2	67	19:18:45.400	488EO6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,460,658	33:0
752	2	67	19:47:51.400	488EO6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,460,687	13:0
753	2	68	00:13:06.066	488EP6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,460,949	43:0
754	2	68	01:07:21.400	488EP6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,461,003	12:0
755	2	68	01:17:06.066	488EP6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,461,012	70:0
756	2	68	04:54:12.666	488EP6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,461,227	45:0
757	2	68	05:30:58.000	488EP6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,461,263	77:0
758	2	68	11:44:18.000	488EQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,461,633	07:0
759	2	68	12:23:14.666	488EQ6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,461,671	54:0
760	2	68	12:24:50.000	488EQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,461,673	15:0
761	2	68	12:33:22.000	488EQ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,461,681	55:0
762	2	68	20:33:14.000	488ER6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,462,156	18:0
763	2	68	23:28:18.000	488ER6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,462,329	31:0
764	2	69	00:49:22.000	488ER6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,462,409	47:0
765	2	69	01:02:13.333	488ER6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,462,422	21:0
766	2	69	01:10:42.000	488ER6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,462,430	56:0
767	2	70	00:53:05.266	488ES6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,463,837	34:0
768	2	70	07:24:01.933	488ET6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,464,224	02:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	2	70	08:14:50.600	488ET6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,464,274	25:0
770	2	70	08:21:37.933	488ET6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,464,280	90:0
771	2	70	22:07:57.933	488EU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,465,098	22:0
772	2	70	23:13:21.933	488EU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,465,162	84:0
773	2	71	00:23:45.933	488EU6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,465,232	50:0
774	2	71	05:18:09.866	488EV6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,465,523	65:0
775	2	71	05:41:37.866	488EV6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,465,546	84:0
776	2	71	06:44:10.533	488EV6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,465,608	71:0
777	2	71	07:13:16.533	488EV6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,465,637	51:0
778	2	71	11:08:01.866	488EV6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,465,869	67:0
779	2	71	12:06:55.200	488EW6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,465,927	89:0
780	2	71	12:16:17.866	488EW6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,465,937	23:0
781	2	71	21:07:51.200	488EX6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,466,462	88:0
782	2	71	23:02:41.866	488EX6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,466,576	50:0
783	2	72	00:34:25.866	488EX6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,466,667	25:0
784	2	72	00:56:51.200	488EX6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,466,689	41:0
785	2	72	01:06:25.866	488EX6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,466,698	84:0
786	2	72	04:32:49.200	488EY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,466,903	04:0
787	2	72	07:09:05.866	488EY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,467,057	55:0
788	2	72	08:08:49.866	488EY6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,467,116	62:0
789	2	72	08:16:48.533	488EY6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,467,124	52:0
790	2	72	08:25:53.866	488EY6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,467,133	51:0
791	2	73	04:33:34.466	488EZ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,468,327	88:0
792	2	73	05:54:25.800	488EZ6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,468,407	85:0
793	2	73	06:23:31.800	488EZ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,468,436	65:0
794	2	73	07:32:33.800	488EZ6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,468,504	90:0
795	2	73	08:16:41.133	488EZ6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,468,548	57:0
796	2	73	08:25:53.800	488FA6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,468,557	67:0
797	2	74	00:22:35.066	488FB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,469,503	83:0
798	2	74	06:02:57.733	488FB6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,469,840	50:0
799	2	74	07:29:33.733	488FC6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,469,926	18:0
800	2	74	07:58:39.733	488FC6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,469,954	89:0
801	2	74	10:48:49.733	488FC6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,470,123	25:0
802	2	74	11:54:16.400	176UL6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	2R0	4	0	6,470,188	00:0
803	2	74	11:55:03.066	488FC6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,470,188	70:0
804	2	74	11:57:05.733	488FC6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2R0	4	0	6,470,190	72:0
805	2	74	12:02:21.733	465WK6A	6DMST	5050	DMS Slew to TIC	2R0	4	0	6,470,196	00:0
806	2	74	12:02:21.733		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 3923.00 +/-	2R0	4	0	6,470,196	00:0
807	2	74	12:02:21.733		DMS:	: *SLEW-TIC	P7, TRACK *1, *FWD, TIC 3923.00 +/-	2R0	4	0	6,470,196	00:0
808	2	74	12:02:28.400		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 3923.00 +/-	2R0	4	0	6,470,196	10:0
809	2	74	12:02:29.800		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *3923.12 +/-	2R0	4	0	6,470,196	12:1
810	2	74	12:07:45.733	488FD6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,470,201	31:0
811	2	74	13:22:27.866		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *5047.94 +/-	2R0	4	0	6,470,275	20:2
812	2	74	13:22:29.066		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5048.00 +/-	2R0	4	0	6,470,275	22:0
813	2	74	18:00:05.733		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 5048.00 +/-	2R0	4	0	6,470,549	73:0
814	2	74	18:00:05.733	465WL6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2R0	4	0	6,470,549	73:0
815	2	74	18:00:07.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *5048.12 +/-	2R0	4	0	6,470,549	75:1
816	2	74	18:00:12.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5049.35 +/-	2R0	4	0	6,470,549	83:0
817	2	74	18:00:13.600		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *5049.41 +/-	2R0	4	0	6,470,549	84:8
818	2	74	18:00:17.466		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 5043.91 +/-	2R0	4	0	6,470,549	90:6
819	2	74	18:00:17.466		DMS:	: *PLAYBACK	P100, TRACK 4, REV, TIC *5043.91 +/-	2R0	4	0	6,470,549	90:6
820	2	74	18:25:57.733	465WL6B	6DMSC	RDY,4	DMS Control Tape stop	2R0	4	0	6,470,575	35:0
821	2	74	18:25:57.733		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 305.79 +/-	2R0	4	0	6,470,575	35:0
822	2	74	18:25:58.933		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 304.99 +/-	2R0	4	0	6,470,575	36:8
823	2	74	19:02:29.066	488FE6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,470,611	46:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	2	74	20:26:47.733	465WM6A	6DTRN	CMD,6DTRN,465WM6	DMS TRACK TURNAROUND	2R0	4	0	6,470,694	81:0
825	2	74	20:26:47.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 304.99 +/-	2R0	4	0	6,470,694	81:0
826	2	74	20:26:47.733		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 304.99 +/-	2R0	4	0	6,470,694	81:0
827	2	74	20:26:49.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 305.11 +/-	2R0	4	0	6,470,694	83:1
828	2	74	20:26:54.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 306.34 +/-	2R0	4	0	6,470,695	00:0
829	2	74	20:26:55.600		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 306.40 +/-	2R0	4	0	6,470,695	01:8
830	2	74	20:26:57.000		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 306.28 +/-	2R0	4	0	6,470,695	03:9
831	2	74	20:34:09.066	488FE6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	2R0	4	0	6,470,702	15:0
832	2	74	20:34:31.000		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2R0	4	0	6,470,702	47:9
833	2	74	20:34:32.200		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2R0	4	0	6,470,702	49:7
834	2	74	20:34:32.200		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2R0	4	0	6,470,702	49:7
835	2	74	20:34:33.600		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2R0	4	0	6,470,702	51:8
836	2	74	20:34:45.600		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2R0	4	0	6,470,702	69:8
837	2	74	20:34:46.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2R0	4	0	6,470,702	71:6
838	2	74	20:40:53.066	465WN6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	2R0	4	0	6,470,708	75:0
839	2	74	20:40:53.066		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	2R0	4	0	6,470,708	75:0
840	2	74	20:40:59.733		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	2R0	4	0	6,470,708	85:0
841	2	74	20:41:03.600		DMS:	: *AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	2R0	4	0	6,470,708	90:8
842	2	74	20:41:03.600		DMS:	: *PLAYBACK	P100, TRACK 1, FWD, TIC * 207.62 +/-	2R0	4	0	6,470,708	90:8
843	2	74	21:12:47.066		DMS:	**: *RUNDOWN**	P100, TRACK 1, FWD, TIC *6063.01 +/-	2R0	4	0	6,470,740	34:0
844	2	74	21:12:47.066	465WN6B	6DMSC	RDY,1	DMS Control Tape stop	2R0	4	0	6,470,740	34:0
845	2	74	21:12:48.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	2R0	4	0	6,470,740	35:8
846	2	74	21:28:23.066	465WO6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	2R0	4	0	6,470,755	73:0
847	2	74	21:28:23.066		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	2R0	4	0	6,470,755	73:0
848	2	74	21:28:24.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	2R0	4	0	6,470,755	75:1
849	2	74	21:28:29.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	2R0	4	0	6,470,755	83:0
850	2	74	21:28:30.933		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	2R0	4	0	6,470,755	84:8
851	2	74	21:28:34.800		DMS:	: *PLAYBACK	P100, TRACK 2, REV, TIC *6059.73 +/-	2R0	4	0	6,470,755	90:6
852	2	74	21:28:34.800		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	2R0	4	0	6,470,755	90:6
853	2	74	22:00:31.066	465WP6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2R0	4	0	6,470,787	53:0
854	2	74	22:00:31.066		DMS:	**: *RUNDOWN**	P100, TRACK 2, REV, TIC * 164.96 +/-	2R0	4	0	6,470,787	53:0
855	2	74	22:00:32.266		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	2R0	4	0	6,470,787	54:8
856	2	74	22:00:36.133		DMS:	: *PLAYBACK	P100, TRACK 3, FWD, TIC * 169.66 +/-	2R0	4	0	6,470,787	60:6
857	2	74	22:00:36.133		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	2R0	4	0	6,470,787	60:6
858	2	74	22:32:31.733	465WP6B	6DMSC	RDY,3	DMS Control Tape stop	2R0	4	0	6,470,819	22:0
859	2	74	22:32:31.733		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC *6062.38 +/-	2R0	4	0	6,470,819	22:0
860	2	74	22:32:32.933		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	2R0	4	0	6,470,819	23:8
861	2	74	22:43:29.733	488FE6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	2R0	4	0	6,470,830	08:0
862	2	74	22:47:15.066		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	2R0	4	0	6,470,833	73:0
863	2	74	22:47:15.066	465WQ6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	2R0	4	0	6,470,833	73:0
864	2	74	22:47:16.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	2R0	4	0	6,470,833	75:1
865	2	74	22:47:21.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	2R0	4	0	6,470,833	83:0
866	2	74	22:47:22.933		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	2R0	4	0	6,470,833	84:8
867	2	74	22:47:26.800		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	2R0	4	0	6,470,833	90:6
868	2	74	22:47:26.800		DMS:	: *PLAYBACK	P100, TRACK 4, REV, TIC *6059.09 +/-	2R0	4	0	6,470,833	90:6
869	2	74	23:19:22.400	465WR6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	2R0	4	0	6,470,865	52:0
870	2	74	23:19:22.400		DMS:	**: *RUNDOWN**	P100, TRACK 4, REV, TIC * 166.38 +/-	2R0	4	0	6,470,865	52:0
871	2	74	23:19:23.600		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	2R0	4	0	6,470,865	53:8
872	2	74	23:19:27.466		DMS:	: *PLAYBACK	P100, TRACK 3, FWD, TIC * 171.08 +/-	2R0	4	0	6,470,865	59:6
873	2	74	23:19:27.466		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	2R0	4	0	6,470,865	59:6
874	2	74	23:20:28.400	465WR6B	6DMSC	RDY,3	DMS Control Tape stop	2R0	4	0	6,470,866	60:0
875	2	74	23:20:28.400		DMS:	**: *RUNDOWN**	P100, TRACK 3, FWD, TIC * 358.52 +/-	2R0	4	0	6,470,866	60:0
876	2	74	23:20:29.600		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	2R0	4	0	6,470,866	61:8
877	2	74	23:20:59.066	488FE6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,470,867	15:0
878	2	74	23:34:58.400	465WS6A	6DMSC	RDY,4	DMS Control Tape stop	2R0	4	0	6,470,881	00:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
879	2	74	23:34:58.400		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	2R0	4	0	6,470,881	00:0
880	2	74	23:35:52.400	465WT6A	6DTRN	CMD,6DTRN,465WT6	DMS TRACK TURNAROUND	2R0	4	0	6,470,881	81:0
881	2	74	23:35:52.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	2R0	4	0	6,470,881	81:0
882	2	74	23:35:52.400		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	2R0	4	0	6,470,881	81:0
883	2	74	23:35:53.800		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	2R0	4	0	6,470,881	83:1
884	2	74	23:35:59.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	2R0	4	0	6,470,882	00:0
885	2	74	23:36:00.266		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	2R0	4	0	6,470,882	01:8
886	2	74	23:36:01.666		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	2R0	4	0	6,470,882	03:9
887	2	74	23:47:27.466		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	2R0	4	0	6,470,893	31:6
888	2	74	23:47:28.666		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	2R0	4	0	6,470,893	33:4
889	2	74	23:47:28.666		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	2R0	4	0	6,470,893	33:4
890	2	74	23:47:29.733	488FE6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,470,893	35:0
891	2	74	23:47:30.066		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	2R0	4	0	6,470,893	35:5
892	2	74	23:47:42.066		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	2R0	4	0	6,470,893	53:5
893	2	74	23:47:43.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	2R0	4	0	6,470,893	55:3
894	2	75	00:04:17.733	176UK6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	2R0	4	0	6,470,910	00:0
895	2	75	04:22:41.733	488FF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,471,165	51:0
896	2	75	05:41:37.733	488FF6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,471,243	57:0
897	2	75	05:49:41.733	488FF6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,471,251	55:0
898	2	75	06:18:47.733	488FF6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,471,280	35:0
899	2	75	10:42:25.666	488FG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,471,541	11:0
900	2	75	11:54:57.000	488FG6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,471,612	77:0
901	2	75	11:57:05.666	488FG6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	2R0	4	0	6,471,614	88:0
902	2	75	12:07:45.666	488FG6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,471,625	47:0
903	2	75	23:47:20.333	488FH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,472,317	37:0
904	2	76	06:47:45.666	488FI6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,472,733	19:0
905	2	76	07:47:29.666	488FI6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,472,792	26:0
906	2	76	08:06:41.666	488FI6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,472,811	25:0
907	2	76	10:57:21.666	488FI6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,472,980	06:0
908	2	76	11:48:33.666	488FI6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,473,030	64:0
909	2	76	11:51:17.000	488FJ6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,473,033	36:0
910	2	76	12:01:21.666	488FJ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,473,043	33:0
911	2	76	20:52:12.933	488FK6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	2R0	4	0	6,473,568	35:0
912	2	76	22:28:33.600	488FK6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,473,663	61:0
913	2	77	00:08:49.600	488FK6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,473,762	76:0
914	2	77	00:31:12.933	488FK6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	2R0	4	0	6,473,784	89:0
915	2	77	00:40:49.600	488FK6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,473,794	44:0
916	2	77	04:13:04.933	488FL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,474,004	37:0
917	2	77	05:34:56.266	488FL6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,474,085	33:0
918	2	77	06:04:02.933	488FL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	2R0	4	0	6,474,114	14:0
919	2	77	06:30:00.266		DMS:	: READY	RDY, TRACK 1, FWD, TIC 201.00 +/-	2R0	4	0	6,474,139	75:0
920	2	77	06:34:13.600	176MC6A	6TMREC	**TPB**	TERMINATE PLAYBACK (PB CONTROL) Record Mo	2R0	4	0	6,474,144	00:0
921	2	77	06:36:14.933	465MA6A	6DMST	3900	DMS Slew to TIC	2R0	4	0	6,474,146	00:0
922	2	77	06:36:14.933		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 201.00 +/-	2R0	4	0	6,474,146	00:0
923	2	77	06:36:14.933		DMS:	: *SLEW-TIC	P7, TRACK 1, FWD, TIC 201.00 +/-	2R0	4	0	6,474,146	00:0
924	2	77	06:36:21.600		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 201.00 +/-	2R0	4	0	6,474,146	10:0
925	2	77	06:36:23.000		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 201.12 +/-	2R0	4	0	6,474,146	12:1
926	2	77	10:59:15.066		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *3897.94 +/-	2R0	4	0	6,474,406	10:2
927	2	77	10:59:16.266		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3898.00 +/-	2R0	4	0	6,474,406	12:0
928	2	77	12:24:04.266	465MB6A	6DMSC	RDY,4	DMS Control Tape stop	2R0	4	0	6,474,490	00:0
929	2	77	12:24:04.266		DMS:	: READY	RDY, TRACK *4, *REV, TIC 3898.00 +/-	2R0	4	0	6,474,490	00:0
930	**2**	**77**	**12:30:12.000**	**33NNRCTCAL01-**		**-----START------**		**2R0**	**4**	**0**	**:**	**:**
931	2	77	12:44:21.600	20FX4A	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	2R0	4	0	6,474,510	06:0
932	2	77	12:48:28.266	20FX4B	**7SAFE**	**STOP**	S/P NO MOVEMENT	2R0	4	0	6,474,514	12:0
933	2	77	12:49:18.266	20FX4C	7SLEW	DIS,POS,0.0	Stator movement	2R0	4	0	6,474,514	87:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
934	**2**	**77**	**12:52:22.933**	**185XE10A3A**	**40HRP**		**1 RCT Heater ON (primary relay)**	**2R0**	**4**	**0**	**6,474,518:00:0**	
935	**2**	**77**	**12:52:28.266**	**185XE10B3A**	**40HRP**		**2 RCT Heater ON (primary relay)**	**2R0**	**4**	**0**	**6,474,518:08:0**	
936	**2**	**78**	**00:43:57.600**	**20FX5A**	**37PL**		**Program Load (halts microprocessor & unwri**		**4**	**0**	**6,475,221:69:0**	
937	**2**	**78**	**00:44:04.933**	**20FX5B**	**37MRL**		**Memory Realocate (software operates from R**		**4**	**0**	**6,475,221:80:0**	
938	**2**	**78**	**00:44:12.933**	**20FX6A**	**6MCOPY**	**NIMS**	**NIMS,1000,LLM1A,7300,77F7**		**4**	**0**	**6,475,222:01:0**	
939	**2**	**78**	**00:44:22.933**	**20FX6B**	**6MCOPY**	**NIMS**	**NIMS,1598,LLM1A,77F8,781D**		**4**	**0**	**6,475,222:16:0**	
940	**2**	**78**	**00:44:32.933**	**20FX5C**	**37IRT**		**Instrument Reset (goes into POR state)**		**4**	**0**	**6,475,222:31:0**	
941	**2**	**78**	**00:44:34.266**	**20FX5D**	**37MN**		**Memory Normal (software operates from ROM)**	**260**	**4**	**0**	**6,475,222:33:0**	
942	2	78	00:47:09.600	125XE	NIMSINIT	GS	##### GROUP START INIT	260	4	0	6,475,224:84:0	
943	**2**	**78**	**00:47:09.600**	**125XE4A**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**260**	**4**	**0**	**6,475,224:84:0**	
944	**2**	**78**	**00:48:10.266**	**125XE4B**	**37IST**	**1,2,0,OFF,0,0,0**	**Chopper ON, Sync, Chopper (Ref)**	**2R0**	**4**	**0**	**6,475,225:84:0**	
945	**2**	**78**	**00:49:10.933**	**125XE4C**	**37IST**	**0,2,0,OFF,0,1,3**	**Gain State 1**	**1R0**	**4**	**0**	**6,475,226:84:0**	
946	2	78	00:50:11.600	125XE11A	NIMSINIT	GE	##### GROUP END INIT	1R0	4	0	6,475,227:84:0	
947	**2**	**78**	**00:50:11.600**	**125XE4D**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**1R0**	**4**	**0**	**6,475,227:84:0**	
948	**2**	**78**	**00:52:12.933**	**127XE4A**	**37IOP**	**3,0**	**Long Map, Grating Start Position =00**	**1R3**	**4**	**0**	**6,475,229:84:0**	
949	2	78	00:52:12.933	127XE	NIMSTAB	GS	%%%%% GROUP START TAB	1R3	4	0	6,475,229:84:0	
950	**2**	**78**	**00:52:13.600**	**127XE4B**	**37ETB**	**04,C4,35,FF,FF**	**Loads wavelength edit table**	**1R3**	**4**	**0**	**6,475,229:85:0**	
951	2	78	00:52:21.600	127XE11A	NIMSTAB	GE	%%%%% GROUP END TAB	1R3	4	0	6,475,230:06:0	
952	**2**	**78**	**00:57:58.266**	**185XE10C3A**	**40HRPR**		**1 RCT Heater OFF (primary relay)**	**1R3**	**4**	**0**	**6,475,235:56:0**	
953	2	78	00:58:00.266	20FX4F	7SCAN	NORM,106.89,22.6	Check S/P Position	1R3	4	0	6,475,235:59:0	
954	**2**	**78**	**00:58:03.600**	**185XE10D3A**	**40HRPR**		**2 RCT Heater OFF (primary relay)**	**1R3**	**4**	**0**	**6,475,235:64:0**	
955	2	78	01:02:09.600		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3898.00 +/-	1R3	4	0	6,475,239:69:0	
956	2	78	01:02:09.600	20XE422A6B	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	1R3	4	0	6,475,239:69:0	
957	2	78	01:02:11.000		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3898.12 +/-	1R3	4	0	6,475,239:71:1	
958	2	78	01:02:16.266		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3899.35 +/-	1R3	4	0	6,475,239:79:0	
959	2	78	01:02:17.466		DMS:	: *RUNUP	R28, TRACK *4, *REV, TIC *3899.41 +/-	1R3	4	0	6,475,239:80:8	
960	2	78	01:02:20.933	20XE176A6B	6TMREC	**MPW**	28.8 KBPS PWS + NIMS RECORD Record Mode C	1R3	4	0	6,475,239:86:0	
961	2	78	01:02:21.466		DMS:	: *AT_SPD	R28, TRACK 4, REV, TIC 3897.91 +/-	1R3	4	0	6,475,239:86:8	
962	2	78	01:02:21.466		DMS:	**: *RECORD**	R28, TRACK 4, REV, TIC *3897.91 +/-	1R3	4	0	6,475,239:86:8	
963	**2**	**78**	**01:02:22.266**	**33NNRCTCAL01,**	**NIMPBK**	**301FE**	**NIMS RCT CAL**	**1R3**	**4**	**0**	**: :**	
964	2	78	01:02:24.266	192XE4A	**7CONE**	**17.0,0.0**	Check S/P Position	1R3	4	0	6,475,240:00:0	
965	2	78	01:14:32.266	192XE4B	**7CONE**	**17.0,119.7**	Check S/P Position	1R3	4	0	6,475,252:00:0	
966	**2**	**78**	**01:15:28.000**	**33NNRCTCAL01,**	**DESELC**	**300FE**	**NIMS RCT CAL**	**1R3**	**4**	**0**	**: :**	
967	2	78	01:15:30.266	20XE422A6C	6DMSC	RDY,0	DMS Control Tape stop	1R3	4	0	6,475,252:87:0	
968	2	78	01:15:30.266		DMS:	**: *RUNDOWN**	R28, TRACK 4, REV, TIC *3204.63 +/-	1R3	4	0	6,475,252:87:0	
969	2	78	01:15:31.466		DMS:	: *READY	RDY, TRACK 4, REV, TIC *3204.33 +/-	1R3	4	0	6,475,252:88:8	
970	2	78	01:20:36.266	192XE4C	**7CONE**	**17.0,153.0**	Check S/P Position	1R3	4	0	6,475,258:00:0	
971	2	78	01:27:36.266	127XF	NIMSTAB	GS	%%%%% GROUP START TAB	1R3	4	0	6,475,264:84:0	
972	**2**	**78**	**01:27:36.266**	**127XF4A**	**37IOP**	**0,0**	**Safe, Grating Start Position =00**	**1R0**	**4**	**0**	**6,475,264:84:0**	
973	**2**	**78**	**01:27:36.933**	**127XF4B**	**37ETB**	**04,C4,02,00,00**	**Loads wavelength edit table**	**1R0**	**4**	**0**	**6,475,264:85:0**	
974	2	78	01:27:44.933	127XF11A	NIMSTAB	GE	%%%%% GROUP END TAB	1R0	4	0	6,475,265:06:0	
975	**2**	**78**	**01:30:38.266**	**125XF4A**	**37MB**	**0,0,0,0,0,0**	**Selects mirror (spatial) edit table**	**1R0**	**4**	**0**	**6,475,267:84:0**	
976	2	78	01:30:38.266	125XF	NIMSINIT	GS	##### GROUP START INIT	1R0	4	0	6,475,267:84:0	
977	**2**	**78**	**01:31:38.933**	**125XF4B**	**37IST**	**1,0,0,OFF,0,0,0**	**Chopper ON, Sync, 63Hz (Ref)**	**160**	**4**	**0**	**6,475,268:84:0**	
978	2	78	01:32:39.600	125XF11A	NIMSINIT	GE	##### GROUP END INIT	160	4	0	6,475,269:84:0	
979	**2**	**78**	**01:32:39.600**	**125XF4C**	**37IST**	**1,1,0,OFF,0,0,0**	**Chopper OFF, N/A, 63Hz (Ref)**	**1O0**	**4**	**0**	**6,475,269:84:0**	
980	2	78	01:49:02.933	20FX4D	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	6,475,286:12:0	
981	2	78	01:49:52.933	20FX4E	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	6,475,286:87:0	
982	**2**	**78**	**01:51:58.000**	**33NNRCTCAL01-**		**-----STOP-------**		**1O0**	**4**	**0**	**: :**	
983	2	78	01:58:56.933		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3204.33 +/-	1O0	4	0	6,475,295:84:0	
984	2	78	01:58:56.933	20XE422A6D	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,295:84:0	
985	2	78	01:58:58.333		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3204.45 +/-	1O0	4	0	6,475,295:86:1	
986	2	78	01:59:03.600		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3205.69 +/-	1O0	4	0	6,475,296:03:0	
987	2	78	01:59:04.800		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC *3205.75 +/-	1O0	4	0	6,475,296:04:8	
988	2	78	01:59:08.266	20XE176A6D	6TMREC	**HIM**	115.2 KBPS SSI + NIMS RECORD Record Mode	1O0	4	0	6,475,296:10:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
989	2	78	01:59:08.800		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC *3199.45 +/-	1O0	4	0	6,475,296:10:8	
990	2	78	01:59:08.800		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 3199.45 +/-	1O0	4	0	6,475,296:10:8	
991	2	78	02:02:04.266	20XE422A6E	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,299:01:0	
992	2	78	02:02:04.266		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC *2582.57 +/-	1O0	4	0	6,475,299:01:0	
993	2	78	02:02:05.466		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2581.57 +/-	1O0	4	0	6,475,299:02:8	
994	2	78	02:03:56.266	20XE422A6F	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,300:78:0	
995	2	78	02:03:56.266		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2581.57 +/-	1O0	4	0	6,475,300:78:0	
996	2	78	02:03:57.666		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2581.69 +/-	1O0	4	0	6,475,300:80:1	
997	2	78	02:04:02.933		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2582.93 +/-	1O0	4	0	6,475,300:88:0	
998	2	78	02:04:04.133		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC *2582.99 +/-	1O0	4	0	6,475,300:89:8	
999	2	78	02:04:07.600	20XE176A6F	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	1O0	4	0	6,475,301:04:0	
1000	2	78	02:04:08.133		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 2576.69 +/-	1O0	4	0	6,475,301:04:8	
1001	2	78	02:04:08.133		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC *2576.69 +/-	1O0	4	0	6,475,301:04:8	
1002	2	78	02:04:35.600	20XE422A6G	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,301:46:0	
1003	2	78	02:04:35.600		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC *2480.12 +/-	1O0	4	0	6,475,301:46:0	
1004	2	78	02:04:36.800		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2479.12 +/-	1O0	4	0	6,475,301:47:8	
1005	2	78	02:05:57.600	20XE422A6H	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,302:78:0	
1006	2	78	02:05:57.600		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2479.12 +/-	1O0	4	0	6,475,302:78:0	
1007	2	78	02:05:59.000		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2479.24 +/-	1O0	4	0	6,475,302:80:1	
1008	2	78	02:06:04.266		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2480.48 +/-	1O0	4	0	6,475,302:88:0	
1009	2	78	02:06:05.466		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC *2480.54 +/-	1O0	4	0	6,475,302:89:8	
1010	2	78	02:06:08.933	20XE176A6H	6TMREC	**HMA**	115.2 KBPS IMAGE(1-400)RECORD Record Mode	1O0	4	0	6,475,303:04:0	
1011	2	78	02:06:09.466		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 2474.24 +/-	1O0	4	0	6,475,303:04:8	
1012	2	78	02:06:09.466		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC *2474.24 +/-	1O0	4	0	6,475,303:04:8	
1013	2	78	02:07:07.600	20XE422A6I	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,304:01:0	
1014	2	78	02:07:07.600		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC *2269.86 +/-	1O0	4	0	6,475,304:01:0	
1015	2	78	02:07:08.800		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2268.86 +/-	1O0	4	0	6,475,304:02:8	
1016	2	78	02:09:14.266		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 2268.86 +/-	1O0	4	0	6,475,306:09:0	
1017	2	78	02:09:14.266	20XE422A6J	6DMSC	R806,0	DMS Control Tape runup 806.4kb	1O0	4	0	6,475,306:09:0	
1018	2	78	02:09:15.666		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *2268.98 +/-	1O0	4	0	6,475,306:11:1	
1019	2	78	02:09:20.933		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2270.22 +/-	1O0	4	0	6,475,306:19:0	
1020	2	78	02:09:22.133		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *2270.28 +/-	1O0	4	0	6,475,306:20:8	
1021	2	78	02:09:26.933	20XE176A6J	6TMREC	**IM8**	806.4 KBPS IMAGE RECORD Record Mode Chang	1O0	4	0	6,475,306:28:0	
1022	2	78	02:09:27.400		DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC 2204.28 +/-	1O0	4	0	6,475,306:28:7	
1023	2	78	02:09:27.400		DMS:	**: *RECORD**	R806, TRACK 4, REV, TIC *2204.28 +/-	1O0	4	0	6,475,306:28:7	
1024	2	78	02:09:42.933	20XE422A6K	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,306:52:0	
1025	2	78	02:09:42.933		DMS:	**: *RUNDOWN**	R806, TRACK 4, REV, TIC *1822.01 +/-	1O0	4	0	6,475,306:52:0	
1026	2	78	02:09:45.666		DMS:	: *READY	RDY, TRACK 4, REV, TIC *1810.51 +/-	1O0	4	0	6,475,306:56:1	
1027	2	78	02:20:10.933	20XE422A6L	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,316:84:0	
1028	2	78	02:20:10.933		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1810.51 +/-	1O0	4	0	6,475,316:84:0	
1029	2	78	02:20:12.333		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1810.63 +/-	1O0	4	0	6,475,316:86:1	
1030	2	78	02:20:17.600		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1811.87 +/-	1O0	4	0	6,475,317:03:0	
1031	2	78	02:20:18.800		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC *1811.93 +/-	1O0	4	0	6,475,317:04:8	
1032	2	78	02:20:22.266	20XE176A6L	6TMREC	**HIM**	115.2 KBPS SSI + NIMS RECORD Record Mode	1O0	4	0	6,475,317:10:0	
1033	2	78	02:20:22.800		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 1805.63 +/-	1O0	4	0	6,475,317:10:8	
1034	2	78	02:20:22.800		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC *1805.63 +/-	1O0	4	0	6,475,317:10:8	
1035	2	78	02:21:16.933		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC *1615.31 +/-	1O0	4	0	6,475,318:01:0	
1036	2	78	02:21:16.933	20XE422A6M	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,318:01:0	
1037	2	78	02:21:18.133		DMS:	: *READY	RDY, TRACK 4, REV, TIC *1614.31 +/-	1O0	4	0	6,475,318:02:8	
1038	2	78	02:30:17.600	20XE422A6N	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,326:84:0	
1039	2	78	02:30:17.600		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1614.31 +/-	1O0	4	0	6,475,326:84:0	
1040	2	78	02:30:19.000		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1614.43 +/-	1O0	4	0	6,475,326:86:1	
1041	2	78	02:30:24.266		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1615.67 +/-	1O0	4	0	6,475,327:03:0	
1042	2	78	02:30:25.466		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC *1615.73 +/-	1O0	4	0	6,475,327:04:8	
1043	2	78	02:30:28.933	20XE176A6N	6TMREC	**HIM**	115.2 KBPS SSI + NIMS RECORD Record Mode	1O0	4	0	6,475,327:10:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1044	2	78	02:30:29.466		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 1609.43 +/-	1O0	4	0	6,475,327:10:8	
1045	2	78	02:30:29.466		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC *1609.43 +/-	1O0	4	0	6,475,327:10:8	
1046	2	78	02:31:23.600	20XE422A6O	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,328:01:0	
1047	2	78	02:31:23.600		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC *1419.12 +/-	1O0	4	0	6,475,328:01:0	
1048	2	78	02:31:24.800		DMS:	: *READY	RDY, TRACK 4, REV, TIC *1418.12 +/-	1O0	4	0	6,475,328:02:8	
1049	2	78	02:40:24.266		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1418.12 +/-	1O0	4	0	6,475,336:84:0	
1050	2	78	02:40:24.266	20XE422A6P	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,336:84:0	
1051	2	78	02:40:25.666		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1418.24 +/-	1O0	4	0	6,475,336:86:1	
1052	2	78	02:40:30.933		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1419.47 +/-	1O0	4	0	6,475,337:03:0	
1053	2	78	02:40:32.133		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC *1419.53 +/-	1O0	4	0	6,475,337:04:8	
1054	2	78	02:40:35.600	20XE176A6P	6TMREC	**HIM**	115.2 KBPS SSI + NIMS RECORD Record Mode	1O0	4	0	6,475,337:10:0	
1055	2	78	02:40:36.133		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC *1413.23 +/-	1O0	4	0	6,475,337:10:8	
1056	2	78	02:40:36.133		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 1413.23 +/-	1O0	4	0	6,475,337:10:8	
1057	2	78	02:41:30.266		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC *1222.92 +/-	1O0	4	0	6,475,338:01:0	
1058	2	78	02:41:30.266	20XE422A6Q	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,338:01:0	
1059	2	78	02:41:31.466		DMS:	: *READY	RDY, TRACK 4, REV, TIC *1221.92 +/-	1O0	4	0	6,475,338:02:8	
1060	2	78	02:50:30.933		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1221.92 +/-	1O0	4	0	6,475,346:84:0	
1061	2	78	02:50:30.933	20XE422A6R	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,346:84:0	
1062	2	78	02:50:32.333		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1222.04 +/-	1O0	4	0	6,475,346:86:1	
1063	2	78	02:50:37.600		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1223.27 +/-	1O0	4	0	6,475,347:03:0	
1064	2	78	02:50:38.800		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC *1223.33 +/-	1O0	4	0	6,475,347:04:8	
1065	2	78	02:50:42.266	20XE176A6R	6TMREC	**HIM**	115.2 KBPS SSI + NIMS RECORD Record Mode	1O0	4	0	6,475,347:10:0	
1066	2	78	02:50:42.800		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 1217.03 +/-	1O0	4	0	6,475,347:10:8	
1067	2	78	02:50:42.800		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC *1217.03 +/-	1O0	4	0	6,475,347:10:8	
1068	2	78	02:51:36.933	20XE422A6S	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,348:01:0	
1069	2	78	02:51:36.933		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC *1026.72 +/-	1O0	4	0	6,475,348:01:0	
1070	2	78	02:51:38.133		DMS:	: *READY	RDY, TRACK 4, REV, TIC *1025.72 +/- 1	1O0	4	0	6,475,348:02:8	
1071	2	78	03:00:37.600		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1025.72 +/- 1	1O0	4	0	6,475,356:84:0	
1072	2	78	03:00:37.600	20XE422A6T	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,356:84:0	
1073	2	78	03:00:39.000		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1025.84 +/- 1	1O0	4	0	6,475,356:86:1	
1074	2	78	03:00:44.266		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1027.07 +/- 1	1O0	4	0	6,475,357:03:0	
1075	2	78	03:00:45.466		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC *1027.13 +/- 1	1O0	4	0	6,475,357:04:8	
1076	2	78	03:00:48.933	20XE176A6T	6TMREC	**HIM**	115.2 KBPS SSI + NIMS RECORD Record Mode	1O0	4	0	6,475,357:10:0	
1077	2	78	03:00:49.466		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 1020.83 +/- 1	1O0	4	0	6,475,357:10:8	
1078	2	78	03:00:49.466		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC *1020.83 +/- 1	1O0	4	0	6,475,357:10:8	
1079	2	78	03:01:43.533	20XE422A6U	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,358:01:0	
1080	2	78	03:01:43.533		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC * 830.76 +/- 1	1O0	4	0	6,475,358:01:0	
1081	2	78	03:01:44.733		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 829.76 +/- 1	1O0	4	0	6,475,358:02:8	
1082	2	78	03:15:47.533	20XE422A6V	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,371:84:0	
1083	2	78	03:15:47.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 829.76 +/- 1	1O0	4	0	6,475,371:84:0	
1084	2	78	03:15:48.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 829.88 +/- 1	1O0	4	0	6,475,371:86:1	
1085	2	78	03:15:54.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 831.11 +/- 1	1O0	4	0	6,475,372:03:0	
1086	2	78	03:15:55.400		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC * 831.17 +/- 1	1O0	4	0	6,475,372:04:8	
1087	2	78	03:15:58.866	20XE176A6V	6TMREC	**HIM**	115.2 KBPS SSI + NIMS RECORD Record Mode	1O0	4	0	6,475,372:10:0	
1088	2	78	03:15:59.400		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC * 824.87 +/- 1	1O0	4	0	6,475,372:10:8	
1089	2	78	03:15:59.400		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 824.87 +/- 1	1O0	4	0	6,475,372:10:8	
1090	2	78	03:16:53.533	20XE422A6W	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,373:01:0	
1091	2	78	03:16:53.533		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC * 634.56 +/- 1	1O0	4	0	6,475,373:01:0	
1092	2	78	03:16:54.733		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 633.56 +/- 1	1O0	4	0	6,475,373:02:8	
1093	2	78	03:30:57.533		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 633.56 +/- 1	1O0	4	0	6,475,386:84:0	
1094	2	78	03:30:57.533	20XE422A6X	6DMSC	R115,0	DMS Control Tape runup 115.2kb	1O0	4	0	6,475,386:84:0	
1095	2	78	03:30:58.933		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 633.68 +/- 1	1O0	4	0	6,475,386:86:1	
1096	2	78	03:31:04.200		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 634.91 +/- 1	1O0	4	0	6,475,387:03:0	
1097	2	78	03:31:05.400		DMS:	: *RUNUP	R115, TRACK *4, *REV, TIC * 634.97 +/- 1	1O0	4	0	6,475,387:04:8	
1098	2	78	03:31:08.866	20XE176A6X	6TMREC	**HIM**	115.2 KBPS SSI + NIMS RECORD Record Mode	1O0	4	0	6,475,387:10:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1099	2	78	03:31:09.400		DMS:	**: *RECORD**	R115, TRACK 4, REV, TIC * 628.67 +/- 1	1O0	4	0	6,475,387:10:8	
1100	2	78	03:31:09.400		DMS:	: *AT_SPD	R115, TRACK 4, REV, TIC 628.67 +/- 1	1O0	4	0	6,475,387:10:8	
1101	2	78	03:32:03.533	20XE422A6Y	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,388:01:0	
1102	2	78	03:32:03.533		DMS:	**: *RUNDOWN**	R115, TRACK 4, REV, TIC * 438.36 +/- 1	1O0	4	0	6,475,388:01:0	
1103	2	78	03:32:04.733		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 437.36 +/- 1	1O0	4	0	6,475,388:02:8	
1104	2	78	03:36:56.866	20XE422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	1O0	4	0	6,475,392:77:0	
1105	2	78	03:36:56.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 437.36 +/- 1	1O0	4	0	6,475,392:77:0	
1106	2	78	03:36:58.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 437.48 +/- 1	1O0	4	0	6,475,392:79:1	
1107	2	78	03:37:03.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 438.71 +/- 1	1O0	4	0	6,475,392:87:0	
1108	2	78	03:37:04.733		DMS:	: *RUNUP	R7, TRACK *4, *REV, TIC * 438.77 +/- 1	1O0	4	0	6,475,392:88:8	
1109	2	78	03:37:05.533	20XE176A6A	6TMREC	**LPW**	7.68 KBPS LOW RATE SCI PWS RECORD Record	1O0	4	0	6,475,392:90:0	
1110	2	78	03:37:06.133		DMS:	**: *RECORD**	R7, TRACK 4, REV, TIC * 438.65 +/- 1	1O0	4	0	6,475,392:90:9	
1111	2	78	03:37:06.133		DMS:	: *AT_SPD	R7, TRACK 4, REV, TIC 438.65 +/- 1	1O0	4	0	6,475,392:90:9	
1112	2	78	03:37:12.866		DMS:	**: *RUNDOWN**	R7, TRACK 4, REV, TIC * 437.08 +/- 1	1O0	4	0	6,475,393:10:0	
1113	2	78	03:37:12.866	20XE422A6Z	6DMSC	RDY,0	DMS Control Tape stop	1O0	4	0	6,475,393:10:0	
1114	2	78	03:37:14.066		DMS:	: *READY	RDY, TRACK 4, REV, TIC * 437.02 +/- 1	1O0	4	0	6,475,393:11:8	
1115	2	78	05:09:06.866	465MC6A	6DMST	5500	DMS Slew to TIC	1O0	4	0	6,475,484:00:0	
1116	2	78	05:09:06.866		DMS:	: *SLEW-TIC	P7, TRACK *1, *FWD, TIC 437.02 +/- 1	1O0	4	0	6,475,484:00:0	
1117	2	78	05:09:06.866		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 437.02 +/- 1	1O0	4	0	6,475,484:00:0	
1118	2	78	05:09:13.533		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 437.02 +/- 1	1O0	4	0	6,475,484:10:0	
1119	2	78	05:09:14.933		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 437.14 +/- 1	1O0	4	0	6,475,484:12:1	
1120	2	78	11:09:07.000		DMS:	**: *RUNDOWN**	P7, TRACK 1, FWD, TIC *5497.94 +/- 1	1O0	4	0	6,475,840:04:2	
1121	2	78	11:09:08.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *5498.00 +/- 1	1O0	4	0	6,475,840:06:0	
1122	2	78	12:14:47.533	465MD6A	6DMSC	RDY,3	DMS Control Tape stop	1O0	4	0	6,475,905:00:0	
1123	2	78	12:14:47.533		DMS:	: READY	RDY, TRACK *3, FWD, TIC 5498.00 +/- 1	1O0	4	0	6,475,905:00:0	
1124	2	79	00:29:52.200	176ME6A	6TMREC	**IPB**	INITIATE PLAYBACK (PB CONTROL) Record Mod	1O0	4	0	6,476,632:00:0	
1125	2	79	02:00:00.200		DMS:	: READY	RDY, TRACK 3, FWD, TIC 5498.00 +/- 1	1O0	4	0	6,476,721:13:0	
1126	2	79	06:28:33.533	488FQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,476,986:68:0	
1127	2	79	07:36:49.533	488FQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,477,054:24:0	
1128	2	79	07:50:55.533	488FQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,477,068:19:0	
1129	2	79	08:00:17.533	488FQ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,477,077:43:0	
1130	2	79	15:21:52.133	488FR6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,477,514:18:0	
1131	2	79	22:02:57.466	488FS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,477,910:80:0	
1132	2	79	23:51:45.466	488FS6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,478,018:44:0	
1133	2	80	00:20:50.133	488FS6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,478,047:22:0	
1134	2	80	00:30:09.466	488FS6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,478,056:42:0	
1135	2	80	04:01:48.133	488FS6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,478,265:71:0	
1136	2	80	06:22:09.466	488FT6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,478,404:54:0	
1137	2	80	07:32:33.466	488FT6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,478,474:20:0	
1138	2	80	07:45:47.466	488FT6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,478,487:28:0	
1139	2	80	07:56:01.466	488FT6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,478,497:39:0	
1140	2	80	21:52:17.466	488FU6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,479,324:46:0	
1141	2	80	21:57:35.466	488FU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,479,329:68:0	
1142	2	80	23:47:29.400	488FU6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,479,438:40:0	
1143	2	81	00:21:37.400	488FU6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,479,472:18:0	
1144	2	81	01:45:26.733	488FU6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,479,555:09:0	
1145	2	81	02:14:32.733	488FV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,479,583:80:0	
1146	2	81	06:47:45.400	488FV6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,479,854:08:0	
1147	2	81	07:40:39.400	488FV6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,479,906:37:0	
1148	2	81	07:49:37.400	488FV6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,479,915:25:0	
1149	2	81	15:12:29.400	488FW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,480,353:25:0	
1150	2	81	16:35:30.733	488FW6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,480,435:35:0	
1151	2	81	17:04:36.733	488FW6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,480,464:15:0	
1152	2	81	22:41:21.400	488FX6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,480,797:19:0	
1153	2	82	00:10:34.066	488FX6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,480,885:40:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1154	2	82	04:04:12.733	488FX6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,481,116:47:0	
1155	2	82	04:14:09.400	488FX6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,481,126:32:0	
1156	2	82	04:58:57.400	488FY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,481,170:60:0	
1157	2	82	10:27:29.333	488FY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,481,495:53:0	
1158	2	82	11:22:57.333	488FZ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,481,550:40:0	
1159	2	82	11:25:30.000	488FZ6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,481,552:87:0	
1160	2	82	11:35:45.333	488FZ6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,481,563:09:0	
1161	2	83	01:26:25.333	488GA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,482,384:58:0	
1162	2	83	06:02:57.333	488GA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,482,658:12:0	
1163	2	83	07:17:37.333	488GA6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,482,731:89:0	
1164	2	83	07:35:24.000	488GB6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,482,749:51:0	
1165	2	83	11:24:02.666	488GB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,482,975:63:0	
1166	2	83	12:09:53.333	488GB6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,483,021:03:0	
1167	2	83	14:15:45.333	488GC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,483,145:47:0	
1168	2	83	21:26:41.266	488GD6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,483,571:65:0	
1169	2	83	23:32:33.266	488GD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,483,696:18:0	
1170	2	84	00:15:19.266	488GD6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,483,738:45:0	
1171	2	84	00:23:45.266	488GD6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,483,746:76:0	
1172	2	85	00:22:03.933	488GE6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,485,169:31:0	
1173	2	85	01:45:57.266	488GE6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,485,252:28:0	
1174	2	85	02:15:03.933	488GE6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,485,281:09:0	
1175	2	85	06:22:09.200	488GF6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,485,525:43:0	
1176	2	85	07:25:08.533	488GF6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,485,587:70:0	
1177	2	85	18:53:44.533	488GG6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,486,268:73:0	
1178	2	85	19:25:05.200	488GG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,486,299:73:0	
1179	2	85	20:39:45.200	488GG6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,486,373:59:0	
1180	2	86	05:41:37.200	488GH6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,486,909:51:0	
1181	2	86	07:00:33.200	488GH6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,486,987:57:0	
1182	2	86	07:20:01.200	488GH6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,487,006:80:0	
1183	2	86	07:30:25.200	488GH6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,487,017:15:0	
1184	2	86	15:35:57.133	488GI6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,487,497:33:0	
1185	2	86	20:56:49.133	488GI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,487,814:64:0	
1186	2	86	22:57:42.466	488GJ6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,487,934:24:0	
1187	2	86	23:04:49.133	488GJ6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,487,941:27:0	
1188	2	87	03:35:53.133	488GJ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,488,209:35:0	
1189	2	87	05:37:21.133	488GK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,488,329:47:0	
1190	2	87	06:56:17.133	488GK6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,488,407:53:0	
1191	2	87	07:19:53.133	488GK6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,488,430:84:0	
1192	2	87	07:28:17.133	488GK6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,488,439:21:0	
1193	2	87	21:46:40.466	488GL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,489,288:17:0	
1194	2	87	23:11:13.133	488GL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,489,371:73:0	
1195	2	87	23:44:48.466	488GL6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,489,405:02:0	
1196	2	87	23:53:53.133	488GL6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,489,414:00:0	
1197	2	88	00:21:39.800	488GL6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,489,441:43:0	
1198	2	88	01:46:20.400	488GM6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,489,525:20:0	
1199	2	88	02:15:26.400	488GM6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,489,554:00:0	
1200	2	88	06:00:49.066	488GM6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,489,776:82:0	
1201	2	88	07:06:57.066	488GM6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,489,842:28:0	
1202	2	88	08:32:45.733	488GN6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,489,927:16:0	
1203	2	88	08:59:35.066	488GN6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,489,953:64:0	
1204	2	88	09:51:13.066	488GN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,490,004:70:0	
1205	2	88	10:50:57.066	488GN6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,490,063:77:0	
1206	2	88	11:06:23.733	488GN6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,490,079:11:0	
1207	2	88	11:12:17.066	488GO6A	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	1O0	4	0	6,490,084:86:0	
1208	2	88	11:48:33.066	488GO6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,490,120:74:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1209	2	88	20:00:40.400	488GP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	1O0	4	0	6,490,607	48:0
1210	2	88	20:31:13.066	488GP6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,490,637	67:0
1211	2	88	21:52:22.400	176UM6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	6,490,718	00:0
1212	2	88	22:01:59.733	20UN4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	6,490,727	47:0
1213	2	88	22:02:59.733	20UN4D	**7MODE**	**SPNL**	AACS ALL-SPIN LOW	1O0	4	0	6,490,728	46:0
1214	2	88	22:04:59.733	20UN4E	**7SAFE**	**UNSTOW**	S/P TO 153 deg cone	1O0	4	0	6,490,730	44:0
1215	2	88	22:10:29.733	20UN4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	1O0	4	0	6,490,735	84:0
1216	2	88	22:10:30.400	20UN4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	1O0	4	0	6,490,735	85:0
1217	2	88	22:10:50.400	20UN4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	1O0	4	0	6,490,736	24:0
1218	2	88	22:10:51.066	20UN4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	1O0	4	0	6,490,736	25:0
1219	2	88	22:11:11.066	20UN4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	1O0	4	0	6,490,736	55:0
1220	2	88	22:11:11.733	20UN4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	1O0	4	0	6,490,736	56:0
1221	2	88	22:11:21.733	20UN4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	1O0	4	0	6,490,736	71:0
1222	2	88	22:11:22.400	20UN4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	1O0	4	0	6,490,736	72:0
1223	2	88	22:11:32.400	20UN4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	1O0	4	0	6,490,736	87:0
1224	2	88	22:11:33.066	20UN4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	1O0	4	0	6,490,736	88:0
1225	2	88	22:13:19.733	20UN4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	1O0	4	0	6,490,738	66:0
1226	2	88	22:13:20.400	20UN4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	1O0	4	0	6,490,738	67:0
1227	2	88	22:13:40.400	20UN4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	1O0	4	0	6,490,739	06:0
1228	2	88	22:13:41.066	20UN4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	1O0	4	0	6,490,739	07:0
1229	2	88	22:14:01.066	20UN4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	1O0	4	0	6,490,739	37:0
1230	2	88	22:14:01.733	20UN4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	1O0	4	0	6,490,739	38:0
1231	2	88	22:14:11.733	20UN4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	1O0	4	0	6,490,739	53:0
1232	2	88	22:14:12.400	20UN4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	1O0	4	0	6,490,739	54:0
1233	2	88	22:14:22.400	20UN4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	1O0	4	0	6,490,739	69:0
1234	2	88	22:14:23.066	20UN4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	1O0	4	0	6,490,739	70:0
1235	2	88	22:15:19.733	20UN4Z	**7MODE**	**CRU**	AACS CRUISE MODE	1O0	4	0	6,490,740	64:0
1236	2	88	22:40:03.733	20UO4A	**7SAFE**	**STOP**	S/P NO MOVEMENT	1O0	4	0	6,490,765	15:0
1237	2	88	22:40:53.733	20UO4B	7SLEW	DIS,POS,0.0	Stator movement	1O0	4	0	6,490,765	90:0
1238	2	88	22:44:57.066	176UP6A	6TMREC	**RPB**	RESUME PLAYBACK (PB CONTROL) Record Mode	1O0	4	0	6,490,770	00:0
1239	2	88	23:06:57.066	488GP6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,490,791	69:0
1240	2	88	23:44:40.400	488GP6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,490,829	06:0
1241	2	89	05:18:17.733	488GQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,491,159	02:0
1242	2	89	05:48:01.066	488GQ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,491,188	38:0
1243	2	89	06:41:29.733	488GQ6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,491,241	28:0
1244	2	89	07:10:35.733	488GQ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,491,270	08:0
1245	2	89	08:40:49.066	488GQ6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,491,359	29:0
1246	2	89	10:59:07.066	488GR6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,491,496	09:0
1247	2	89	11:01:37.066	488GR6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	1O0	4	0	6,491,498	52:0
1248	2	89	11:16:33.066	488GR6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,491,513	31:0
1249	2	89	22:16:25.666	488GS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,492,165	88:0
1250	2	89	23:41:35.666	488GS6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,492,250	18:0
1251	2	90	00:10:41.666	488GS6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,492,278	89:0
1252	2	90	05:50:09.000	488GT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,492,614	64:0
1253	2	90	07:09:30.333	488GT6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,492,693	17:0
1254	2	90	07:19:45.000	488GT6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,492,703	29:0
1255	2	90	20:11:17.666	488GU6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,493,466	35:0
1256	2	90	21:36:42.266	488GU6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,493,550	78:0
1257	2	90	22:05:48.933	488GU6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,493,579	59:0
1258	2	91	05:45:52.933	488GV6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,494,034	60:0
1259	2	91	07:04:22.266	488GV6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,494,112	26:0
1260	2	91	07:13:20.933	488GV6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,494,121	15:0
1261	2	91	16:41:11.600	488GW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,494,682	70:0
1262	2	91	18:06:49.600	488GW6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,494,767	42:0
1263	2	91	18:35:55.600	488GW6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,494,796	22:0

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1264	2	91	21:20:16.933	488GW6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	1O0	4	0	6,494,958:72:0	
1265	2	91	23:19:44.933	488GX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,495,076:86:0	
1266	2	92	00:01:51.600	488GX6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,495,118:54:0	
1267	2	92	00:30:57.600	488GX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,495,147:34:0	
1268	2	92	00:46:51.600	488GX6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,495,163:09:0	
1269	2	92	01:15:57.600	488GX6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	1O0	4	0	6,495,191:80:0	
1270	2	92	02:54:09.600	176UZ6A	6TMREC	**PPB**	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1O0	4	0	6,495,289:00:0	
1271	**2**	**92**	**03:00:00.000**	**20A3FF**	**40T2R**	**Final Condition**	**PCT Heater 2 OFF**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1272	**2**	**92**	**03:00:00.000**	**20A3EW**	**37A**	**Final Condition**	**NIMS Power ON**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1273	**2**	**92**	**03:00:00.000**	**20A3EX**	**37HR**	**Final Condition**	**Replacement Heaters OFF**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1274	**2**	**92**	**03:00:00.000**	**20A3EY**	**37C1PR**	**Final Condition**	**Optics Heater 1 OFF (primary relay)**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1275	**2**	**92**	**03:00:00.000**	**20A3EZ**	**37C2PR**	**Final Condition**	**Optics Heater 2 OFF (primary relay)**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1276	**2**	**92**	**03:00:00.000**	**20A3FA**	**37F1PR**	**Final Condition**	**Radiator Flash Heater OFF (primary relay)**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1277	**2**	**92**	**03:00:00.000**	**20A3FB**	**37F2PR**	**Final Condition**	**Shield Flash Heater OFF (primary relay)**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1278	**2**	**92**	**03:00:00.000**	**20A3FD**	**40HRPR**	**Final Condition**	**RCT Heater OFF (primary relay)**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1279	**2**	**92**	**03:00:00.000**	**20A3FE**	**40T1PR**	**Final Condition**	**PCT Heater 1 OFF (primary relay)**	**1O0**	**4**	**0**	**6,495,294:70:6**	
1280	2	92	03:00:00.266		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	1O0	4	0	6,495,294:71:0	

33JNGLOBAL01

```
OAPEL:  33JNGLOBAL01              ALIAS:  33JNGLOBAL01
EXT:    A                         PSID:   DH
SCLK1:  06392563:06:0             SCLK2:  06392586:00:0
SCET1:    02-019/23:46:52.933     SCET2:    02-020/00:10:04.266
TARGET: JUPITER                   PARTITION: 1

MODE:       7                     GAIN:       2
CHOP:       1                     GRAT_OFF:   4
PTAB_A:     1 1 0 0 012           PTAB_B:     1 1 0 0 012
ECAL:       0                     OPCAL:      0
R/T:        0                     RECORD:     1

MB_DOWN:    00000                 MB_UP:      00000
COMP_FLAG:  1
EST_COMP:   2.0                   EST_COMPV:  0.3
RATE_CON1:  00000                 RATE_CON2:  65525
NWAVETOT:    10                   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:     0713010001          07  13  010  001
WTGRP_SIZ:  13
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	03CD7	0,0011,1100,1101,0111
1	03CD7	0,0011,1100,1101,0111
2	03CD7	0,0011,1100,1101,0111
3	03CD7	0,0011,1100,1101,0111
4	03CD7	0,0011,1100,1101,0111
5	03CD7	0,0011,1100,1101,0111
6	03CD7	0,0011,1100,1101,0111
7	03CD7	0,0011,1100,1101,0111
8	03CD7	0,0011,1100,1101,0111
9	03CD7	0,0011,1100,1101,0111
10	03CD7	0,0011,1100,1101,0111
11	03CD7	0,0011,1100,1101,0111
12	00000	0,0000,0000,0000,0000

33JNGLOBAL02

```
OAPEL:  33JNGLOBAL02              ALIAS:  33JNGLOBAL02
EXT:    A                         PSID:   DI
SCLK1:  06392761:00:0             SCLK2:  06392780:90:0
SCET1:    02-020/03:07:00.933     SCET2:    02-020/03:27:14.266
TARGET: JUPITER                   PARTITION: 1

MODE:      7                      GAIN:      2
CHOP:      1                      GRAT_OFF:  4
PTAB_A:    1 1 0 0 012            PTAB_B:    1 1 0 0 012
ECAL:      0                      OPCAL:     0
R/T:       0                      RECORD:    1

MB_DOWN:   00000                  MB_UP:     00000
COMP_FLAG: 1
EST_COMP:  2.0                    EST_COMPV: 0.3
RATE_CON1: 00000                  RATE_CON2: 65525
NWAVETOT:   10                    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:    0713010001          07  13  010  001
WTGRP_SIZ: 13
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	03CD7	0,0011,1100,1101,0111
1	03CD7	0,0011,1100,1101,0111
2	03CD7	0,0011,1100,1101,0111
3	03CD7	0,0011,1100,1101,0111
4	03CD7	0,0011,1100,1101,0111
5	03CD7	0,0011,1100,1101,0111
6	03CD7	0,0011,1100,1101,0111
7	03CD7	0,0011,1100,1101,0111
8	03CD7	0,0011,1100,1101,0111
9	03CD7	0,0011,1100,1101,0111
10	03CD7	0,0011,1100,1101,0111
11	03CD7	0,0011,1100,1101,0111
12	00000	0,0000,0000,0000,0000

33JNGLOBAL03

```
OAPEL:  33JNGLOBAL03              ALIAS:  33JNGLOBAL03
EXT:    A                         PSID:   DJ
SCLK1:  06392960:00:0             SCLK2:  06392977:00:0
SCET1:    02-020/06:28:13.600     SCET2:    02-020/06:45:24.933
TARGET: JUPITER                   PARTITION: 1

MODE:       7                     GAIN:       2
CHOP:       1                     GRAT_OFF:   4
PTAB_A:     1 1 0 0 012           PTAB_B:     1 1 0 0 012
ECAL:       0                     OPCAL:      0
R/T:        0                     RECORD:     1

MB_DOWN:    00000                 MB_UP:      00000
COMP_FLAG:  1
EST_COMP:   2.0                   EST_COMPV:  0.3
RATE_CON1:  00000                 RATE_CON2:  65525
NWAVETOT:    10                   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:     0713010001          07  13  010  001
WTGRP_SIZ:  13
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	03CD7	0,0011,1100,1101,0111
1	03CD7	0,0011,1100,1101,0111
2	03CD7	0,0011,1100,1101,0111
3	03CD7	0,0011,1100,1101,0111
4	03CD7	0,0011,1100,1101,0111
5	03CD7	0,0011,1100,1101,0111
6	03CD7	0,0011,1100,1101,0111
7	03CD7	0,0011,1100,1101,0111
8	03CD7	0,0011,1100,1101,0111
9	03CD7	0,0011,1100,1101,0111
10	03CD7	0,0011,1100,1101,0111
11	03CD7	0,0011,1100,1101,0111
12	00000	0,0000,0000,0000,0000

33NNRCTRLT01

```
OAPEL:  33NNRCTRLT01            ALIAS:  LSNNRCTRTA01
EXT:    R                       PSID:   XU
SCLK1:  06411123:00:0           SCLK2:  06411130:12:0
SCET1:  2002-033/00:33:01.666   SCET2:  2002-033/00:40:14.333
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

33NNRCTRLT01

```
OAPEL:  33NNRCTRLT01            ALIAS:  LSNNRCTRTA01
EXT:    S                       PSID:   XU
SCLK1:  06411137:00:0           SCLK2:  06411138:12:0
SCET1:  2002-033/00:47:11.000   SCET2:  2002-033/00:48:19.666
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

33NNRCTCAL01

```
OAPEL:  33NNRCTCAL01            ALIAS:  LSNNRCTCAL01
EXT:    A                       PSID:   XE
SCLK1:  06475239:86:8           SCLK2:  06475252:87:0
SCET1:  2002-078/01:02:21.466   SCET2:  2002-078/01:15:30.266
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:        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:  00000
NWAVETOT:   408                 TLMFMT:     MPW

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

WETGID:     0326408000          03  26  408  000
WTGRP_SIZ:  26
```

EDIT TABLE

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

NIMS I33 OBSTAB

This is a time-ordered ASCII TABLE (listing) of GALILEO NIMS observation parameters for use by downlink data processing of the NIMS C30 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 ).
-------------------------------------------------------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------------------------------------------------------
33JNGLOBAL0133JNGLOBAL01ADH06392563:06:006392586:00:01         JUPITER  7214 1 1 0 0 012 1 1 0 0 01200010 0000000000 1 2.00.3000
0065525        1          10LPU  02-019/23:46:52.933  02-020/00:10:04.266
          00000000000000000000000000000000000000000000000000007130100011301O3CD70103CD70103CD70103CD70103CD70103CD70103CD70103C
D70103CD70103CD70103CD70103CD70100000
33JNGLOBAL0233JNGLOBAL02ADI06392761:00:006392780:90:01         JUPITER  7214 1 1 0 0 012 1 1 0 0 01200010 0000000000 1 2.00.3000
0065525        1          10LPU  02-020/03:07:00.933  02-020/03:27:14.266
          00000000000000000000000000000000000000000000000000007130100011301O3CD70103CD70103CD70103CD70103CD70103CD70103CD70103C
D70103CD70103CD70103CD70103CD70100000
33JNGLOBAL0333JNGLOBAL03ADJ06392960:00:006392977:00:01         JUPITER  7214 1 1 0 0 012 1 1 0 0 01200010 0000000000 1 2.00.3000
0065525        1          10LPU  02-020/06:28:13.600  02-020/06:45:24.933
          00000000000000000000000000000000000000000000000000007130100011301O3CD70103CD70103CD70103CD70103CD70103CD70103CD70103C
D70103CD70103CD70103CD70103CD70100000
33NNRCTRLT01LSNNRCTRTA01RXU06411123:00:006411130:12:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                252RT 2002-033/00:33:01.6662002-033/00:40:14.333
          00000000000000000000000000000000000000000000000000303252000 312003FF12007FF0200000

33NNRCTRLT01LSNNRCTRTA01SXU06411137:00:006411138:12:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                252RT 2002-033/00:47:11.0002002-033/00:48:19.666
          00000000000000000000000000000000000000000000000000303252000 312003FF12007FF0200000

33NNRCTCAL01LSNNRCTCAL01AXE06475239:86:806475252:87:01         CAL      3114 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000
0000000                408MPW2002-078/01:02:21.4662002-078/01:15:30.266
          00000000000000000000000000000000000000000000000000003264080002601lFFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FF
FF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF011FFFF01000000100000
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```

Chapter 5 - Detailed Observation Designs

Contents

Introduction to Chapter 5

Detailed Observation Designs

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

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

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

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

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

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

NIMS Software Reload

ACTIVITY ID: 33NNMARDUK01-
START TIME: 02-017/13:47:39.733

Activity ID: Orbit 33 Target N Inst N OAPEL MARDUK SeqNo 01 -

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

Time System	CDS	Load ID	Calendar Date	01/17/02	Week 03
Start	IEE-CDS	00000000:00:0	02-017/13:47:39.733	IEE-000/00:00:00.000	
End	IEE-CDS	00000000:00:0	02-017/13:49:51.066	IEE-000/00:00:00.000	
Duration		00000000:00:0	000/00:02:21.33	000/00:00:00.000	

Top Label 33NNMARDUK01-
Bottom Label

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

Observation Objective

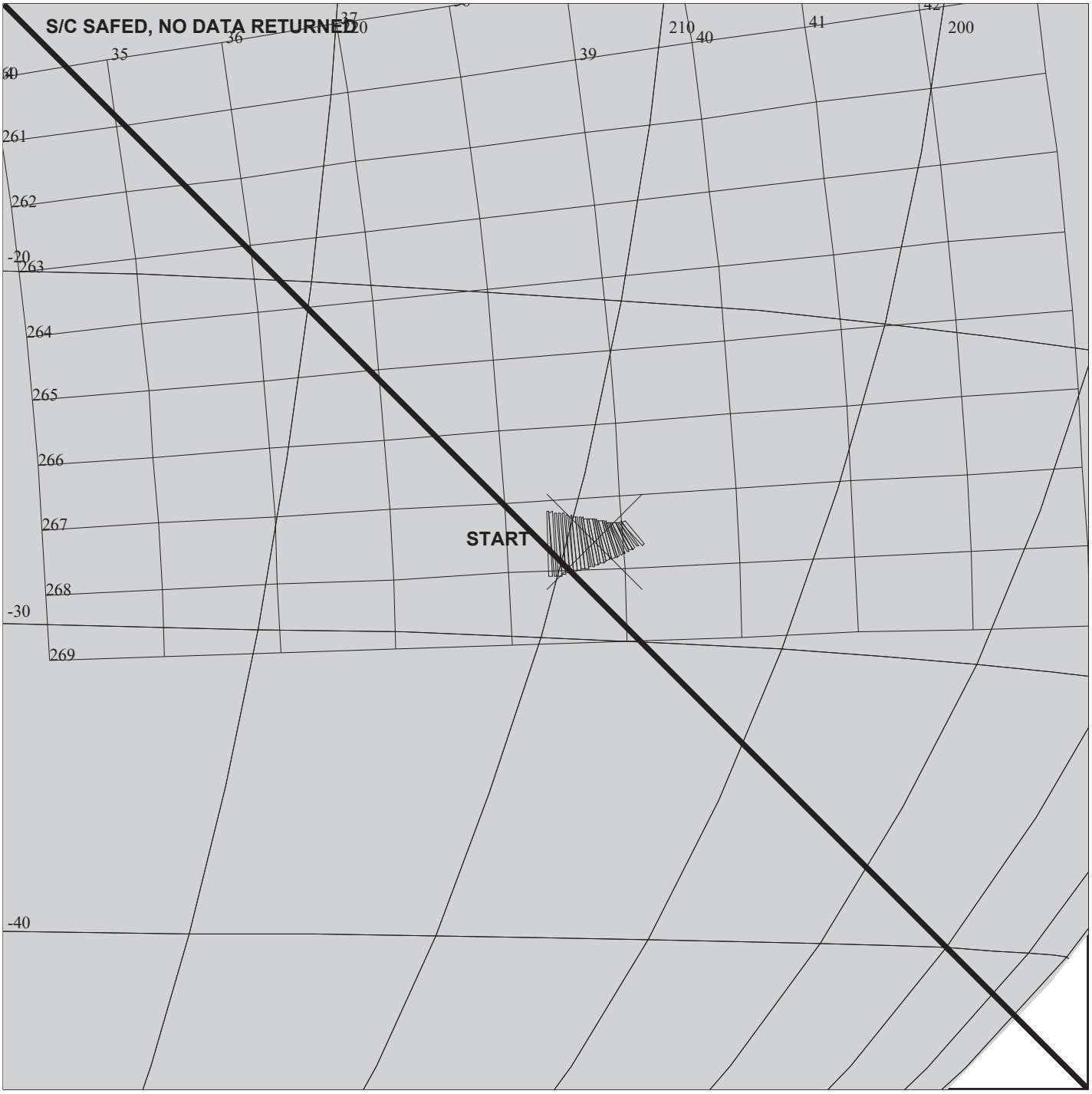
NIMS reload
Each NIMS GMM observation will have an instrument reload before the start of each observation. Each reload has its own OAPEL form, but only this first is included in the NIMSGUIDE. The NIMS I33 reload OAPELs are:

33NNMARDUK01, 33NNKANEHE01, 33NNMOSAIC01, 33NNMOSAIC02, 33NNREGION01, 33NNGLOBAL01, 33NNGLOBAL02, 33NNGLOBAL01, 33NNGLOBAL02, 33NNGLOBAL03, 33NNRELOAD01.

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.



165DB:TT= 0 TMC= 1 C= -7.00 XC= 0.00 BS= 0/0239 TC= 1(-27 209)
A= 182 pD= 1446 SR=17.450 RA50=237.27 DEC50=-17.43 cone= 38.36 clock=267.62
117DB:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0239
1:#s= 1 Cs= 14.30 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1446 rD= 34

33INMARDUK01

DESIGN G3.2 yande:11/12/2001 9: 3: 7

FILE:P.33INMARDUK01

TARGET BODY : IO

MINI:m.33INMARDUK01

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:IEE 02-017/14:08:53.066 -CDS 14:00:0

BODY PLOT TIME:TARGET-TIME D= 1446 S= 3.000

OBSERVATION:33INMARDUK01

DESCRIP:IO_PELE_OBSERVATION

Io Marduk Obs

ACTIVITY ID: 33INMARDUK01-
START TIME: 02-017/13:54:23.000

Activity ID: Orbit 33 Target I Inst N OAPEL MARDUK SeqNo 01 -

Title	Io Marduk Obs			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date	01/17/02	Week 03
Start	IEE-CDS	00000015:00:0	02-017/13:54:23.000	IEE-000/00:15:10.000	
End	IEE-CDS	00000008:00:0	02-017/14:01:27.667	IEE-000/00:08:05.333	
Duration		00000007:00:0	000/00:07:04.667	000/00:07:04.667	

Top Label	33INMARDUK01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Nightside observation of Marduk hot spot to map thermal emission and search for high temperature volcanism.

S/C SAFED, No Data Returned

Design Detail

BTG=1.52 MB, TICS=213, FMT=MPW, LM, Gain State 1

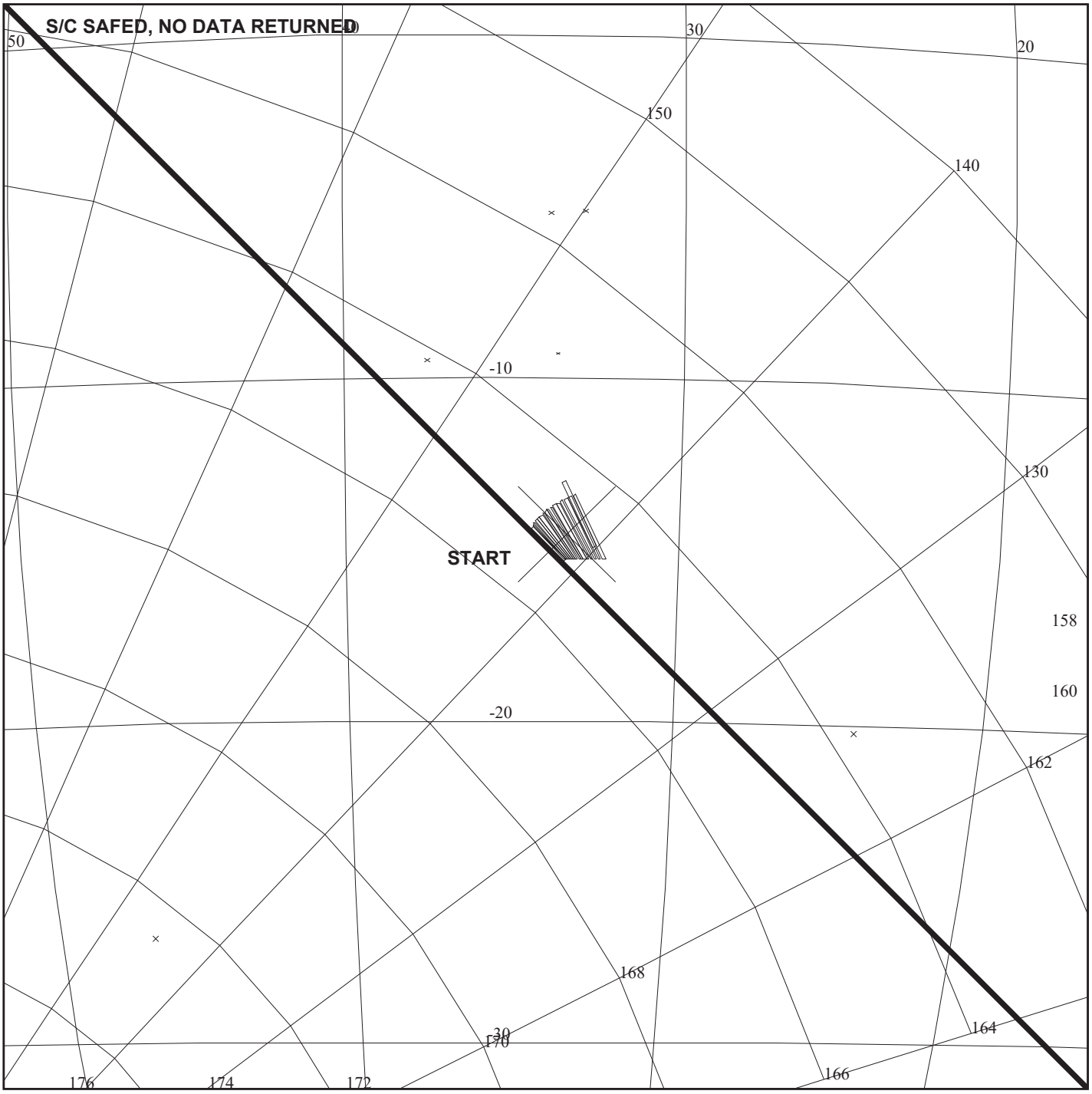
One-scan mosaic centered on Marduk.
Center at 27 deg S. latitude, 209 deg W. longitude.

Gain state 1 to avoid high temperature saturation.

BOOMS - cone angle = 40 degrees.

Fixed Long Map (XLM), Gain 1, Grating Start 0, MPW, ILM408

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DC:TT= 0 TMC= 1 C= 4.50 XC= 1.60 BS= 0/4607 TC= 1(-14.5 33.4)
A= 182 pD= 868 SR=17.450 RA50= 87.12 DEC50= 34.77 cone=165.21 clock=141.96
117DC:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS=20/4607
1:#s= 1 Cs= -8.60 XCs= 0.00 Cr= 0.00 XCr= 8.00 sD= 868 rD= 2

33INKANEHE01

DESIGN G3.2 yande:11/28/2001 9:39: 3

FILE:P.33INKANEHE01

TARGET BODY : IO

MINI:m.33INKANEHE01

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:IEE 02-017/14:08:53.066 +CDS 10:00:0 **BODY PLOT TIME:TARGET-TIME D= 868 S= 2.500**

OBSERVATION:33INKANEHE01 **DESCRIP:IO_KANEHEKILI**

Io Kanehekili Obs

ACTIVITY ID: 33INKANEHE01-
START TIME: 02-017/14:18:39.000

Activity ID: Orbit 33 Target I Inst N OAPEL KANEHE SeqNo 01 -

Title	Io Kanehekili Obs			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	01/17/02 Week 03
Start	IEE+CDS	00000009:00:0	02-017/14:18:39.000		IEE+000/00:09:06.000
End	IEE+CDS	00000015:00:0	02-017/14:24:43.000		IEE+000/00:15:10.000
Duration		00000006:00:0	000/00:06:04.000		000/00:06:04.000

Top Label	33INKANEHE01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

High resolution observation of a part of the Kanehekili hot spot for thermal mapping and to search for high temperature volcanism.

S/C SAFED, No Data Returned

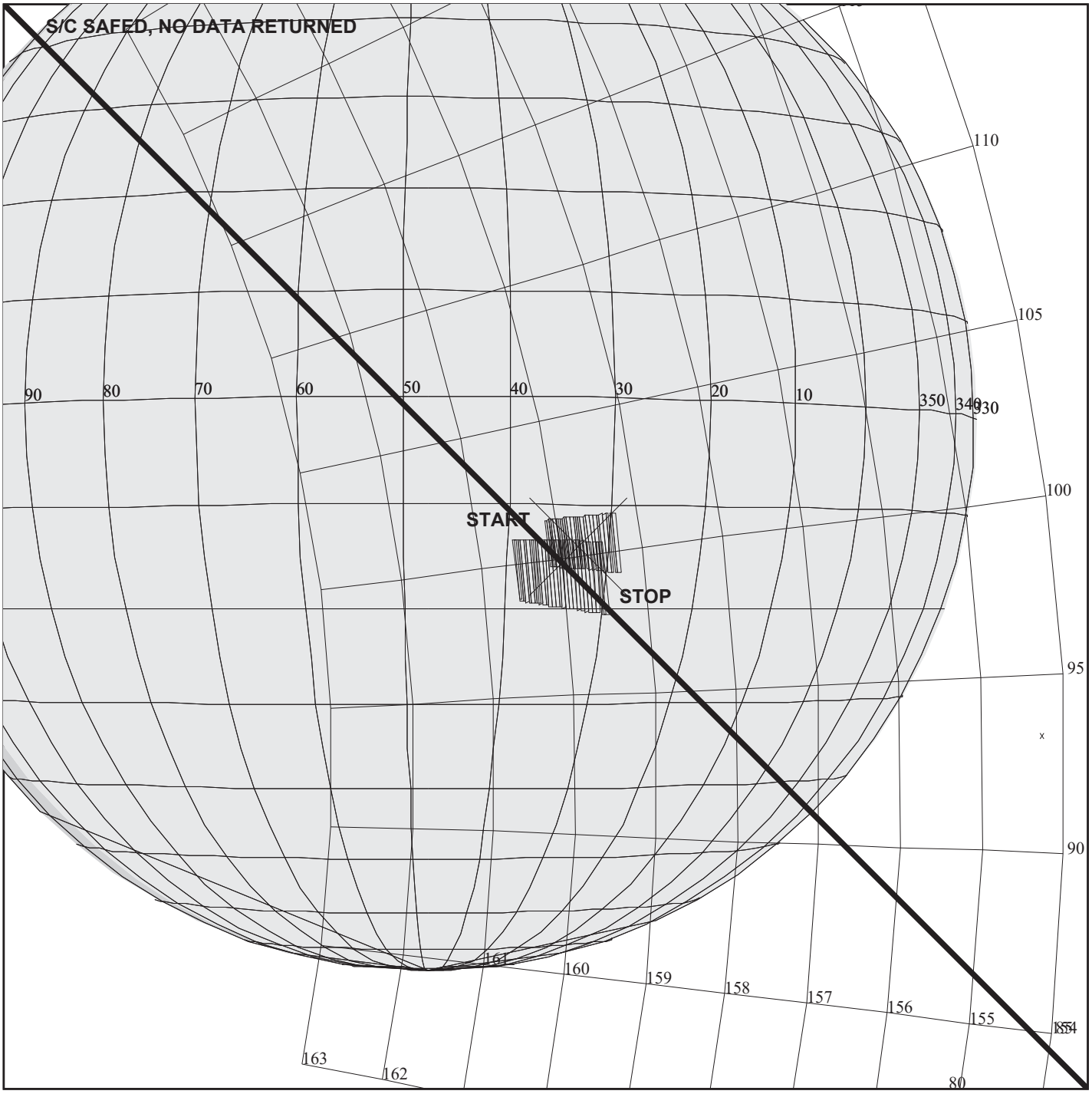
Design Detail

BTG=1.52 MB, TICS=213, FMT=MPW, LM, Gain State 2

One-scan mosaic centered on Kanehekili.
Center at 14.5 deg S. latitude, 33.4 deg W. longitude.

Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM408

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DD:TT= 0 TMC= 1 C= 6.50 XC= 1.50 BS= 0/8065 TC= 1(-14 33)
A= 282 pD= 2720 SR=17.450 RA50= 76.16 DEC50= 25.86 cone=160.15 clock=100.57
117DD:#SB= 1 OR= 0.030 RR=10.000 BM=F RC= 1 BS= 0/8065
1:#s= 2 Cs= -13.25 XCs= -1.20 Cr= 17.00 XCr= -3.00 sD= 1338 rD= 44

33INMOSAIC01

DESIGN G3.2 yande:11/12/2001 15:29:17

FILE:P.33INMOSAIC01

TARGET BODY : IO

MINI:m.33INMOSAIC01

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:IEE 02-017/14:08:53.066 +CDS 29:00:0

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

OBSERVATION:33INMOSAIC01

DESCRIP:IO_MOSAIC_OB

Io Mosaic Obs

ACTIVITY ID: 33INMOSAIC01-
START TIME: 02-017/14:37:11.732

Activity ID: Orbit 33 Target I Inst N OAPEL MOSAIC SeqNo 01 -

Title	Io Mosaic Obs			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date	01/17/02	Week 03
Start	IEE+CDS 00000028:00:0	02-017/14:37:11.732		IEE+000/00:28:18.666	
End	IEE+CDS 00000044:00:0	02-017/14:53:22.399		IEE+000/00:44:29.333	
Duration	00000016:00:0	000/00:16:10.667		000/00:16:10.667	

Top Label	33INMOSAIC01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To map thermal emission and SO2 distribution over the Kanehekili hot spots and surrounding area.

S/C SAFED, No Data Returned

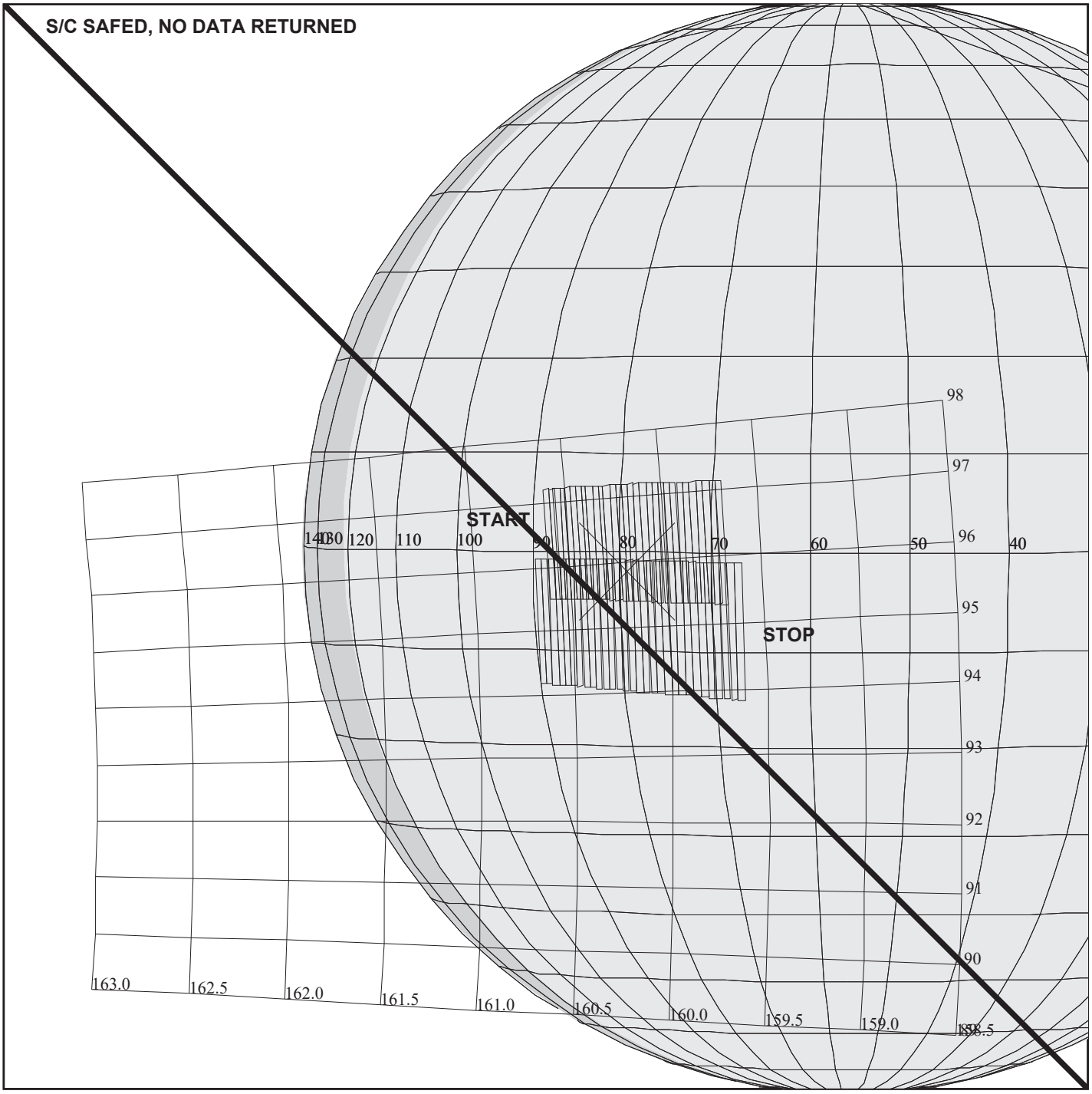
Design Detail

BTG=1.52 MB, TICS=213, FMT=MPW, LM, Gain State 2

Two-scan mosaic covering both main hot spots of Kanehekili located at (14 S, 33 W) and (17 S, 35W).

Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM408

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DE:TT= 0 TMC= 1 C= 7.00 XC= 3.00 BS= 0/5527 TC= 1(-2 79)
A= 364 pD= 3088 SR=17.450 RA50= 76.64 DEC50= 24.44 cone=160.61 clock= 96.36
117DE:#SB= 1 OR= 0.030 RR=10.000 BM=F RC= 1 BS= 0/5527
1:#s= 2 Cs= -15.10 XCs= -1.00 Cr= 15.10 XCr= -5.50 sD= 1522 rD= 44

33INMOSAIC02

DESIGN G3.2 yande:11/12/2001 9: 3:15

FILE:P.33INMOSAIC02

TARGET BODY : IO

MINI:m.33INMOSAIC02

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:IEE 02-017/14:08:53.066 +CDS 70:00:0 **BODY PLOT TIME:TARGET-TIME D= 3088 S= 1.000**

OBSERVATION:33INMOSAIC02 **DESCRIP:IO_MOSAIC_OB_2**

Io Mosaic Obs

ACTIVITY ID: 33INMOSAIC02-
START TIME: 02-017/15:18:39.066

Activity ID: Orbit 33 Target I Inst N OAPEL MOSAIC SeqNo 02 -

Title	Io Mosaic Obs			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date	01/17/02	Week 03
Start	IEE+CDS 00000069:00:0	02-017/15:18:39.066		IEE+000/01:09:46.000	
End	IEE+CDS 00000087:00:0	02-017/15:36:51.066		IEE+000/01:27:58.000	
Duration	00000018:00:0	000/00:18:12.000		000/00:18:12.000	

Top Label	33INMOSAIC02-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To map thermal emission and SO2 distribution over the Hi'iaka hot spot and surrounding area.

S/C SAFED, No Data Returned

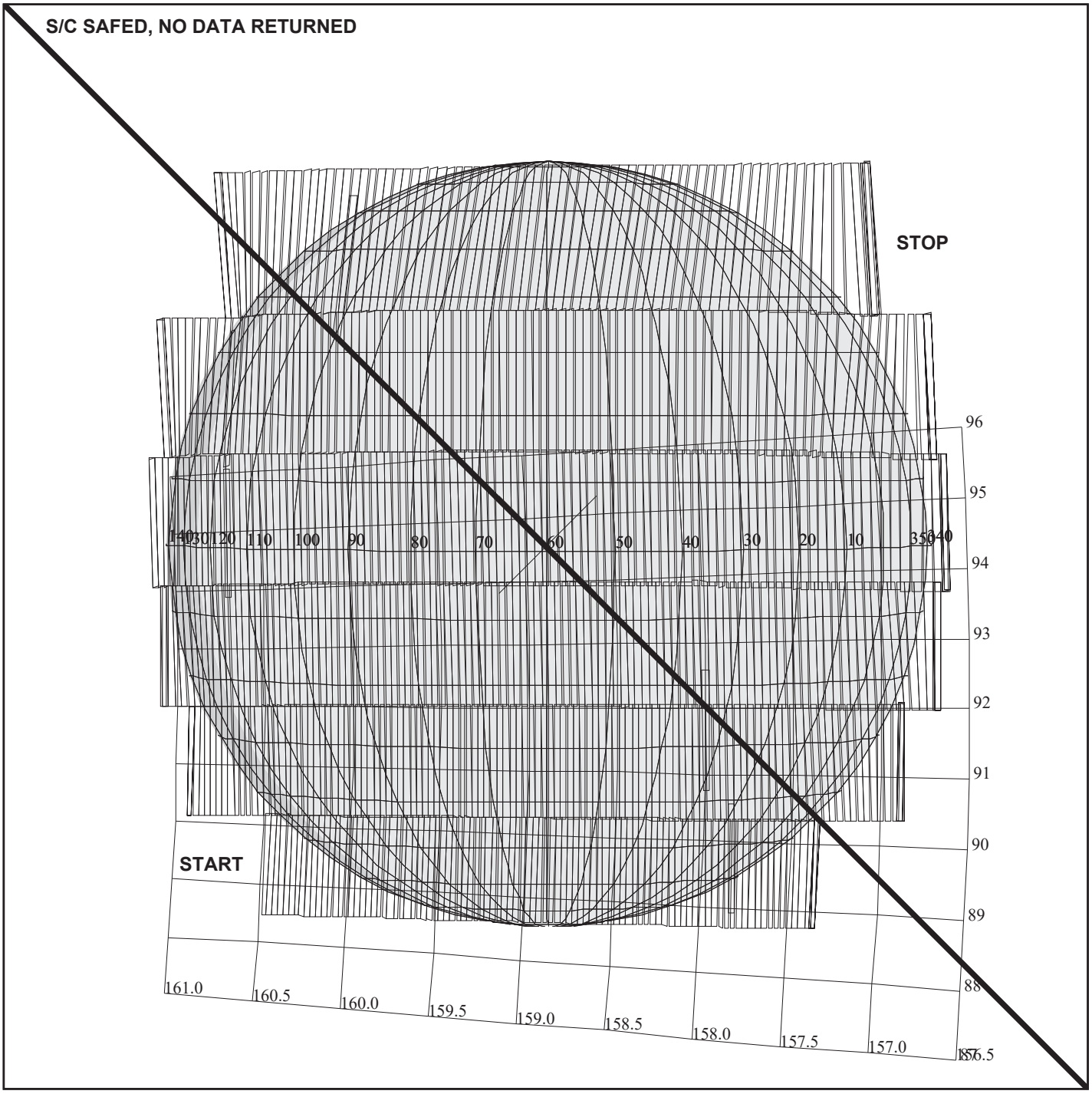
Design Detail

BTG=1.52 MB, TICS=213, FMT=MPW, LM, Gain State 2

Two-scan mosaic covering the Hi'iaka region.
Centered at -2 degrees S latitude, 79 degrees W. longitude.

Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM408

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DF:TT= 0 TMC= 1 C= 28.00 XC= -33.00 BS= 0/9531 TC= 3
A= 546 pD= 0 SR=17.450 RA50= 76.67 DEC50= 22.10 cone=160.46 clock= 89.33
117DF:#SB= 6 OR= 0.110 RR=12.000 BM=F RC= 1 BS= 0/9531
1:#s= 1 Cs= -52.50 XCs= 1.70 Cr= 0.00 XCr= 7.20 sD= 1370 rD= 44
2:#s= 1 Cs= -61.80 XCs= 2.10 Cr= 57.50 XCr= 7.80 sD= 1604 rD= 46
3:#s= 1 Cs= -61.50 XCs= 1.70 Cr= 62.30 XCr= 6.90 sD= 1596 rD= 46
4:#s= 1 Cs= -58.00 XCs= 1.20 Cr= 61.20 XCr= 6.70 sD= 1506 rD= 48
5:#s= 1 Cs= -52.50 XCs= 0.80 Cr= 57.00 XCr= 7.00 sD= 1368 rD= 48
6:#s= 1 Cs= -42.00 XCs= 0.70 Cr= 48.80 XCr= 7.30 sD= 1102 rD= 48

33INREGION01

DESIGN G3.2 yande:11/19/2001 9:26:27

FILE:P.33INREGION01

TARGET BODY : IO

MINI:m.33INREGION01

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:IEE 02-017/14:08:53.066 +CDS 92:00:0

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

OBSERVATION:33INREGION01

DESCRIP:IO_REGIONAL_MAP

Io Region Obs

ACTIVITY ID: 33INREGION01-
START TIME: 02-017/15:38:47.732

Activity ID: Orbit 33 Target I Inst N OAPEL REGION SeqNo 01 -

Title	Io Region Obs			Instrument	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID	Calendar Date	01/17/02	Week 03
Start	IEE+CDS	00000088:84:0	02-017/15:38:47.732	IEE+000/01:29:54.666	
End	IEE+CDS	00000140:33:0	02-017/16:30:48.399	IEE+000/02:21:55.333	
Duration		00000051:40:0	000/00:52:00.667	000/00:52:00.667	

Top Label	33INREGION01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Global observation of Io centered at about 60 degrees W. longitude.
This observation will cover much of the Jupiter-facing hemisphere,
not before imaged by NIMS at high resolution.
To search for new hot spots, map thermal emission and determine
the distribution of SO2 and the 1-micron absorber.

S/C SAFED, No Data Returned

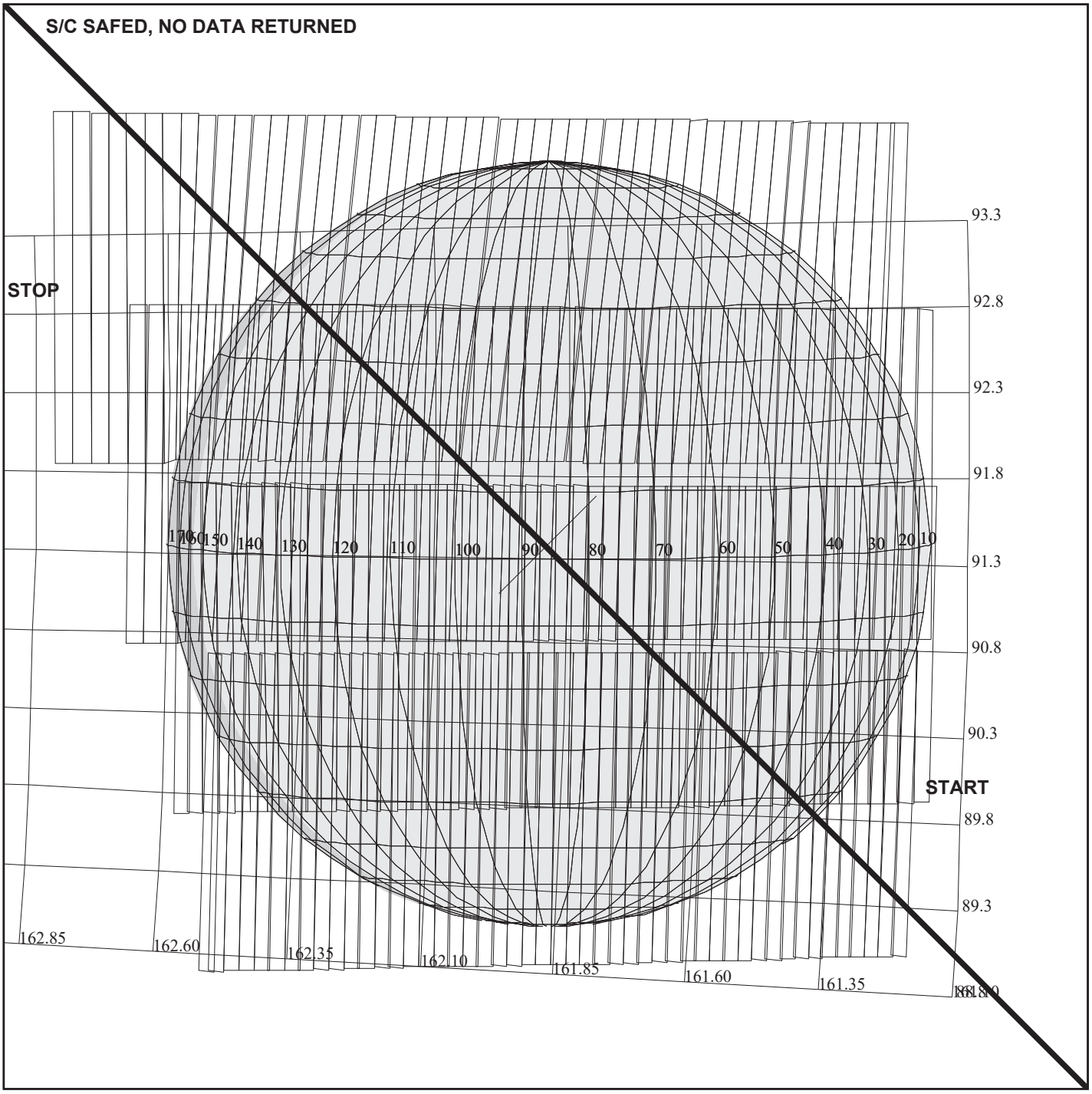
Design Detail

BTG=1.52 MB, TICS=213, FMT=MPW, SM, Gain State 2

Six-scan regional-scale mosaic covering entire disk of Io.
Centered at 60 degrees W. longitude.

Fixed Short Map (XSM), Gain 2, Grating Start 0, MPW, ISM102

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DG:TT= 0 TMC= 1 C= -12.00 XC= -8.00 BS= 0/7023 TC= 3
A= 546 pD= 0 SR=17.450 RA50= 77.44 DEC50= 22.37 cone=161.20 clock= 89.89
117DG:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/7023
1:#s= 4 Cs= 24.90 XCs= -1.40 Cr= -22.20 XCr= 6.20 sD= 2508 rD= 48

33INGLOBAL01

DESIGN G3.2 yande:11/12/2001 12:44:25

FILE:P.33INGLOBAL01

TARGET BODY : IO

MINI:m.33INGLOBAL01

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:IEE 02-017/14:08:53.066 +CDS 298:00:0 **BODY PLOT TIME:TARGET-TIME D= 0 S= 0.700**

OBSERVATION:33INGLOBAL01 **DESCRIP:IO_GLOBAL_OB**

Io Global Obs

ACTIVITY ID: 33INGLOBAL01-
START TIME: 02-017/19:07:49.666

Activity ID: Orbit 33 Target I Inst N OAPEL GLOBAL SeqNo 01 -

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

Time System	CDS	Load ID		Calendar Date	01/17/02 Week 03
Start	IEE+CDS	00000295:00:0	02-017/19:07:49.666		IEE+000/04:58:16.666
End	IEE+CDS	00000354:00:0	02-017/20:07:29.000		IEE+000/05:57:56.000
Duration		00000059:00:0	000/00:59:39.334		000/00:59:39.334

Top Label	33INGLOBAL01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Global observation of Io centered at about 86 degrees W. longitude.
This observation will cover part of the Jupiter-facing hemisphere,
Objective is to monitor activity of known hot spots, search for
new hot spots and map SO2 distribution and distribution of the 1-micron
absorber.

S/C SAFED, No Data Returned

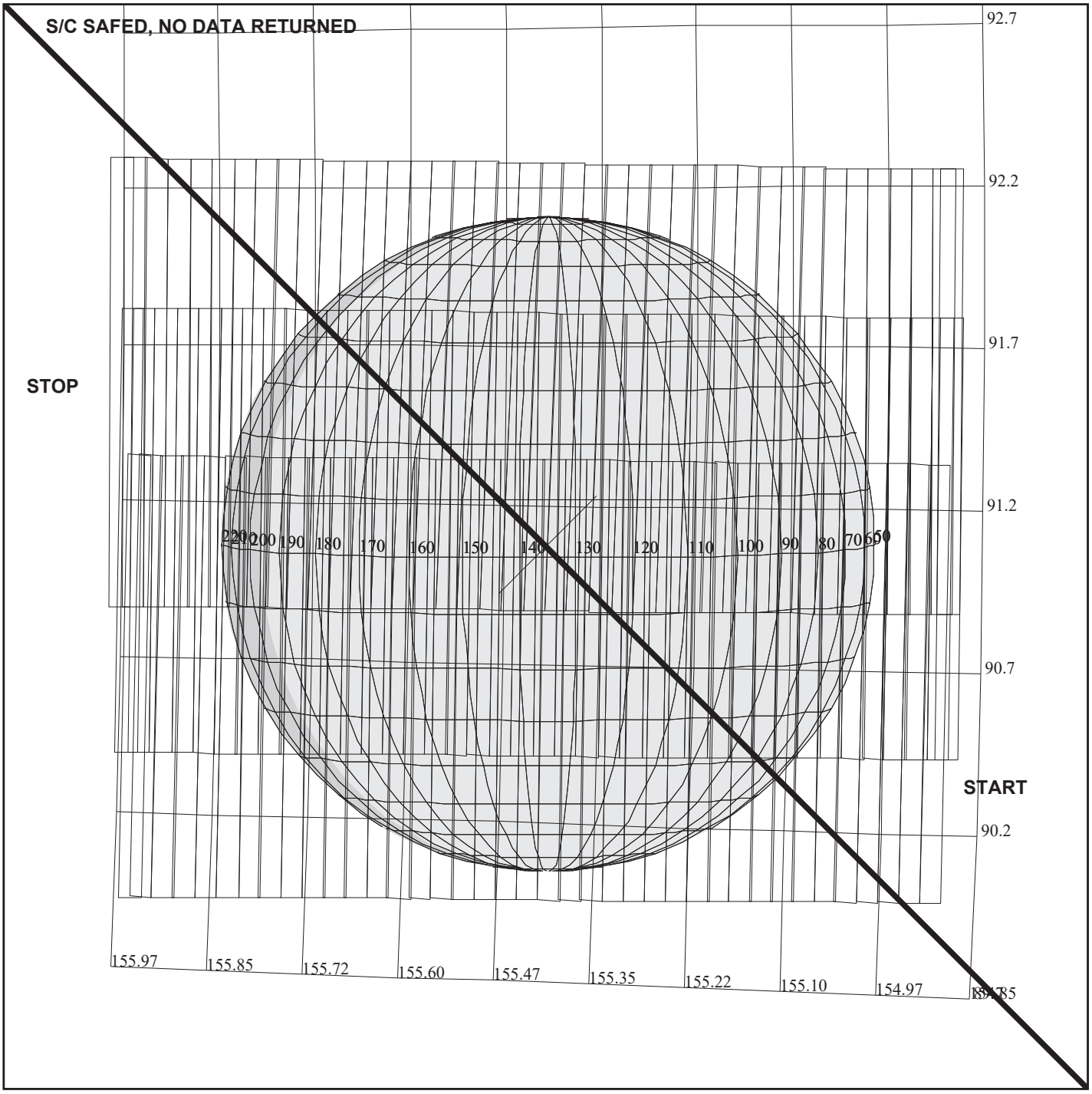
Design Detail

BTG=1.52 MB, TICS=213, FMT=LPU, SM, Gain State 2

Four-scan global mosaic covering entire disk of Io.
Centered at 86 degrees W. longitude.

Fixed Long Map (XLM), Gain 2, Grating Start 0, LPU, ILM252

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DK:TT= 0 TMC= 1 C= -9.00 XC= -3.00 BS= 0/1077 TC= 3
A= 242 pD= 0 SR=17.450 RA50= 70.66 DEC50= 21.82 cone=154.90 clock= 90.67
117DK:#SB= 1 OR= 0.040 RR=12.000 BM=F RC= 1 BS= 0/1077
1:#s= 3 Cs= 13.00 XCs= 0.00 Cr= -18.50 XCr= 3.50 sD= 994 rD= 48

33INGLOBAL02

DESIGN G3.2 yande:11/12/2001 12:34: 2

FILE:P.33INGLOBAL02

TARGET BODY : IO

MINI:m.33INGLOBAL02

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:IEE 02-017/14:08:53.066 +CDS 595:00:0

BODY PLOT TIME:TARGET-TIME D= 0 S= 0.600

OBSERVATION:33INGLOBAL02

DESCRIP:IO_GLOBAL_OB_2

Io Global Obs

ACTIVITY ID: 33INGLOBAL02-
START TIME: 02-018/00:09:08.333

Activity ID: Orbit 33 Target I Inst N OAPEL GLOBAL SeqNo 02 -

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

Time System	CDS	Load ID	Calendar Date	01/17/02	Week 03
Start	IEE+CDS	00000593:00:0	02-018/00:09:08.333	IEE+000/09:59:35.333	
End	IEE+CDS	00000612:00:0	02-018/00:28:21.000	IEE+000/10:18:48.000	
Duration		00000019:00:0	000/00:19:12.667	000/00:19:12.667	

Top Label 33INGLOBAL02-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Global observation of Io centered at about 135 degrees W. longitude.
To search for new hot spots, mositor activity of known hot spots and investigate distribution of SO2. Spatial resolution is comparable to best in Galileo main mission (~120 km/pixel).

S/C SAFED, No Data Returned

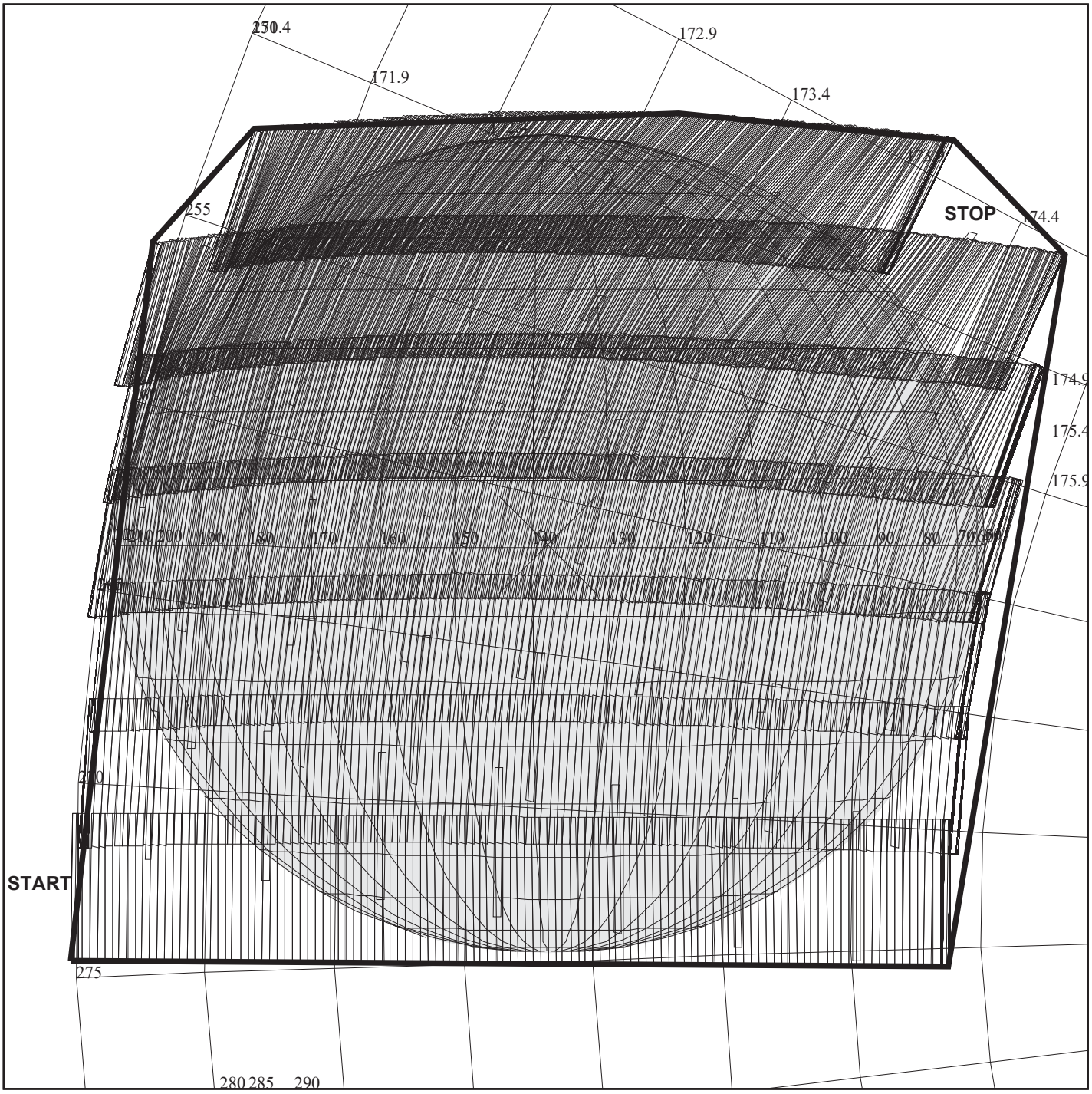
Design Detail

BTG=1.52 MB, TICS=213, FMT=LPU, SM, Gain State 2

Three-scan global mosaic covering entire disk of Io.
Centered at 135 degrees W. longitude.

Fixed Long Map (XLM), Gain 2, Grating Start 0, LPU, ILM252

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DH:TT= 0 TMC= 1 C= -29.50 XC= 23.50 BS= 0/5227 TC= 3
A= 728 pD= 0 SR=17.450 RA50=107.13 DEC50= 22.42 cone=171.39 clock=272.68
117DH:#SB= 5 OR= 0.750 RR=12.000 BM=F RC= 1 BS= 0/5227
1:#s= 2 Cs= 58.50 XCs= 0.00 Cr= -57.90 XCr= -7.70 sD= 350 rD= 52
2:#s= 1 Cs= 58.50 XCs= 0.00 Cr= -57.90 XCr= -7.70 sD= 406 rD= 46
3:#s= 1 Cs= 59.90 XCs= 0.00 Cr= -58.60 XCr= -7.70 sD= 542 rD= 46
4:#s= 2 Cs= 59.50 XCs= 0.00 Cr= -59.00 XCr= -7.70 sD= 766 rD= 62
5:#s= 1 Cs= 45.50 XCs= 0.00 Cr= -53.50 XCr= -7.70 sD= 662 rD= 66

33JNGLOBAL01

DESIGN G3.2 yande:11/19/2001 8:58:15

FILE:P.33JNGLOBAL01

CENTRAL BODY:JUPITER III

MINI:m.33JNGLOBAL01

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:JEE 02-017/16:22:21.066 +CDS 3288:00:0

BODY PLOT TIME:TARGET-TIME D= 0 S= 0.800

OBSERVATION:33JNGLOBAL01

DESCRIP:JUPITER_GLOBAL_OBS

Jupiter Global Obs

ACTIVITY ID: 33JNGLOBAL01-
START TIME: 02-019/23:43:24.666

Activity ID: Orbit 33 Target J Inst N OAPEL GLOBAL SeqNo 01 -

Title	Jupiter Global Obs			Instrument	NIMS
Requestor	NIMS-AWG/M. SEGURA	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID	Calendar Date	01/19/02	Week 03
Start	JEE+CDS	00003283:84:0	02-019/23:43:24.666	JEE+002/07:20:24.666	
End	JEE+CDS	00003311:00:0	02-020/00:10:47.333	JEE+002/07:47:47.333	
Duration		00000027:07:0	000/00:27:22.667	000/00:27:22.667	

Top Label 33JNGLOBAL01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Full-disk multi-color map of Jupiter to examine cloud morphology and microphysical properties.
First of 3 observations to cover the globe for the final Jupiter global mosaic of the Galileo GMM mission.

Design Detail

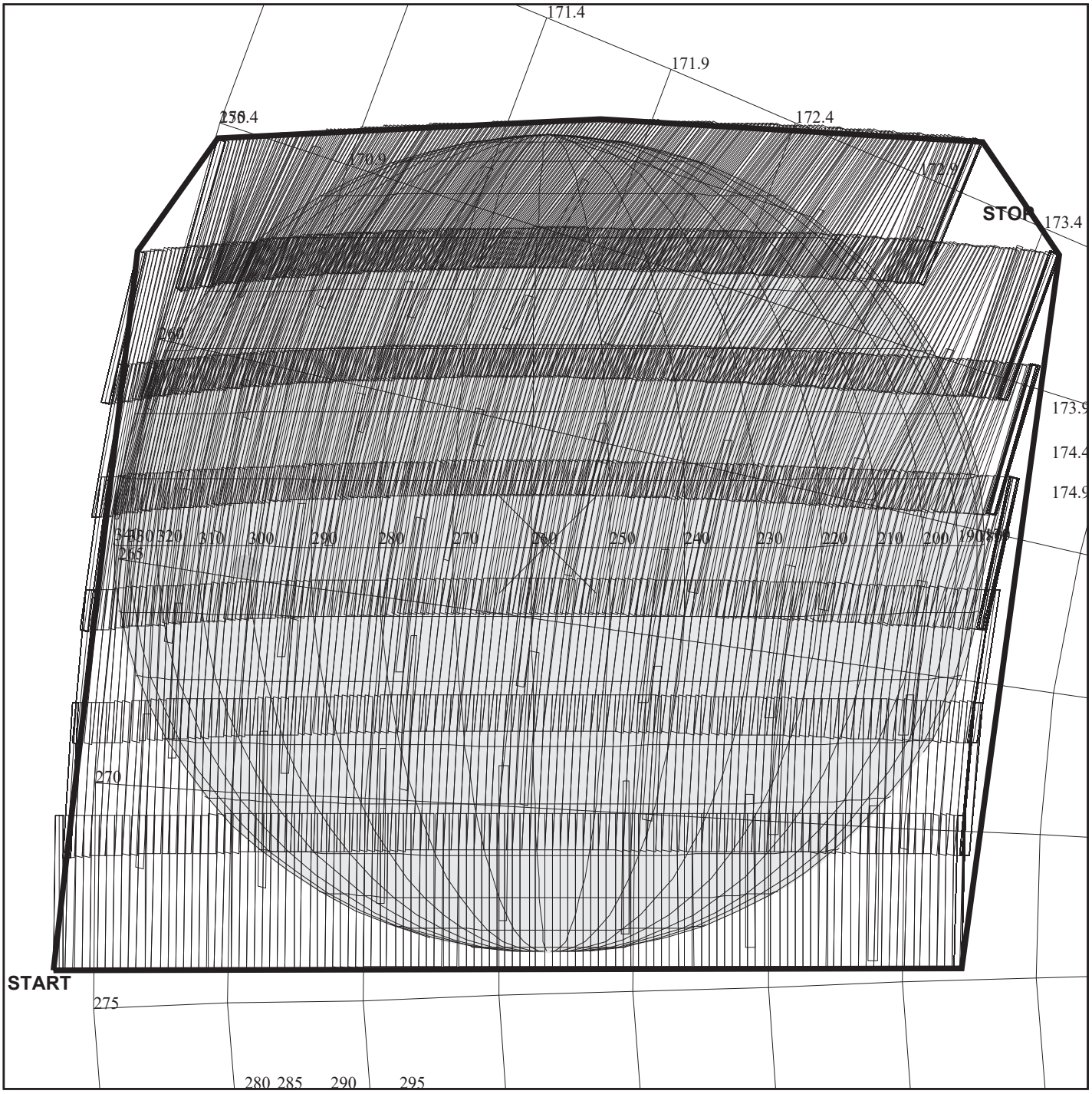
BTG=1.52 MB, TICS=213, FMT=MPW, XM, Gain State 2

Multi-tiered mosaic.
Pole to pole coverage achieved with 7 tiers.
Central meridian at 138 degrees W. longitude.
Spatial resolution about 1180 km per pixel.
Phase angle near 3 degrees.

SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT

Fixed Map (XM), Gain 2, Grating Start 0, LPU, JXM10, JXM10

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DI:TT= 0 TMC= 1 C= -29.50 XC= 23.00 BS= 0/1263 TC= 3
A= 728 pD= 0 SR=17.450 RA50=108.31 DEC50= 22.31 cone=170.29 clock=272.43
117DI:#SB= 3 OR= 0.750 RR=12.000 BM=F RC= 1 BS= 0/1263
1:#s= 3 Cs= 58.00 XCs= -0.80 Cr= -57.50 XCr= -6.50 sD= 324 rD= 52
2:#s= 3 Cs= 58.00 XCs= -0.80 Cr= -57.50 XCr= -6.50 sD= 592 rD= 52
3:#s= 1 Cs= 48.00 XCs= -0.80 Cr= -53.50 XCr= -6.50 sD= 558 rD= 64

33JNGLOBAL02

DESIGN G3.2 yande:11/19/2001 9: 0:53

FILE:P.33JNGLOBAL02

CENTRAL BODY:JUPITER III

MINI:m.33JNGLOBAL02

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:JEE 02-017/16:22:21.066 +CDS 3486:00:0

BODY PLOT TIME:TARGET-TIME D= 0 S= 0.800

OBSERVATION:33JNGLOBAL02

DESCRIP:JUPITER_GLOBAL_OBS

Jupiter Global Obs

ACTIVITY ID: 33JNGLOBAL02-
START TIME: 02-020/03:03:36.666

Activity ID: Orbit 33 Target J Inst N OAPEL GLOBAL SeqNo 02 -

Title	Jupiter Global Obs			Instrument	NIMS
Requestor	NIMS-AWG/M. SEGURA	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID	Calendar Date	01/20/02	Week 03
Start	JEE+CDS	00003481:84:0	02-020/03:03:36.666	JEE+002/10:40:36.666	
End	JEE+CDS	00003505:18:0	02-020/03:27:08.666	JEE+002/11:04:08.666	
Duration		00000023:25:0	000/00:23:32.000	000/00:23:32.000	

Top Label 33JNGLOBAL02-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Full-disk multi-color map of Jupiter to examine cloud morphology and microphysical properties.
Second of 3 observations to cover the globe for the final Jupiter global mosaic of the Galileo GMM mission.

Design Detail

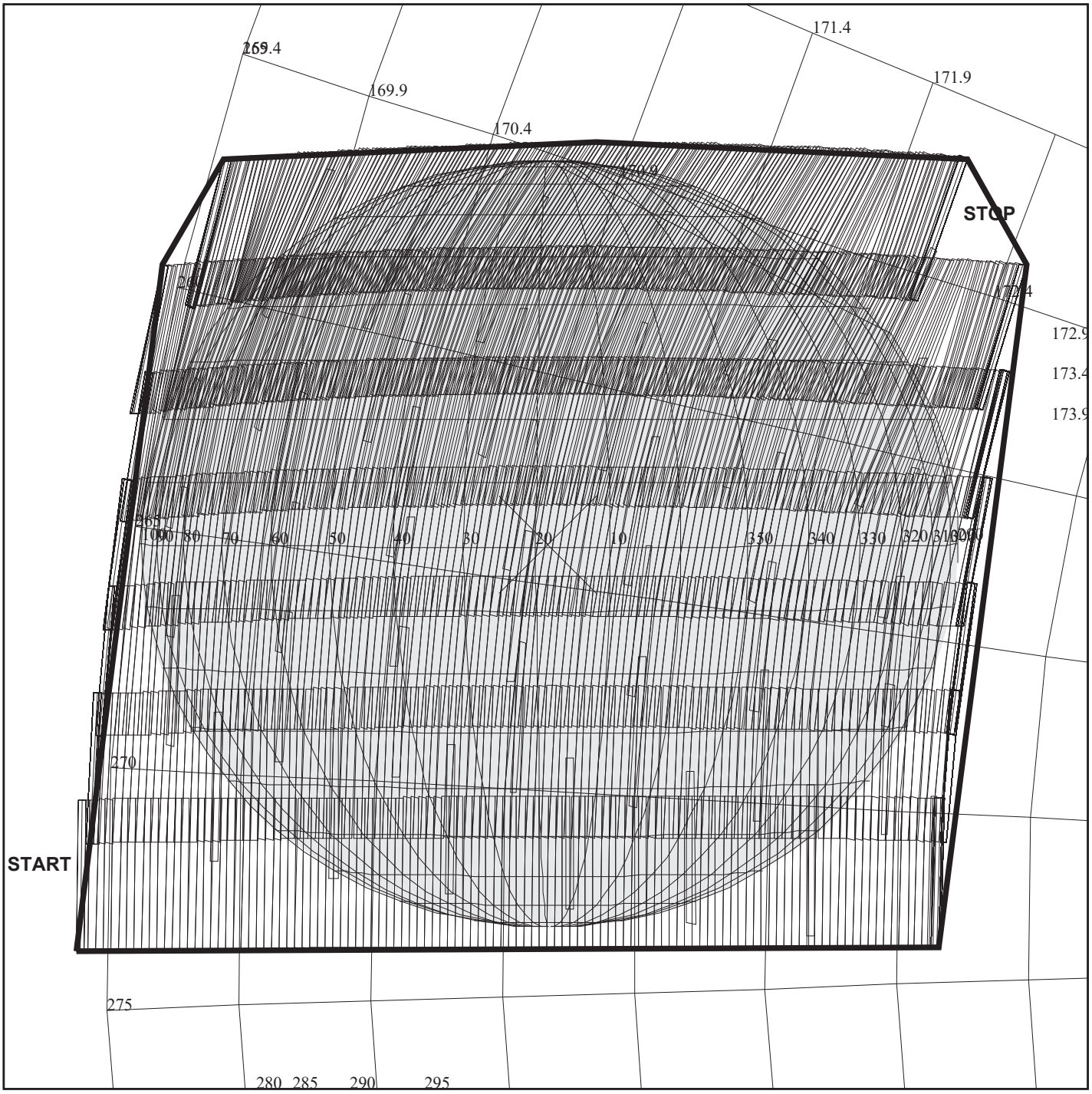
BTG=1.52 MB, TICS=213, FMT=MPW, XM, Gain State 2

Multi-tiered mosaic.
Pole to pole coverage achieved with 7 tiers.
Central meridian at 258 degrees W. longitude.
Spatial resolution about 1230 km per pixel.
Phase angle near 4 degrees.

SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT

Fixed Map (XM), Gain 2, Grating Start 0, LPU, JXM10, JXM10

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95



165DM:TT= 0 TMC= 1 C= -29.00 XC= 22.50 BS= 0/7481 TC= 3
A= 728 pD= 0 SR=17.450 RA50=109.37 DEC50= 22.20 cone=169.30 clock=272.24
117DM:#SB= 3 OR= 0.750 RR=12.000 BM=F RC= 1 BS= 0/7481
1:#s= 4 Cs= 56.50 XCs= -1.10 Cr= -56.00 XCr= -6.00 sD= 328 rD= 52
2:#s= 2 Cs= 56.00 XCs= -1.10 Cr= -55.50 XCr= -6.00 sD= 488 rD= 52
3:#s= 1 Cs= 48.00 XCs= -1.10 Cr= -52.50 XCr= -6.00 sD= 476 rD= 64

33JNGLOBAL03

DESIGN G3.2 yande:11/19/2001 9: 1:43

FILE:P.33JNGLOBAL03

CENTRAL BODY:JUPITER III

MINI:m.33JNGLOBAL03

S/C EPH:/DATA/NAVIO/011018-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:JEE 02-017/16:22:21.066 +CDS 3685:00:0

BODY PLOT TIME:TARGET-TIME D= 0 S= 0.750

OBSERVATION:33JNGLOBAL03

DESCRIP:JUPITER_GLOBAL_OBS_2

Jupiter Global Obs

ACTIVITY ID: 33JNGLOBAL03-
START TIME: 02-020/06:24:54.000

Activity ID: Orbit 33 Target J Inst N OAPEL GLOBAL SeqNo 03 -

Title	Jupiter Global Obs			Instrument	NIMS
Requestor	NIMS-AWG/M. SEGURA	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID	Calendar Date	01/20/02	Week 03
Start	JEE+CDS	00003681:00:0	02-020/06:24:54.000	JEE+002/14:01:54.000	
End	JEE+CDS	00003702:00:0	02-020/06:46:08.000	JEE+002/14:23:08.000	
Duration		00000021:00:0	000/00:21:14.000	000/00:21:14.000	

Top Label 33JNGLOBAL03-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Full-disk multi-color map of Jupiter to examine cloud morphology and microphysical properties.
Third of 3 observations to cover the globe for the final Jupiter global mosaic of the Galileo GMM mission.

Design Detail

BTG=1.52 MB, TICS=213, FMT=MPW, XM, Gain State 2

Multi-tiered mosaic.
Pole to pole coverage achieved with 7 tiers.
Central meridian at 18 degrees W. longitude.
Spatial resolution about 1280 km per pixel.
Phase angle near 5 degrees.

SPACECRAFT IN CRUISE MODE - UNCOMPENSATED SPACECRAFT WOBBLE PRESENT

Fixed Map (XM), Gain 2, Grating Start 0, LPU, JXM10, JXM10

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95

NIMS Chopper Off

ACTIVITY ID: 33NNCHOPOF01-
START TIME: 02-020/08:34:32.266

Activity ID: Orbit 33 Target N Inst N OAPEL CHOPOF SeqNo 01 -

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

Time System	CDS	Load ID		Calendar Date	01/20/02 Week 03
Start	JEE+CDS	00000000:00:0	02-020/08:34:32.266		JEE+000/00:00:00.000
End	JEE+CDS	00000000:00:0	02-020/08:39:35.600		JEE+000/00:00:00.000
Duration		00000000:00:0	000/00:05:03.333		000/00:00:00.000

Top Label	33NNCHOPOF01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	300	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Turn off NIMS Chopper.

Design Detail

Galileo Activity Plan Form 12/01/00 00:00:00 rev 6/95

NIMS RCT Real Time Calibration

ACTIVITY ID: 33NNRCTRLT01-
START TIME: 02-032/11:59:59.700

Activity ID: Orbit 33 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	02/01/02	Week 05
Start	RTA+CDS	00000000:00:0	02-032/11:59:59.700	RTA+000/00:00:00.000	
End	RTA+CDS	00000000:00:0	02-033/01:21:34.400	RTA+000/00:00:00.000	
Duration		00000000:00:0	000/13:21:34.700	000/00:00:00.000	

Top Label 33NNRCTRLT01-
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 RCT Heaters cannot be on while that scan platform is in use.
The RCT calibration Library Sequence has been modified to turn off
the RCT heaters before slewing to zero cone to observe.
Hence the RCT is observed as it cools, instead of at a steady temperature.

This is a GMM 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) Turn off RCT Heaters.
6) Slew to RCT (cone = 0.0), return 8 grating cycles (12 mf) in R/T
7) Slew to Dark (cone = 119.7), return 2 grating cycle (12 mf) in R/T
8) Slew to Safe (cone = 153.0)
9) Set NIMS to Safe Mode and turn off Chopper.
10) Resume Playback after using scan platform.

Fixed Long Map (XLM), Gain 1, Grating Start 0, R/T, RCT252

Galileo Activity Plan Form 05/31/00 10:48:23 rev 1/99

NIMS RCT Calibration

ACTIVITY ID: 33NNRCTCAL01-
START TIME: 02-077/12:30:12.266

Activity ID: Orbit 33 Target N Inst N OAPEL RCTCAL SeqNo 01 -

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

Time System	CDS	Load ID		Calendar Date	03/18/02 Week 11
Start	CAL+CDS 00000000:00:0	02-077/12:30:12.266		RTA+000/00:00:00.000	
End	CAL+CDS 00000793:00:0	02-078/01:51:58.266		RTA+000/13:21:46.000	
Duration	00000793:00:0	000/13:21:46.000		000/13:21:46.000	

Top Label	33NNRCTCAL01-				
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 recorded.

This calibration looks at the RCT after the RCT heaters have been off and watches it cool off for 13 RIMs. The first two recorded RIMs are looking at dark sky as the scan platform slews from safe/unstow to 0 degrees cone.

This is the FINAL NIMS RCT calibration.

Data Returned

Design Detail

1) Turn on RCT Heaters for 12 hours.
2) Set Engineering Variable Map to return NIMS Temps more frequently.
3) Set NIMS to Long Map Mode, Gain state 1, Chopper Reference
4) Pause playback before using scan platform.
5) Turn off RCT Heaters.
6) Slew to RCT (cone = 0.0)
7) Record 13 Rims
8) Slew scan platform to Safe position (cone = 153.0) .
9) Chopper off.

Fixed Long Map (XLM), Gain 1, Grating Start 0, MPW, LM442, LM408

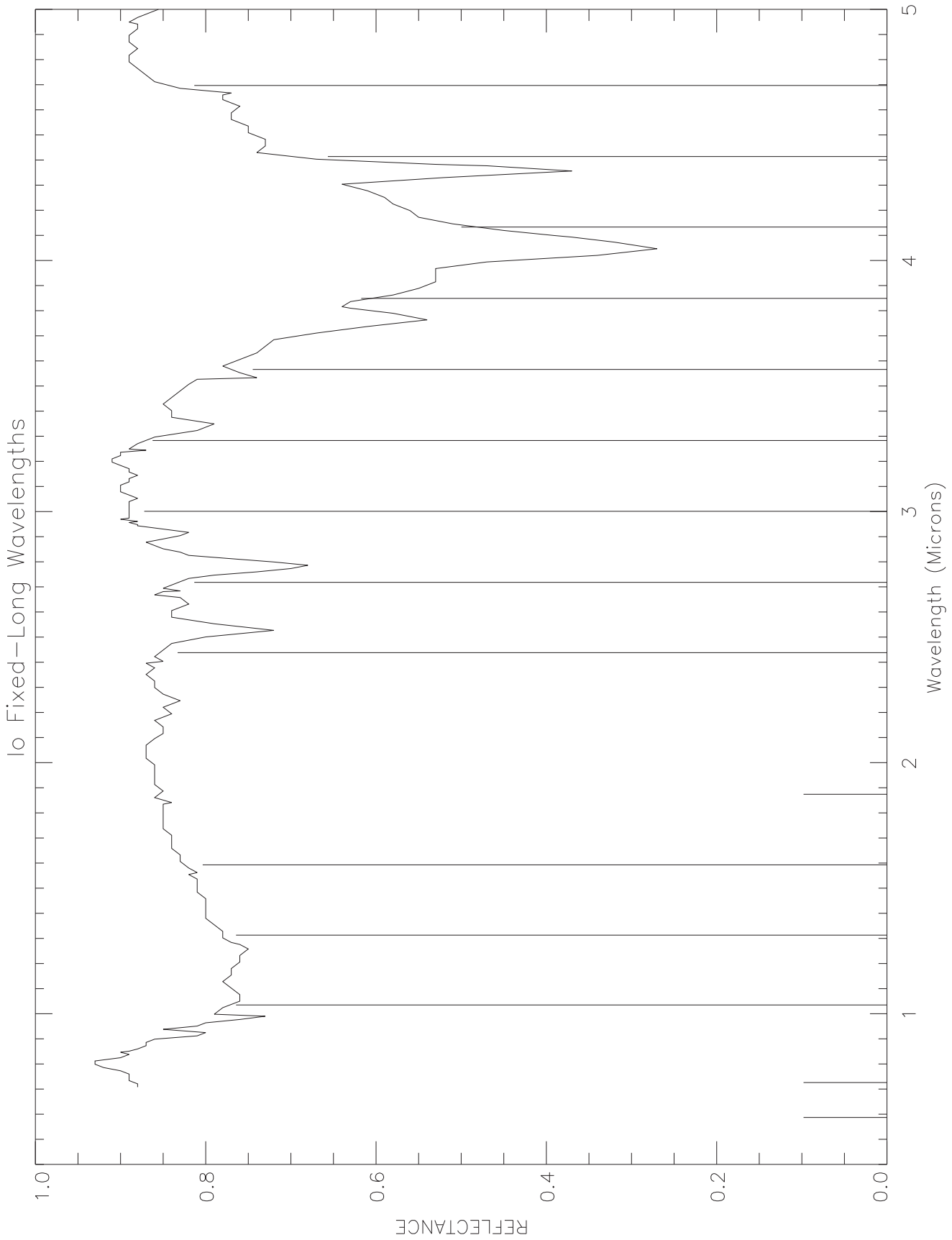
Chapter 6 - Edit Tables

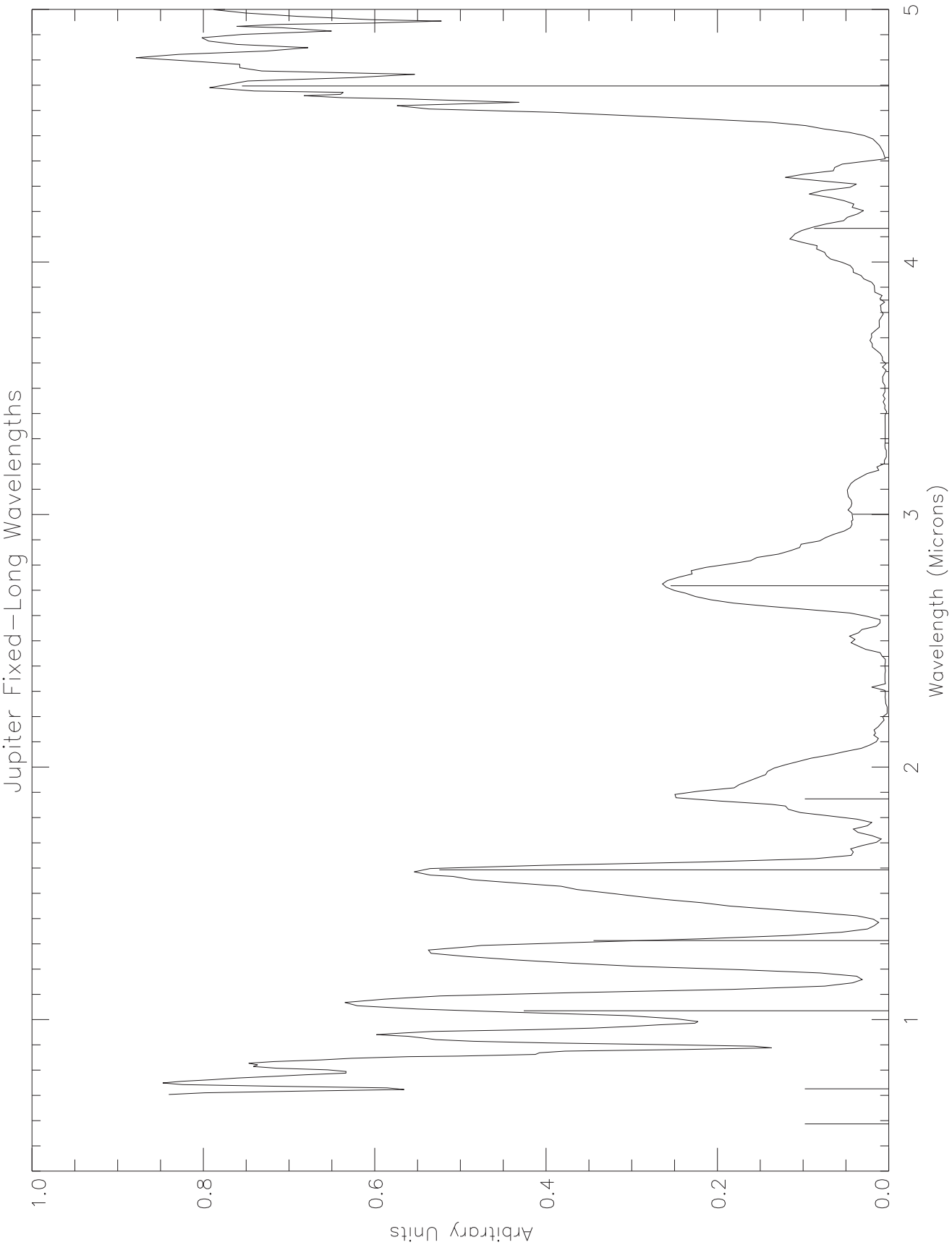
Contents

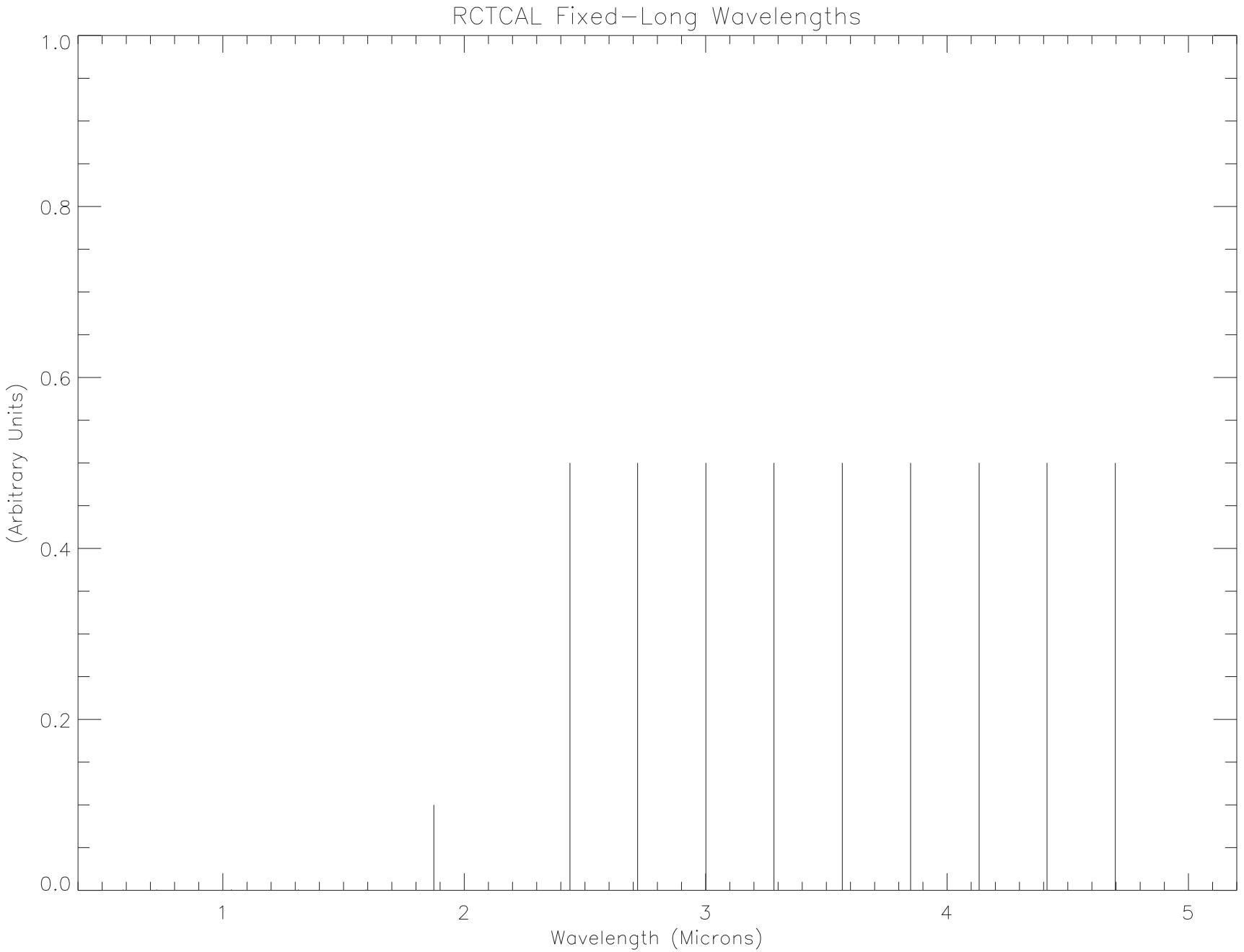
Introduction to Chapter 6

NIMS Edit Table Plots

This chapter contains plots of the NIMS Edit Tables used in I32. 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.


Io Fixed-Long Wavelengths
REFLECTANCE
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


Jupiter Fixed-Long Wavelengths
Arbitrary Units
1.0
0.8
0.6
0.4
0.2
0.0
1
2
3
4
5
Wavelength (Microns)


RCTCAL Fixed–Long Wavelengths
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 I33 orbit. Due to the low downlink data rates available for Galileo Jupiter Operations and other unforeseen and unpredictable events during the I33 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.

A spacecraft safing event occurred 28 minutes prior to the I33 Io Flyby causing the loss of all Io observations. The only NIMS observations performed were the three Jupiter Global Maps. About three tracks of I32 data were not recorded over, so that these data were still available for playback during I33 cruise.

There were five autonomous reloads of the NIMS RAM code from CDS during the I33 encounter, one during the post-safing sequence recovery and the others just before each science observation. One (major) software halt was detected during I33. The approach that we are taking to avoid data loss due to processor halts has proven to be very successful.

The NIMS grating became stuck some time between C22 and I24. NIMS can now return only 17 (of 408) wavelengths. This has caused a drastic change in NIMS science capabilities. Detectors 1, 2 and 7 now have very low sensitivity. Detectors 3 and 8 are still not functioning. NIMS now returns only 12 useful wavelengths. Interesting science can still be carried out given the current condition of the insturment.

The plots on the pages 3 through 5 show the geometry of the NIMS I33 observations using a north trajectory pole projection. The 'returned' observations are in Bold characters and the 'non-returned' in gray. The observations with an asterix were taken with the NIMS software halted.

The spreadsheets on pages 6 and 7 summarize the 'final' playback model for the I33 data returned during I33 cruise.

The text on page 8 gives a 'recap' of the I33 playback events which affected which observations were returned.

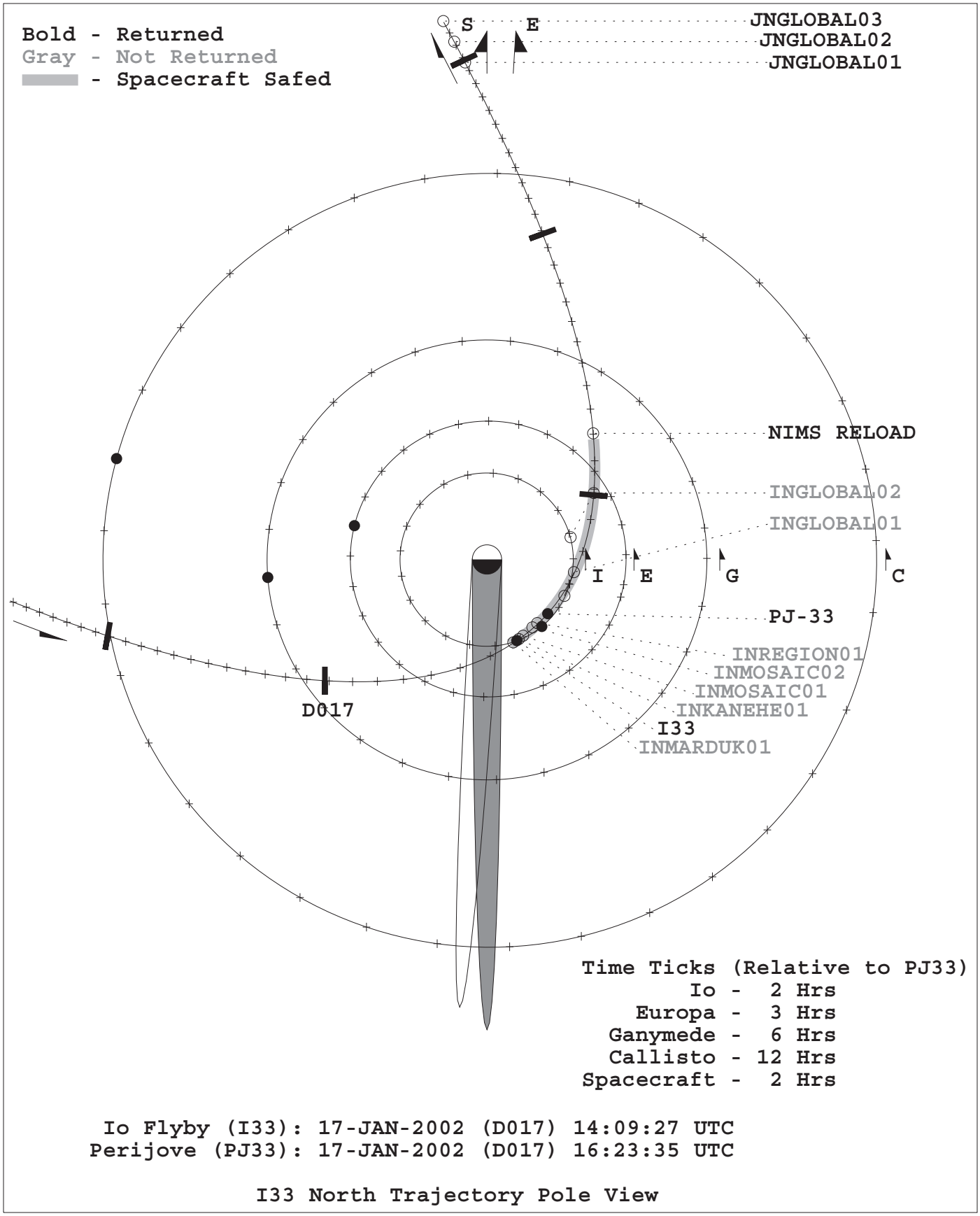
A Timeline of I33 playback events is on pages 8 through 20.

The text on pages 21 and 22 describes the I33 NIMS and Spacecraft Anomalies.

The text on page 23 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 24 and 25.

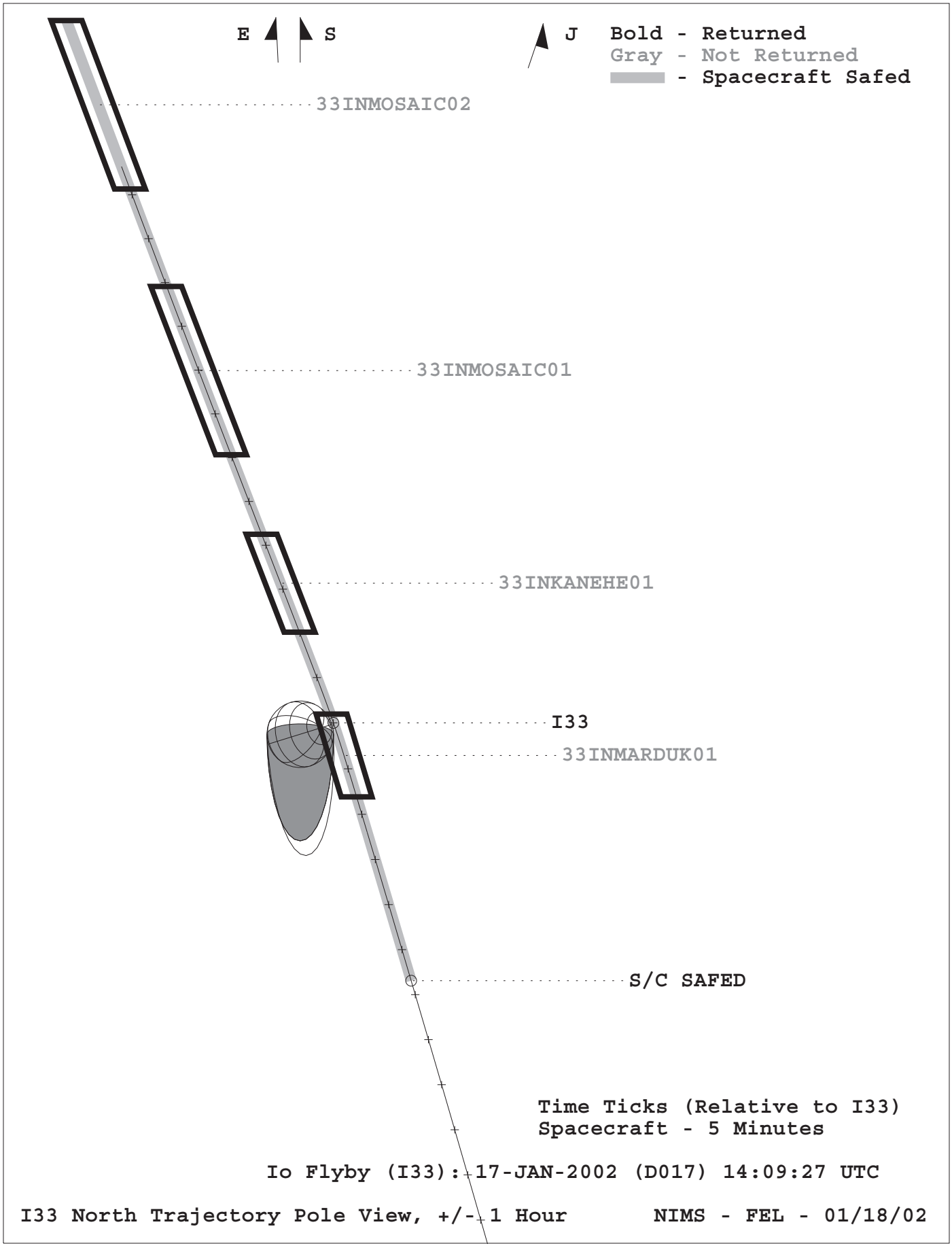
The text on page 26 is a guide to understanding the NIMS MASK.

NIMS I33 OBSERVATIONS



NIMS - FEL - 01/18/02

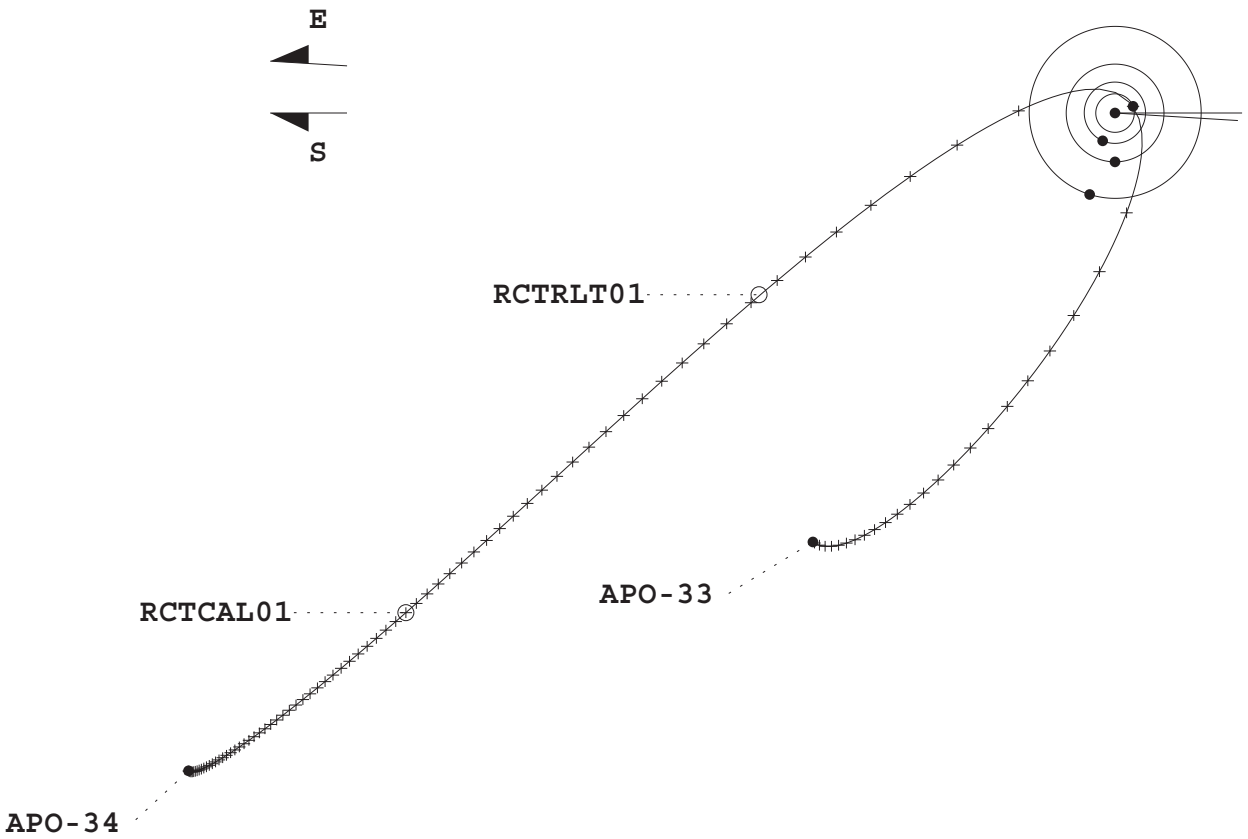
NIMS I33 IO FLYBY OBSERVATIONS



Io Flyby (I33): 17-JAN-2002 (D017) 14:09:27 UTC

I33 North Trajectory Pole View, +/- 1 Hour NIMS - FEL - 01/18/02

NIMS I33 CALIBRATIONS



Time Ticks (Relative to I33)
Spacecraft - 2 Days

Io Flyby (I33): 17-JAN-2002 (D017) 14:09:27 UTC
Perijove (PJ33): 17-JAN-2002 (D017) 16:23:35 UTC
Apojove (A34): 13-JUN-2002 (D164) 04:21:54 UTC

I33 North Trajectory Pole View

NIMS - FEL - 03/11/02

NIMS I33 DATA RETURN

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
33JNGLOBAL01	Jupiter Global	I33JXM10	I33JXMFG10	XM	2	0	4	LPU	DH
33JNGLOBAL02	Jupiter Global	I33JXM10	I33JXMFG10	XM	2	0	4	LPU	DI
33JNGLOBAL03	Jupiter Global	I33JXM10	I33JXMFG10	XM	2	0	4	LPU	DJ
32INTHPELE01-gf	Io Pele Map 01	I32ILM442	I33ILM288	LM	1	0	4	MPW	DA
32INPELE__01+	SSI Pele ride-along	I32IXS17	I33IXS15	XS	1	0	4	IM8	IB
32INTHLOKI01-gf	Io Loki Map	I32ILM442	I33ILM288	LM	1	0	4	MPW	DB
32INTHPELE02-gf	Io Pele Map 02	I32ILM442	I33ILM288	LM	1	0	4	MPW	DC
32INEMAKNG02+	SSI Emakong ride-along	I32ILM442	I33ILM360	LM	1	0	4	IM4	ID
32INTOHIL_01+	SSI Tohil ride-along	I32ILM442	I33ILM360	LM	1	0	4	IM8	IF
32INITUPAN01-gf	Io Tupan Obs	I32ILM442	I33ILM288	LM	2	0	4	MPW	DF
32INTVASHT01+	Ssi Tvashtar ride-along	I32IXS17	I33IXS15	XS	1	0	4	IM8	IL
32INICHAAC01-gf	Io Chaac Obs	I32ILM442	I33ILM288	LM	2	0	4	MPW	DG
32INTERMIN01+	SSI Terminator 01 ride-along	I32ILM442	I33ILM360	LM	1	0	4	IM8	IJ
32INTERMIN02+	SSI Terminator 02 ride-along	I32ILM442	I33ILM360	LM	1	0	4	IM8	IK
32INREGION01-gf	Io Regional Map 01	I32IFMFG120	I32IFMFG84	FM	2	0	4	LPU	DI
32INREGION02-gf	Io Reginal Map 02	I32ILMFG252	I32ILMFG144	LM	2	0	4	LPU	DJ
33JNGLOBAL01-gf	Jupiter Global	I33JXM10	I33JXMFG10	XM	2	0	4	LPU	DH
33JNGLOBAL02-gf	Jupiter Global	I33JXM10	I33JXMFG10	XM	2	0	4	LPU	DI
33JNGLOBAL03-gf	Jupiter Global	I33JXM10	I33JXMFG10	XM	2	0	4	LPU	DJ
32INTHPELE01	Io Pele Map 01	I32ILM442	I33ILMFGDD72	LM	1	0	4	MPW	DA
32INTHLOKI01	Io Loki Map	I32ILM442	I33ILMFGDD72	LM	1	0	4	MPW	DB
32INTHPELE02	Io Pele Map 02	I32ILM442	I33ILMFGDD72	LM	1	0	4	MPW	DC
32INTHERML01	Io Thermal Map	I32ILM442	I33ILMFGDD72	LM	2	0	4	MPW	DD
32INITUPAN01	Io Tupan Obs	I32ILM442	I33ILMFGDD72	LM	2	0	4	MPW	DF
32INICHAAC01	Io Chaac Obs	I32ILM442	I33ILMFGDD72	LM	2	0	4	MPW	DG
32INHTSPOT01	Io Hot Spot Obs	I32ILM442	I33ILMFGDD72	LM	2	0	4	MPW	DH
32INREGION01	Io Regional Map 01	I32IFMFG120	I33IFMFGFW36	FM	2	0	4	LPU	DI
32INREGION01-gf	Io Regional Map 01	I32IFMFG120	I33IFMFGFW36	FM	2	0	4	LPU	DI
32INREGION02	Io Regional Map 02	I32ILMFG252	I33ILMFGFW108	LM	2	0	4	LPU	DJ
I33 Calibrations									
33NNRCTCAL01	Recorded RCT Calibration	I33RCTFG442	I33RCTFG408	LM	1	0	4	MPW	XE

NIMS I33 DATA RETURN

Activity ID	Mode	Mode Recorded	Wave-lengths Returned	Record Time (sec)	PB Time (sec)	Comp	Total BTG (Mbits) (w/4% o'head)	Data Reduction Factor (sBOT/BTG)	Pass
33JNGLOBAL01	XM	10	10	1405	1391	2.13	4.079	2.10	1
33JNGLOBAL02	XM	10	10	1223	1213	2.26	3.353	2.23	1
33JNGLOBAL03	XM	10	10	1041	1031	2.29	2.812	2.26	1
32INTHPELE01-gf	LM	360	288	243	146	1.38	0.731	2.30	2
32INPELE__01+	XS	17	15	15	13	1.21	0.201	0.00	2
32INTHLOKI01-gf	LM	360	288	611	73	1.39	0.363	2.32	2
32INTHPELE02-gf	LM	360	288	360	12	1.21	0.069	2.02	2
32INEMAKNG02+	LM	360	360	92	89	1.21	0.635	0.00	2
32INTOHIL_01+	LM	360	360	40	38	1.21	0.271	0.00	2
32INITUPAN01-gf	LM	360	288	550	48	1.28	0.259	2.13	2
32INTVASHT01+	XS	17	15	14	12	1.21	0.186	0.00	2
32INICHAAC01-gf	LM	360	288	558	92	1.3	0.489	2.17	2
32INTERMIN01+	LM	360	360	50	46	1.21	0.328	0.00	2
32INTERMIN02+	LM	360	360	50	46	1.21	0.328	0.00	2
32INREGION01-gf	FM	120	84	3876	808	1.22	2.671	1.87	2
32INREGION02-gf	LM	252	144	1943	59	1.29	0.158	2.30	2
33JNGLOBAL01-gf	XM	10	10	1405	20	2.1	0.059	2.07	2
33JNGLOBAL02-gf	XM	10	10	1223	115	2.2	0.327	2.17	2
33JNGLOBAL03-gf	XM	10	10	1041	46	2.2	0.131	2.17	2
32INTHPELE01	LM	360	72	243	239	1.38	0.299	9.20	3
32INTHLOKI01	LM	360	72	611	606	1.39	0.753	9.27	3
32INTHPELE02	LM	360	72	360	356	1.21	0.508	8.07	3
32INTHERML01	LM	360	72	186	182	1.85	0.170	12.33	3
32INITUPAN01	LM	360	72	550	545	1.28	0.736	8.53	3
32INICHAAC01	LM	360	72	558	553	1.3	0.735	8.67	3
32INHTSPOT01	LM	360	72	732	728	1.22	1.031	8.13	3
32INREGION01	FM	120	36	3876	3714	1.22	5.261	4.35	3
32INREGION01-gf	FM	120	84	3876	74	1.22	0.245	1.87	3
32INREGION02	LM	252	108	1943	1935	1.29	3.888	3.07	3
							31.077 Total		
							53.34 Allocation		
							22.263 Over/Under		
I33 Calibrations									
33NNRCTCAL01	LM	442	408	789	786	3.86	1.994	4.54	1

RECAP OF I33 PLAYBACK EVENTS

Data from the final Io encounter of the Galileo Millenium Mission (I33) was lost due to spacecraft safing, but a new sequence was uplinked in time to record the three planned NIMS I33 Jupiter observations. In addition to these we were able to recover an additional 30 Mbits or so of previously recorded I32 data, including a half-dozen SSI Io observation ride-alongs. Following playback of all of the NIMS data that could be obtained, a final RCT calibration was performed, with data recorded to tape and subsequently played back.

The failure to record data during the Io flyby was attributed to a previously unprecedented series of despun bus reset events, which overwhelmed the onboard software patch. In addition, for the first time ever, the spacecraft went into safe mode during the cruise period, at a distance of about 180 Rj from Jupiter. The resulting loss of data playback capability was not a significant factor.

As a result of the safing in I33, the NIMS I32 Io dataset will have the highest attainable signal to noise possible. Despite the disappointment of losing the encounter, the I33 data return constitutes a significant and valuable "final achievement" for NIMS science.

The following timeline details the most signifigant events of the I32 playback period. Most of the text below is excerpted from messages issued at the time.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

12-06-01: The first delivery port for the I33 playback table is next Tuesday (11 December). The I33 Io flyby occurs on January 17, 2002. The provisional plan for I33 is to play back as much remote sensing data as possible in the first few weeks. The money will run out for remote sensing operations sometime around March. After that, only fields and particles data will be returned.
The present table assumes that all the NIMS data can be brought down. Approximately 66 Mbits of data are commanded for playback. When we receive our allocation, we will cut back to stay within our bits budget.
There are 10 remote sensing observations for NIMS in I33: 3 Jupiter global mosaics, 3 Io global mosaics (one named 33INREGION01), and 4 additional moderate to high resolution views of Io.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

12-10-01: (Y. Anderson) Currently, I33 playback is initiated at 02-028/00:30, and will be paused at the end of B-load, which is on 02-092/02:54 (April 2). During this period, we have a capability of 148.57 MB. Most of these bits will be used to playback the remote sensing data. The allocation to MWG during this period is essentially zero, except the RTS usage. After taking out 4.457MB inefficiency and 3 MB SPOT margin, we have 141.116 MB to allocated to the teams. Here are the breakdowns: NIMS 52.385

12-21-01: (R. Lopes) We will need to make some changes to I33 playback. Region01 is our highest priority, and after talking with Sylvain I realized that he cannot do his SO2 mapping unless there are at least 6 samples. Past experience shows that otherwise the data are just too noisy. I'd be willing to cut the number of samples for the other observations to get this one.

01-04-02: (Y. Anderson) Sequence I33BED has a downlink capability of 150.965MB, of which 143.436 MB are distributed to the teams. SPOT keeps 4.529MB for inefficiency and 3 MB margin.
NIMS 53.339

01-08-02: The table delivered today includes new wavelength tables and a few minor timing changes. A strategy for 2-pass data return was implemented. We received a small increase in our allocation, to 53.34 Mbits, which should allow us to return most of what we are recording in I33.
Our strategy for the two passes over the tape is a little different this time. We are putting about 20% of our bits in the second pass (lower than usual). To make sure we obtain all of our Jupiter spatial coverage, we are bringing it all down at the end of the first pass, instead of splitting it between passes. Likewise we are bringing down all of our highest priority Io observation (33INREGION01) in the first pass. There is enough NIMS data in the second tape pass to help keep down losses due to slewing inefficiency. And, based on recent performance, we will have numerous gaps in our pass 1 data to fill as well. We are not being forced to do a "preview" (SSI-only) pass this time. Our charges for returning AACS data will be determined after this update. The I33 encounter begins on 15 January, and playback is initiated on the 27th.

01-11-02: (E. Theilig) The Galileo spacecraft is operating normally. Playback of data recorded during the Io 32 encounter is 97% complete and is scheduled to terminate on 1/14.
With radiation of the science sequence on 1/13, the spacecraft will be fully configured for the Io 33 encounter on 1/17. Close approach to Io will be at 6:44 a.m. PST (Earth-receive time) at a planned altitude of 100 km.

Perijove occurs almost two hours later at a range of 5.5 Rj. The science sequence begins Monday 1/14 at 6:35 p.m. PST (Earth-receive time). The attitude control subsystem was configured on 1/9 for the radiation environment close to Jupiter and the encounter attitude was established on 1/10. The final targeting maneuver has been cancelled as a result of accurate delivery from the apojove maneuver: the current B-plane errors are less than one sigma and the time of closest approach error is 5 seconds, about 3 sigma off of the aim-point. The closest approach observations will still be of scientific value, particularly if the lower resolution context images are obtained.

01-17-02: The spacecraft drops into safe mode at approximately 13:41 UTC, 28 minutes before Io close approach. Perijove occurs at 16:23:35 UTC.

01-17-02: (M. Segura) Unfortunately I don't have good news to report. The spacecraft went into safing around the time of our first Io observation so the bad news is there will be NO NIMS Io data for I33 return. The first opportunity to recover will be on DOY 018/05:00:00 - hours before our Jupiter observations.

01-17-02: (E. Theilig) The Galileo spacecraft entered "safe" mode at approximately 6:16 a.m. PST (Earth receive time), only 28 minutes before closest approach to Io at 6:44 a.m. Our anomaly investigation is continuing, with all indications pointing to a recurrence of a Command Data Subsystem despun bus reset. This problem has occurred on almost every encounter since mid-1998 but is usually handled by a software patch loaded in 1999. The software patch normally recognizes the bus reset indicators and does not initiate the safing fault protection routines, thereby ensuring the continuation of the science sequence. This morning, the fault protection routine executed and halted the science sequence. The reason this particular bus reset was not caught by the software patch is unknown.
At the present time the spacecraft is quiescent and in command and telemetry contact with the ground.
As investigation continues and confirms a radiation-related bus reset as the cause of the spacecraft safing, the team is beginning the process of recovering the nominal spacecraft configuration and resuming the science sequence. The expected sequence restart time is 8:00 p.m. PST this evening.
Prior to the safing event, the Deep Space Network successfully recorded the Radio Science Jupiter Occultation using the Radio Science Receiver over the Goldstone and Canberra 70-m antennas, between 2:58 a.m. and 5:41 a.m. PST (Earth-receive time). Approximately 3 tracks of remote sensing and closest approach fields and particles data were not acquired.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

01-17-02: (K. Schimmels) First, let me say thank you to all of you for pulling together and working so hard today to assist in the recovery efforts. I know that this is really a sad time for SPOT, and everyone worked very hard to ensure that we'd get the best return we can, given the circumstances.
Second, I am requesting that each team email me by 11 AM tomorrow with an instrument status. The recovery commands and the truncated sequence have been sent up to the spacecraft now, we are locked up on packetized telemetry, so all is continuing at this point. Please check the SST white board for commanding details. The truncated sequence will start with state matching activities tonight at 018/04:00, and the first science activity will be the Amalthea Opnavs.
Tomorrow - the OTM has been cancelled. There is no need for it. Also, we will be sending realtime commands to set up the tape to record buffer dumps on track 3 in I33B. These will overwrite the end of the C/A recordings (MWG and NIMS) at tic 5600 on track 3.
Yanhua and I will be talking about playback strategy tomorrow morning, as well. The current thought is for remote sensing to do a first-pass only playback table for all I33 data, and use the second pass for gap fill. I'm past worrying about efficiency at this point. Total data return is the important factor. So, keeping that in mind, and also what you'd like to recover from tracks 2, 3, and 4 (and early on track 1 prior to I33 recording) as far as I32 playback is concerned.

01-17-02: (M. Segura) The spacecraft is now on it's way to recovery. We should be seeing Phase 2 science/engineering packets within the next hour or so. The recovery will be completed by 8:00 pm this evening. Our Jupiter observations will execute as planned (barring another safing of course).
There were some adjustments made to the tape map which I try to encapsulate here.
The I33A sequence began recording on Track 1 ~ tic 2100 with PPR observations. The safing occurred just prior the start of our Marduk observation (first Io activity for NIMS). The decision was made to continue the rest of the I33A recording without repositioning the tape. The rest of the record activity would easily fit on the remainder of track 1 preserving all other I32 data except the Jupiter globals.
MWG has a small amount of recording (180 tics) planned for I33B which would record over the last 130 tics or so of I32 IOREGION02 since the tape positioning had to be done for this via real time command and a bit of whining and righteous indignation on my part resulted in a change to the tape position. So.... we will be able to return ALL the wavelengths and gaps for both REGION01 and REGION02 entirely as a part of the I33 playback plan. (The MWG recording will wipe out I32EMAKONG instead).

I33 Playback Events Timeline (12-06-01 to 04-04-02)

01-18-02: (W. Currie) S/C Safing Occurred around 017/14:06
I33A Sequence restarted 018/00:28=20
There appears to have been another bus reset event at 018/05:09:22 ERT, (04:30:09 SCET), though this one was handled nominally by the software patch.

01-18-02: (R. Mehlman) Good NIMS SCLKs began to appear again at 6390012 (SCET 18/04:47:29) and remain good three hours later. Seven have appeared so far. NIMS engineering looks good too: the Tfpa DN was steady at 3 and has now fallen to 2, other values appear normal. Hardware status word began showing gain state 2 and 63-hertz chopper mode, then went to chopper reference by 6390005 (SCET 18/04:40:49), just before the first good SCLK showed up.
Our first post-recovery observation (33JNGLOBAL01) is a day and a half off.

01-18-02: (E. Theilig) The Galileo spacecraft is operating normally and all activities appear to be as planned following recovery of the spacecraft from "safe" mode. The current status is from the Canberra pass at 7:00 a.m. PST (Earth receive time). The science sequence restarted at 8:35 p.m. PST (Earth receive time) on 1/17 with state matching activities included before the first Solid State Imaging camera observation of Amalthea. From the restart point to the end of the sequence on Monday, 1/21, the remote sensing instruments will acquire observations of Amalthea, Europa, and Jupiter. The Amalthea observations are planned for optical navigation of the next encounter in November. Telemetry from the camera suggests that it is operating normally. Continuous fields and particles data collection will continue until 1/28 at which time remote sensing playback will begin.
A second bus reset occurred at 7:20 p.m. PST (Earth receive time) on 1/17 and was handled by the software patch designed to avoid safing in the event of a radiation induced despun bus reset. It is still unknown as to why the patch did not keep the sequence running when the earlier reset happened just before closest approach.
The closest approach to Jupiter occurred at 8:58 a.m. PST at a range of 5.5 Rj. The peak radiation level was 915 (as measured by the star scanner in pulse counts). This is the highest level experienced by the spacecraft since Io 27 in February of 2000.
The only Io observations successfully acquired include Photopolarimeter-Radiometer data, a partial Near Infrared Mapping Spectrometer observation, and the Radio Science gravity experiment. The Navigation Team successfully delivered the spacecraft to within one sigma of the aimpoint and is expected to recommend cancelling the post-encounter, clean-up maneuver.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

01-18-02: (Y. Anderson) Our delivery schedule for pbt delivery on Tuesday 3pm still stands. For this delivery, all we need is the singles for I33 data selected in pass 1. We can add I32 data selected in the next update. At this time, no change to allocations. But PPR seems to be in need of a few MB more, can SSI and NIMS each contribute some?

01-18-02: (K. Schimmels) Eilene brought up the possibility of commanding the RTS /Buffer dump data collection in I33B to be longer. Since the original constraints on the 10 days were a) BTG allocation and b) tape space for buffer dumps, and both of these restrictions do not exist any more, this is a possibility. Does remote sensing have any data they have not seen from track 4 that they really really don't want overwritten? This would mean delaying initiate playback, but for now still plan on delivering a PBT just in case.

01-21-02: (R. Mehlman) Engineering data is sparse far from closest approach, but we have: -A good SCLK and a good Hardware Status word in the hour before 33JNGLOBAL01, indicating no NIMS halts since the I33 sequence was restarted.
-Good SCLKs and status words between GLOBAL01 and GLOBAL02, indicating no halts during GLOBAL01.
-Good SCLKs and status words after GLOBAL03, indicating no halts during GLOBAL03.
We can't say anything about GLOBAL02, but there's no reason to expect any problems since it was so far from Jupiter.

01-22-02: All indications are that recording of the I33 NIMS Jupiter global observations occurred as planned, following recovery from the spacecraft safing event last week. In today's playback table we are including singles to play back these observations only. This buys us time to generate gap-fill singles for returning those portions of our I32 data that were not successfully brought down in I32. Due to the very spotty performance of the DSN over the holidays, we have a very large number of unfilled gaps to pursue.
The current table plays back all 10 recorded wavelengths for the 3 Jupiter globals, in the first pass over the tape. This amounts to some 12.5 Mbits of downlink allocation. Before the safing event, our allocation stood at more than 53 Mbits. I expect we may be able to make good use of perhaps 75% of this total, as the complexity of our data return strategy in I32 makes it technically challenging to return many tiny gaps using different wavelength selection tables, without creating new gaps. It makes far more sense to command the complete complement of grating steps for return, for the times of the gaps.
There is a question regarding the prioritization of our remaining data, as MWG would like to expand their RTS, which would involve overwriting some of the I32 data. More on this later.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

01-22-02: We have a LOT of gaps to fill in the I32 Io data that remains on the tape. Kathy mentions track 4 where there are 3 NIMS observations and 3 SSI ridealongs that we probably want to go after. Track 3 has 4 NIMS and 3 SSI. Only track 2 is mostly free of NIMS data-we have 32INTHPELE01 there at the start of the track. It has 4 gaps right now. I sent Kathy this info and said we would be unhappy if tracks 3 and 4 were overwritten.
Although we have gaps in our observations "on paper," due to grating steps redundancy we may already have fully acceptable products on the ground (please review Lucas' latest products) It would be helpful to know which observations have visible gaps remaining, and which observations really need more grating steps for noise reduction (note, 32INREGION01 and 32INREGION02 are not affected by the current issue; they will not be overwritten). The decision to extend fields and particles RTS beyond the nominal 10 days (now ending on the 27th) will probably need to be made soon.

01-22-02: I have just spoken with Kathy Schimmels regarding the question of overwriting NIMS I32 data for I33 MWG RTS. SSI is also unhappy with the idea of affecting track 4. It turns out that a relatively small amount of tape will be needed, and track 2 will be the destination, if the extended RTS is approved. Currently MAG is not responding to requests for their input. The decision will most probably be made tomorrow. Thus we do not have to do in-depth triage for our I32 gap fills at this time.

01-22-02: (K. Schimmels) The MWG has decided not to pursue additional RTS data collection beyond what is already in the I33B sequence. The workload involved in doing an RBS, the out of order tape recording due to buffer dumps and complicating factors in playback were all considered, as well as the science request for this not being overwhelming strong. We will continue on the path of positioning on track 1 prior to IPB this weekend.

01-23-02: (Y. Anderson) Playback will initiate on Sunday (1/27) at 5:05 PM PST and terminate for remote sensing playback on Monday (4/1) at 7:30 PM PST.
The I33 playback is a little bit unusual: there are I32 data carried over (unfortunately) and it's not done in a first-in/first-out fashion.
We will start with playing back I33 remote sensing data on track 1 (MWG data on track 1 won't be selected at this time) and have them selected in pass 1. After finishing those, we will pick up I32 data on track 2, 3 and 4 (remote sensing data only) in pass 2. [Note that it has to be pass 2 because of a time regression from I33 to I32 data, although the playback has just gone through one track of the tape.]
In the current playback table -- I33PCB, only I33 data playback are included.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

01-24-02: Since we have an excess of downlink allocation in I33, it occurs to me that it might be useful to bring down data for detectors 1, 2, 7 in the I32 Io MPW observations. One reason to do this would (possibly) be to perform noise studies. Another would be to have an end-of-mission record of their performance/problem. Would it make sense to get any data from 3 and 8? If these generate only random noise then probably not. If you disagree let me know soon, as it is relatively easy to add these to the playback plan at this stage.
The Jupiter observations and the large Io REGION observations did not record the non-functioning detector data to tape, so we are only talking about the 8 Io encounter MPW observations.

01-24-02: In response to your request I have modeled the downlink bits totals for NIMS data playback in I33. This includes the recorded I33 observations, playback of selected SSI ride-alongs additional wavelengths (completing data return for observations partially played back in I32), and commands to fill the remaining 26 or so gaps. The total downlink required for this is approximately 32 Mbits. We want to hold at least an additional 10 Mbits as insurance for gaps occurring in our first physical tape pass. Thus I think 42 Mbits is a reasonable number for us. This is about 80% of our pre-anomaly downlink bits allocation.

01-30-02: Playback of the NIMS I33 Jupiter global observations is underway. We have requested 100% of the data recorded in the first tape pass, anticipating that there will be gaps to fill later on.
The table delivered today includes commands for playing back I32 data that was not recorded over due to the spacecraft anomaly. Last week's table consisted of 3 sets of playback commands, while today's has 42. Several new wavelength edit tables were created. The data return strategy may be summarized as follows:
We are returning NIMS recorded data for 6 SSI I32 Io observations (32ISPELE__01, 32ISEMAKNG01, 32ISTOHIL_01, 32ISTVASHT01, 32ISTERMIN01, 32ISTERMIN02), as recommended by Frank. These are coming down with 15 detectors (360 wavelengths).
We will fill a very large number of existing gaps in our I32 encounter period Io observations. The wavelengths commanded here correspond to those returned during the I32 playback period (288 wavelengths total, 12 detectors, 24 samples each). Only one observation remaining on tape had no gaps (32INTHERML01), while one other (32INEMAKNG01) was written over with new data.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

In our first pass over 32INREGION01 and 32INREGION02 we will fill gaps remaining after I32 playback was completed. As with the encounter observations, we return the same set of wavelengths/detectors as in I32 (84 wavelengths for the FM LPU REGION01, 144 wavelengths for the LM LPU REGION02).
In the final playback pass over the tape (for the mission) we will fill any gaps in our Jupiter globals, before returning yet more unseen I32 Io data. For the encounter observations we are commanding return of data from detectors 1, 2, and 7, for analysis purposes and completeness, and for an end-of-mission record. These detectors were not recorded for the two large REGION observations, but a considerable number of samples that have not been played back remain on the tape for these. Thus we will finish by returning approximately 9 Mbits of as yet unseen data from these two observations. The final products for these observations should have excellent signal to noise ratios.
The model estimate for NIMS data return in the I33 playback period is 32.4 Mbits. We have sufficient allocation at present to fill any gaps that may occur during our first physical pass over the tape.

02-13-02: Playback is proceeding uneventfully. We received our I33 Jupiter observations at the end of January, with some gaps. In this week's table I included six new sets of commands to fill these. The additional downlink bits requirement is about 0.6 Mbits.
The Jupiter observations compressed well and look good, aside from a correctable problem due to wobble (we were looking "in the cone pole", down the long axis of the spacecraft). The white oval (a focus of scientific interest right now) appears in one of the 3 global observations. These are the final NIMS observations of the mission, aside from calibrations.

01-17-02: (S. Thompson) DSS 63 (pass #4516): Both FCD's dropped lock at 21:25 ERT. The station also saw the "FSR Safing Carrier Detected" alarm at the same time. All other indications showed that the spacecraft was not in safing. The station rebooted several pieces of equipment and attempted locking up on the spacecraft in residual mode (just in case), but was unsuccessful. All indications were that this was a problem on the ground, but the cause was unknown. All data from 21:25-EOT were lost.
DSS 14 (pass #4517): Both FCD's failed to lock up throughout the pass. The station also saw the "FSR Safing Carrier Detected" alarm throughout the pass, but all other indications showed that the spacecraft was not in safing. The station rebooted the DGT, and attempted to lock on the spacecraft in residual mode the same as DSS 63 had previously attempted to do, but was also unsuccessful. There were no successful transfer frames during the pass.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

02-18-02: (E. Theilig) The spacecraft is presently quiescent and in command and telemetry communication with the ground following entry into safe mode over the weekend. Preliminary analysis indicates that the spacecraft entered safing at 1:25 p.m. PST (Earth receive time) on February 16 as a result of the Command and Data Subsystem (CDS) "A string" being taken down by a bus parity error. A command to switch the telemetry to the "B string" was sent Sunday evening after multiple, unsuccessful attempts to lock up on "A string" telemetry. The cause of the bus parity error is unknown but could be related to a despun bus reset. A software patch designed to continue nominal spacecraft operation in the event of a despun bus reset is incompatible with playback of recorded data and is disabled during the cruise part of the orbit. As investigation continues and confirms that it is safe to do so, the CDS "A string" will be brought back up to restore redundancy to the spacecraft. The spacecraft will then be reconfigured to the pre-anomaly state and the science playback software enabled before the onboard sequence is restarted. If all goes as planned, the spacecraft could be back in normal operation by Thursday, February 21.

02-19-02: (E. Theilig) Spacecraft recovery from "safe" mode is proceeding smoothly. The "A string" of the Command and Data System has been restored to normal operation and the science data processing software has been reloaded but has not yet been enabled. That step will occur shortly before the background sequence and playback are restarted on Thursday, February 21. All indications point to a "standard" despun bus reset on the A string. This is the first such occurrence of this type of anomaly outside 30 Rj since Galileo arrived at Jupiter.

02-19-02: (Y. Anderson) Playback will be re-initiated on Thursday Feb. 21 at 5:30 PM PST. The termination for playback is on Monday Apr. 1 at 7:30 PM PST (time unchanged).
The current PBT starts from the beginning of the previous segment 5 in I33PCF. The first selected data in the current I33PDB are 32ISGSHBAR01, at tic 3826 on track 4. The segmentation of I33PDB is the same as that in I33PCF, except each segment has a different number now.

02-19-02: (K. Schimmels) Here's the startup info and plans for the calibrations, and a list of what I need from you all tomorrow to pick the date. I'm focusing on this executing no later than March 20 / 21st: NIMS cal will be first, followed by SSI Calibration. Recording will be on Track 4.

02-22-02: (E. Theilig) The Galileo spacecraft is once again operating normally following last weekend's safing event. A Command and Data System (CDS) despun bus reset occurred on 2/16 taking the CDS A string down and placing the spacecraft in a safe mode. These events have occurred both during interplanetary cruise and during the extended mission; however, this is the first occurrence in the extended mission with the spacecraft out in the solar wind about 180 Rj away from the planet.
The root cause of a despun bus reset is considered to be debris generated in the slip rings that transfer power and signals between the spun and despun portions of the spacecraft. Debris in this area can cause shorts in a line that normally indicates to the CDS despun section that the CDS subsystem has experienced a power on reset. In that circumstance the despun section performs a reset and prepares for recovery. In the case of this erroneous reset, the rest of the CDS notes the despun section reset, and calls the on-board safing algorithm.
Recovery efforts consisted of diagnostic readouts on 2/17, bringing the A string up on 2/18, loading and restarting the software used to process science data on 2/19, and loading the background sequence and a playback table on 2/20. Normal sequence operations began on 2/21.

03-05-02: (B. McLaughlin) Galileo operations have returned to normal after recovery from an unexpected safing event on the spacecraft last week. A Command and Data System computer reset occurred on Saturday, February 16, which caused the spacecraft to shut down operations and phone home for help. We believe that similar resets, which have occurred since 1998, are due to accumulated radiation effects, so we were somewhat surprised that this one occurred so far out from Jupiter and its intense radiation field. At the time of the reset, the spacecraft was nearly 180 Jupiter radii (12.9 million kilometers or 8 million miles) from the planet. This most recent event may be more similar to anomalies that occurred during Galileo's interplanetary cruise, prior to arrival at Jupiter in 1995. This just goes to show that space exploration is unpredictable at best!
Playback of the tape recorded data from the January 17 flyby of Io continues. In addition, data remaining on the tape from the October flyby is still available for playback. Continuous data collection by the Magnetometer, the Dust Detector, and the Extreme Ultraviolet Spectrometer instruments also occupies our attention.
Plans are also being made to perform a final set of calibrations for the Near Infrared Mapping Spectrometer and the Solid State Imaging camera. These calibrations will take place Monday night, March 18. They will provide a final measurement of the sensitivity of the instruments against which we can compare recent science measurements.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

03-05-02: The table delivered today includes a few new sets of commands for filling gaps in our 32INREGION01. This will be our 4th pass over this data, and hopefully we can get it down intact (at last).
This gap-fill is coming down with 84 wavelengths (same as in pass 2). This has higher priority than our low-signal detectors playback in pass 3, so we are stopping in the middle of that playback, changing wavelength edit tables, and then playing back our gap fills, before resuming playback of the low-signal detectors data (with detectors 1, 2, 7 selected). The total number of downlink bits required is about the same as before. In connection with the low-signal detectors playback, as I have noted in SPOT meetings, there is a larger uncertainty for the compression estimates. If the data are not too noisy they should compress well; if it is full of noise, they may compress poorly. I believe that in either case, the current playback plan will function as intended, as there is a reasonable "pad."
We also have some gaps in our I33 Jupiter GLOBAL02, but we cannot access these recordings again. Thanks to Bob M (as always) for providing SCETs of gaps.
Playback will terminate in a little under 2 weeks, at which time NIMS calibration data will be recorded. There will be a new playback table created to return that data.

03-13-02: The final calibration activity for NIMS will occur on Monday. After a warm-up period for the target, an RCTCAL will be performed and recorded to tape. The playback table to return the data delivered today has only one set of commands. We are returning all the data (Long Map, MPW, 408 wavelengths, about 13 RIMS). I believe the compression estimate (2.0) is reasonable and fairly conservative. It will require about 3.8 Mbits of downlink allocation to bring it down.

03-13-02: (Y. Anderson) Calibrations data playback will initiate next week, Tuesday (3/19) at 4:30 PM PST, and terminate on Monday (4/1) at 7:30 PM PST.
We will first play back the six buffer dumps at the end of track 3, which were recorded during the I33 B-load. Then we pick up the calibration data which will be recorded on track 4. All data are played back in a single pass.

03-15-02: (E. Theilig) The Galileo spacecraft is operating normally. The primary activity this week has been the continuation of playback of data recorded during the Io 32 and Io 33 encounters. Playback is 75% complete and is scheduled to terminate on 3/17. The remainder of playback will be used for remote sensing calibrations planned on 3/18.

I33 Playback Events Timeline (12-06-01 to 04-04-02)

03-20-02: (K. Schimmels) Just a clarification on our earlier discussion - Eilene has requested that we still not plan on a nominal second pass of playback, however, just to keep in mind that if we have a good reason, such as a LARGE loss of data, we will consider the option of an additional pass to recover this data.

04-04-02: This message is to let you know that the final NIMS playback commands of the Galileo Mission and its extensions executed successfully. The RCTCAL recorded during I33 cruise was returned to Earth late in March, with only one minor gap (7 packets).
I expect that this will be the final installment of this series of email messages documenting data return decisions made and events occurring. Readers of these messages should be aware that a permanent record of playback decisions and events exists in each of the NIMS Guides which are available on the NIMS web site (http://jumpy.igpp.ucla.edu/~nims/).
G1 playback initiated on July 8, 1996, five years and eight months ago. Many people have contributed significantly to the success of the NIMS data return effort during these years. Decisions concerning the prioritization of data for return have been a team effort, involving too many individuals to mention here. However, I would like to recognize the following individuals, who have worked directly with the files, programs, and processes involved on the operations side:

NIMS Team Members:
- Marcia Segura
- Frank Leader
- Elias Barbinis
- Bob Mehlman
- Lucas Kamp
- Rosaly Lopes
- Bill Smythe
- John Hui
- Adriana Ocampo
- Paul Herrera
- Kevin Baines
- Jim Shirley

Galileo Science Planning and Operations Team Members:
- Alan DiCicco
- Jeff Culwell
- Kathy Schimmels
- Dave Schranck
- Yanhua Anderson
- Jerod Gross

Thanks to all of you. May we meet again, in future projects, with similar success!

NIMS Anomaly Report - I33 Sequence

The NIMS grating became stuck prior to the I24 encounter. The grating continued to be stuck for the I33 encounter. This development caused a drastic change in NIMS operations. Detectors 1, 2 and 7 now have very low sensitivity. Detectors 3 and 8 are still not functioning. NIMS now returns only 12 useful wavelengths.

The NIMS processor halted twice during I33, once during encounter and once during cruise. Both events were coincident with a spacecraft safing event. The first spacecraft safing event occurred just before the I33 Io Flyby. The second occurred well past Callisto's orbit away from the hardest radiation. All Io observations were lost. Only the three Jupiter Global observations were saved.

The spacecraft safed during the I33 Encounter due to an unusual CDS Bus Rest Event that the CDS BURP patch could not handle. The second Bus Reset resulted in safing because the BURP patch is disabled during playback.

Stuck Grating (from the I24 NIMS Guide)

At I24, NIMS experienced a fundamental change in the way that it operates. Sometime between C22 and I24, the NIMS grating became stuck at a position corresponding to a pshift of about 14.5. This unusual grating position produces wavelengths for each detector far shorter than previously used. With the stuck grating, NIMS is permanently in a "fixed grating" mode. At this new grating position, Detectors 1, 2 and 7 return very low DN, as their new wavelengths are outside of the passband of their blocking filters and therefore are of minimal use. As before, detectors 3 and 8 are still not functioning.

There is no ground calibration for the wavelengths corresponding to this pshift. Flight calibration was derived from the I24 RCT and PCT calibrations. Details of this new flight calibration will be discussed in the as yet unpublished NIMS calibration report.

The spectral capability of the NIMS instrument shrank from 408 wavelengths to 17 wavelengths with the stuck grating. Now all commanded modes, Long Map, Full Map, Short Map or Fixed Map, select the same 17 wavelengths. Two effects of the stuck grating have been put to good use: spatial editing and noise reduction.

Even though the grating is stuck, the grating cycle still plays an important role. The playback edit table can now be used for spatial data editing. In Long Map mode, each mirror scan can be selected or deselected using the playback edit table. This allows a range of spatial density versus areal coverage choices.

If an observation is performed in Long Map mode at the Long Map scan rate, the 24 mirror scans over a single grating cycle can be averaged together to increase the signal to noise level. The adverse effects of the high levels of radiation-induced noise encountered close-in to Jupiter are greatly alleviated by this averaging.

Response to Stuck Grating Anomaly (I33)

At I33 the cause of the stuck grating was not known (and is still not clearly understood). No attempts were made during I33 to unstick the grating.

Processor Halts

There were two NIMS processor halts during I33, both due to spacecraft safing. In both instances, the NIMS software was reloaded as part of the sequence recovery and also prior to the NIMS observations 33JNGLOBAL01 and 33NNRCTRLT01.

Spacecraft Anomaly

The spacecraft safed about 28 minutes before I33 Io closest approach. All Io observations were lost. The safing event was due to an unusual CDS Bus Upset that the CDS BURP software could not handle. A second more typical CDS Bus Rest occurred 9 hours later that was handled properly by the CDS BURP code. A second spacecraft safing event occurred during I33 cruise far from Jupiter's hard radiation environment. This event was similar to those encontered during interplanetary cruise prior to G1.

Anomaly Timing:

6389115	02-017/13:41:10	Spacecraft Safing Event #1
6389890	02-018/02:44:56	Second CDS BURP Event
6389984	02-018/04:19:39	NIMS Power On (Sequence Recovery)
6389990	02-018/04:25:34	NIMS Software Reload
6432265	02-047/20:50:56	Spacecraft Safing Event #2
6439692	02-053/01:59:47	NIMS Software Reload

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.