

# **NIMS GUIDE TO THE I24 ORBIT**

**Original: October 1999**

**Revised: May 2000**

**VERSION DATE: 000501**

**I24 Encounter starts 11/10/99,**

**I24 Playback starts 11/14/99**

## Foreword to the Revised Edition

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

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

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

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

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

## Acknowledgements

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

## Foreword

This document serves as a guide to the I24 Orbit for the NIMS Team. The aim of this guide is to provide detailed information on the various NIMS I24 observations and calibrations. Also included in this document is background information on the I24 orbit. This guide was produced before the start of the I24 orbit. After analysis of the NIMS I24 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 I24 orbit. Chapter 2 gives an overview of the I24 orbit and summarizes the NIMS science objectives for the I24 orbit using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry for the I24 orbit. Chapter 4 summarizes the NIMS I24 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 I24 orbit.

For more information on the I24 orbit, please refer to the Galileo Orbit Planning guide and the Galileo Orbit Activity Plan for the I24 Orbit. Both of these documents are produced by the Galileo Project.

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

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# Chapter 1 - Introduction

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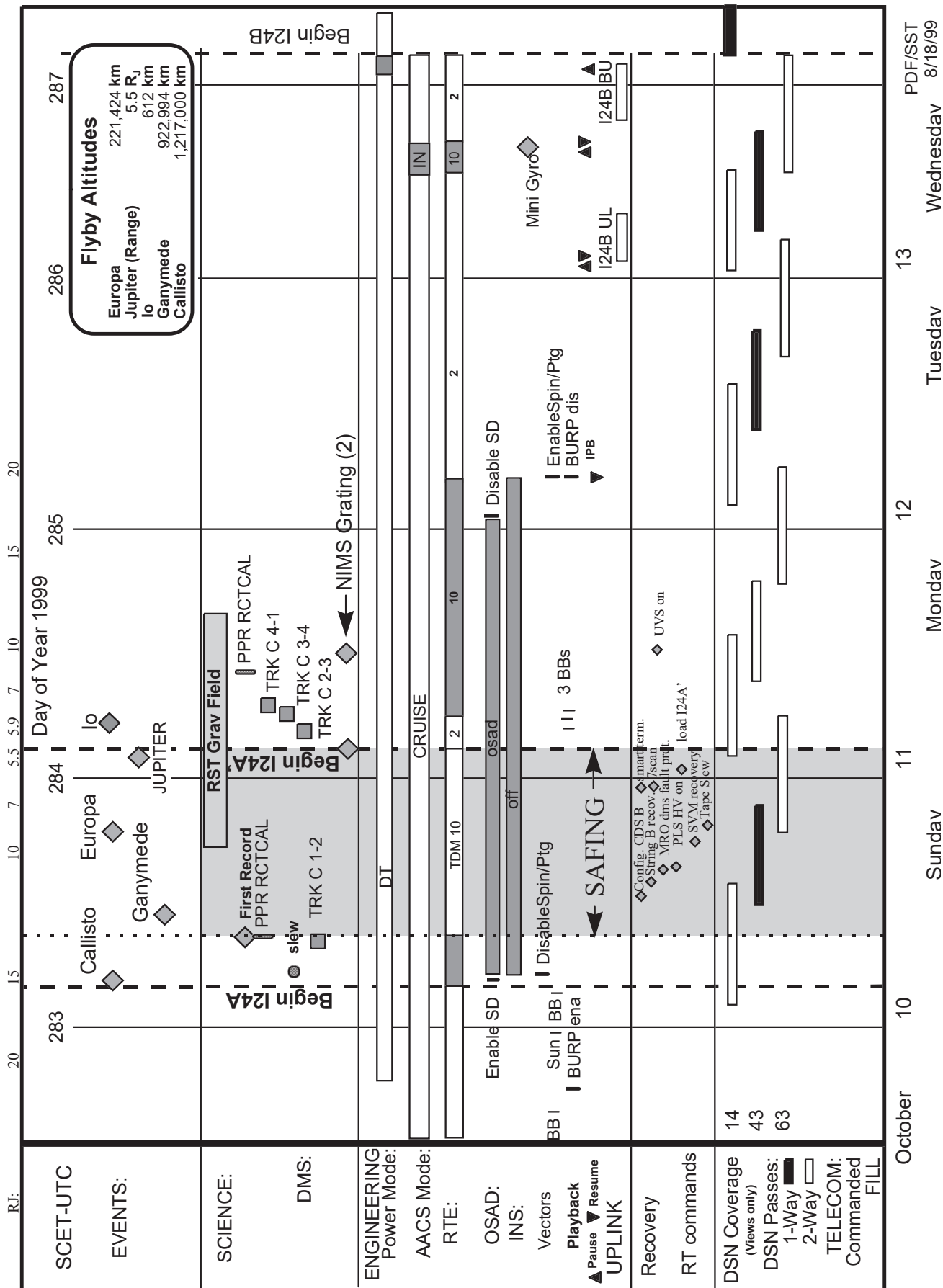
## Introduction

This I24 orbit is the twenty-fourth of twenty-five orbits in Galileo's Tour of the Jovian system and the thirteenth orbit in the Galileo Europa Mission (GEM). I24 starts the Io Flyby phase of the GEM. This orbit has a targetted satellite flyby of Io.

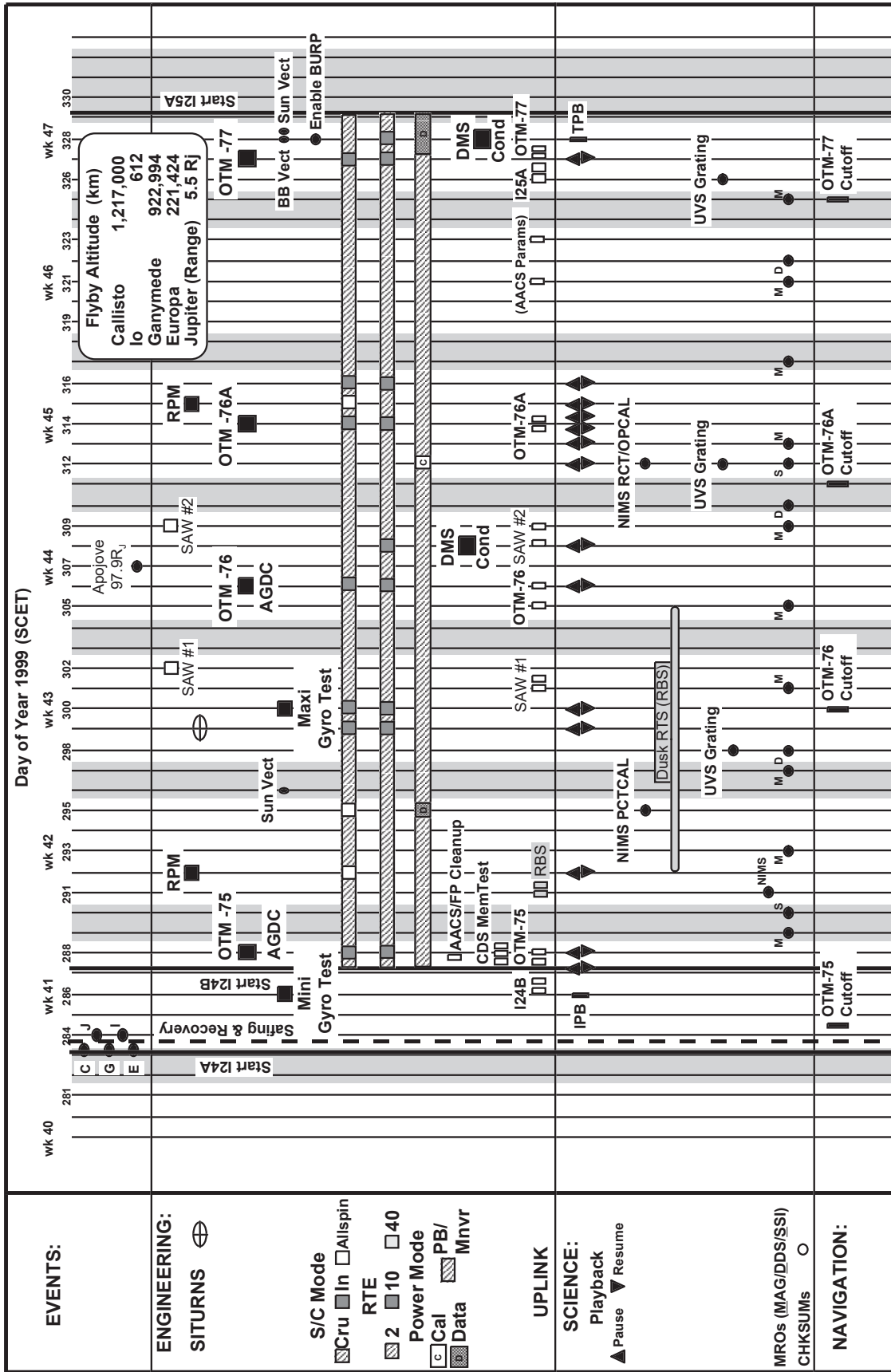
There are 16 autonomous reloads of the NIMS RAM code from CDS planned during the I24A encounter period, one just before each science observation. These reloads are in response to the on-going flight-anomalies where the NIMS RAM code takes some bit hits and halts the instrument during when the spacecraft is close to Jupiter. NIMS personnel will monitor the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

The I24 orbit is divided into 2 sequence loads: one Encounter Load (I24A) and one Orbital Cruise Load (I24B). The I24A load begins on D283 (10/10/99) and ends on D287 (10/14/99). This load contains the flyby of Io. The Cruise Load I24B runs from D287 to D329. Playback of the recorded data takes place during the Cruise phase, I24B. A high-level overview timeline of the I24 orbit can be found on the following two pages.

# I24A Sequence Overview



# I-24 Overview



October 1999  
 08  
 11  
 13  
 15  
 18  
 20  
 22  
 25  
 27  
 29  
 November 1999  
 01  
 03  
 05  
 08  
 10  
 12  
 15  
 17  
 19  
 22  
 24  
 26  
 SST/BMcl  
 10/18/99



## Introduction

The following table lists the major events during I24, including NIMS Real Time observations, in UTC.

10/10/99	99-283/04:00:00	I24 Encounter Start
10/10/99	99-283/09:00:00	S/C Safed
10/11/99	99-284/00:30:00	NIMS Grating Test 01
10/11/99	99-284/00:50:00	NIMS Grating Test 02
10/11/99	99-284/02:03:35	PJ-24 Jupiter Closest Approach
10/11/99	99-284/03:00:00	S/C Restart
10/11/99	99-284/03:21:38	NIMS Power On
10/11/99	99-284/03:24:03	NIMS RAM Reload
10/11/99	99-284/04:15:56	NIMS RAM Reload 01
10/11/99	99-284/04:33:50	Io Closest Approach
10/11/99	99-284/04:29:18	NIMS RAM Reload 02
10/11/99	99-284/04:37:16	NIMS RAM Reload 03
10/11/99	99-284/04:45:22	NIMS RAM Reload 04
10/11/99	99-284/04:49:24	NIMS RAM Reload 05
10/11/99	99-284/04:53:30	NIMS RAM Reload 06
10/11/99	99-284/05:02:36	NIMS RAM Reload 07
10/11/99	99-284/05:14:44	NIMS RAM Reload 08
10/11/99	99-284/05:21:05	NIMS RAM Reload 09
10/11/99	99-284/05:27:09	NIMS RAM Reload 10
10/11/99	99-284/05:33:13	NIMS RAM Reload 11
10/11/99	99-284/06:06:35	NIMS RAM Reload 12
10/11/99	99-284/06:42:59	NIMS RAM Reload 13
10/11/99	99-284/08:02:52	NIMS RAM Reload 14
10/11/99	99-284/10:40:36	NIMS RAM Reload 15
10/11/99	99-284/11:17:24	NIMS Grating Test 03
10/12/99	99-285/04:19:14	NIMS RAM Reload 16
10/12/99	99-285/05:59:40	Start I24 Playback
10/22/99	99-295/15:28:28	NIMS R/T PCT CAL
11/08/99	99-312/06:34:25	NIMS R/T RCT CAL
11/24/99	99-328/03:54:41	End I24 Playback

## Chapter 2 - Orbit Overview

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## Introduction to Chapter 2

This chapter gives an overview of the NIMS observations in the I24 Orbit.

The text on page 3 summarizes the NIMS science objectives for I24. The NIMS calibrations are discussed on page 3. Early data return and I24 playback are also discussed on page 3.

The I24 Integrated Io Observation Plan is presented on pages 4 through 7.

The table on pages 8 and 9 is a time-ordered listing of the NIMS Oapels for I24.

The plot on page 10 shows the geometry of the NIMS I24 observations using a north trajectory pole view projection. The plot on page 11 shows the geometry of the NIMS I24 observations during the Io Flyby using a north trajectory pole view projection. The plot on page 12 shows the geometry of the NIMS I24 calibrations.

The spreadsheet on page 13 summarizes the various inputs for the NIMS I24 Observations. The spreadsheet on pages 14 and 15 summarizes the resource usage for the NIMS I24 observations.

The table on page 16 lists various NIMS I24 observing parameters: target latitude/longitude, range, cone angle, incidence angle (light), emission angle (view) and phase angle.

The timeline on pages 17 through 20 shows the placement of the I24 observations for all instruments during the I24 Encounter Period.

The tapemap on page 21 shows the placement of the I24 observations on the spacecraft's tape recorder.

The timeline on pages 22 through 28 shows the preliminary I24 playback schedule.

The NIMS I24 mosaic designs are summarized on page 29 and 30 in time-order.

## NIMS I24 SCIENCE OVERVIEW

### Io Science

NIMS has only Io science observations in I24. The I24 sequence is designed very differently from anything NIMS has ever done before. The I24 closest approach period has minimal to no stand-alone NIMS observations. All the targeting or pointing is done within the SSI observations. The bulk of the observations are sit and stare with NO planned scan platform motion. These tag-along observations are brief observations that take place just after a SSI observation where the scan platform is repositioned near the center of the SSI mosaic and usually have a duration 52 seconds. The I24 observations have been very tightly integrated in time and tape space as well.

24INLOKIRA01 - high resolution nightside obs. of Loki's caldera.  
24INH SPELE01 - nightside tag-along obs. of Pele.  
24INPILLAN01 - nightside tag-along obs. of Pillan caldera.  
24INCOLCHS01 - dayside 52 sec. tag-along obs. of Colchis region.  
24INZAMAMA01 - dayside 52 sec. tag-along obs. of Zamama hot spot.  
24INPROMTH01 - dayside 52 sec. tag-along obs. of Prometheus hot spot.  
24INCOLCHS02 - dayside 52 sec. tag-along obs. of Colchis region.  
24INNTOHIL01 - dayside 52 sec. tag-along obs. of Tohil region.  
24INPROMTH02 - 7 Rims dayside obs. of Prometheus hot spot, coordinated with a SSI mosaic.  
24INZAMAMA02 - dayside 156 sec. tag-along obs. of Zamama hot spot.  
24INDORINA01 - dayside 52 sec. tag-along obs. of Dorian green area.  
24INAMSKGI01 - dayside 156 sec. tag-along obs. of Amirani hot spot.  
24INTERMAP01 - dayside 52 sec. tag-along obs. of a caldera near the terminator.  
24INREGION01 - dayside 32 min. three swath regional map centered at 0 deg latitude, 150 deg W. longitude.  
24INPPLUME01 - dayside 5 min. limb-scan map from Pillan hot spot to off-limb to look for Pillan's plume, if active. Coordinated with a SSI observation.  
24INPELEPM01 - dayside 5 min. limb-scan map from PELE hot spot to off-limb to look for PELE'S plume, if active.  
24INREGION02 - dayside 16 min. two swath global map centered at 0 deg latitude, 190 deg W. longitude.

### Calibration

There are three NIMS calibration observations planned for I24: one PCT cal, one RCT cal and one OPCAL.

### Early Data Return

There are three realtime observations in I24: One PCT calibration, one RCT calibration and one OPCAL.

### I24 Playback

I24 playback is split into two passes through the tape.

## I24 TAPE AND BTG PLAN

### I. I24 TAPE PLAN OVERVIEW

start on track 2 -- MWG recording thru perijove, PPR Io.  
-60 minutes to Io C/A: change to track 3 for Io close approach.  
+15 minutes: change to track 4.  
+60 minutes or whenever convenient to remote sensing:  
change to track 1.

### II. TAPE ALLOCATIONS IN IO REMOTE SENSING GROUP:

We agreed to the following allocations:

Track 2: PPR and MWG only, no conflicts.

Track 3:

SSI: 0.79 track  
NIMS: 0.10 track  
MWG: 0.11 track  
PPR: ridealong

Track 4:

SSI: 0.855 track  
NIMS: 0.145 track  
PPR: ridealong

Track 1:

SSI: 0.37 track  
NIMS: 0.60 track  
PPR: 0.03 track (?)

(If PPR needs a little more or less, re-apportion SSI and NIMS)

### III. BTG ALLOCATIONS

We are assuming that 281 MB in I24 will be sufficient for all MWG, NIMS, PPR, and UVS data, and all SSI images with 1.8:1 compression. From strawman plan this comes to:

MWG: 85 Mbits  
NIMS: 45.5 Mbits  
SSI: 132 Mbits  
PPR: 6 Mbits  
UVS: 1 Mbit  
Reserve: 11 Mbits

Lost downlink from extending encounter period until the eclipse (day 285/hour 04) will be charged to SSI allocation.

I24 DETAILED OBSERVATION PLAN

Track 2:

day/hr:mn observations  
 -----  
 283/16 PPR 17 and 21 micron map of Io's nightside, long 200  
 283/~21-284/03:34 MWG high-rate recording, inner Io torus region, down to 5.5 RJ  
 284/03:20-34 PPR Io nightside observations  
 -----

Track 3:

day/hr:mn	Min from Io C/A	Target	Target Lat/Lon	S/C	Lat/Lon	Range	notes (SSI unless otherwise noted)
284/03:32	-60 to -50	tape track turnaround (2-->3)					
284/03:43	-50 to -11	Loki, Ra long ~300	+12, 309	, 303	~10000		PPR only (booms)
284/04:24	-11 to -5	Loki	-18.3, 255.7	, 264	~2000		NIMS mapping of south Loki caldera at night
284/04:30	-4	Pele	-18.3, 255.7	, 254	~1300		NIMS 52 s
284/04:31	-3	Pele	-10.5, 243.3	, 243	~800		1x10 AI8 and 1 IM8/400, thru booms
32	-1.6	Pillan P.	+3.9, 215.7	, 212	~700		1x12 AI8 and 1 IM8/240, NIMS 52 s
35	~+1	Colchis M.	+18.1, 172.5	, 173	~2000		1x10 AI8 and 1 IM8/240, NIMS 52+ s
40	~+6	Zamama	-1.7, 153.8	, 161	~3500		2x6 clear, 1x5 green (last of each record IM8/240), NIMS 52+ s
44	+10	Prometh.					

PPR ridealong with most SSI and NIMS sequences listed above.

Pele (on nightside, to see hot lava). Sequence: 5X [clear-50 ms, clear-4 ms], green-IM8/400-40 ms. Frames timed to overlap AI8 frames by 2/3 (~1/2 for IM8). 1-in-3 chance each frame will be blocked by booms.

Pillan. These will be acquired at excellent low-sun illumination and high resolution, but oblique. Note: best regional context will be 2.6 km/pixel! Orient strip from N caldera wall NE over recent flows. Bleeding likely if we cross liquid lava. All clear filter, about 25 msec exposures.

Colchis Montes. East-west strip of clear-filter images. Needs to be E-W (or slight SW to NE trend) to be perpendicular to lineations.

Zamama01 -- E-W strip, clear filter. Saturation or bleeding possible at vent.

Promth01 -- Two major goals: (1) highest-resolution images of vent and flows, and (2) additional green-filter strip over hottest areas as clear/green ratio should clearly reveal hot lava that is not fully resolved, and enable excellent temperature measurements. Also, double coverage provides means to identify and remove noise. Center clear and green mosaic on Prometheus vent and dark flows (see coordinates above).

I24 DETAILED OBSERVATION PLAN

Track 4:

day/hr:mn	Min from Io C/A	Target	Target Lat/Lon	S/C	Lat/Lon	Range	notes
284/04:50	+15 to +17	tape track turnaround (3-->4)					
52	+18	Colchis M.	+4, 216	, 151	7100	2x1 AI8, NIMS 52 s	
56	+22	Tohil Mons	-28, 160	, 148	9000	2x2 AI8, NIMS 52 s	
00	+26	Prometheus	-2, 154	, 147	10789	1x2x3-color AI8, then 756,889,1MC IM8/240	
02	+28	Prometheus	-2, 154	, 146	11723	NIMS mosaic, 7 minutes	
10	+36	Isum/Zamama	+24, 190	, 148	15500	3x6 AI8, NIMS 156 s	
14	+40	Dorian/GC	-22, 190	, 145	17000	1x4 AI8, NIMS 52 s	
18	+44	Amirani/GB	+25, 99	0, 145	19250	3x6 AI8, NIMS 156 s	
24	+50	Termmap01	-10, 85	0, 145	22089	6x1 AI8 + IM8/240, NIMS 52 s	

Comments on designs:

All clear filter unless otherwise stated.

Colchis Montes -- orient N-S. Context for Track 3 high-res strip.

Tohil Mons -- stereo with I27 coverage. Stereo of whole mountain and caldera at moderate resolution.

Prometh02 -- 1x2 AI8 in vio, grn, red, then IM8/240 line images in 756, 889, 1MC filters.  
Paul Geissler will agonize over the details for this one. Provides stereo coverage along with Prometh01.

Isum/Zamama -- context mosaic for I24 (Zamama) and I27 (Zamama, Isum, TBD). I24 provides the best opportunity to acquire medium-res coverage of I27 close approach region, for targetting tweaks and regional context.

Dorian/GC (golf course...green stuff in caldera) -- Cover from -22/193 to -21/187.

Amirani/GB -- covers Amirani, Skythia Mons, Gish-Bar region.

Termmap01 -- Strip of images along terminator, start below Regmap01 and head south. Includes Hi'iaka. Finish strip with IM8/240.

I24 DETAILED OBSERVATION PLAN

Track 1:

day/hr:mn	Min from Io C/A	Target	Lat/Lon	Range	S/C	notes
284/05:40	+64 to +74	(anywhere from 4 to 20 minutes needed)				tape track turnaround (4-->1)
50+		NIMS Mosaic	0, 146	34469+		NIMS regional mosaic, 50 minutes
50+		PPR scans	0, 146	34469+		PPR scans
06:46		Pillan plume	0, 154	60776		SSI violet frame, 1.2 km/pixel, AI8
48		Pillan plume	0, 154			NIMS, SO2 and temperatures, plume and plume-free limb.
06:54		PPR, NIMS				PPR scans, mosaics; more NIMS
08:06		Pele plume	0, 166	102485		NIMS, SO2 and temperatures, plume and plume-free limb.
09:16		Reg. Stereo	0, 177	143366		SSI Stereo with C21; 12 IM4 frames, 1.4 km/pix
		(terminator long. 112 here, 80 in C21)				
10:42		NIMS Mosaic	0, 190	207000+		NIMS regional mosaic, 30 minutes
284/18:00		full-disk color	1, 243	660000		6.6 km/px, full disk color, IM4, v-g-r-756-889-IMC
285/04:00		Eclipsed Io	0, 300	1500000		See Loki, Pele, Pillan, Marduk on limb, IM4 OCM, clear-IMC

Comments on designs:

Pillan--single AI8 violet-filter frame. Could also show Pele if visible.

Regional Stereo -- how much IM4 line truncation should we expect? Again could show Pele plume, but maybe best to sacrifice bright limb to insure coverage of C21 stereo. Suggest N-S strips of 1, 4, 4, 3 frames, from W to E. 1 frame on limb near lat -10.

Full disk color: best 6-color coverage Loki to Pillan, Acala on bright limb, 13 RJ.

Eclipse -- how many OCMs possible in IM4? Change to HMA? 18 RJ, 15 km/pixel. Filters: clear, IMC, add green, violet, red if possible.



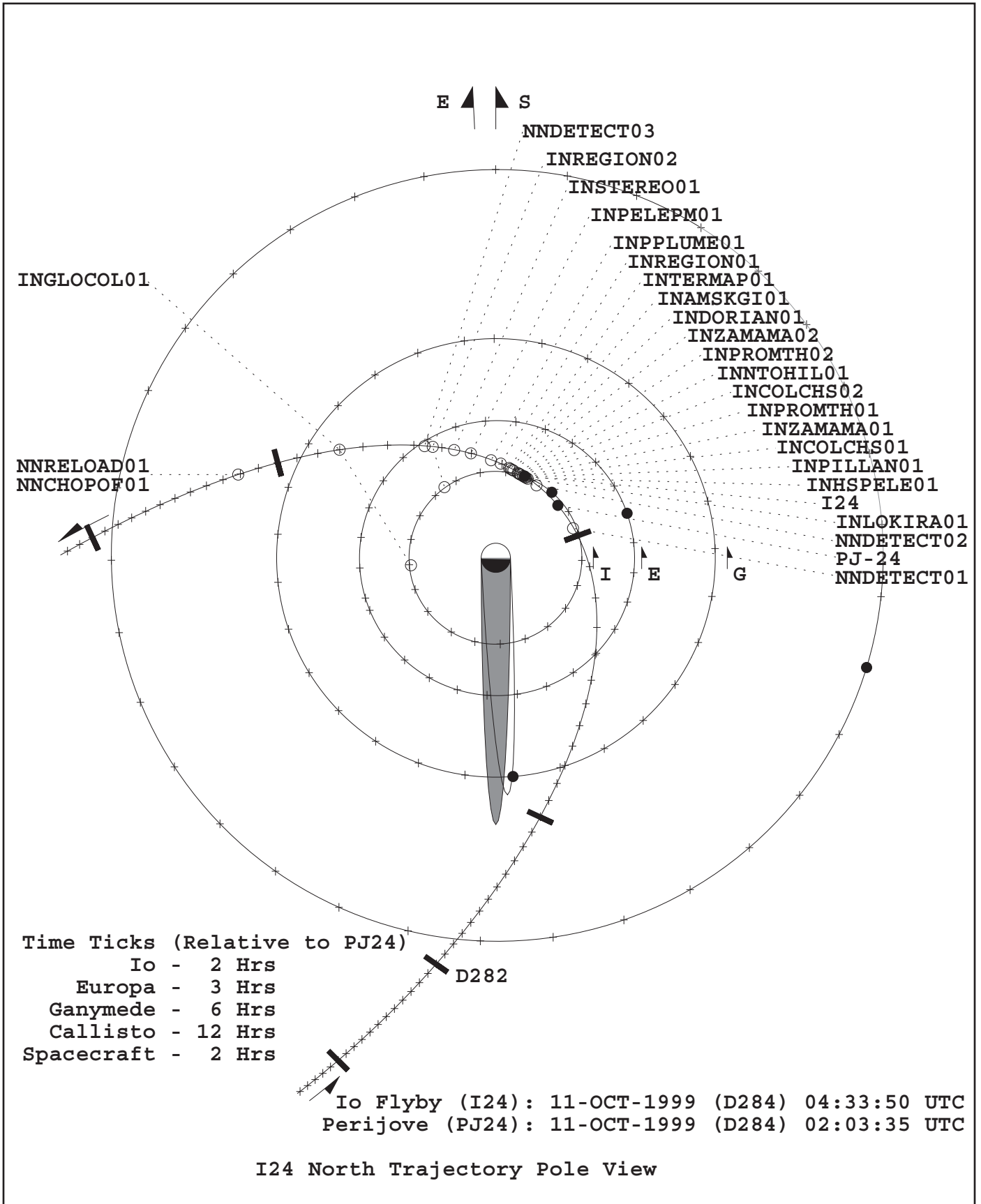
## I24 Time-Ordered Listing

OAPEL	Start (UTC)	End (UTC)	Duration
24NNDETECT01-	99-284/00:30:17	99-284/00:50:30	000/00:20:13
24NNDETECT02-	99-284/03:42:24	99-284/04:02:37	000/00:20:13
24NNLOKIRA01-	99-284/04:16:46	99-284/04:18:48	000/00:02:01
24INLOKIRA01-	99-284/04:20:49	99-284/04:27:54	000/00:07:04
24INHSPELE01-	99-284/04:27:54	99-284/04:29:14	000/00:01:20
24NNPILLAN01-	99-284/04:29:14	99-284/04:31:11	000/00:01:56
24INPILLAN01-	99-284/04:31:11	99-284/04:33:16	000/00:02:04
24INCOLCHS01-	99-284/04:35:05	99-284/04:36:16	000/00:01:11
24NNZAMAMA01-	99-284/04:36:16	99-284/04:39:01	000/00:02:44
24INZAMAMA01-	99-284/04:39:08	99-284/04:41:06	000/00:01:58
24NNPROMTH01-	99-284/04:45:05	99-284/04:47:06	000/00:02:01
24INPROMTH01-	99-284/04:47:24	99-284/04:50:08	000/00:02:44
24NNCOLCHS02-	99-284/04:50:08	99-284/04:51:27	000/00:01:18
24INCOLCHS02-	99-284/04:51:27	99-284/04:53:34	000/00:02:07
24NNNTOHIL01-	99-284/04:53:34	99-284/04:55:17	000/00:01:42
24INNTOHIL01-	99-284/04:55:17	99-284/04:58:27	000/00:03:10
24NNPROMTH02-	99-284/04:59:14	99-284/05:00:58	000/00:01:44
24INPROMTH02-	99-284/05:00:58	99-284/05:12:36	000/00:11:38
24NNZAMAMA02-	99-284/05:12:39	99-284/05:17:13	000/00:04:34
24INZAMAMA02-	99-284/05:17:13	99-284/05:21:02	000/00:03:48
24NNDORIAN01-	99-284/05:21:02	99-284/05:22:30	000/00:01:28
24INDORIAN01-	99-284/05:22:31	99-284/05:24:41	000/00:02:10
24NNAMSKGI01-	99-284/05:24:44	99-284/05:29:17	000/00:04:32
24INAMSKGI01-	99-284/05:29:17	99-284/05:33:03	000/00:03:46
24NNTERMAP01-	99-284/05:33:04	99-284/05:35:38	000/00:02:34
24INTERMAP01-	99-284/05:35:38	99-284/05:37:40	000/00:02:01
24NNREGION01-	99-284/06:05:58	99-284/06:08:00	000/00:02:01
24INREGION01-	99-284/06:08:00	99-284/06:41:22	000/00:33:22
24NNPPLUME01-	99-284/06:42:22	99-284/06:45:24	000/00:03:02
24INPPLUME01-	99-284/06:46:27	99-284/06:52:29	000/00:06:02
24NNPELEPM01-	99-284/08:02:15	99-284/08:05:17	000/00:03:02
24INPELEPM01-	99-284/08:05:17	99-284/08:11:21	000/00:06:04
24NNREGION02-	99-284/10:39:59	99-284/10:42:00	000/00:02:01
24INREGION02-	99-284/10:42:00	99-284/11:06:16	000/00:24:16

## I24 Time-Ordered Listing

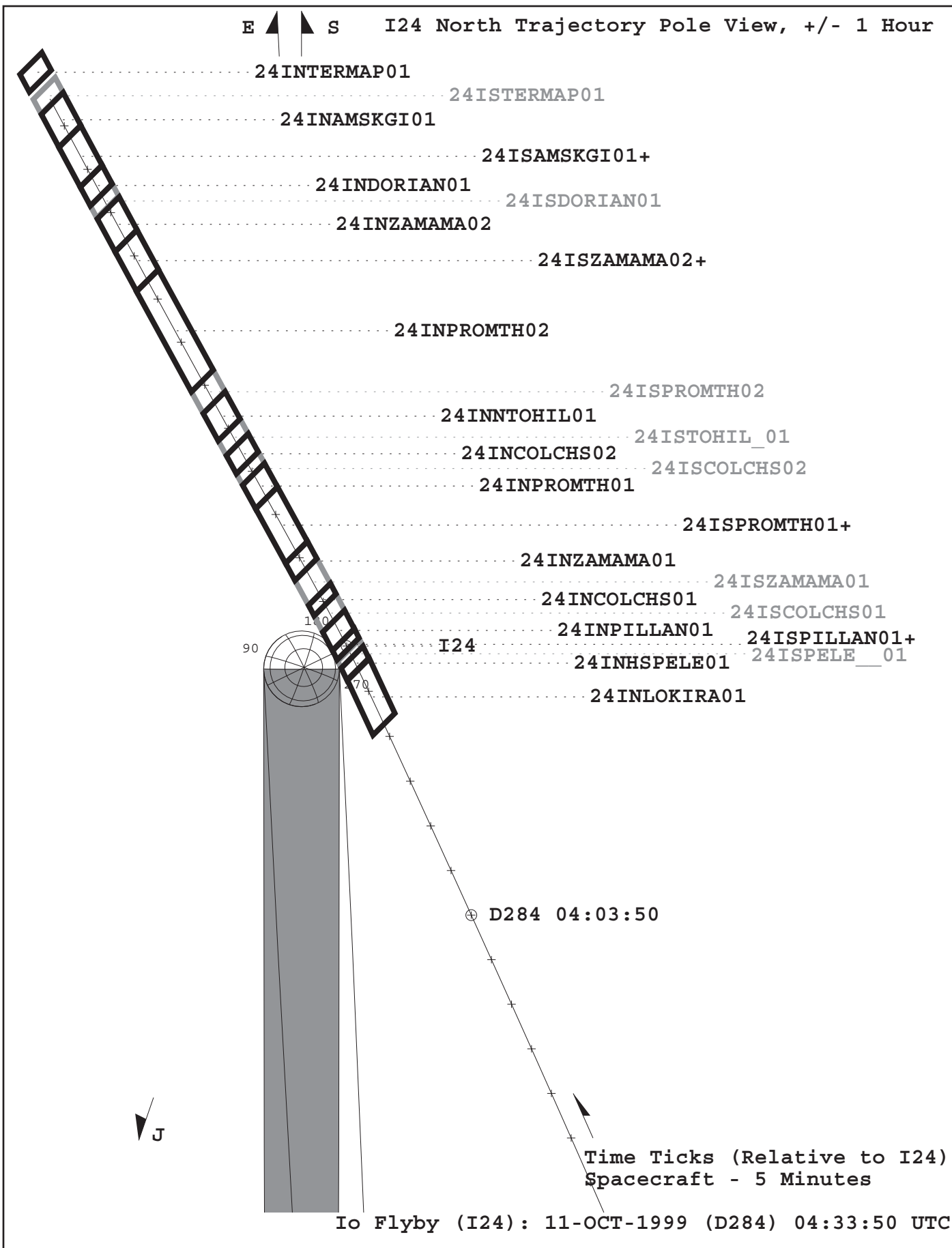
OAPEL	Start (UTC)	End (UTC)	Duration
24NNDETECT03-	99-284/11:17:24	99-284/11:37:37	000/00:20:13
24NNRELOAD01-	99-285/04:17:36	99-285/04:23:40	000/00:06:04
24NNCHOPOF01-	99-285/04:23:40	99-285/04:33:47	000/00:10:06
24NNPCTRLT01-	99-295/08:59:56	99-295/16:50:06	000/07:50:10
24NNRCTRLT01-	99-312/17:59:52	99-313/07:15:37	000/13:15:44

# NIMS I24 OBSERVATIONS



NIMS - FEL - 12/06/99

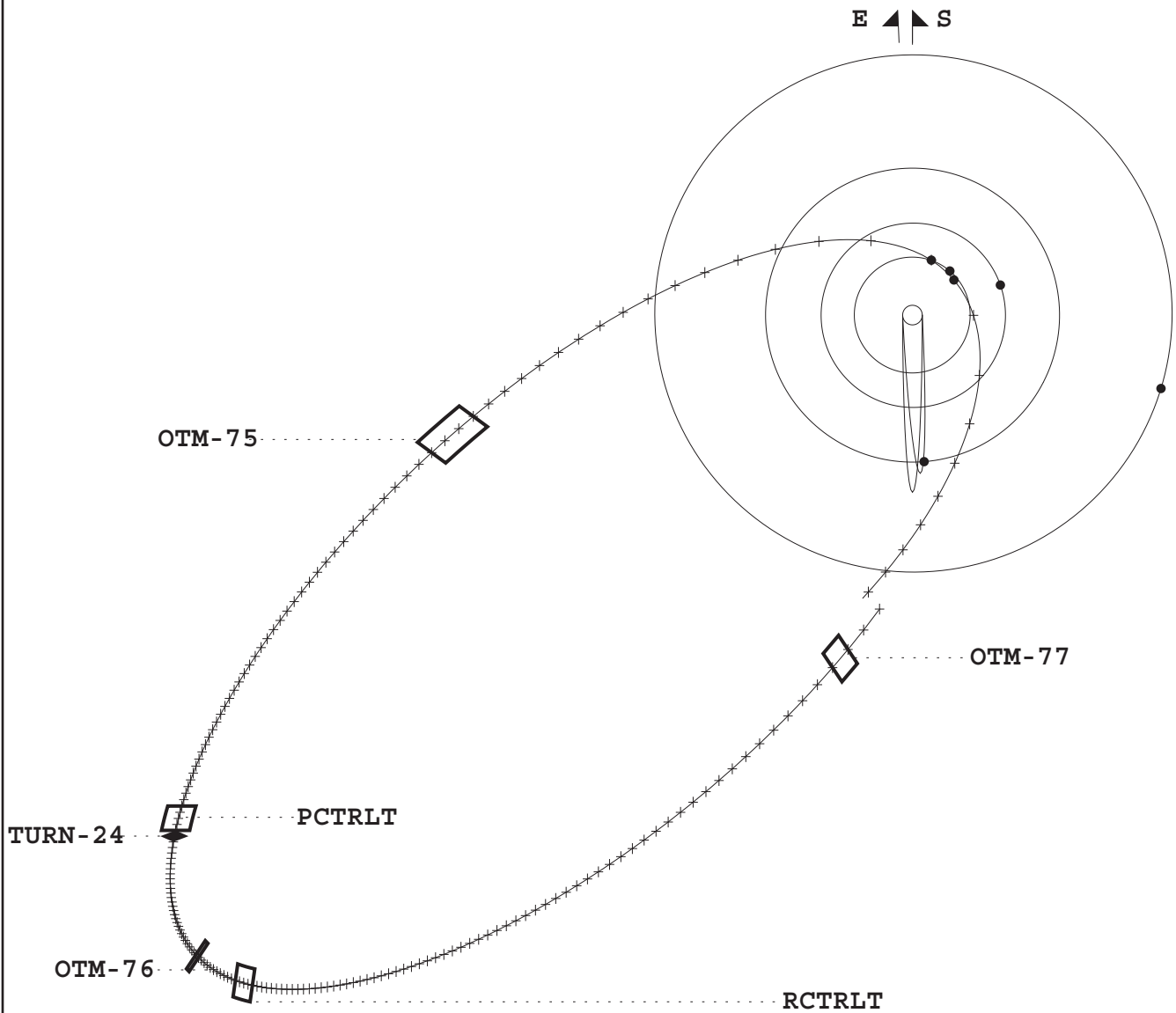
# NIMS & SSI I24 IO FLYBY OBSERVATIONS



# NIMS I24 CRUISE CALIBRATIONS

Io Flyby (I24): 11-OCT-1999 (D284) 04:37:21 UTC  
Perijove (PJ24): 11-OCT-1999 (D284) 02:05:11 UTC  
Apojove (AJ24): 02-NOV-1999 (D306) 17:00:00 UTC

Time Ticks (Relative to I24)  
Spacecraft - 6 Hours



I24 North Trajectory Pole View, Perijove to Perijove

# I24 NIMS INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
24NNDETECT01	Grating Step Test								
24NNDETECT02	Grating Step Test								
24NNLOKIRA01-	NIMS Software Reload								
24INLOKIRA01-	Io Loki Obs	I24IILM442	I24IILM360	LM	4	0	4	MPW	DA
24INHSPELE01-	Io Pele Obs	I24IILM442	I24IILM360	LM	4	0	4	MPW	
24NNPILLAN01-	NIMS Software Reload								
24INPILLAN01-	Io Pillan Obs	I24IILM442	I24IILM360	LM	4	0	4	MPW	DC
24INCOLCHS01-	Io Colchs Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DD
24NNZAMAWA01-	NIMS Software Reload								
24INZAMAWA01-	Io Zamama Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DE
24NNPROMTH01-	NIMS Software Reload								
24INPROMTH01-	Io Prometheus Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DF
24NNCOLCHS02-	NIMS Software Reload								
24INCOLCHS02-	Io Colchs Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DG
24NNNTOHIL01-	NIMS Software Reload								
24INNTOHIL01-	Io Tohil Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DH
24NNPROMTH02-	NIMS Software Reload								
24INPROMTH02-	Io Prometheus Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DI
24NNZAMAWA02-	NIMS Software Reload								
24INZAMAWA02-	Io Zamama Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DJ
24NNDORIAN01-	NIMS Software Reload								
24INDORIAN01-	Io Dorian Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DK
24NNAMSKGI01-	NIMS Software Reload								
24INAMSKGI01-	Io Amskgi Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DL
24NNTERMAP01-	NIMS Software Reload								
24INTERMAP01-	Io Termap Obs	I24IILM442	I24IILM360	LM	3	0	4	MPW	DM
24NNREGION01-	NIMS Software Reload								
24INREGION01-	Io Region Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DN
24NNPPLUME01-	NIMS Software Reload								
24INPPLUME01-	Io Plume Obs	I24IILM442	I24IILM360	LM	4	0	4	MPW	DO
24NNPELEPM01-	NIMS Software Reload								
24INPELEPM01-	Io Pele Plume Obs	I24IILM442	I24IILM360	LM	4	0	4	MPW	DP
24NNREGION02-	NIMS Software Reload								
24INREGION02-	Io Region Obs	I24IILM442	I24IILM360	LM	2	0	4	MPW	DQ
24NNDETECT03	Grating Step Test								
24NNRELOAD01-	NIMS Software Reload								
24NNCHOFOF01-	NIMS Chopper Off								
24NNCTRLT01-	RCT Calibration	I24RCT252	R/T	LM	1	0	4	R/T	XE
24NNROPAL01	NIMS OPAL	I24OPCAL48	R/T	LM	4	0	4	R/T	DC
24NNPCTRLT01-	PCT Calibration	I24PCT252	R/T	LM	4	0	4	R/T	FB

## I24 RESOURCES

Activity ID	Mode	Record Format	Obs.		Obs. Cost (ticks)	Obs. Cost (tracks)	Obs. Cost (ticks)	Obs. Cost (tracks)	Number Returned	Wavelengths Returned	Obs (sec.)	Obs (sec.)	PB (sec.)	Selected		Bits to		Mode
			Cost (tracks)	Cost (ticks)										sBOT (MBITS)	Tape BOT (Mbits)	Cycle time (sec)		
24INLOKIRA01-	LM	MPW	0.0457	266	266	360	300.00	308.67	3.56	3.46	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INHSELE01-	LM	MPW	0.0083	48	48	360	52.02	51.40	0.59	0.60	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INPILLAN01-	LM	MPW	0.0083	48	48	360	52.02	51.40	0.59	0.60	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INCOLCHS01-	LM	MPW	0.0083	48	48	360	52.02	51.40	0.59	0.60	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INZAMAMA01-	LM	MPW	0.0083	48	48	360	52.02	51.40	0.59	0.60	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INPROMTH01-	LM	MPW	0.0083	48	48	360	52.02	51.40	0.59	0.60	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INCOLCHS02-	LM	MPW	0.0083	48	48	360	52.02	51.40	0.59	0.60	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INNTOHIL01-	LM	MPW	0.0083	48	48	360	52.02	51.40	0.59	0.60	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INPROMTH02-	LM	MPW	0.0638	372	372	360	420.00	428.67	4.94	4.84	8.667	8.667	4.84	4.84	1.79	1.79	1.80	8.667
24INZAMAMA02-	LM	MPW	0.0240	140	140	360	156.00	155.35	1.79	1.80	8.667	8.667	1.80	1.80	0.60	0.60	0.60	8.667
24INDORIAN01-	LM	MPW	0.0083	48	48	360	52.02	51.40	0.59	0.60	8.667	8.667	0.60	0.60	0.59	0.59	0.60	8.667
24INAMSKGI01-	LM	MPW	0.0240	140	140	360	156.00	155.35	1.79	1.80	8.667	8.667	1.80	1.80	0.60	0.60	0.60	8.667
24INTERMAP01-	LM	MPW	0.0122	71	71	360	78.00	77.34	0.89	0.90	8.667	8.667	0.90	0.90	0.89	0.89	0.90	8.667
24INREGION01-	LM	MPW	0.2900	1690	1690	360	1,920.00	1928.67	22.22	22.12	8.667	8.667	22.12	22.12	3.56	3.46	3.46	8.667
24INPPOLUME01-	LM	MPW	0.0457	266	266	360	300.00	308.67	3.56	3.46	8.667	8.667	3.46	3.46	3.56	3.46	3.46	8.667
24INPELEPM01-	LM	MPW	0.0457	266	266	360	300.00	308.67	3.56	3.46	8.667	8.667	3.46	3.46	3.56	3.46	3.46	8.667
24INREGION02-	LM	MPW	0.1491	869	869	360	986.00	994.67	11.46	11.36	8.667	8.667	11.36	11.36	11.46	11.36	11.36	8.667
<b>Resource Totals</b>			<b>0.7663</b>	<b>4465</b>	<b>4465</b>													

## I24 RESOURCES

Activity ID	AACS	Comp	Thold	RT	Total BTG	Mbits	Data Reduction	Pass
	Mbits				(w/4% ahead)	Factor	(sBOT/BTG)	
	c 2.5							
24INLOKIRA01-	0.02	1.05	0		2.5398		1.40	1,2
24INHPELE01-	0.00	1.05	0		0.4229		1.40	1
24INPILLAN01-	0.00	1.05	0		0.4229		1.40	1
24INCOLCHS01-	0.00	1.05	0		0.4229		1.40	1
24INZAMAMA01-	0.00	1.05	0		0.4229		1.40	1
24INPROMTH01-	0.00	1.05	0		0.4229		1.40	1
24INCOLCHS02-	0.00	1.05	0		0.4229		1.40	1
24INNTOHIL01-	0.00	1.05	0		0.4229		1.40	1
24INPROMTH02-	0.02	1.05	0		3.5272		1.40	1,2
24INZAMAMA02-	0.01	1.05	0		1.2783		1.40	1
24INDORIAN01-	0.00	1.05	0		0.4229		1.40	1
24INAMSKGI01-	0.01	1.05	0		1.2783		1.40	1
24INTERMAP01-	0.00	1.05	0		0.6364		1.40	1
24INREGION01-	0.11	1.05	0		15.8696		1.40	1,2
24INPLUME01-	0.02	1.05	0		2.5398		1.40	1,2
24INPELEPM01-	0.02	1.05	0		2.5398		1.40	1,2
24INREGION02-	0.06	1.20	0		7.1613		1.60	1,2
<b>Resource Totals</b>					<b>40.7539</b>			
	Alloc.				40.9280			
	Over				-0.1741			

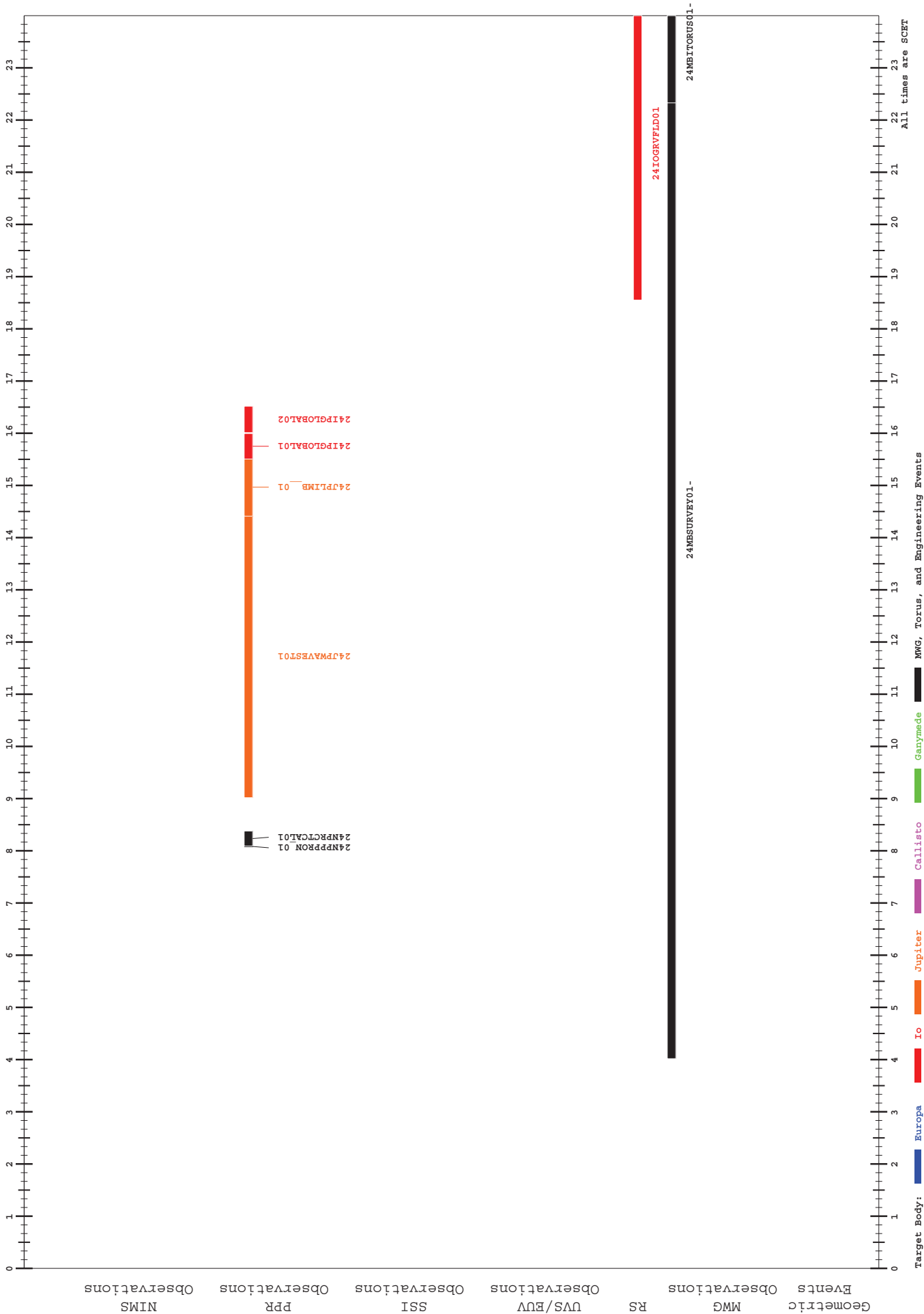


NIMS I24 OBSERVING GEOMETRY

OAPL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
24INLOKIRA01	+12 to +14	308 to 310	2.7 to 4.2K	56 to 80	146	32 to 53	98 to 122
24INHPELE01	-19 to -18	255.5	.9 to 2.0K	64 to 85	63 to 99	48 to 54	93 to 115
24INPILLAN01	-11 to -10	227 to 247	.9 to 1.0K	94 to 144	67 to 87	45 to 65	35 to 85
24INCOLCHS01	+3.8 to +4.2	214.8	.7 to 1.2K	151 to 174	51 to 63	29 to 48	4 to 48
24INZAMAMA01	+17.5 to +18.5	172.	1.6 to 2.8K	155 to 164	16 to 23	26 to 30	13 to 23
24INPROMTH01	-3.5 to -1.5	155.	3.1 to 6.5K	170 to 176	2 to 15	4 to 18	2 to 10
24INCOLCHS02	+1 to +4	216	8.3 to 9.4K	157	52	75 to 77	23 to 25
24INNTOHIL	-29 to -25	159	10K	164	31	34 to 41	17 to 19
24INPROMTH02	-4 to +2	152 to 157	11 to 17K	161	9 to 14	7 to 12	18 to 22
24INZAMAMA02	+15 to +22	172 to 174	18 to 21K	156	15 to 58	34 to 82	23 to 27
24INDORIAN01	-25 to -17	185 to 189	23K	156	27 to 47	42 to 69	24 to 26
24INAMSKGI01	+18 to +28	112 to 120	25K	160	42 to 82	27 to 64	19 to 22
24INTERMAP01	-8 to -2	95 to 98	28K	161	73 to 92	51 to 72	20 to 21
24INREGION01	-22 to +25	135 to 170	44 to 60K	156	11 to 45	4 to 23	24 to 26
24INPPIUME01	-24 to -2	211 to 244	65K	155	41 to 65	66 to 91	26 to ---
24INPELEPM01	-40 to +2	205 to 256	106K	156	31 to 67	50 to 90	25 to ---
24INREGION02	-90 to +90	112 to 282	213K	158	24 to 103	26 to 90	22

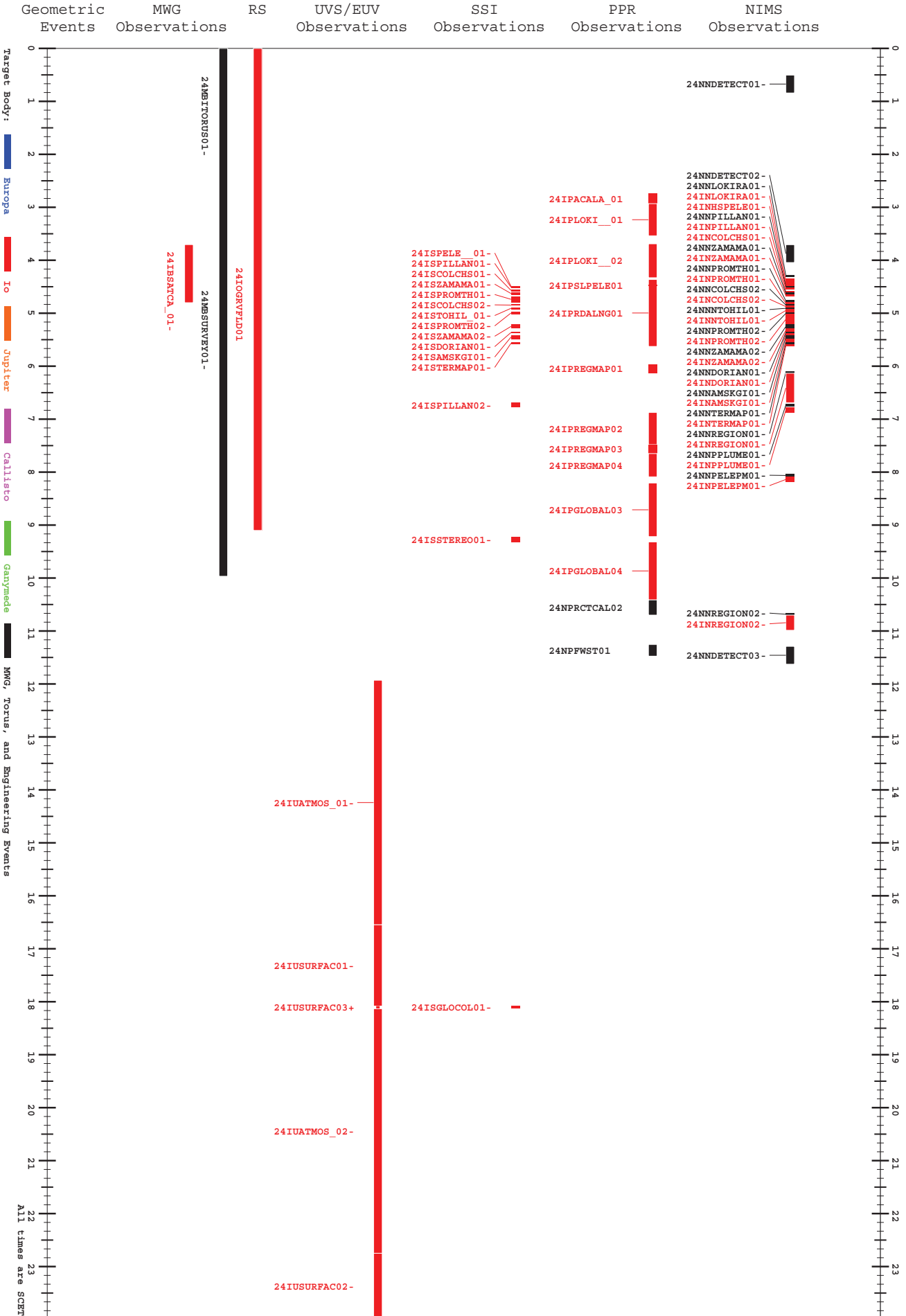
**I24 ENCOUNTER**  
**Plot Time: 99-283/00:00:00.000 to 99-284/00:00:00.000**  
**Date of Plot: 22-Sep-99 13:19:14**

**GEM: I24**



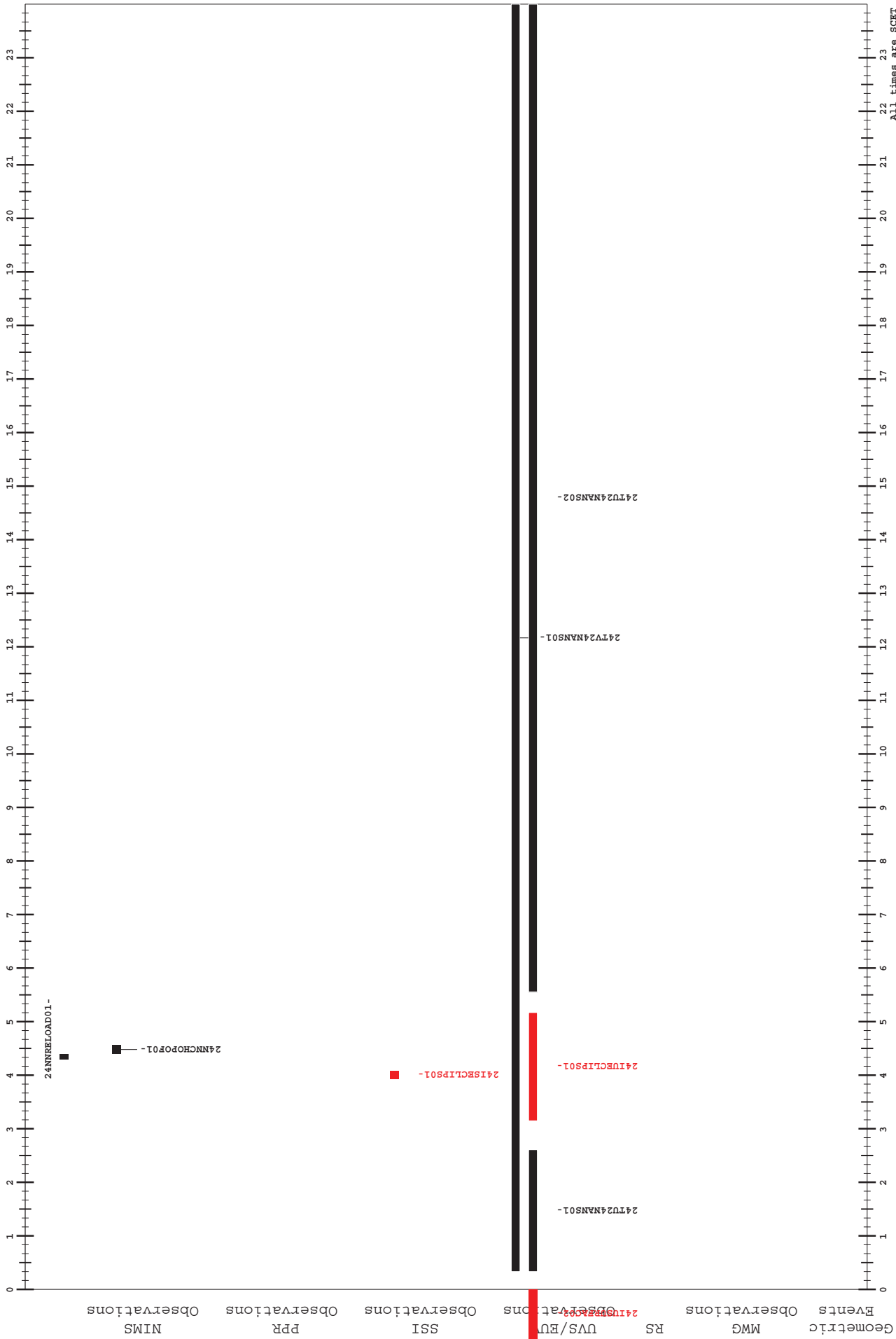
I24 ENCOUNTER  
Plot Time: 99-284/00:00:00.000 to 99-285/00:00:00.000  
Date of Plot: 22-Sep-99 13:19:15

GEM: I24



# GEM: I24

**I24 ENCOUNTER**  
**Plot Time: 99-285/00:00:00.000 to 99-286/00:00:00.000**  
**Date of Plot: 22-Sep-99 13:19:15**

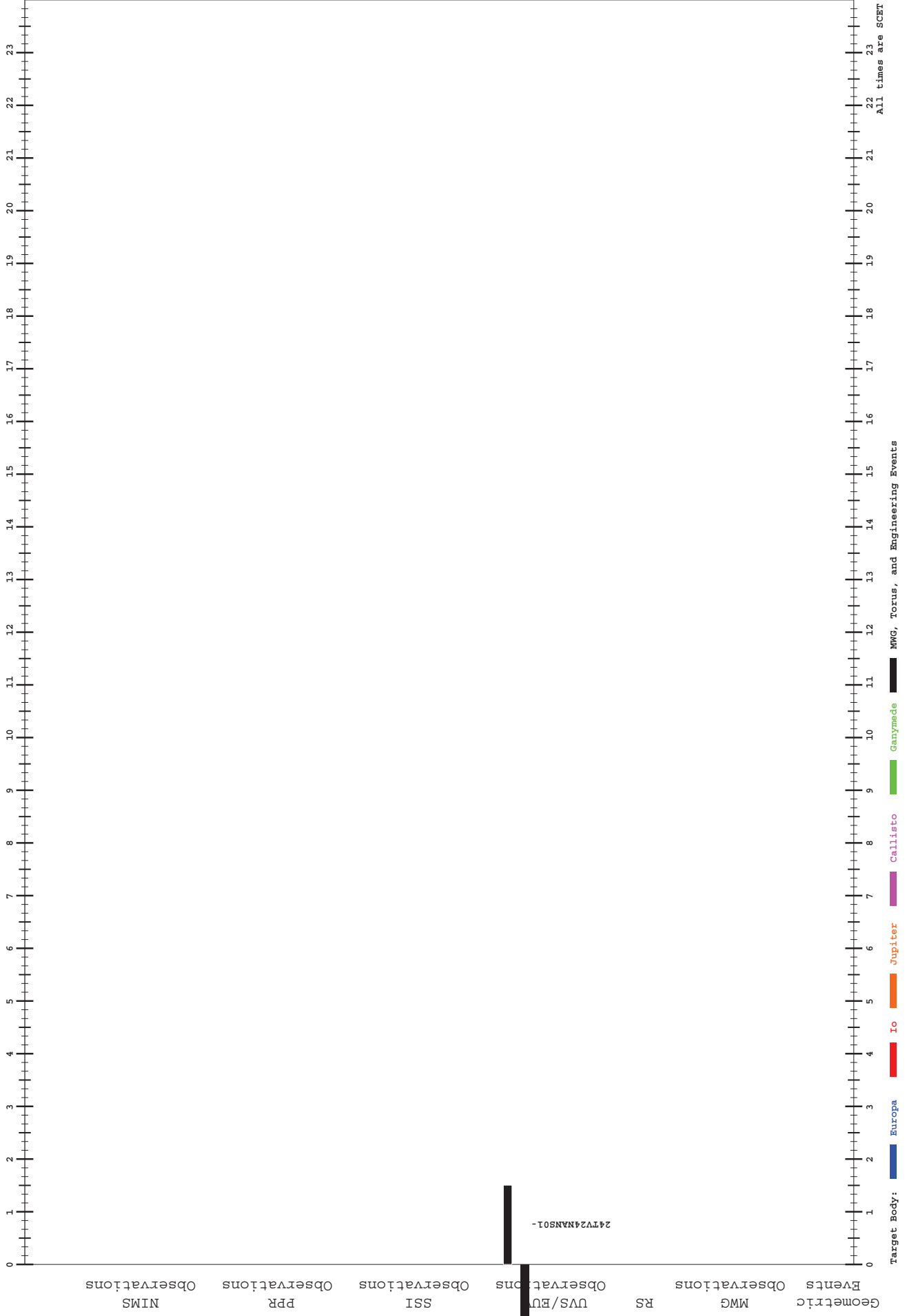


Target Body: Europa Io Jupiter Callisto Ganymede MWG, Forus, and Engineering Events

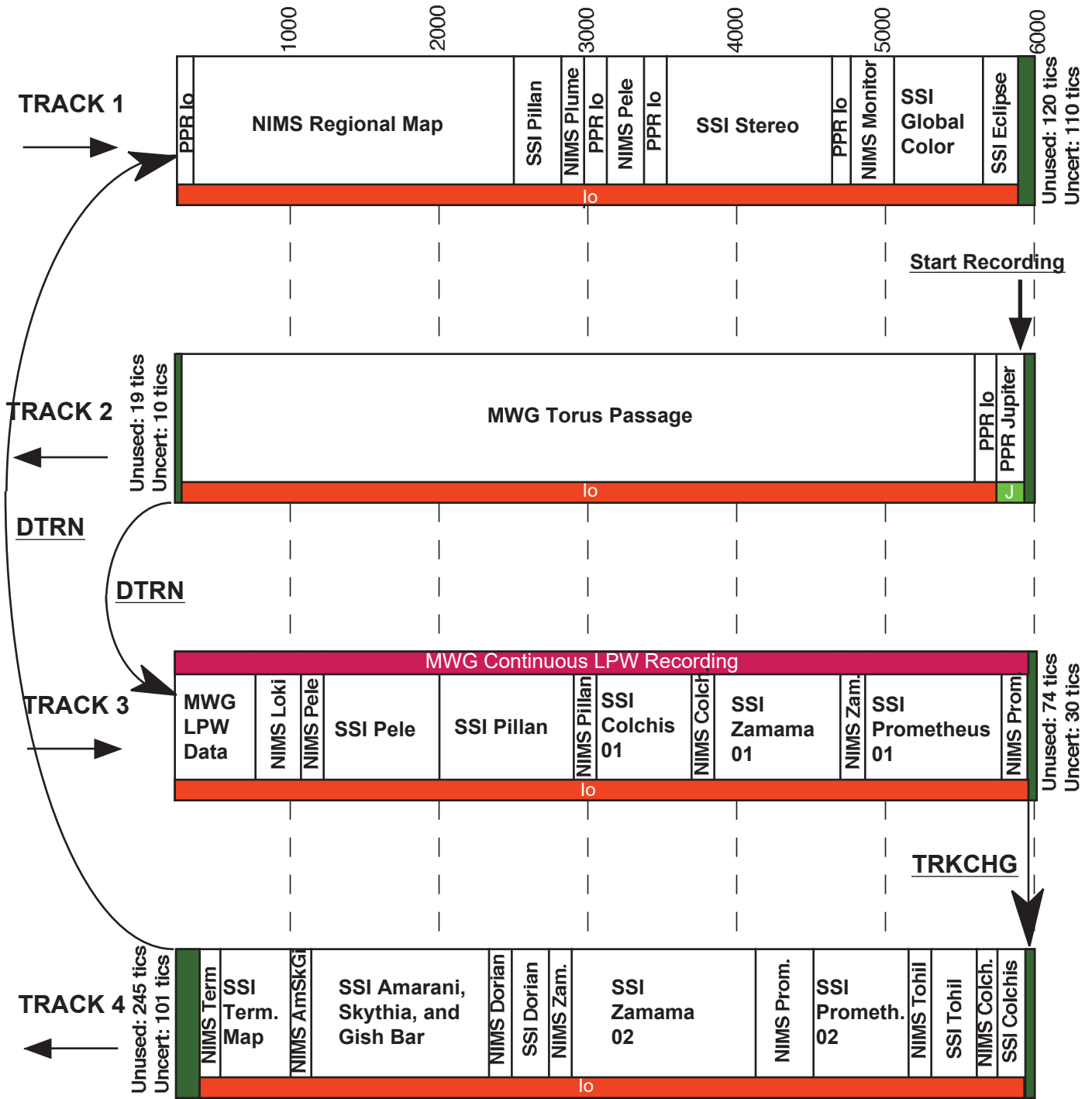
All times are SCET

# GEM: I24

I24 ENCOUNTER  
Plot Time: 99-286/00:00:00.000 to 99-287/00:00:00.000  
Date of Plot: 22-Sep-99 13:19:15



# I24 ENCOUNTER HIGH-LEVEL TAPEMAP



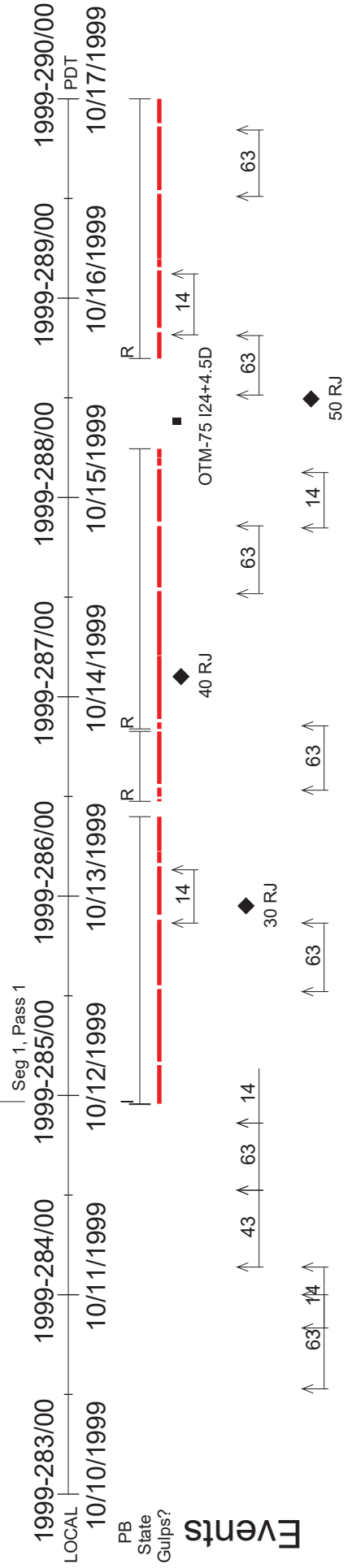
J. Gross, 7/12/99

# I24PBA

5933/2 5931/2  
 24NPRCTCAL01-  
 5931/2 5735/2  
 24JPWAVEST01  
 5735/2 5699/2  
 24JPLIMB\_\_01  
 5699/2 5664/2  
 24IPGLOBAL01  
 5665/2

24MBITORUS01-

Playback / Date Returned



# I24PBA

218/2

24MBITORUS01-

233/3 786/3

24IBSATCA\_01-

788/3 1052/3  
24INLOKIRA-

1052/3 1073/3  
24IBSATCA\_01-

1074/3 1121/3  
24INHISPELE-

1121/3 1122/3  
24IBSATCA\_01-

1188/3 1997/3  
24ISPELE\_01

2009/3 2027/3  
24IBSATCA\_01-

2093/3 2869/3  
24ISPILLAN01

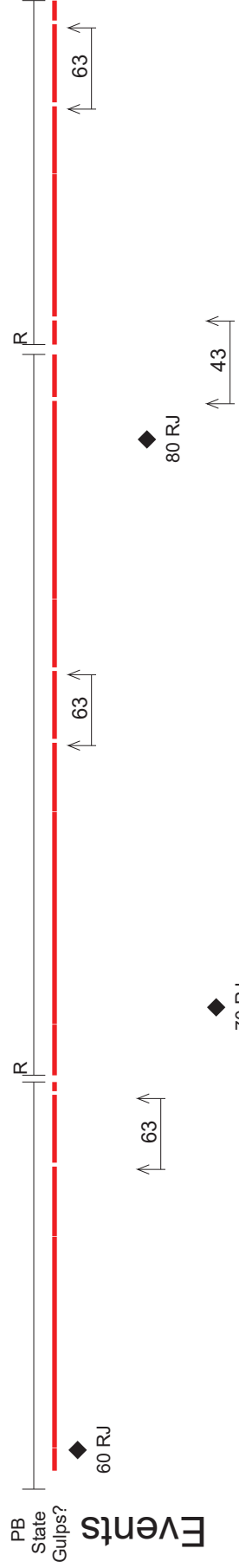
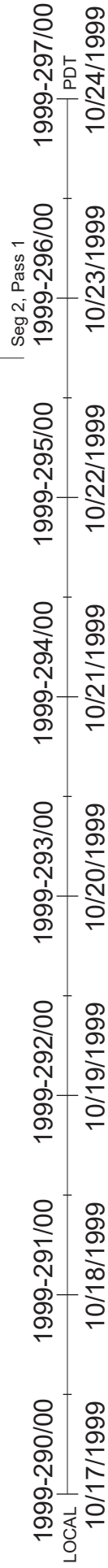
2880/3 2888/3  
24IBSATCA\_01-

2889/3 2936/3  
24INPILLAN-

2936/3 2949/3  
24IBSATCA\_01-

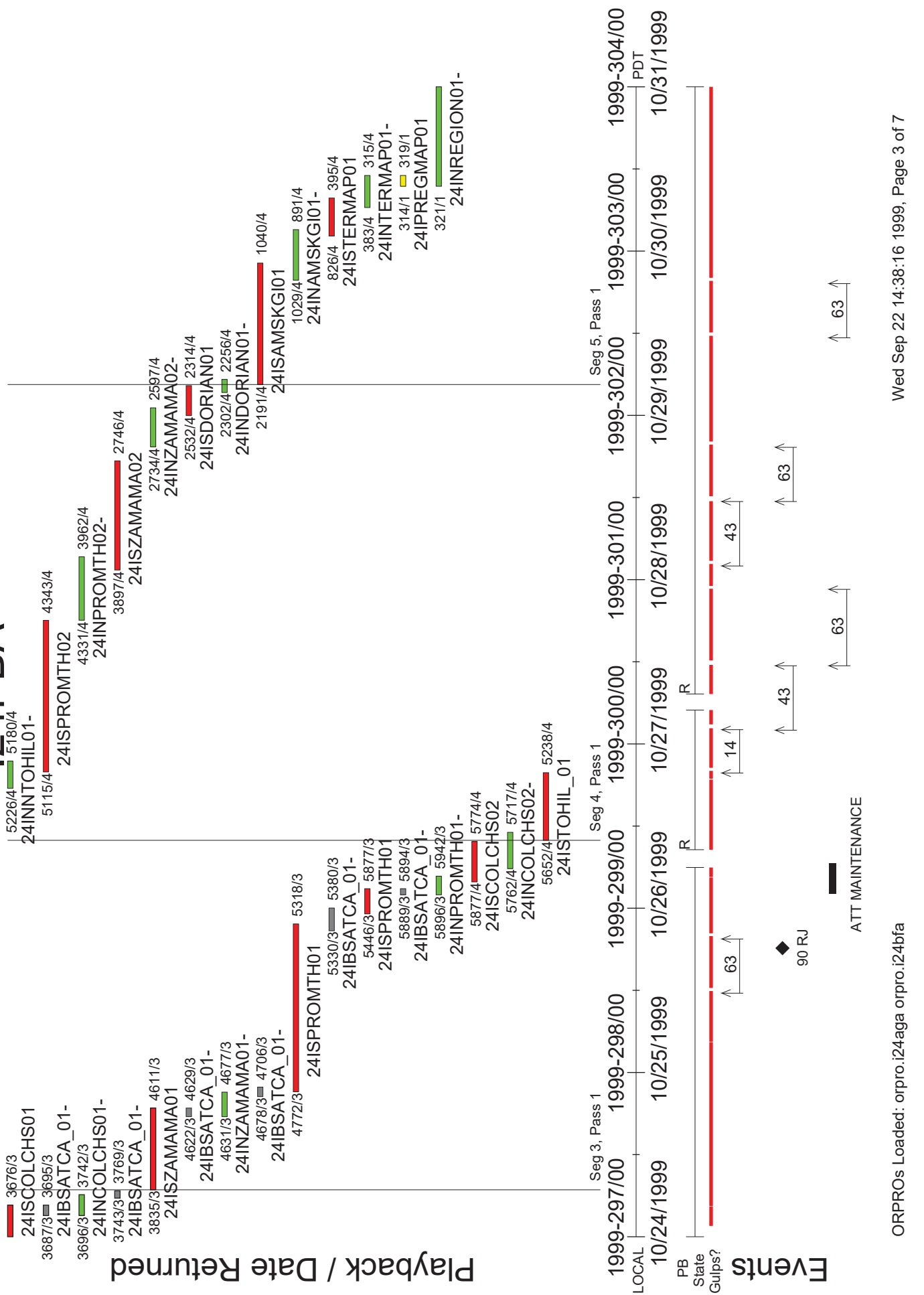
3015/3  
24ISCOLCHS01

Playback / Date Returned





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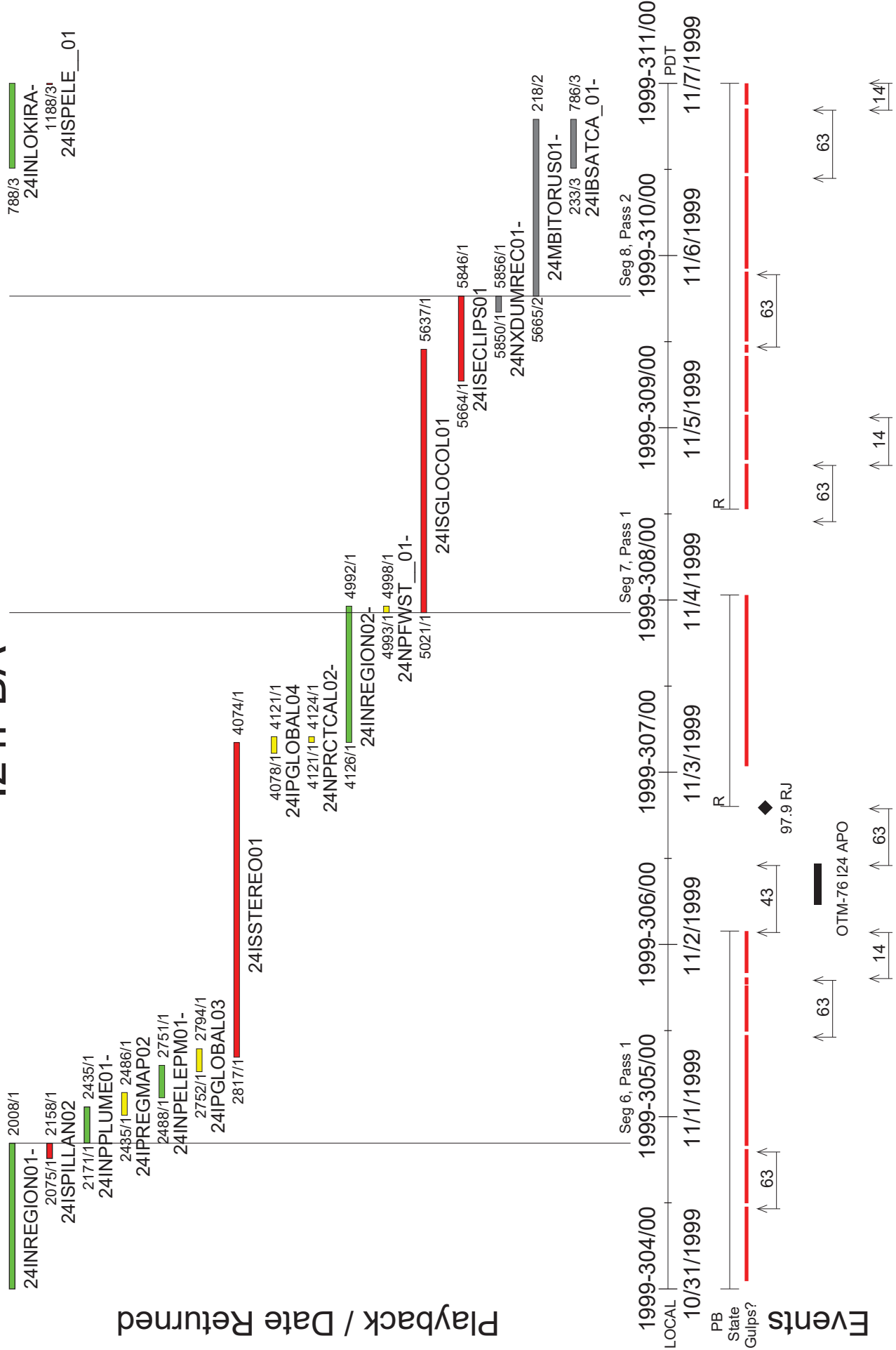


## Playback / Date Returned

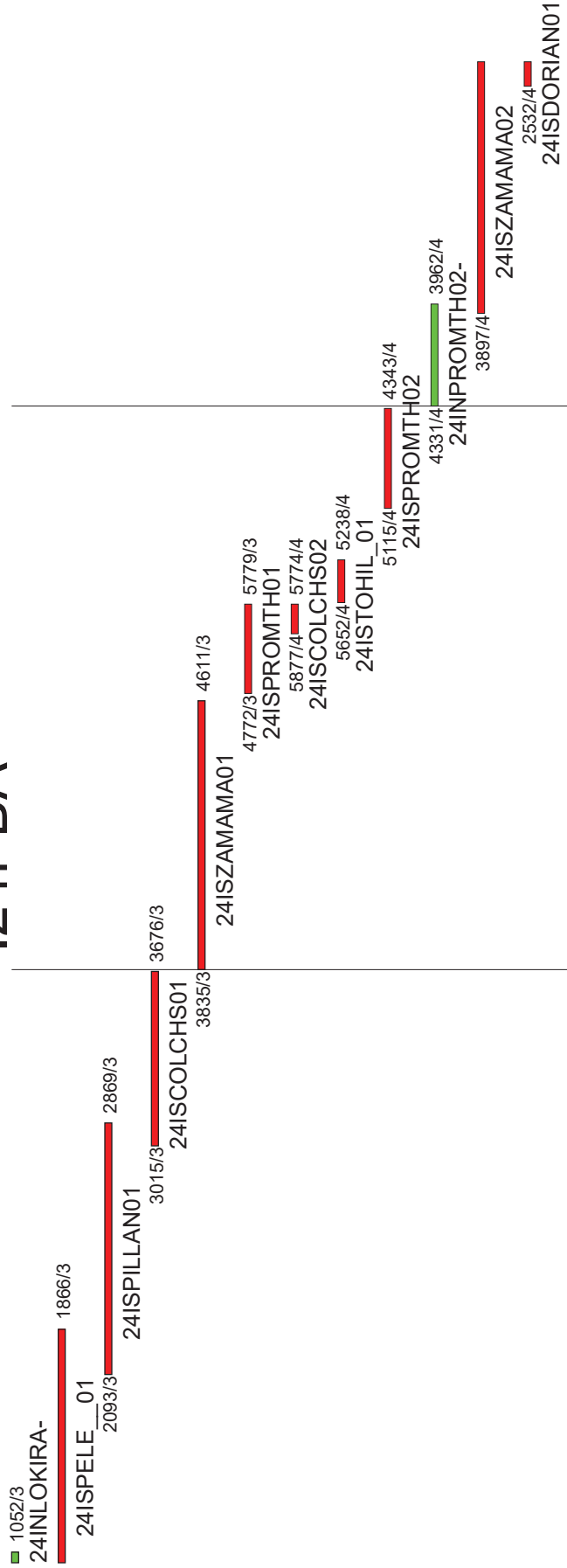
90 RJ

ATT MAINTENANCE

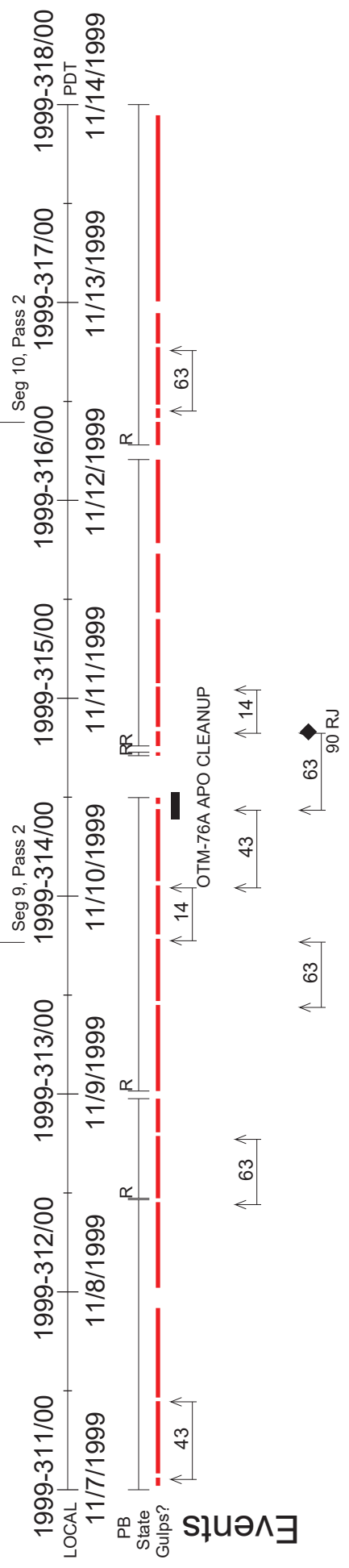
# I24PBA



# I24PBA

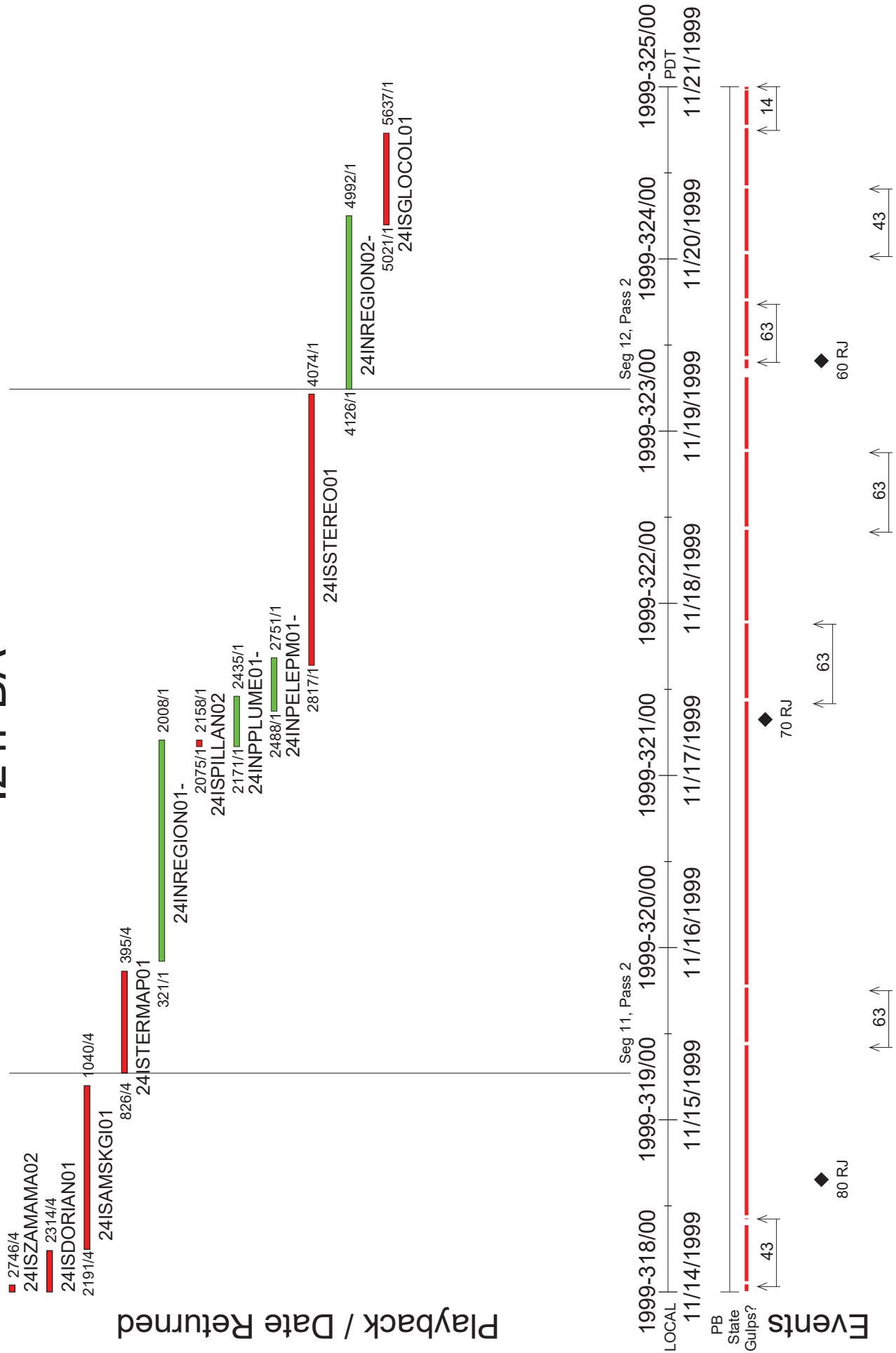


Playback / Date Returned



Events

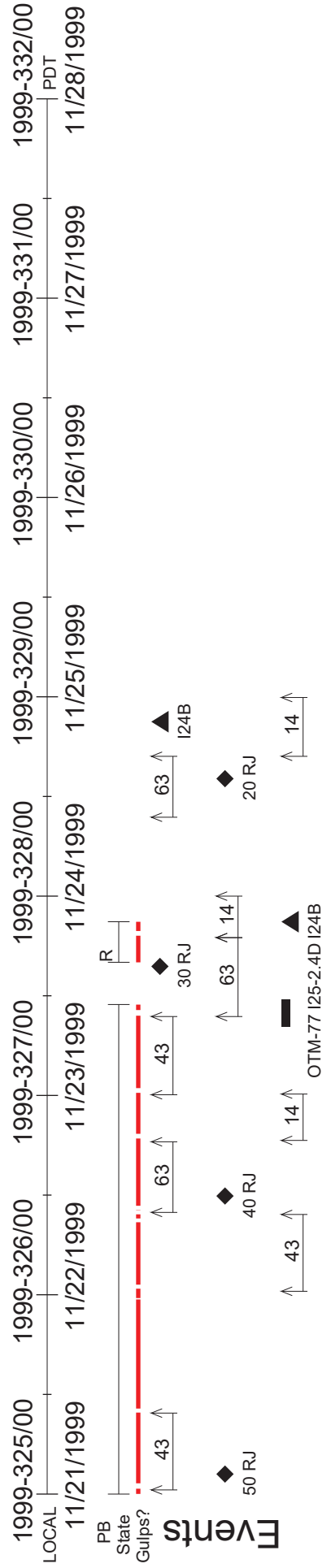
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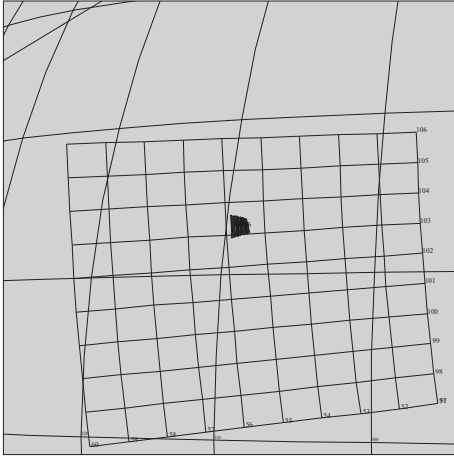
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5664/1  
24ISECLIPS01

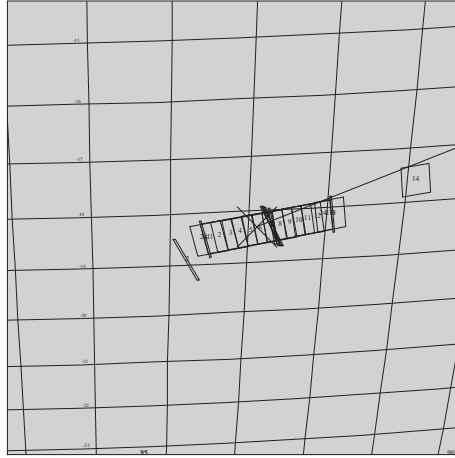
Playback / Date Returned



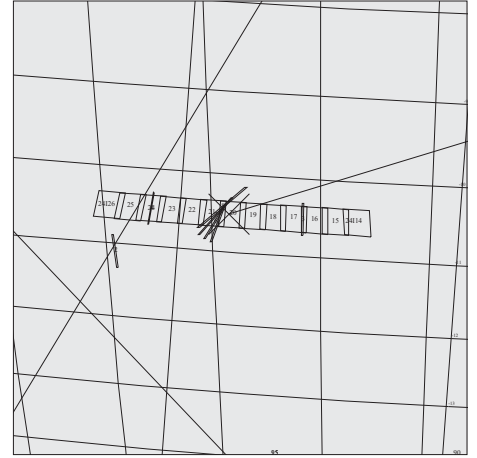
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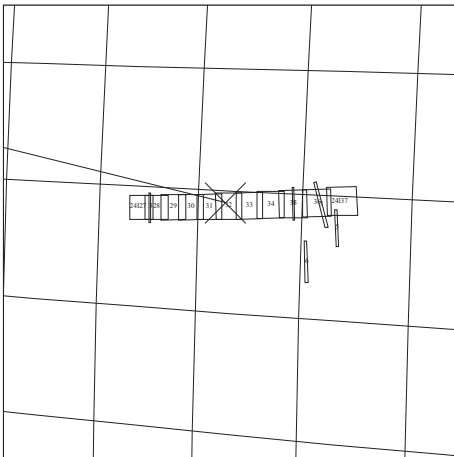
**24INLOKIRA01**  
**99-284/04:20:49**



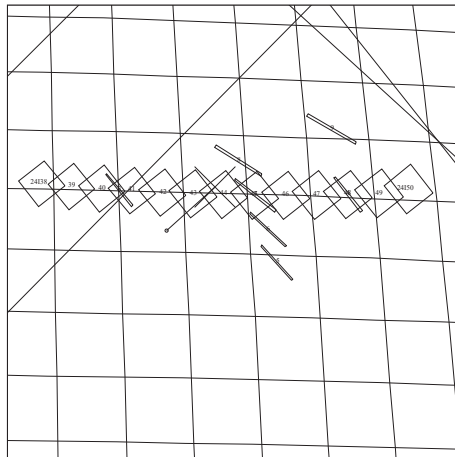
**24INHSPELE01**  
**99-284/04:27:54**



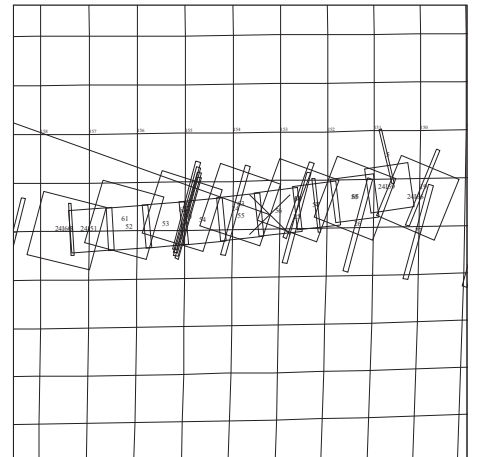
**24INPILLAN01**  
**99-284/04:31:11**



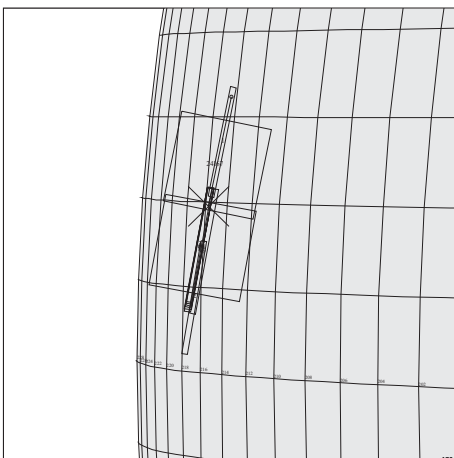
**24INCOLCHS01**  
**99-284/04:35:05**



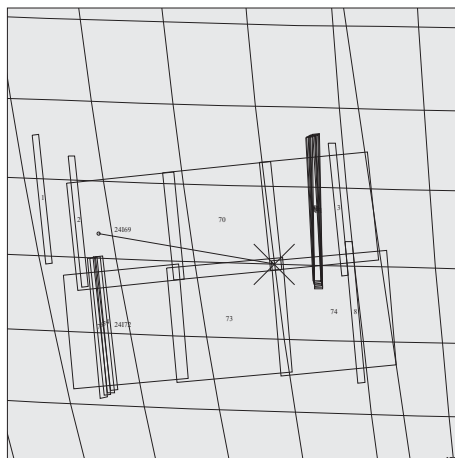
**24INZAMAMA01**  
**99-284/04:39:08**



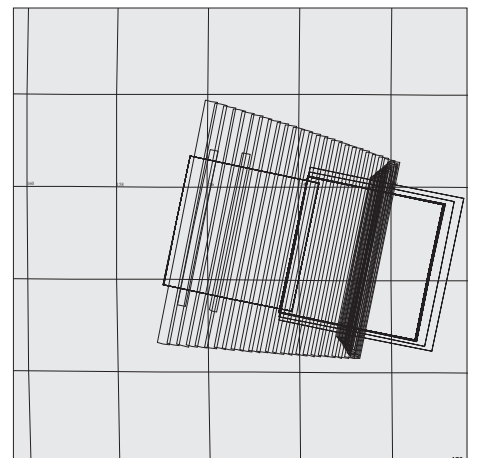
**24INPROMTH01**  
**99-284/04:47:24**



**24INCOLCHS02**  
**99-284/04:51:27**

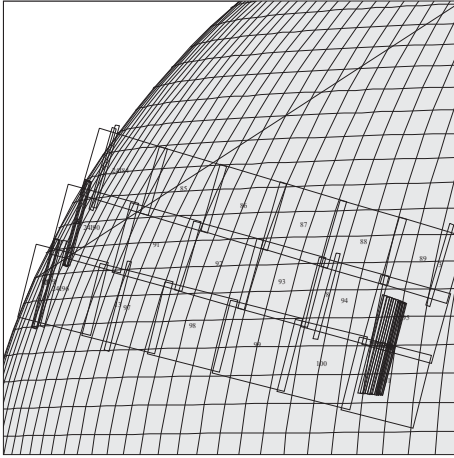


**24INNTOHIL01**  
**99-284/04:55:17**

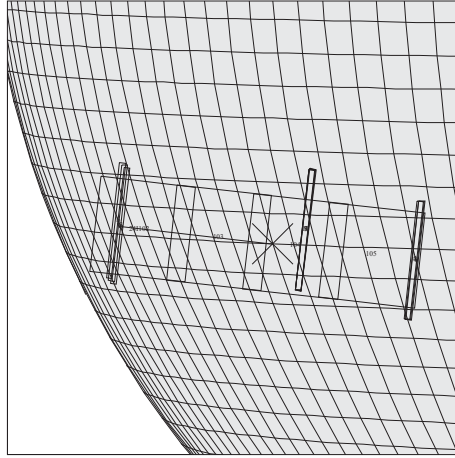


**24INPROMTH02**  
**99-284/05:00:58**

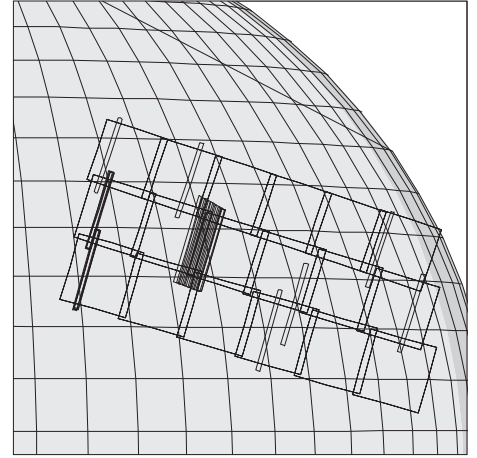
# I24 NIMS B



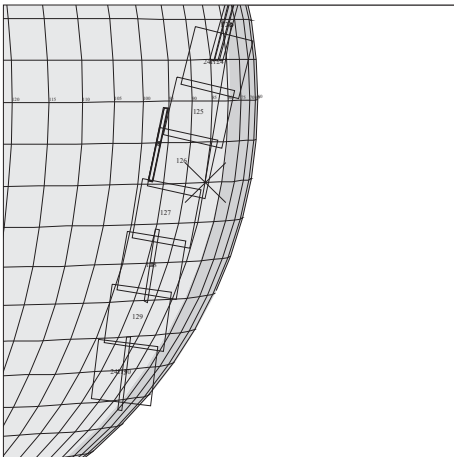
**24INZAMAMA02**  
**99-284/05:17:13**



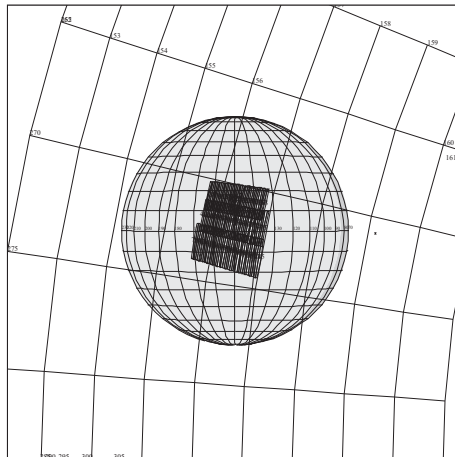
**24INDORIAN01**  
**99-284/05:22:31**



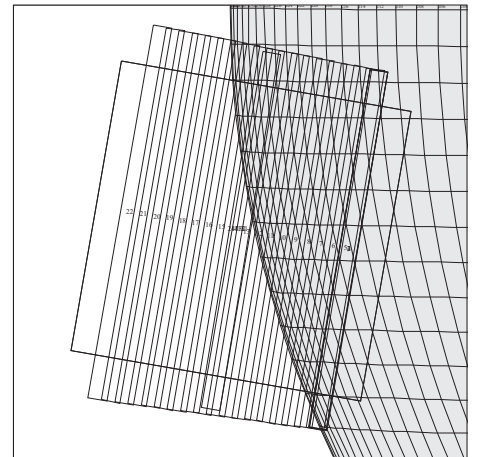
**24INAMSKGI01**  
**99-284/05:29:17**



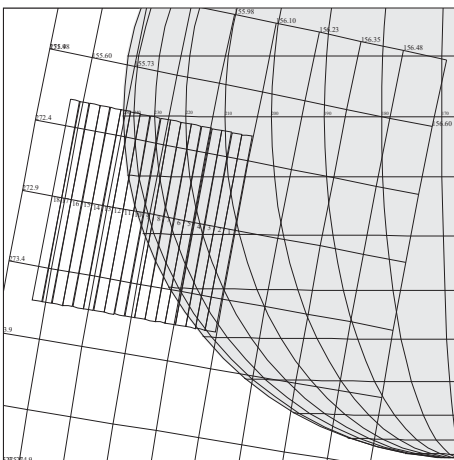
**24INTERMAP01**  
**99-284/05:35:38**



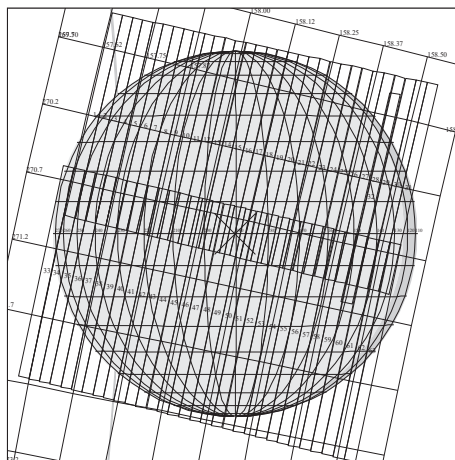
**24INREGION01**  
**99-284/06:08:00**



**24INPPLUME01**  
**99-284/06:46:27**



**24INPELEPM01**  
**99-284/08:05:17**



**24INREGION02**  
**99-284/10:42:00**

## Chapter 3 - Orbit Geometries

### Contents

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### Introduction to Chapter 3

This chapter contains diagrams of various aspects of geometry for the I24 Orbit.

The figure on page 3 is a North Trajectory Pole View of the I24 Orbit from apoapsis to apoapsis.

The figure on page 4 is a North Trajectory Pole View of the I24 Orbit from +/- 5 days of Io closest approach.

The figure on page 5 is a North Trajectory Pole View of the I24 Orbit from +/- 2 days of Io closest approach.

The figure on page 6 is a North Trajectory Pole View of the I24 Orbit from +/- 1 day of Io closest approach.

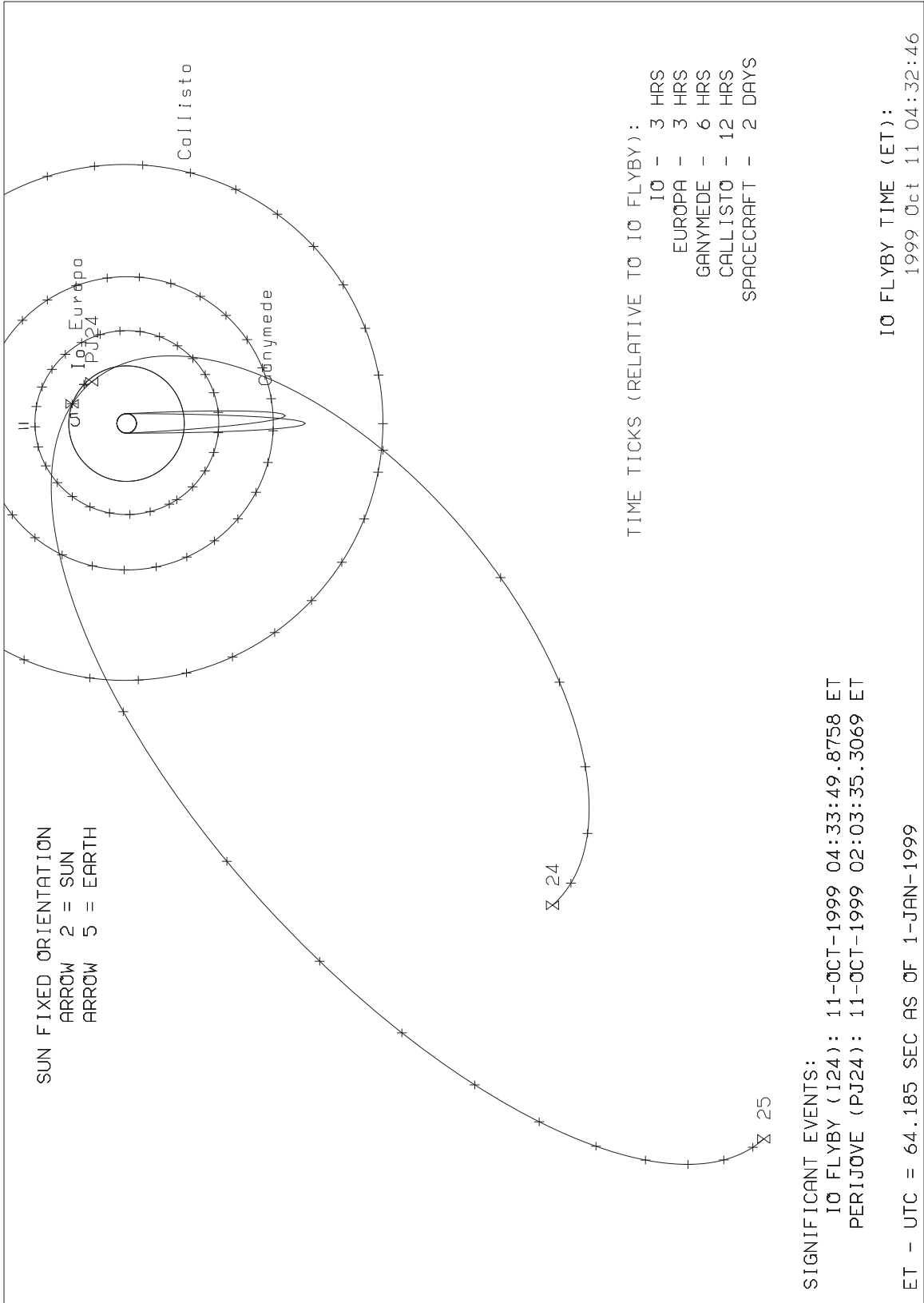
The figure on page 7 shows the spacecraft's groundtrack on Jupiter at Jupiter closest approach.

The figure on page 8 is a North Trajectory Pole View of the I24 Orbit from +/- 6 hours of Io closest approach.

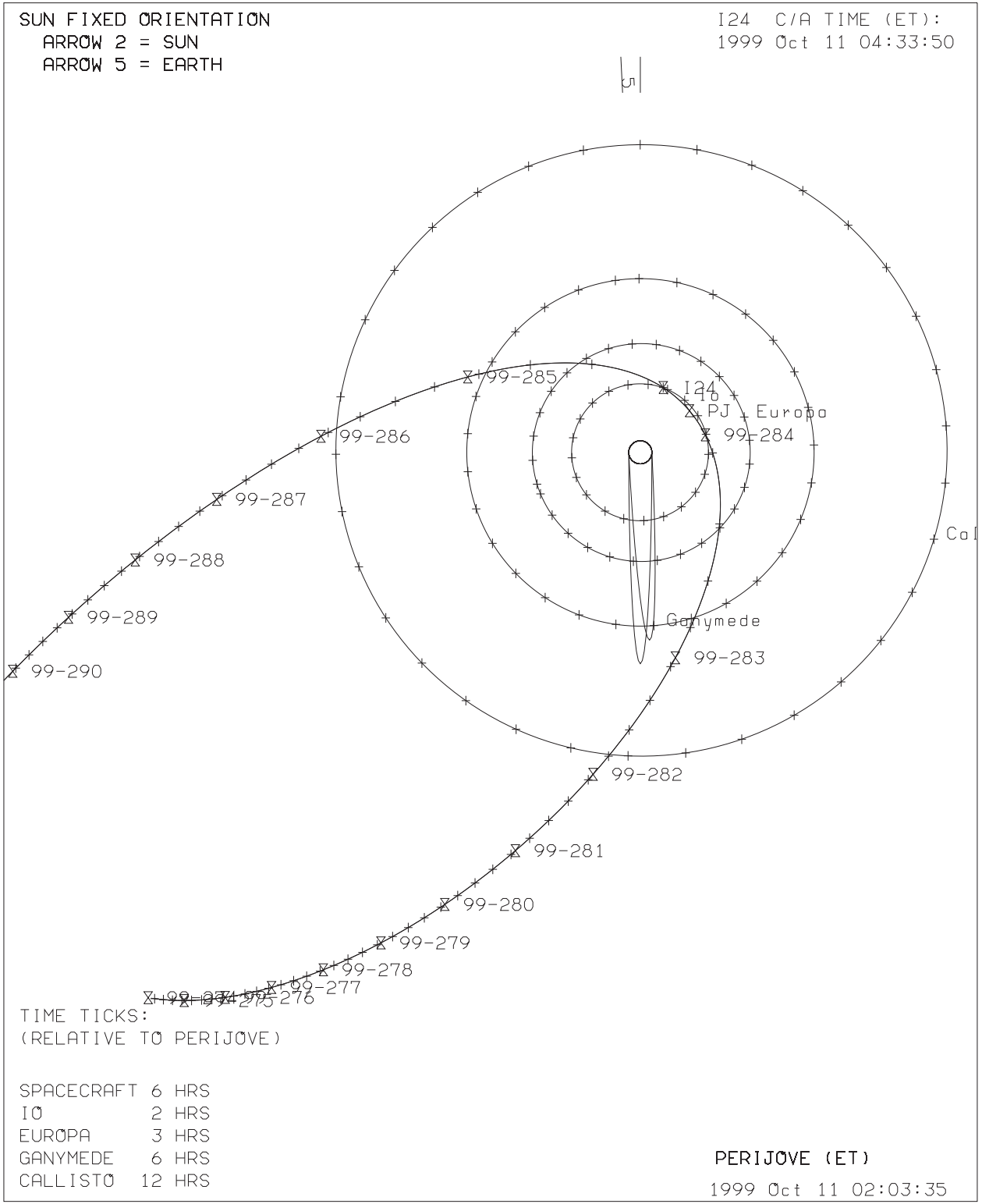
The figure on page 9 is a North Trajectory Pole View of the I24 Orbit from +/- 1 hour of Io closest approach.

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

# Jupiter 24: North Traj Pole View (1024 Apo to Apo)



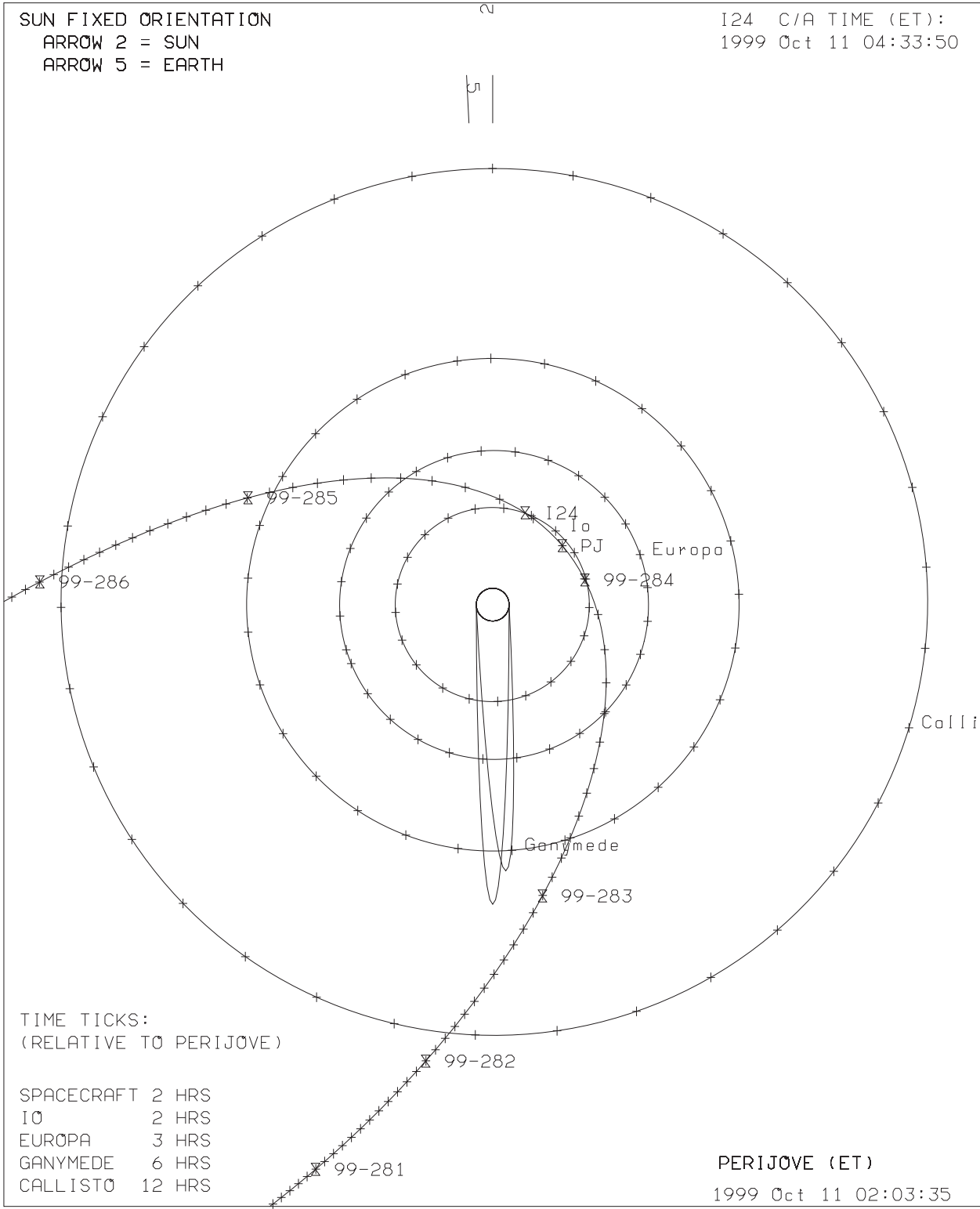
# JUPITER 24: N. TRAJ. POLE VIEW (+/- 5 DAYS)



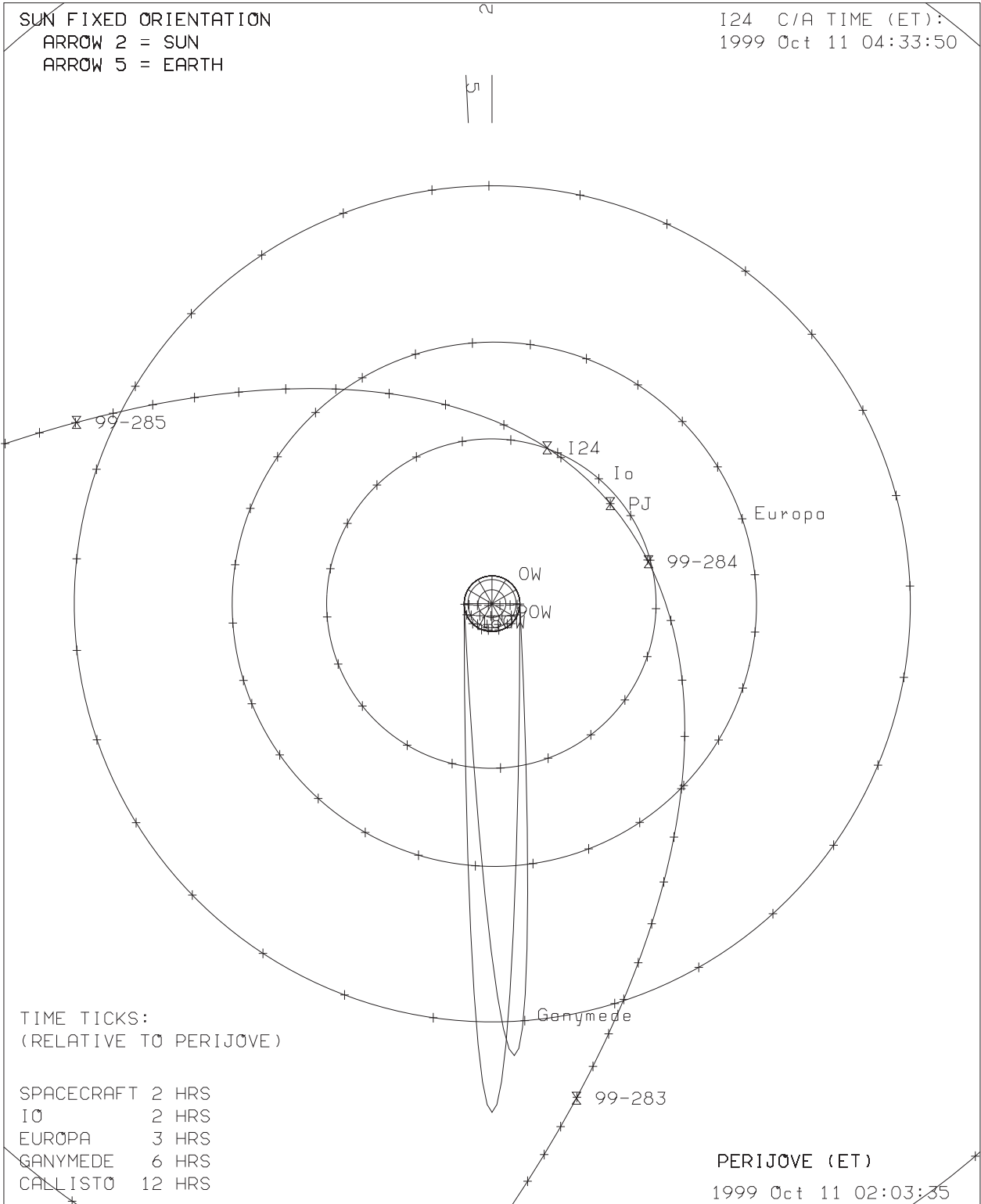
GEM-990114

NAV Feb 4, 1999

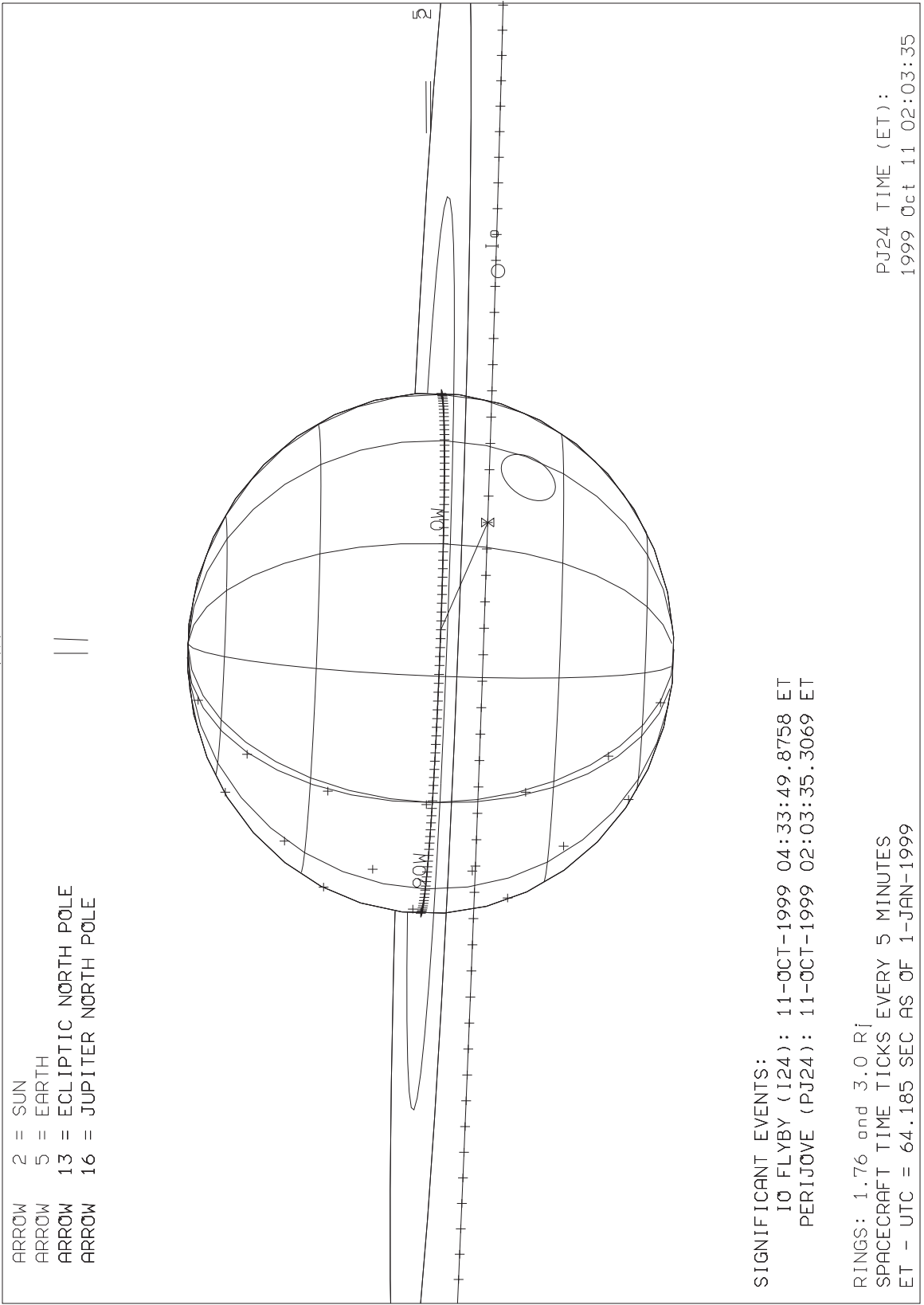
# JUPITER 24: N. TRAJ. POLE VIEW (+/- 2 DAYS)



# JUPITER 24: N. TRAJ. POLE VIEW (+/- 1 DAY)



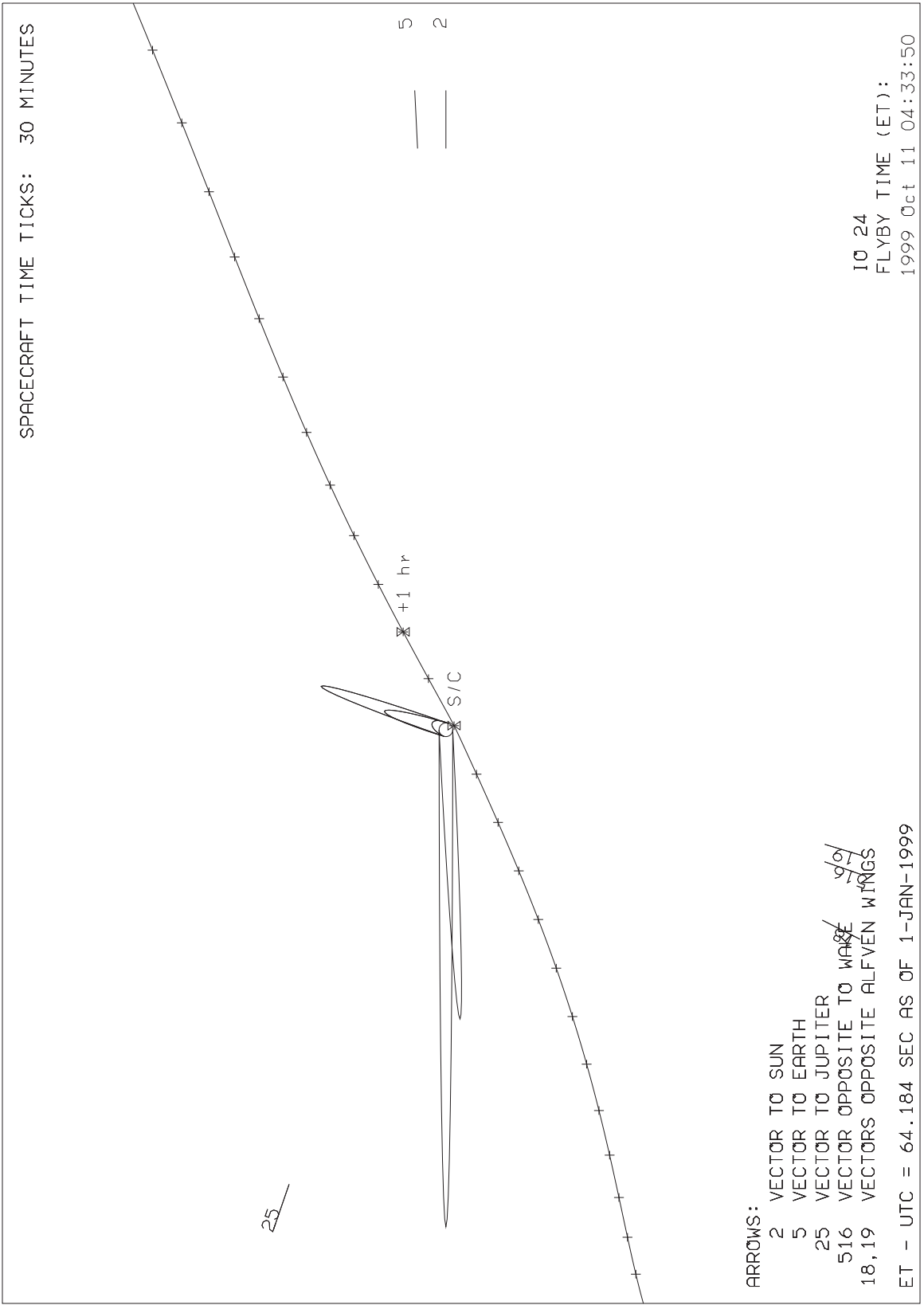
# JUPITER 24: GROUNDTRACK AT CLOSEST APPROACH



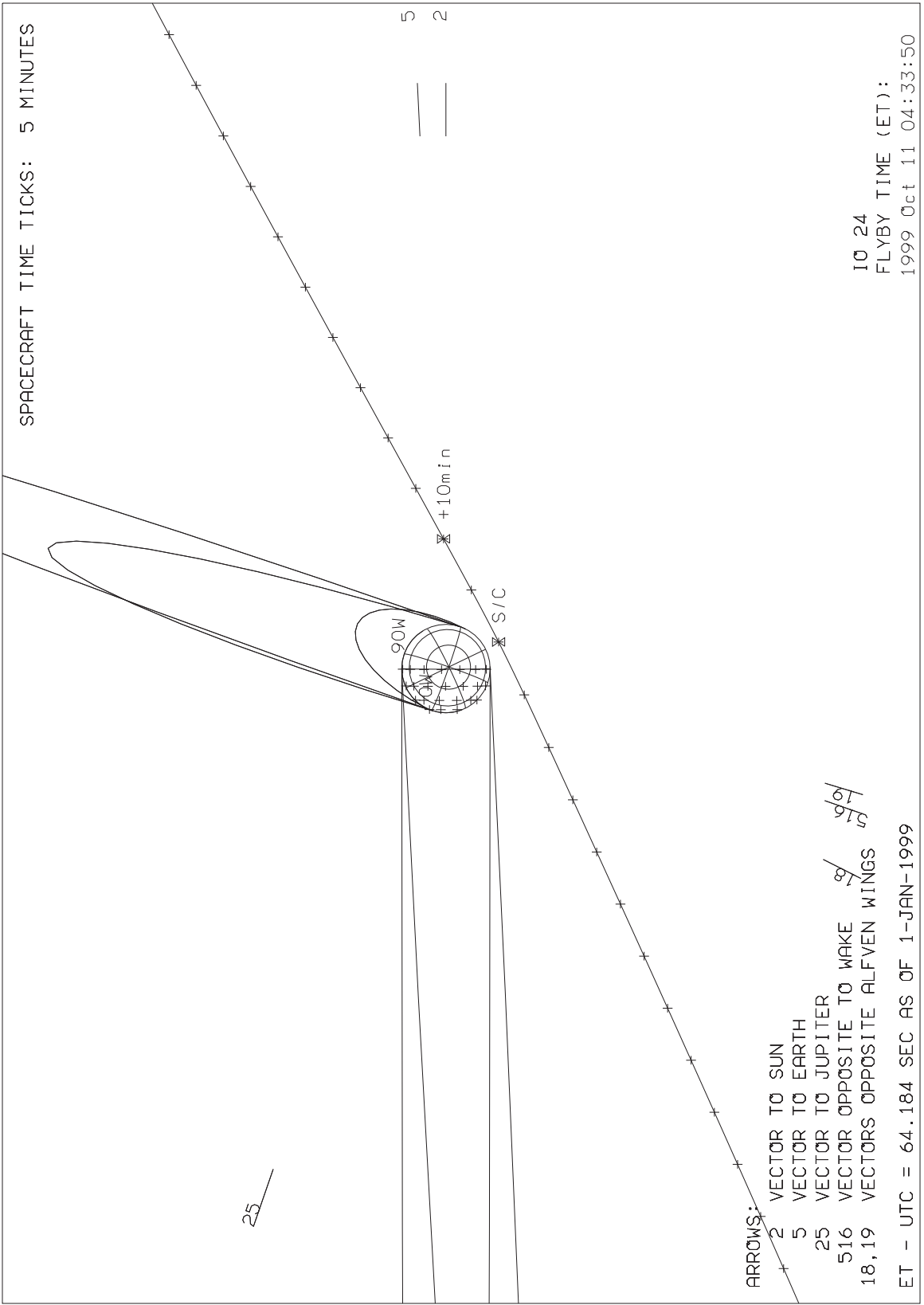
PJ24 TIME (ET):  
 1999 Oct 11 02:03:35

NAV Feb 4, 1999

IO 24: N. TRAJ POLE VIEW (+/- 6 HRS)

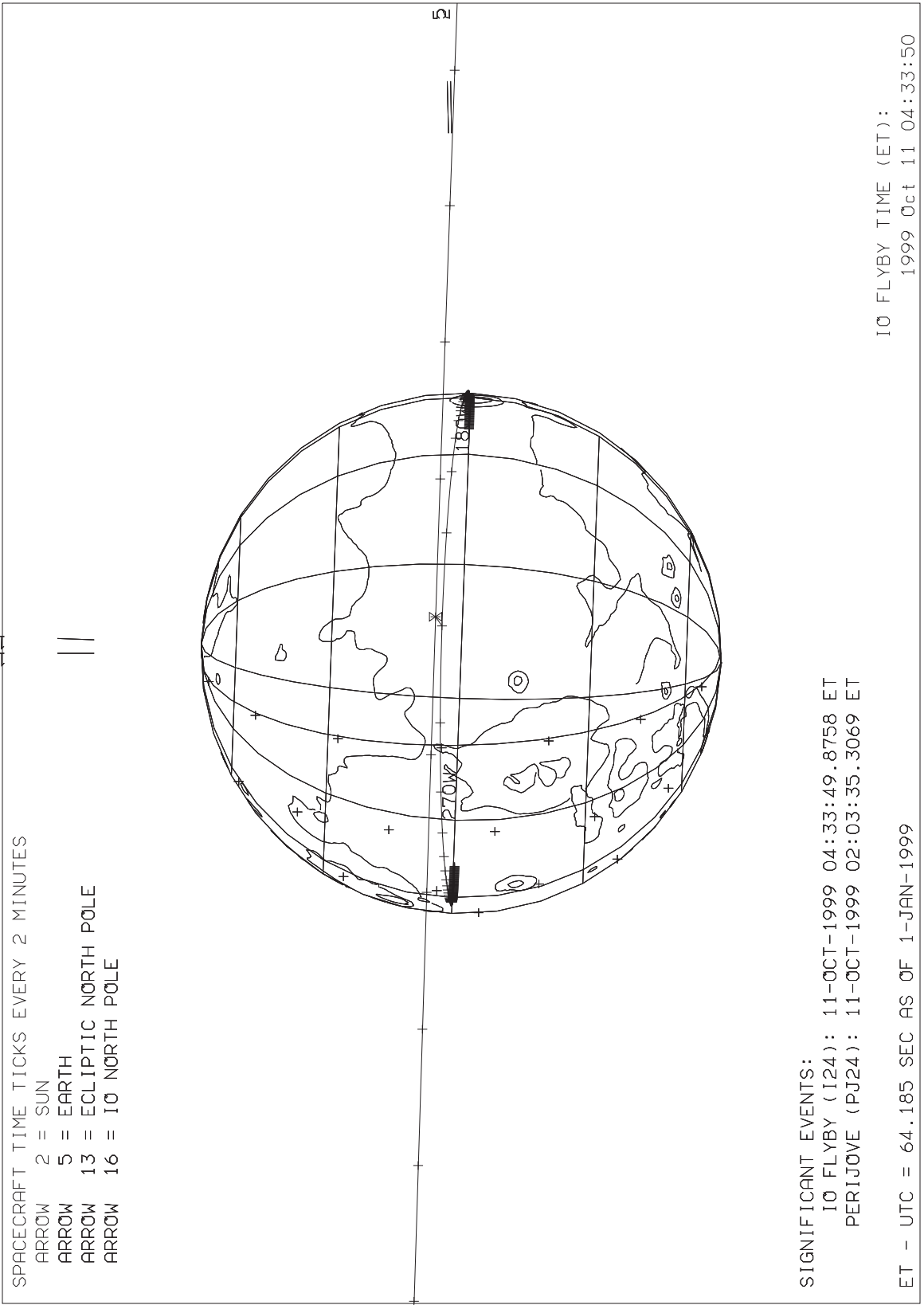


I0 24: N. TRAJ POLE VIEW (+/- 1 HR)





# IO 24: GROUNDTRACK AT CLOSEST APPROACH



## Chapter 4 - NIMS Observation Summaries

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## Introduction to Chapter 4

This chapter summarizes the NIMS I24 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 I24 Sequence. The information in this summary is derived from the I24 SEFs (Spacecraft Event File) and PBTs (Playback Tables) with inputs from the NIMS Science Coordinators regarding the start time and duration of the NIMS observations. There are twelve columns of information in this table:

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

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

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

The NIMS Obstab (Observation Table) is a time-ordered listing of the NIMS obsrvation parameters for use by downlink data processing of the NIMS I24 data. It is also derived from the I24 SEFs and PBTs. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry.

Sequence:		I24AGE Safing		Created: 10/5/99		Begin: 99-283/04:00:00		Finish: 99-287/03:00:00			
Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1	99	283	04:00:00.000	20A3FD	40HRPR	RCT Heater OFF (primary relay)	400	4	0	5,206,474:26:8	
2	99	283	04:00:00.000	20A3EX	37HR	Replacement Heaters OFF	400	4	0	5,206,474:26:8	
3	99	283	04:00:00.000	20A3EW	37A	NIMS Power ON	400	4	0	5,206,474:26:8	
4	99	283	04:00:00.000	20A3FF	40T2R	PCT Heater 2 OFF	400	4	0	5,206,474:26:8	
5	99	283	04:00:00.000	20A3FE	40T1PR	PCT Heater 1 OFF (primary relay)	400	4	0	5,206,474:26:8	
6	99	283	04:00:00.000	20A3FB	37F2PR	Shield Flash Heater OFF (primary relay)	400	4	0	5,206,474:26:8	
7	99	283	04:00:00.000	20A3FA	37F1PR	Radiator Flash Heater OFF (primary relay)	400	4	0	5,206,474:26:8	
8	99	283	04:00:00.000	20A3EZ	37C2PR	Optics Heater 2 OFF (primary relay)	400	4	0	5,206,474:26:8	
9	99	283	04:00:00.000	20A3EY	37C1PR	Optics Heater 1 OFF (primary relay)	400	4	0	5,206,474:26:8	
10	99	283	04:00:00.133		DMS: : READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,206,474:27:0	
11	99	283	04:00:41.466	432JA6B	6RTDS2	NIMDSL, AACNCG, RT	400	4	0	5,206,474:89:0	
12	99	283	04:00:42.133	432JA431A6A	6RCDL	DDSNCG, PLSDSL, EP	400	4	0	5,206,474:90:0	
13	99	283	04:00:42.800	432JA6D	6RTSL2	NIMNCG, AACSEL, RT	400	4	0	5,206,475:00:0	
14	99	283	04:00:42.800	432JA6C	6RTSL1	R/T Select of DDS and	400	4	0	5,206,475:00:0	
15	99	283	04:02:03.466	488AA6A	6TMSED	NORM, EH5	400	4	0	5,206,476:30:0	
16	99	283	04:02:30.133	200A6A	6HICON	Sci, Eng, and D/L Chan	400	4	0	5,206,476:70:0	
17	99	283	04:09:40.800		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,206,483:79:0	
18	99	283	04:09:40.800	465KA6A	6DMSC	DMS Control Tape P/B 7.68kbps	400	4	0	5,206,483:79:0	
19	99	283	04:09:47.466		DMS: : *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,206,483:89:0	
20	99	283	04:09:48.866		DMS: : *P SLEW	P7, TRACK 1, FWD, TIC *202.24 +/-	400	4	0	5,206,484:00:1	
21	99	283	04:09:48.866		DMS: : *AT SPD	P7, TRACK 1, FWD, TIC 202.24 +/-	400	4	0	5,206,484:00:1	
22	99	283	04:10:49.466		DMS: : *RUNDOWN	P7, TRACK 1, FWD, TIC *216.45 +/-	400	4	0	5,206,485:00:0	
23	99	283	04:10:49.466	465KA6B	6DMSC	DMS Control Tape stop	400	4	0	5,206,485:00:0	
24	99	283	04:10:50.666		DMS: : *READY	RDY, TRACK 1, FWD, TIC *216.51 +/-	400	4	0	5,206,485:01:8	
25	99	283	04:15:42.133	175KA422A6A	6DMSC	R28.1	400	4	0	5,206,489:75:0	
26	99	283	04:15:42.133		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 216.51 +/-	400	4	0	5,206,489:75:0	
27	99	283	04:15:48.800		DMS: : *RUNUP	R28, TRACK 1, FWD, TIC 216.51 +/-	400	4	0	5,206,489:85:0	
28	99	283	04:15:52.133	175KA176A6A	6TMREC	MPW	400	4	0	5,206,489:90:0	
29	99	283	04:15:52.800		DMS: : *AT SPD	28.8 KBPS PWS + NIMS RECORD Record Mode C	400	4	0	5,206,490:00:0	
30	99	283	04:15:52.800		DMS: : *RECORD	R28, TRACK 1, FWD, TIC 218.01 +/-	400	4	0	5,206,490:00:0	
31	99	283	04:30:00.133	20TO4A	7SAFE	STOP	400	4	0	5,206,503:88:0	
32	99	283	04:30:50.133	20TO4B	7SLEW	DIS, POS, 0.0	400	4	0	5,206,504:72:0	
33	99	283	04:30:56.133	20TO4E	7STAR	1,1610,278,815,3	400	4	0	5,206,504:81:0	
34	99	283	04:30:58.133	20TO4F	7STAR	2,9000,2,664,14,	400	4	0	5,206,504:84:0	
35	99	283	04:31:00.133	20TO4G	7STAR	3,1610,278,815,3	400	4	0	5,206,504:87:0	
36	99	283	04:31:02.133	20TO4H	7STAR	4,9000,2,664,14,	400	4	0	5,206,504:90:0	
37	99	283	04:31:04.133	20TO4I	7STAR	5,1610,278,815,3	400	4	0	5,206,505:02:0	
38	99	283	04:31:06.133	20TO4J	7STAR	6,9000,2,664,14,	400	4	0	5,206,505:05:0	
39	99	283	04:35:02.800	432PD431A6A	6RCDL	DDSNCG, PLSNCG, EP	400	4	0	5,206,508:87:0	
40	99	283	04:35:03.466	432PD6A	6RTSL1	R/T Select of DDS and	400	4	0	5,206,508:88:0	
41	99	283	04:57:31.466	488AA6B	6TMSED	NORM, EH6	400	4	0	5,206,531:17:0	
42	99	283	06:04:16.800		DMS: : *RUNDOWN	R28, TRACK 1, FWD, TIC *5934.41 +/-	400	4	0	5,206,597:19:0	
43	99	283	06:04:16.800	175KA422A6B	6DMSC	RDY, 0	400	4	0	5,206,597:19:0	
44	99	283	06:04:18.000		DMS: : *READY	RDY, TRACK 1, FWD, TIC *5934.71 +/-	400	4	0	5,206,597:20:8	
45	99	283	08:01:04.133	20RA6B	6RTSL1	R/T Select of DDS and	400	4	0	5,206,712:65:0	
46	99	283	08:05:24.133	192GA4A	7CONE	9.0, 0.0	400	4	0	5,206,717:00:0	
47	99	283	08:09:26.800	465KB6A	6DMSC	RDY, 2	400	4	0	5,206,721:00:0	
48	99	283	08:09:26.800		DMS: : READY	RDY, TRACK *2, *REV, TIC 5934.71 +/-	400	4	0	5,206,721:00:0	
49	99	283	08:13:29.466	176GA6A	6TMREC	BPT	400	4	0	5,206,725:00:0	
50	99	283	08:15:44.133	176GA6B	6TMREC	NRC	400	4	0	5,206,727:20:0	
51	99	283	08:15:46.133	50ZZ6XX	6DMSC	R7.0	400	4	0	5,206,727:23:0	
52	99	283	08:15:46.133		DMS: : *US-RUNUP	P7, TRACK *1, *FWD, TIC 5934.71 +/-	400	4	0	5,206,727:23:0	
53	99	283	08:15:47.533		DMS: : *US_AT_SP	P7, TRACK 1, FWD, TIC *5934.83 +/-	400	4	0	5,206,727:25:1	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MFI
54	99	283	08:15:52.800		DMS: : *US RD	P7, TRACK 1, FWD, TIC *5936.07 +/-	400	4	0	5,206,727:33:0	
55	99	283	08:15:54.000		DMS: : *RUNUP	R7, TRACK *2, *REV, TIC *5936.13 +/-	400	4	0	5,206,727:34:8	
56	99	283	08:15:55.400		DMS: : *AT SPD	R7, TRACK 2, REV, TIC *5936.01 +/-	400	4	0	5,206,727:36:9	
57	99	283	08:15:56.133		DMS: : *RECORD	R7, TRACK 2, REV, TIC *5935.83 +/-	400	4	0	5,206,727:38:0	
58	99	283	08:16:07.466	50ZZ6RD	6DMS RDY,0	DMS Control Tape stop	400	4	0	5,206,727:55:0	
59	99	283	08:16:07.466		DMS: : *RUNDOWN	R7, TRACK 2, REV, TIC *5933.18 +/-	400	4	0	5,206,727:55:0	
60	99	283	08:16:08.666		DMS: : *READY	RDY, TRACK 2, REV, TIC *5933.12 +/-	400	4	0	5,206,727:56:8	
61	99	283	08:17:32.133	192GA4B	<b>7CONE</b> 9.0,90.0	Check S/P Position	400	4	0	5,206,729:00:0	
62	99	283	09:01:00.133	165GB4A	<b>7SCAN</b> NORM,233.136999,	Check S/P Position	400	4	0	5,206,771:90:0	
63											
<b>64</b>					<b>SPACECRAFT</b>	<b>SAFING</b>					

Sequence:		I24AZF		Created: 10/10/99		Begin: 99-284/03:00:00		Finish: 99-287/03:00:00			
Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1	99	284	00:30:17.400	24NNDTECT01-							
2	99	284	00:50:30.734	24NNDTECT01-	-----START----- -----STOP-----						
3	99	284	03:00:00.066		DMS: : READY	RDY, TRACK 1, FWD, TIC 201.00 +/-					5,207,839:12:0
4	99	284	03:00:51.400	432JA6B	6RTDS2	NIMDSL, AACNCG, RT					5,207,839:89:0
5	99	284	03:00:52.066	432JA431A6A	6RCDSL	DDSNCG, PLSDSL, EP					5,207,839:90:0
6	99	284	03:00:52.733	432JA6C	6RTSL1	R/T Select of DDS and					5,207,840:00:0
7	99	284	03:00:52.733	432JA6D	6RTSL2	NIMNCG, AACSEL, RT					5,207,840:00:0
8	99	284	03:03:34.066	200A6A	6HICON						5,207,841:55:0
9	99	284	03:03:34.066	465KD6A	6DMST	235 DMS Slew to TIC					5,207,842:60:0
10	99	284	03:03:34.066		DMS: : *SLEW-TIC	P7, TRACK 1, FWD, TIC 201.00 +/-					5,207,842:60:0
11	99	284	03:03:34.066		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 201.00 +/-					5,207,842:60:0
12	99	284	03:03:40.733		DMS: : *RUNUP	P7, TRACK 1, FWD, TIC 201.00 +/-					5,207,842:70:0
13	99	284	03:03:42.133		DMS: : *AT SPD	P7, TRACK 1, FWD, TIC * 201.12 +/-					5,207,842:72:1
14	99	284	03:05:56.866		DMS: : *RUNDOWN	P7, TRACK 1, FWD, TIC * 232.94 +/-					5,207,845:01:2
15	99	284	03:05:58.066		DMS: : *READY	RDY, TRACK 1, FWD, TIC * 233.00 +/-					5,207,845:03:0
16	99	284	03:11:39.400	432PD431A6A	6RCDSL	DDSNCG, PLSNCG, EP					5,207,850:60:0
17	99	284	03:11:40.066	432PD6A	6RTSL1	R/T Select of DDS and					5,207,850:61:0
18	99	284	03:12:00.066	431OA6A	6RCSEL	DDSNCG, PLSNCG, EP					5,207,851:00:0
19	99	284	03:13:13.400	282NA431A6A	6RCSEL	DDSNCG, PLSSEL, EP					5,207,852:19:0
20	99	284	03:20:19.400	20ZS6A	6CKSUM	MAG, 4040, 46F0					5,207,859:21:0
21	99	284	03:20:59.400	20ZS6B	6MROH	12 read from LLM1A12, 2282, 0, A2					5,207,859:81:0
22	99	284	03:20:59.400	20ZS6B	6MROH	12, 2282, 0, A2					5,207,859:81:0
23	99	284	03:21:10.066	20ZU3Q	37HR	1 Replacement Heaters OFF					5,207,860:06:0
24	99	284	03:21:12.066	20ZU3S	37HR	2 Replacement Heaters OFF					5,207,860:09:0
25	99	284	03:21:38.066	20ZU3R	37A	1 NIMS Power ON	260	4	0	5,207,860:48:0	
26	99	284	03:21:40.066	20ZU3T	37A	2 NIMS Power ON	260	4	0	5,207,860:51:0	
27	99	284	03:23:39.400	20ZU4A	37IST	1,2,0,OFF,0,0,0					5,207,862:48:0
28	99	284	03:24:03.400	20ZF5A	37PL	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,207,862:48:0	
29	99	284	03:24:10.066	20ZF5B	37MRL	Program Load (halts microprocessor & unwri	4	0	5,207,862:84:0		
30	99	284	03:24:16.733	20ZF6A	6MCOPI	Memory Realocate (software operates from R	4	0	5,207,863:03:0		
31	99	284	03:24:26.733	20ZF6B	6MCOPI	NIMS, 1000, LLM1A, 7300, 77F7	4	0	5,207,863:13:0		
32	99	284	03:24:36.733	20ZF5C	37IRT	NIMS, 1598, LLM1A, 77F8, 781D	4	0	5,207,863:28:0		
33	99	284	03:24:38.066	20ZF5D	37MNI	Instrument Reset (goes into POR state)					5,207,863:43:0
34	99	284	03:24:49.400	20ZF4A	37IST	Memory Normal (software operates from ROM)	260	4	0	5,207,863:45:0	
35	99	284	03:27:00.066	41SX99A	POWER	Chopper ON, Sync, Chopper (RefGain State	4R0	4	0	5,207,863:62:0	
36	99	284	03:27:04.066	41SX3A	40T1PR	Change to Data Taking Mode	4R0	4	0	5,207,865:76:0	
37	99	284	03:27:14.066	41SX3B	40T1PR	1 PCT Heater 1 OFF (primary relay)	4R0	4	0	5,207,865:82:0	
38	99	284	03:27:24.066	41SX3C	40T2R	2 PCT Heater 1 OFF (primary relay)	4R0	4	0	5,207,866:06:0	
39	99	284	03:27:34.066	41SX3D	40T2R	1 PCT Heater 2 OFF	4R0	4	0	5,207,866:21:0	
40	99	284	03:33:16.066	432OA431A6A	6RCDSL	2 PCT Heater 2 OFF	4R0	4	0	5,207,866:36:0	
41	99	284	03:33:16.733	432OA6A	6RTSL1	Record Deselect (DDS o	4R0	4	0	5,207,872:03:0	
42	99	284	03:39:18.066	465KZ6A	6DMSC	R/T Select of DDS and	4R0	4	0	5,207,872:04:0	
43	99	284	03:39:18.066		DMS: : READY	DMS Control Tape stop	4R0	4	0	5,207,878:00:0	
44	99	284	03:41:18.733	165GH4A	7SCAN	RDY, TRACK *3, FWD, TIC 233.00 +/-	4R0	4	0	5,207,878:00:0	
45	99	284	03:42:09.400		DMS: : *E4-DELAY	Check S/P Position	4R0	4	0	5,207,879:90:0	
46	99	284	03:42:09.400	175TA422A6A	6DMSC	RDY, TRACK *1, FWD, TIC 233.00 +/-	4R0	4	0	5,207,880:75:0	
47	99	284	03:42:10.733	117GH	CSMOS	DMS Control	4R0	4	0	5,207,880:75:0	
48	99	284	03:42:16.066		DMS: : *RUNUP	***** GROUP START CSMOS	4R0	4	0	5,207,880:77:0	
49	99	284	03:42:17.400	175TA176A6A	6TMREC	R7, TRACK *3, FWD, TIC 233.00 +/-	4R0	4	0	5,207,880:85:0	
50	99	284	03:42:17.466		DMS: : *AT SPD	7.68 KBPS LOW RATE SCI PWS RECORD Record	4R0	4	0	5,207,880:87:0	
51	99	284	03:42:17.466		DMS: : *RECORD	R7, TRACK 3, FWD, TIC * 233.12 +/-	4R0	4	0	5,207,880:87:1	
52	99	284	03:42:18.733	165GH4B	7VECT	R7, TRACK 3, FWD, TIC * 233.12 +/-	4R0	4	0	5,207,880:87:1	
53	99	284	03:42:20.066	117GH105A106A4A	7STRP	Inert vect update UTC	4R0	4	0	5,207,880:89:0	
						Slew = 0.14	4R0	4	0	5,207,881:00:0	

54	99	284	03:42:20.066	43:1MA6A	6RCSEL	DDSSSEL,PLSNCG,EP	Record Select (DDS onl)	4R0	4	0	5,207,881:00:0
55	99	284	03:42:24.067	24NNDTECT02-	37PL	-----START-----	Program Load (halts microprocessor & unwri	4R0	4	0	5,207,881:22:0
56	99	284	03:42:34.733	20FB5A	37PL		Memory Realocate (software operates from R	4	0	5,207,881:24:0	
57	99	284	03:42:36.066	20FB5B	37MRL		NIMS,1000,LLM1A,7300,77F7	4	0	5,207,881:32:0	
58	99	284	03:42:41.400	20FB6A	6MCOPY	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,207,881:47:0	
59	99	284	03:42:51.400	20FB6B	6MCOPY	NIMS	Instrument Reset (goes into POR state)	4	0	5,207,881:52:0	
60	99	284	03:42:54.733	20FB5C	37IRT		Memory Normal (software operates from ROM)	260	4	0	5,207,881:62:0
61	99	284	03:43:01.400	20FB5D	37MN		Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,207,881:73:0
62	99	284	03:43:08.733	20FB4A	37IST	1,2,0,OFF,0,0,0	Gain State 2	2R0	4	0	5,207,882:73:0
63	99	284	03:44:09.400	20FB4B	37IST	0,2,0,OFF,0,1,0	Slew =12.01	2R0	4	0	5,207,883:08:0
64	99	284	03:44:26.733	117GH105A106A4B	7STRP	0.017402,-0.0012	Slew =,0.14	2R0	4	0	5,207,883:17:0
65	99	284	03:44:32.733	117GH105A106A4C	7STRP	-0.017402,0,0,0,0	Selects mirror (spatial) edit table	2R0	4	0	5,207,883:73:0
66	99	284	03:45:10.066	20FB4C	37MB	0,0,0,0,0,0	Long Map, Grating Start Position =00	2R3	4	0	5,207,884:73:0
67	99	284	03:46:10.733	20FB4D	37OP	3,0	Loads wavelength edit table	2R3	4	0	5,207,884:74:0
68	99	284	03:46:11.400	20FB4E	37ETB	4,C4,35,FF,FF	Slew =12.01	2R3	4	0	5,207,885:25:0
69	99	284	03:46:39.400	117GH105A106A4D	7STRP	0.017402,0,0,0,0	Slew =,0.14	2R3	4	0	5,207,885:34:0
70	99	284	03:46:45.400	117GH105A106A4E	7STRP	-0.017402,0,0,0,0	Slew =12.01	2R3	4	0	5,207,887:42:0
71	99	284	03:48:52.066	117GH105A106A4F	7STRP	0.017402,-0.0012	Slew =,0.14	2R3	4	0	5,207,887:51:0
72	99	284	03:48:58.066	117GH105A106A4G	7STRP	-0.017402,0,0,0,0	B1A1A,5542,NIMS,150F,1517	2R3	4	0	5,207,888:06:0
73	99	284	03:49:28.733	20FG6A	6MCOPY	B1A1A,554B,NIMS,150F,1517	B1A1A,554B,NIMS,150F,1517	2R3	4	0	5,207,888:19:0
74	99	284	03:49:37.400	20FG6B	6MCOPY	B1A1A,554C,NIMS,150F,1517	B1A1A,554C,NIMS,150F,1517	2R3	4	0	5,207,889:07:0
75	99	284	03:50:30.066	20FG6C	6MCOPY	B1A1A,554D,NIMS,150F,1517	B1A1A,554D,NIMS,150F,1517	2R3	4	0	5,207,889:20:0
76	99	284	03:50:38.733	20FG6D	6MCOPY	B1A1A,554E,NIMS,150F,1517	Slew =12.01	2R3	4	0	5,207,889:59:0
77	99	284	03:51:04.733	117GH105A106A4H	7STRP	0.017402,-0.0012	Slew =,0.14	2R3	4	0	5,207,891:76:0
78	99	284	03:51:10.733	117GH105A106A4I	7STRP	-0.017402,0,0,0,0	Slew =,0.14	2R3	4	0	5,207,891:85:0
79	99	284	03:51:31.400	20FG6E	6MCOPY	B1A1A,5566,NIMS,150F,1517	B1A1A,5566,NIMS,150F,1517	2R3	4	0	5,207,892:23:0
80	99	284	03:51:40.066	20FG6F	6MCOPY	B1A1A,556F,NIMS,150F,1517	B1A1A,556F,NIMS,150F,1517	2R3	4	0	5,207,893:11:0
81	99	284	03:52:32.733	20FG6G	6MCOPY	B1A1A,5578,NIMS,150F,1517	B1A1A,5578,NIMS,150F,1517	2R3	4	0	5,207,893:24:0
82	99	284	03:52:41.400	20FG6H	6MCOPY	B1A1A,5581,NIMS,150F,1517	Slew =12.01	2R3	4	0	5,207,894:02:0
83	99	284	03:53:17.400	117GH105A106A4J	7STRP	0.017402,-0.0012	Slew =,0.14	2R3	4	0	5,207,894:11:0
84	99	284	03:53:23.400	117GH105A106A4K	7STRP	-0.017402,0,0,0,0	B1A1A,558A,NIMS,150F,1517	2R3	4	0	5,207,892:10:0
85	99	284	03:53:34.066	20FG6I	6MCOPY	B1A1A,5593,NIMS,150F,1517	B1A1A,5593,NIMS,150F,1517	2R3	4	0	5,207,892:23:0
86	99	284	03:53:42.733	20FG6J	6MCOPY	B1A1A,559C,NIMS,150F,1517	B1A1A,559C,NIMS,150F,1517	2R3	4	0	5,207,893:11:0
87	99	284	03:54:35.400	20FG6K	6MCOPY	B1A1A,55A5,NIMS,150F,1517	B1A1A,55A5,NIMS,150F,1517	2R3	4	0	5,207,893:24:0
88	99	284	03:54:44.066	20FG6L	6MCOPY	B1A1A,55A5,NIMS,150F,1517	Slew =12.01	2R3	4	0	5,207,894:02:0
89	99	284	03:55:30.066	117GH105A106A4L	7STRP	0.017402,-0.0012	Slew =,0.14	2R3	4	0	5,207,894:11:0
90	99	284	03:55:36.066	117GH105A106A4M	7STRP	-0.017402,0,0,0,0	B1A1A,55AE,NIMS,150F,1517	2R3	4	0	5,207,894:12:0
91	99	284	03:55:36.733	20FG6M	6MCOPY	B1A1A,55B7,NIMS,150F,1517	B1A1A,55B7,NIMS,150F,1517	2R3	4	0	5,207,894:25:0
92	99	284	03:55:45.400	20FG6N	6MCOPY	B1A1A,55C0,NIMS,150F,1517	B1A1A,55C0,NIMS,150F,1517	2R3	4	0	5,207,895:13:0
93	99	284	03:56:38.066	20FG6O	6MCOPY	B1A1A,55C9,NIMS,150F,1517	B1A1A,55C9,NIMS,150F,1517	2R3	4	0	5,207,895:26:0
94	99	284	03:56:46.733	20FG6P	6MCOPY	B1A1A,55D2,NIMS,150F,1517	Slew =12.01	2R3	4	0	5,207,896:14:0
95	99	284	03:57:39.400	20FG6Q	6MCOPY	B1A1A,55D2,NIMS,150F,1517	Slew =,0.14	2R3	4	0	5,207,896:19:0
96	99	284	03:57:42.733	117GH105A106A4N	7STRP	0.017402,-0.0012	B1A1A,55DB,NIMS,150F,1517	2R3	4	0	5,207,896:27:0
97	99	284	03:57:48.066	20FG6R	6MCOPY	B1A1A,55E4,NIMS,150F,1517	Slew =,0.14	2R3	4	0	5,207,896:28:0
98	99	284	03:57:48.733	117GH105A106A4O	7STRP	-0.017402,0,0,0,0	B1A1A,55E4,NIMS,150F,1517	2R3	4	0	5,207,897:15:0
99	99	284	03:58:40.733	20FG6S	6MCOPY	B1A1A,55ED,NIMS,150F,1517	B1A1A,55ED,NIMS,150F,1517	2R3	4	0	5,207,897:28:0
100	99	284	03:58:49.400	20FG6T	6MCOPY	B1A1A,55F6,NIMS,150F,1517	B1A1A,55F6,NIMS,150F,1517	2R3	4	0	5,207,898:16:0
101	99	284	03:59:42.066	20FG6U	6MCOPY	B1A1A,55FF,NIMS,150F,1517	Slew =12.01	2R3	4	0	5,207,898:29:0
102	99	284	03:59:50.733	20FG6V	6MCOPY	B1A1A,55FF,NIMS,150F,1517	Slew =,0.14	2R3	4	0	5,207,898:36:0
103	99	284	03:59:55.400	117GH105A106A4P	7STRP	0.017402,-0.0012	B1A1A,5608,NIMS,150F,1517	2R3	4	0	5,207,898:45:0
104	99	284	04:00:01.400	117GH105A106A4Q	7STRP	-0.017402,0,0,0,0	B1A1A,5611,NIMS,150F,1517	2R3	4	0	5,207,899:17:0
105	99	284	04:00:43.400	20FG6W	6MCOPY	B1A1A,5608,NIMS,150F,1517	R/T Select of DDS and	2R3	4	0	5,207,899:30:0
106	99	284	04:00:52.066	20FG6X	6MCOPY	B1A1A,5611,NIMS,150F,1517	B1A1A,5611,NIMS,150F,1517	2R3	4	0	5,207,899:30:0
107	99	284	04:01:04.066	20RF6B	6RTSL1		B1A1A,561A,NIMS,150F,1517	2R3	4	0	5,207,899:48:0
108	99	284	04:01:44.733	20FG6Y	6MCOPY	B1A1A,561A,NIMS,150F,1517	B1A1A,561A,NIMS,150F,1517	2R3	4	0	5,207,900:18:0
109	99	284	04:01:53.400	20FG6Z	6MCOPY	B1A1A,5623,NIMS,150F,151C	B1A1A,5623,NIMS,150F,151C	2R3	4	0	5,207,900:31:0

110	99	284	04:02:08.066	117GH105A106A4R	7STRP	0.017402,-0.0012	Slew =12.01	2R3	4	0	5,207,900:53:0
111	99	284	04:02:14.066	117GH105A106A4S	7STRP	-0.017402,0.0,0,	Slew =,0.14	2R3	4	0	5,207,900:62:0
112	99	284	04:02:37.400	24NNDTECT02-	-----STOP-----			2R3	4	0	:
113	99	284	04:04:20.733	117GH105A106A4T	7STRP	0.017402,-0.0012	Slew =12.01	2R3	4	0	5,207,902:70:0
114	99	284	04:04:26.733	117GH105A106A4U	7STRP	-0.017402,0.0,0,	Slew =,0.14	2R3	4	0	5,207,902:79:0
115	99	284	04:06:33.400	117GH105A106A4V	7STRP	0.017402,-0.0012	Slew =12.01	2R3	4	0	5,207,904:87:0
116	99	284	04:06:39.400	117GH105A106A4W	7STRP	-0.017402,0.0,0,	Slew =,0.14	2R3	4	0	5,207,905:05:0
117	99	284	04:08:46.066	117GH105A106A4X	7STRP	0.017402,-0.0012	Slew =12.01	2R3	4	0	5,207,907:13:0
118	99	284	04:08:52.066	117GH105A106A4Y	7STRP	-0.017402,0.0,0,	Slew =,0.14	2R3	4	0	5,207,907:22:0
119	99	284	04:10:58.733	117GH105A106A4Z	7STRP	0.017402,-0.0012	Slew =12.01	2R3	4	0	5,207,909:30:0
120	99	284	04:11:04.733	117GH105A106A4AA	7STRP	-0.017402,0.0,0,	Slew =,0.14	2R3	4	0	5,207,909:39:0
121	99	284	04:13:11.400	117GH105A106A4AB	7STRP	0.017402,-0.0012	Slew =12.01	2R3	4	0	5,207,911:47:0
122	99	284	04:13:17.400	117GH105A106A4AC	7STRP	-0.017402,0.0,0,	Slew =,0.14	2R3	4	0	5,207,911:56:0
123	99	284	04:15:24.066	117GH105A106A4AD	7STRP	0.017402,-0.0012	Slew =12.01	2R3	4	0	5,207,913:64:0
124	99	284	04:15:30.066	117GH105A106A4AE	7STRP	-0.017402,0.0,0,	Slew =,0.14	2R3	4	0	5,207,913:73:0
125	99	284	04:15:56.733	20DA5A	37PL			2R3	4	0	5,207,914:22:0
126	99	284	04:15:58.066	20DA5B	37MRL		Program Load (halts microprocessor & unwri	4	0	5,207,914:22:0	
127	99	284	04:16:00.066	20DA6A	6MCOPI	NIMS	Memory Realocate (software operates from R	4	0	5,207,914:24:0	
128	99	284	04:16:10.066	20DA6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,207,914:27:0	
129	99	284	04:16:23.400	20DA5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,207,914:62:0	
130	99	284	04:16:26.733	20DA5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,207,914:67:0
131	99	284	04:16:46.734	24NNLOKIRA01-	-----START-----			260	4	0	:
132	99	284	04:16:58.066	20DA4A	37IST	1.2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,207,915:23:0
133	99	284	04:17:36.733	117GH105A106A4AF	7STRP	0.017402,-0.0012	Slew =12.01	2R0	4	0	5,207,915:81:0
134	99	284	04:17:42.733	117GH105A106A4AG	7STRP	-0.017402,0.0,0,	Slew =,0.14	2R0	4	0	5,207,915:90:0
135	99	284	04:18:48.067	24NNLOKIRA01-	-----STOP-----			2R0	4	0	:
136	99	284	04:19:40.066	125DA4A	37IST	0.2,0,OFF,0,1,1	Gain State 4	4R0	4	0	5,207,917:84:0
137	99	284	04:19:40.066	125DA	NIMSINIT	GS	##### GROUP START INIT	4R0	4	0	5,207,917:84:0
138	99	284	04:19:49.400	117GH11A	CSMOS	GE	**** GROUP END CSMOS	4R0	4	0	5,207,918:07:0
139	99	284	04:20:00.066	481UA4A	7VECT		Inert vect update UTC	4R0	4	0	5,207,918:23:0
140	99	284	04:20:40.733	125DA11A	NIMSINIT	GE	##### GROUP END INIT	4R0	4	0	5,207,918:84:0
141	99	284	04:20:40.733	125DA4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	4R0	4	0	5,207,918:84:0
142	99	284	04:20:44.733	165DA4A	7SCAN	NORM,265.399998,	Check S/P Position	4R0	4	0	5,207,918:90:0
143	99	284	04:20:48.733	428JA6A	6RCCLR			4R0	4	0	5,207,919:05:0
144	99	284	04:20:49.400	428JA6B	6RCSET			4R0	4	0	5,207,919:06:0
145	99	284	04:20:49.400	24INLOKIRA01-	-----START-----			4R0	4	0	:
146	99	284	04:21:36.733	117DA	CSMOS	GS	**** GROUP START CSMOS	4R0	4	0	5,207,919:77:0
147	99	284	04:21:37.400	175DA422A6A	6DMSC	R28.3	DMS Control	4R0	4	0	5,207,919:78:0
148	99	284	04:21:37.400		DMS:	:*RUNDOWN	R7, TRACK 3, FWD, TIC * 786.23 +/-	4R0	4	0	5,207,919:78:0
149	99	284	04:21:38.600		DMS:	:*RUNUP	R28, TRACK 3, FWD, TIC * 786.29 +/-	4R0	4	0	5,207,919:79:8
150	99	284	04:21:41.400	127DA	NIMSTAB	GS	%%%% GROUP START TAB	4R0	4	0	5,207,919:84:0
151	99	284	04:21:41.400	127DA4A	37IOP	3.0	Long Map, Grating Start Position =00	4R3	4	0	5,207,919:84:0
152	99	284	04:21:42.066	127DA4B	37ETB	04.C4.35.FF.FF	Loads wavelength edit table	4R3	4	0	5,207,919:85:0
153	99	284	04:21:42.600		DMS:	:*AT SPD	R28, TRACK 3, FWD, TIC 787.79 +/-	4R3	4	0	5,207,919:85:8
154	99	284	04:21:42.600		DMS:	:*RECORD	R28, TRACK 3, FWD, TIC * 787.79 +/-	4R3	4	0	5,207,919:85:8
155	99	284	04:21:42.733	175DA176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	4R3	4	0	5,207,919:86:0
156	99	284	04:21:43.400	24INLOKIRA01-	NIMPBK	301DA	IO LOKI OBSERVATION	4R3	4	0	:
157	99	284	04:21:44.733	165DA4B	7VECT		Inert vect update UTC	4R3	4	0	5,207,919:89:0
158	99	284	04:21:46.066	117DA105A106A4A	7STRP	-0.0079,0.0,0,0,	Slew =,0.03	4R3	4	0	5,207,920:00:0
159	99	284	04:21:50.066	127DA11A	NIMSTAB	GE	%%%% GROUP END TAB	4R3	4	0	5,207,920:06:0
160	99	284	04:24:04.733	24INLOKIRA01-	NIMPBK	301EA	IO LOKI OBSERVATION	4R3	4	0	:
161	99	284	04:24:13.400	24INLOKIRA01-	DESEL	300DA	IO LOKI OBSERVATION	4R3	4	0	:
162	99	284	04:26:15.400	117DA11A	CSMOS	GE	**** GROUP END CSMOS	4R3	4	0	5,207,924:40:0
163	99	284	04:26:16.733	165IA4A	7SCAN	NORM,268.985996,	Check S/P Position	4R3	4	0	5,207,924:42:0
164	99	284	04:26:38.733	428JB6A	6RCCLR			4R3	4	0	5,207,924:75:0
165	99	284	04:26:39.400	428JB6B	6RCSET			4R3	4	0	5,207,924:76:0



166	99	284	04:26:42.733	24INLOKIRA01-	DESEL	300EA	IO LOKI OBSERVATION	4R3	4	0	:	:
167	99	284	04:26:43.400	175TB422A6A	6DMSC	R7.3	DMS Control	4R3	4	0	5,207,924:82:0	
168	99	284	04:26:43.400		DMS:	: *RUNDOWN	R28, TRACK 3, FWD, TIC *1052.16 +/-	4R3	4	0	5,207,924:82:0	
169	99	284	04:26:44.600		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *1052.46 +/-	4R3	4	0	5,207,924:83:8	
170	99	284	04:26:46.000		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *1052.58 +/-	4R3	4	0	5,207,924:85:9	
171	99	284	04:26:46.000		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 1052.58 +/-	4R3	4	0	5,207,924:85:9	
172	99	284	04:26:46.066	175TB176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	4R3	4	0	5,207,924:86:0	
173	99	284	04:27:54.067	24INHSPLE01-	*****START	*****STOP		4R3	4	0	:	
174	99	284	04:27:54.067	24INLOKIRA01-	*****STOP	*****STOP		4R3	4	0	:	
175	99	284	04:28:05.400	428JC6A	6RCCLR			4R3	4	0	5,207,926:23:0	
176	99	284	04:28:06.066	428JC6B	6RCSET		12	4R3	4	0	5,207,926:24:0	
177	99	284	04:28:12.733	175DB422A6A	6DMSC	R28.3	DMS Control	4R3	4	0	5,207,926:34:0	
178	99	284	04:28:12.733		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *1072.97 +/-	4R3	4	0	5,207,926:34:0	
179	99	284	04:28:13.933		DMS:	: *RUNUP	R28, TRACK 3, FWD, TIC *1072.97 +/-	4R3	4	0	5,207,926:35:8	
180	99	284	04:28:17.400	165IA4B	7VECT		Inert vect update UTC	4R3	4	0	5,207,926:41:0	
181	99	284	04:28:17.933		DMS:	: *AT SPD	R28, TRACK 3, FWD, TIC 1074.47 +/-	4R3	4	0	5,207,926:41:8	
182	99	284	04:28:17.933		DMS:	: *RECORD	R28, TRACK 3, FWD, TIC *1074.47 +/-	4R3	4	0	5,207,926:41:8	
183	99	284	04:28:18.066	175DB176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD	4R3	4	0	5,207,926:42:0	
184	99	284	04:28:18.733	24INHSPLE01-	NIMPBK	301DB	IO PELE OBSERVATION	4R3	4	0	:	
185	99	284	04:28:48.733	24INHSPLE01-	NIMPBK	301DU	IO PELE OBSERVATION	4R3	4	0	:	
186	99	284	04:28:54.733	117IA	CSMOS	GS	***** GROUP START CSMOS	4R3	4	0	5,207,927:06:0	
187	99	284	04:29:00.066	481UB4A	7VECT		Inert vect update UTC	4R3	4	0	5,207,927:14:0	
188	99	284	04:29:00.066	24INHSPLE01-	DESEL	300DU	IO PELE OBSERVATION	4R3	4	0	:	
189	99	284	04:29:04.733	428JD6A	6RCCLR			4R3	4	0	5,207,927:21:0	
190	99	284	04:29:05.400	428JD6B	6RCSET		14	4R3	4	0	5,207,927:22:0	
191	99	284	04:29:10.066	24INHSPLE01-	DESEL	300DB	IO PELE OBSERVATION	4R3	4	0	:	
192	99	284	04:29:10.733	116IA4A	7STRP	0.017502,0.0,0.0	Slew = -8.76	4R3	4	0	5,207,927:30:0	
193	99	284	04:29:10.733	175TC422A6A	6DMSC	R7.3	DMS Control	4R3	4	0	5,207,927:30:0	
194	99	284	04:29:10.733		DMS:	: *RUNDOWN	R28, TRACK 3, FWD, TIC *1120.88 +/-	4R3	4	0	5,207,927:30:0	
195	99	284	04:29:11.933		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *1121.18 +/-	4R3	4	0	5,207,927:31:8	
196	99	284	04:29:13.333		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 1121.30 +/-	4R3	4	0	5,207,927:33:9	
197	99	284	04:29:13.333		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *1121.30 +/-	4R3	4	0	5,207,927:33:9	
198	99	284	04:29:13.400	175TC176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	4R3	4	0	5,207,927:34:0	
199	99	284	04:29:14.734	24INHSPLE01-	*****STOP	*****STOP		4R3	4	0	:	
200	99	284	04:29:14.734	24NPPILLAN01-	*****START	*****START		4R3	4	0	:	
201	99	284	04:29:17.400	175IA422A6A	6DMSC	R806.3	DMS Control	4R3	4	0	5,207,927:40:0	
202	99	284	04:29:17.400		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *1122.25 +/-	4R3	4	0	5,207,927:40:0	
203	99	284	04:29:18.600		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *1122.31 +/-	4R3	4	0	5,207,927:41:8	
204	99	284	04:29:18.733	20DC5A	37PL		Program Load (halts microprocessor & unwri	4	0	5,207,927:42:0		
205	99	284	04:29:20.066	20DC5B	37MRL		Memory Realocate (software operates from R	4	0	5,207,927:44:0		
206	99	284	04:29:22.066	117IA105A106A4A	75TRP	-0.035014,0.0,0.0,	Slew = -1.16	4	0	5,207,927:47:0		
207	99	284	04:29:23.400	175IA176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD	4	0	5,207,927:49:0		
208	99	284	04:29:23.866		DMS:	: *RECORD	R806, TRACK 3, FWD, TIC *1188.31 +/-	4	0	5,207,927:49:7		
209	99	284	04:29:23.866		DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC 1188.31 +/-	4	0	5,207,927:49:7		
210	99	284	04:29:25.400	20DC6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5,207,927:52:0		
211	99	284	04:29:35.400	20DC6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,207,927:67:0		
212	99	284	04:29:45.400	20DC5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,207,927:82:0		
213	99	284	04:29:48.733	20DC5D	37MNI		Memory Normal (software operates from ROM)	260	4	0	5,207,927:87:0	
214	99	284	04:29:50.733	428JF6A	6RCCLR			260	4	0	5,207,927:90:0	
215	99	284	04:29:51.400	176IA6A	6TMREC	IMB	806.4 KBPS IMAGE RECORD	260	4	0	5,207,928:00:0	
216	99	284	04:29:51.400	428JF6B	6RCSET		Record Mode Chang	260	4	0	5,207,928:00:0	
217	99	284	04:29:52.066	20DC4A	37IST	1.2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (RefGain State	260	4	0	5,207,928:01:0	
218	99	284	04:29:56.733	175TD422A6A	6DMSC	R7.3	DMS Control	4R0	4	0	5,207,928:08:0	
219	99	284	04:29:56.733	117IA11A	CSMOS	GE	***** GROUP END	4R0	4	0	5,207,928:08:0	
220	99	284	04:29:56.733		DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC *1997.14 +/-	4R0	4	0	5,207,928:08:0	
221	99	284	04:29:59.466		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *2008.64 +/-	4R0	4	0	5,207,928:12:1	

222	99	284	04:30:00.733	175TD176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	Record	4R0	4	0	5,207,928:14:0
223	99	284	04:30:00.866		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *2008.76 +/-		4R0	4	0	5,207,928:14:2
224	99	284	04:30:00.866		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 2008.76 +/-		4R0	4	0	5,207,928:14:2
225	99	284	04:30:05.400	165IB4A	7SCAN	NORM,318.934998,	Check S/P Position		4R0	4	0	5,207,928:21:0
226	99	284	04:30:52.733	20DC4B	37OP	3.0	Long Map, Grating Start Position =00		4R3	4	0	5,207,929:01:0
227	99	284	04:30:56.066	117IB	CSMOS	GS	***** GROUP START CSMOS		4R3	4	0	5,207,929:06:0
228	99	284	04:31:11.400	24NIPILLAN01-			*****STOP *****		4R3	4	0	: :
229	99	284	04:31:11.400	24NIPILLAN01-			*****START *****		4R3	4	0	: :
230	99	284	04:31:12.733	428JG6A	6RCCLR				4R3	4	0	5,207,929:31:0
231	99	284	04:31:13.400	428JG6B	6RCSET				4R3	4	0	5,207,929:32:0
232	99	284	04:31:18.733	175IB422A6A	6DMSC	R806.3	DMS Control		4R3	4	0	5,207,929:40:0
233	99	284	04:31:18.733		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *2027.01 +/-		4R3	4	0	5,207,929:40:0
234	99	284	04:31:19.933		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *2027.07 +/-		4R3	4	0	5,207,929:41:8
235	99	284	04:31:22.066	165IB4B	7VECT		Inert vect update UTC		4R3	4	0	5,207,929:45:0
236	99	284	04:31:23.400	117IB105A106A4A	7STRP	0.078159,0.0,0.0	Slew =2.74		4R3	4	0	5,207,929:47:0
237	99	284	04:31:24.733	175IB176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD	Record Mode Change	4R3	4	0	5,207,929:49:0
238	99	284	04:31:25.200		DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC 2093.07 +/-		4R3	4	0	5,207,929:49:7
239	99	284	04:31:25.200		DMS:	: *RECORD	R806, TRACK 3, FWD, TIC *2093.07 +/-		4R3	4	0	5,207,929:49:7
240	99	284	04:31:25.400	24NIPILLAN01+	NIMPBK	301EB	IO MONITORING WITH SSI		4R3	4	0	: :
241	99	284	04:31:52.066	428JH6A	6RCCLR				4R3	4	0	5,207,929:90:0
242	99	284	04:31:52.733	176IB6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD	Record Mode Chang	4R3	4	0	5,207,930:00:0
243	99	284	04:31:52.733	428JH6B	6RCSET				4R3	4	0	5,207,930:00:0
244	99	284	04:31:53.400	20DC4C	37ETB	4,C4,35,FF,FF	Loads wavelength edit table		4R3	4	0	5,207,930:01:0
245	99	284	04:31:56.066	24NIPILLAN01+	DESEL	300EB	IO MONITORING WITH SSI		4R3	4	0	: :
246	99	284	04:31:56.733	175TE422A6A	6DMSC	R7.3	DMS Control		4R3	4	0	5,207,930:06:0
247	99	284	04:31:56.733		DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC *2869.09 +/-		4R3	4	0	5,207,930:06:0
248	99	284	04:31:56.733	117IB11A	CSMOS	GE	***** GROUP END CSMOS		4R3	4	0	5,207,930:09:0
249	99	284	04:31:59.466		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *2880.59 +/-		4R3	4	0	5,207,930:10:1
250	99	284	04:32:00.066	116DC4A	7STRP	-0.035014,-0.004	Slew =17.01		4R3	4	0	5,207,930:11:0
251	99	284	04:32:00.733	175TE176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	Record	4R3	4	0	5,207,930:12:0
252	99	284	04:32:00.866		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 2880.71 +/-		4R3	4	0	5,207,930:12:2
253	99	284	04:32:00.866		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *2880.71 +/-		4R3	4	0	5,207,930:12:2
254	99	284	04:32:22.066	428JH6A	6RCCLR				4R3	4	0	5,207,930:44:0
255	99	284	04:32:22.733	428JH6B	6RCSET				4R3	4	0	5,207,930:45:0
256	99	284	04:32:30.733	175DC422A6A	6DMSC	R28.3	DMS Control		4R3	4	0	5,207,930:57:0
257	99	284	04:32:30.733		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *2887.71 +/-		4R3	4	0	5,207,930:57:0
258	99	284	04:32:31.933		DMS:	: *RUNUP	R28, TRACK 3, FWD, TIC *2887.77 +/-		4R3	4	0	5,207,930:58:8
259	99	284	04:32:35.933		DMS:	: *AT SPD	R28, TRACK 3, FWD, TIC 2889.27 +/- 1		4R3	4	0	5,207,930:64:8
260	99	284	04:32:35.933		DMS:	: *RECORD	R28, TRACK 3, FWD, TIC *2889.27 +/-		4R3	4	0	5,207,930:64:8
261	99	284	04:32:36.066	175DC176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD	Record Mode C	4R3	4	0	5,207,930:65:0
262	99	284	04:32:36.733	24NIPILLAN01-	NIMPBK	301DC	IO PILLAN OBSERVATION		4R3	4	0	: :
263	99	284	04:33:12.066	165IC4A	7SCAN	NORM,2.98,-3.428	Check S/P Position		4R3	4	0	5,207,931:28:0
264	99	284	04:33:16.066	24NIPILLAN01-			*****STOP *****		4R3	4	0	: :
265	99	284	04:33:19.400	428JH6A	6RCCLR				4R3	4	0	5,207,931:39:0
266	99	284	04:33:20.066	428JH6B	6RCSET				4R3	4	0	5,207,931:40:0
267	99	284	04:33:28.066	24NIPILLAN01-	DESEL	300DC	IO PILLAN OBSERVATION		4R3	4	0	: :
268	99	284	04:33:28.733	175TF422A6A	6DMSC	R7.3	DMS Control		4R3	4	0	5,207,931:53:0
269	99	284	04:33:28.733		DMS:	: *RUNDOWN	R28, TRACK 3, FWD, TIC *2935.67 +/- 1		4R3	4	0	5,207,931:53:0
270	99	284	04:33:29.933		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *2935.97 +/- 1		4R3	4	0	5,207,931:54:8
271	99	284	04:33:31.333		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *2936.09 +/- 1		4R3	4	0	5,207,931:56:9
272	99	284	04:33:31.333		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 2936.09 +/- 1		4R3	4	0	5,207,931:56:9
273	99	284	04:33:31.400	175TF176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	Record	4R3	4	0	5,207,931:57:0
274	99	284	04:33:58.066	117IC	CSMOS	GS	***** GROUP START CSMOS		4R3	4	0	5,207,932:06:0
275	99	284	04:34:00.066	481UC4A	7VECT		Inert vect update UTC		4R3	4	0	5,207,932:09:0
276	99	284	04:34:16.733	428JK6A	6RCCLR				4R3	4	0	5,207,932:34:0
277	99	284	04:34:17.400	428JK6B	6RCSET				4R3	4	0	5,207,932:35:0

278	99	284	04:34:25.400	175IC422A6A	6DMSC	R806.3	DMS Control	4R3	4	0	5,207,932:47:0
279	99	284	04:34:25.400		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *2948.76 +/- 1	4R3	4	0	5,207,932:47:0
280	99	284	04:34:26.600		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *2948.82 +/- 1	4R3	4	0	5,207,932:48:8
281	99	284	04:34:28.733	165IC4B	7VECT		Inert vect update UTC	4R3	4	0	5,207,932:52:0
282	99	284	04:34:30.066	117IC105A106A4A	75TRP	-0.064088,0.0,0,0,	Slew =,2.68	4R3	4	0	5,207,932:54:0
283	99	284	04:34:31.400	175IC176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	4R3	4	0	5,207,932:56:0
284	99	284	04:34:31.866		DMS:	: *RECORD	R806, TRACK 3, FWD, TIC *3014.82 +/- 1	4R3	4	0	5,207,932:56:7
285	99	284	04:34:31.866		DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC 3014.82 +/- 1	4R3	4	0	5,207,932:56:7
286	99	284	04:34:50.066	125DD4A	37IST	0.2,0,OFF,0,1,0	Gain State 2	2R3	4	0	5,207,932:84:0
287	99	284	04:34:50.066	125DD11A	NIMSINIT	GE	##### GROUP END INIT	2R3	4	0	5,207,932:84:0
288	99	284	04:34:50.066	125DD	NIMSINIT	GS	##### GROUP START INIT	2R3	4	0	5,207,932:84:0
289	99	284	04:34:54.066	428JL6A	6RCCLR			2R3	4	0	5,207,932:90:0
290	99	284	04:34:54.733	428JL6B	6RCSET			2R3	4	0	5,207,933:00:0
291	99	284	04:34:54.733	176IC6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5,207,933:00:0
292	99	284	04:34:58.733		DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC *3676.00 +/- 1	2R3	4	0	5,207,933:06:0
293	99	284	04:34:58.733	175TG422A6A	6DMSC	R7.3	DMS Control	2R3	4	0	5,207,933:06:0
294	99	284	04:35:01.400	117IC11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	5,207,933:10:0
295	99	284	04:35:01.466		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *3687.50 +/- 1	2R3	4	0	5,207,933:10:1
296	99	284	04:35:02.733	116DD4A	75TRP	0.018002,-0.0290	Slew =,14.3	2R3	4	0	5,207,933:12:0
297	99	284	04:35:02.733	175TG176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	5,207,933:12:0
298	99	284	04:35:02.866		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *3687.62 +/- 1	2R3	4	0	5,207,933:12:2
299	99	284	04:35:02.866		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 3687.62 +/- 1	2R3	4	0	5,207,933:12:2
300	99	284	04:35:05.400	24INCOLCHS01-			-----START-----	2R3	4	0	:
301	99	284	04:35:29.400	428JM6A	6RCCLR			2R3	4	0	5,207,933:52:0
302	99	284	04:35:30.066	428JM6B	6RCSET			2R3	4	0	5,207,933:53:0
303	99	284	04:35:32.733		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *3694.62 +/- 1	2R3	4	0	5,207,933:57:0
304	99	284	04:35:32.733	175DD422A6A	6DMSC	R28.3	DMS Control	2R3	4	0	5,207,933:57:0
305	99	284	04:35:33.933		DMS:	: *RUNUP	R28, TRACK 3, FWD, TIC *3694.68 +/- 1	2R3	4	0	5,207,933:58:8
306	99	284	04:35:37.933		DMS:	: *RECORD	R28, TRACK 3, FWD, TIC *3696.18 +/- 1	2R3	4	0	5,207,933:64:8
307	99	284	04:35:37.933		DMS:	: *AT SPD	R28, TRACK 3, FWD, TIC 3696.18 +/- 1	2R3	4	0	5,207,933:64:8
308	99	284	04:35:38.066	175DD176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,207,933:65:0
309	99	284	04:35:38.733	24INCOLCHS01-	NIMPBK	301DD	IO COLCHS OBSERVATION	2R3	4	0	:
310	99	284	04:36:12.733	165ID4A	75SCAN	NORM.4.315,15.72	Check S/P Position	2R3	4	0	5,207,934:26:0
311	99	284	04:36:16.733	24NNZAMAMA01-			-----START-----	2R3	4	0	:
312	99	284	04:36:16.733	24INCOLCHS01-			-----STOP-----	2R3	4	0	:
313	99	284	04:36:18.066	428JO6A	6RCCLR			2R3	4	0	5,207,934:34:0
314	99	284	04:36:18.733	428JO6B	6RCSET			2R3	4	0	5,207,934:35:0
315	99	284	04:36:30.066	24INCOLCHS01-	DESEL	300DD	IO COLCHS OBSERVATION	2R3	4	0	:
316	99	284	04:36:30.733	175TH422A6A	6DMSC	R7.3	DMS Control	2R3	4	0	5,207,934:53:0
317	99	284	04:36:30.733		DMS:	: *RUNDOWN	R28, TRACK 3, FWD, TIC *3742.58 +/- 1	2R3	4	0	5,207,934:53:0
318	99	284	04:36:31.933		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *3742.88 +/- 1	2R3	4	0	5,207,934:54:8
319	99	284	04:36:33.333		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *3743.00 +/- 1	2R3	4	0	5,207,934:56:9
320	99	284	04:36:33.333		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 3743.00 +/- 1	2R3	4	0	5,207,934:56:9
321	99	284	04:36:33.400	175TH176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	5,207,934:57:0
322	99	284	04:37:16.733	20DE5A	37PL		Program Load (halts microprocessor & unwri	4	0	5,207,935:31:0	
323	99	284	04:37:20.066	20DE5B	37MRL		Memory Realocate (software operates from R	4	0	5,207,935:36:0	
324	99	284	04:37:23.400	20DE6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5,207,935:41:0	
325	99	284	04:37:33.400	20DE6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,207,935:56:0	
326	99	284	04:37:43.400	20DE5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,207,935:71:0	
327	99	284	04:37:46.733	20DE5D	37MNI		Memory Normal (software operates from ROM)	260	4	0	5,207,935:76:0
328	99	284	04:37:50.066	20DE4A	37IST	1.2,0,OFF,0,1,0	Chopper ON, Sync, Chopper (RefGain State	2R0	4	0	5,207,935:81:0
329	99	284	04:38:00.733	117ID	CSMOS	GS	***** GROUP START CSMOS	2R0	4	0	5,207,936:06:0
330	99	284	04:38:16.066	428JN6A	6RCCLR			2R0	4	0	5,207,936:29:0
331	99	284	04:38:16.733	428JN6B	6RCSET			2R0	4	0	5,207,936:30:0
332	99	284	04:38:23.400		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *3768.80 +/- 1	2R0	4	0	5,207,936:40:0
333	99	284	04:38:23.400	175ID422A6A	6DMSC	R806.3	DMS Control	2R0	4	0	5,207,936:40:0

334	99	284	04:38:24.600	DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *3768.86 +/- 1	2R0	4	0	5,207,936:41:8
335	99	284	04:38:26.733	7VECT		Inert vect update UTC	2R0	4	0	5,207,936:45:0
336	99	284	04:38:28.066	75STRP	-0.061076,-0.075	Slw = 5.58	2R0	4	0	5,207,936:47:0
337	99	284	04:38:29.400	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	2R0	4	0	5,207,936:49:0
338	99	284	04:38:29.866	DMS:	: *RECORD	R806, TRACK 3, FWD, TIC *3834.86 +/- 1	2R0	4	0	5,207,936:49:7
339	99	284	04:38:29.866	DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC 3834.86 +/- 1	2R0	4	0	5,207,936:49:7
340	99	284	04:38:50.733	37IOP	3.0	Long Map, Grating Start Position =00	2R3	4	0	5,207,936:81:0
341	99	284	04:38:51.400	37ETB	4,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	5,207,936:82:0
342	99	284	04:38:57.400	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5,207,937:00:0
343	99	284	04:38:58.066	6RCCLR			2R3	4	0	5,207,937:01:0
344	99	284	04:38:58.733	6RCSET			2R3	4	0	5,207,937:02:0
345	99	284	04:39:01.400	6DMSC	R7,3	DMS Control	2R3	4	0	5,207,937:06:0
346	99	284	04:39:01.400	24INZAMAMA01-	-----STOP-----		2R3	4	0	:
347	99	284	04:39:01.400	DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC *4610.87 +/- 1	2R3	4	0	5,207,937:06:0
348	99	284	04:39:04.066	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	5,207,937:10:0
349	99	284	04:39:04.133	DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *4622.37 +/- 1	2R3	4	0	5,207,937:10:1
350	99	284	04:39:05.400	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	5,207,937:12:0
351	99	284	04:39:05.400	75STRP	0.037017,0.00750	Slw = 15.0	2R3	4	0	5,207,937:12:0
352	99	284	04:39:05.533	DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *4622.49 +/- 1	2R3	4	0	5,207,937:12:2
353	99	284	04:39:05.533	DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 4622.49 +/- 1	2R3	4	0	5,207,937:12:2
354	99	284	04:39:08.066	24INZAMAMA01-	-----START-----		2R3	4	0	:
355	99	284	04:39:32.066	6RCCLR			2R3	4	0	5,207,937:52:0
356	99	284	04:39:32.733	6RCSET			2R3	4	0	5,207,937:53:0
357	99	284	04:39:35.400	DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *4629.49 +/- 1	2R3	4	0	5,207,937:57:0
358	99	284	04:39:35.400	6DMSC	R28,3	DMS Control	2R3	4	0	5,207,937:57:0
359	99	284	04:39:36.600	DMS:	: *RUNUP	R28, TRACK 3, FWD, TIC *4629.55 +/- 1	2R3	4	0	5,207,937:58:8
360	99	284	04:39:40.600	DMS:	: *AT SPD	R28, TRACK 3, FWD, TIC 4631.05 +/- 2	2R3	4	0	5,207,937:64:8
361	99	284	04:39:40.600	DMS:	: *RECORD	R28, TRACK 3, FWD, TIC *4631.05 +/- 1	2R3	4	0	5,207,937:64:8
362	99	284	04:39:40.733	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,207,937:65:0
363	99	284	04:39:41.400	24INZAMAMA01-	30IDE	IO ZAMAMA OBSERVATION	2R3	4	0	:
364	99	284	04:40:24.066	6RCCLR			2R3	4	0	5,207,938:39:0
365	99	284	04:40:24.733	6RCSET			2R3	4	0	5,207,938:40:0
366	99	284	04:40:32.733	24INZAMAMA01-	300DE	IO ZAMAMA OBSERVATION	2R3	4	0	:
367	99	284	04:40:33.400	6DMSC	R7,3	DMS Control	2R3	4	0	5,207,938:53:0
368	99	284	04:40:33.400	DMS:	: *RUNDOWN	R28, TRACK 3, FWD, TIC *4677.46 +/- 2	2R3	4	0	5,207,938:53:0
369	99	284	04:40:34.600	DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *4677.76 +/- 2	2R3	4	0	5,207,938:54:8
370	99	284	04:40:36.000	DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *4677.88 +/- 2	2R3	4	0	5,207,938:56:9
371	99	284	04:40:36.000	DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC 4677.88 +/- 2	2R3	4	0	5,207,938:56:9
372	99	284	04:40:36.066	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	5,207,938:57:0
373	99	284	04:41:02.066	75SCAN	NORM,24.663,7.31	Check S/P Position	2R3	4	0	5,207,939:05:0
374	99	284	04:41:06.066	24INZAMAMA01-	-----STOP-----		2R3	4	0	:
375	99	284	04:42:03.400	CSMOS	GS	***** GROUP START CSMOS	2R3	4	0	5,207,940:06:0
376	99	284	04:42:32.066	6RCCLR			2R3	4	0	5,207,940:49:0
377	99	284	04:42:32.733	6RCSET			2R3	4	0	5,207,940:50:0
378	99	284	04:42:35.400	6DMSC	R806,3	DMS Control	2R3	4	0	5,207,940:54:0
379	99	284	04:42:35.400	DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *4705.86 +/- 2	2R3	4	0	5,207,940:54:0
380	99	284	04:42:36.600	DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *4705.92 +/- 2	2R3	4	0	5,207,940:55:8
381	99	284	04:42:38.733	7VECT		Inert vect update UTC	2R3	4	0	5,207,940:59:0
382	99	284	04:42:40.066	75STRP	-0.058567,-0.001	Slw = 3.07	2R3	4	0	5,207,940:61:0
383	99	284	04:42:41.400	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,207,940:63:0
384	99	284	04:42:41.866	DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC 4771.92 +/- 2	2R3	4	0	5,207,940:63:7
385	99	284	04:42:41.866	DMS:	: *RECORD	R806, TRACK 3, FWD, TIC *4771.92 +/- 2	2R3	4	0	5,207,940:63:7
386	99	284	04:42:42.066	24INPROMTH01+	301EC	IO MONITORING WITH SSI	2R3	4	0	:
387	99	284	04:43:00.066	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5,207,941:00:0
388	99	284	04:43:00.733	6RCCLR			2R3	4	0	5,207,941:01:0
389	99	284	04:43:01.400	6RCSET			2R3	4	0	5,207,941:02:0

390	99	284	04:43:03.400	24INPROMTH01+	DESEL	300EC	IO MONITORING WITH SSI	2R3	4	0	:	:
391	99	284	04:43:04.066	175TK422A6A	6DMSC	R7.3	DMS Control	2R3	4	0	5.207,941:06:0	
392	99	284	04:43:04.066		DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC *5318.25 +/- 2	2R3	4	0	5.207,941:06:0	
393	99	284	04:43:06.800		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *5329.75 +/- 2	2R3	4	0	5.207,941:10:1	
394	99	284	04:43:08.066	175TK176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	5.207,941:12:0	
395	99	284	04:43:08.200		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *5329.87 +/- 2	2R3	4	0	5.207,941:12:2	
396	99	284	04:43:08.200		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC *5329.87 +/- 2	2R3	4	0	5.207,941:12:2	
397	99	284	04:43:13.400	117IE11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	5.207,941:20:0	
398	99	284	04:43:19.400	165IF4A	7SCAN	NORM,34,956,12.8	Check S/P Position	2R3	4	0	5.207,941:29:0	
399	99	284	04:45:05.400	24NNPROMTH01-		-----START-----		2R3	4	0	:	:
400	99	284	04:45:25.066	20DF5A	37PL		Program Load (halts microprocessor & unwri	4	0	5.207,943:31:0		
401	99	284	04:45:25.400	20DF5B	37MRL		Memory Realocate (software operates from R	4	0	5.207,943:36:0		
402	99	284	04:45:28.733	20DF6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5.207,943:41:0		
403	99	284	04:45:38.733	20DF6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5.207,943:56:0		
404	99	284	04:45:48.733	20DF5C	37IRT		Instrument Reset (goes into POR state)	4	0	5.207,943:71:0		
405	99	284	04:45:52.066	20DF5D	37MNI		Memory Normal (software operates from ROM)	260	4	0	5.207,943:76:0	
406	99	284	04:45:55.400	20DF4A	37IST	1,2,0,OFF,0,1,0	Chopper ON, Sync, Chopper (RefGain State	2R0	4	0	5.207,943:81:0	
407	99	284	04:46:04.066	20RX6B	6RTSL1		R/T Select of DDS and	2R0	4	0	5.207,944:03:0	
408	99	284	04:46:06.066	117IF	CSMOS	GS	***** GROUP START CSMOS	2R0	4	0	5.207,944:06:0	
409	99	284	04:46:38.733	428JU6A	6RCCLR			2R0	4	0	5.207,944:55:0	
410	99	284	04:46:39.400	428JU6B	6RCSET			2R0	4	0	5.207,944:56:0	
411	99	284	04:46:42.733		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *5380.15 +/- 2	2R0	4	0	5.207,944:61:0	
412	99	284	04:46:42.733	175IF422A6A	6DMSC	R806.3	DMS Control	2R0	4	0	5.207,944:61:0	
413	99	284	04:46:43.933		DMS:	: *RUNUP	R806, TRACK 3, FWD, TIC *5380.21 +/- 2	2R0	4	0	5.207,944:62:8	
414	99	284	04:46:44.066	165IF4B	7VECT		Inert vect update UTC	2R0	4	0	5.207,944:63:0	
415	99	284	04:46:45.400	117IF105A106A4A	7STRP	0.047035,-0.0140	Slew =11.0	2R0	4	0	5.207,944:65:0	
416	99	284	04:46:48.733	175IF176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	2R0	4	0	5.207,944:70:0	
417	99	284	04:46:49.200		DMS:	: *AT SPD	R806, TRACK 3, FWD, TIC *5446.21 +/- 2	2R0	4	0	5.207,944:70:7	
418	99	284	04:46:49.200		DMS:	: *RECORD	R806, TRACK 3, FWD, TIC *5446.21 +/- 2	2R0	4	0	5.207,944:70:7	
419	99	284	04:46:56.066	20DF4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	5.207,944:81:0	
420	99	284	04:46:56.733	20DF4C	37ETB	4,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	5.207,944:82:0	
421	99	284	04:47:02.733	176IF6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5.207,945:00:0	
422	99	284	04:47:03.400	428JV6A	6RCCLR			2R3	4	0	5.207,945:01:0	
423	99	284	04:47:04.066	428JV6B	6RCSET			2R3	4	0	5.207,945:02:0	
424	99	284	04:47:06.733		DMS:	: *RUNDOWN	R806, TRACK 3, FWD, TIC *5877.70 +/- 2	2R3	4	0	5.207,945:06:0	
425	99	284	04:47:06.733	175TL422A6A	6DMSC	R7.3	DMS Control	2R3	4	0	5.207,945:06:0	
426	99	284	04:47:06.733	24NNPROMTH01-		-----STOP-----		2R3	4	0	:	:
427	99	284	04:47:09.466		DMS:	: *RUNUP	R7, TRACK 3, FWD, TIC *5889.20 +/- 2	2R3	4	0	5.207,945:10:1	
428	99	284	04:47:10.733	175TL176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	2R3	4	0	5.207,945:12:0	
429	99	284	04:47:10.866		DMS:	: *AT SPD	R7, TRACK 3, FWD, TIC *5889.32 +/- 2	2R3	4	0	5.207,945:12:2	
430	99	284	04:47:10.866		DMS:	: *RECORD	R7, TRACK 3, FWD, TIC *5889.32 +/- 2	2R3	4	0	5.207,945:12:2	
431	99	284	04:47:18.733	117IF11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	5.207,945:24:0	
432	99	284	04:47:21.400	116DF4A	7STRP	-0.027507,0.0115	Slew =17.01	2R3	4	0	5.207,945:28:0	
433	99	284	04:47:24.733	24INPROMTH01-		-----START-----		2R3	4	0	:	:
434	99	284	04:47:28.733	428JW6A	6RCCLR			2R3	4	0	5.207,945:39:0	
435	99	284	04:47:29.400	428JW6B	6RCSET			2R3	4	0	5.207,945:40:0	
436	99	284	04:47:32.066	175DF422A6A	6DMSC	R28.3	DMS Control	2R3	4	0	5.207,945:44:0	
437	99	284	04:47:32.066		DMS:	: *RUNDOWN	R7, TRACK 3, FWD, TIC *5894.29 +/- 2	2R3	4	0	5.207,945:44:0	
438	99	284	04:47:33.266		DMS:	: *RUNUP	R28, TRACK 3, FWD, TIC *5894.35 +/- 2	2R3	4	0	5.207,945:45:8	
439	99	284	04:47:37.266		DMS:	: *RECORD	R28, TRACK 3, FWD, TIC *5895.85 +/- 2	2R3	4	0	5.207,945:51:8	
440	99	284	04:47:37.266		DMS:	: *AT SPD	R28, TRACK 3, FWD, TIC *5895.85 +/- 2	2R3	4	0	5.207,945:51:8	
441	99	284	04:47:37.400	175DF176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5.207,945:52:0	
442	99	284	04:47:38.066	24INPROMTH01-	NIMPBK	301DF	IO PROMTH OBSERVATION	2R3	4	0	:	:
443	99	284	04:48:01.400	432MB431A6A	6RCDSL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5.207,945:88:0	
444	99	284	04:48:02.066	432MB6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5.207,945:89:0	
445	99	284	04:48:05.400	432OB431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5.207,946:03:0	

446	99	284	04:48:06.066	4320B6A	6RTSL1	R/T Select of DDS and	2R3	4	0	5,207,946:04:0
447	99	284	04:48:07.400	428JX6A	6RCCLR		2R3	4	0	5,207,946:06:0
448	99	284	04:48:09.400	282NB431A6A	6RCDSL	DDSNGC,PLSDSL,EP	2R3	4	0	5,207,946:09:0
449	99	284	04:48:29.400	24INPROMTH01-	DESEL	300DF	2R3	4	0	:
450	99	284	04:48:30.066		DMS:	: *RUNDOWN	2R3	4	0	5,207,946:40:0
451	99	284	04:48:30.066	175DF422A6B	6DMSC	RDY,0	2R3	4	0	5,207,946:40:0
452	99	284	04:48:31.266		DMS:	: *READY	2R3	4	0	5,207,946:41:8
453	99	284	04:48:58.066	282NB432A431A6A	6RCDSL	DDSNGC,PLSDSL,EP	2R3	4	0	5,207,946:82:0
454	99	284	04:48:58.733	282NB432A6A	6RTSL1	R/T Select of DDS and	2R3	4	0	5,207,946:83:0
455	99	284	04:49:04.066	465KE6A	6DMSC	RDY,4	2R3	4	0	5,207,947:00:0
456	99	284	04:49:04.066		DMS:	: READY	2R3	4	0	5,207,947:00:0
457	99	284	04:49:24.733	20DG5A	37PL	Program Load (halts microprocessor & unwri	4	0	5,207,947:31:0	
458	99	284	04:49:28.066	20DG5B	37MRL	Memory Realocate (software operates from R	4	0	5,207,947:36:0	
459	99	284	04:49:31.400	20DG6A	6MCPY	NIMS	4	0	5,207,947:41:0	
460	99	284	04:49:41.400	20DG6B	6MCPY	NIMS	4	0	5,207,947:56:0	
461	99	284	04:49:51.400	20DG5C	37IRT	Instrument Reset (goes into POR state)	4	0	5,207,947:71:0	
462	99	284	04:49:54.733	20DG5D	37MIN	Memory Normal (software operates from ROM)	260	4	0	5,207,947:76:0
463	99	284	04:49:58.066	20DG4A	37IST	Chopper ON, Sync, Chopper (Ref)Gain State	2R0	4	0	5,207,947:81:0
464	99	284	04:50:05.400	165IG4A	75SCAN	NORM,48,768,20.3	2R0	4	0	5,207,948:01:0
465	99	284	04:50:08.733	24NNCOLCHS02-		-----START-----	2R0	4	0	:
466	99	284	04:50:08.733	24INPROMTH01-		-----STOP-----	2R0	4	0	:
467	99	284	04:50:57.400	175IG422A6A	6DMSC	R806,0	2R0	4	0	5,207,948:79:0
468	99	284	04:50:57.400		DMS:	: *US-RUNUP	2R0	4	0	5,207,948:79:0
469	99	284	04:50:57.400	117IG	CSMOS	GS	2R0	4	0	5,207,948:79:0
470	99	284	04:50:58.733	20DG4B	37IOP	3,0	2R3	4	0	5,207,948:81:0
471	99	284	04:50:58.800		DMS:	: *US AT SP	2R3	4	0	5,207,948:81:0
472	99	284	04:50:59.400	20DG4C	37ETB	4,C4,35,FF,FF	2R3	4	0	5,207,948:82:0
473	99	284	04:51:04.066		DMS:	: *US RD	2R3	4	0	5,207,948:89:0
474	99	284	04:51:05.266	165IG4B	7VECT	R806, TRACK *4, *REV, TIC *5943.91 +/- 2	2R3	4	0	5,207,948:90:8
475	99	284	04:51:05.400			Inert vect update UTC	2R3	4	0	5,207,949:00:0
476	99	284	04:51:06.733	117IG105A106A4A	75TRP	0,0006,0,018013,	2R3	4	0	5,207,949:02:0
477	99	284	04:51:10.066	175IG176A6A	6TMREC	AIB	2R3	4	0	5,207,949:07:0
478	99	284	04:51:10.533		DMS:	: *AT SPD	2R3	4	0	5,207,949:07:7
479	99	284	04:51:10.533		DMS:	: *RECORD	2R3	4	0	5,207,949:07:7
480	99	284	04:51:14.733	175IG422A6B	6DMSC	RDY,0	2R3	4	0	5,207,949:14:0
481	99	284	04:51:14.733		DMS:	: *RUNDOWN	2R3	4	0	5,207,949:14:0
482	99	284	04:51:17.466		DMS:	: *READY	2R3	4	0	5,207,949:18:1
483	99	284	04:51:22.733	117IG11A	CSMOS	GE	2R3	4	0	5,207,949:26:0
484	99	284	04:51:27.400	24NNCOLCHS02-		-----START-----	2R3	4	0	:
485	99	284	04:51:27.400	24NNCOLCHS02-		-----STOP-----	2R3	4	0	:
486	99	284	04:51:29.400	116DG4A	75TRP	R-0,0005,-0,00475	2R3	4	0	5,207,949:36:0
487	99	284	04:52:19.400	175DG422A6A	6DMSC	DMS Control Tape runup 28.8kbp	2R3	4	0	5,207,950:20:0
488	99	284	04:52:19.400		DMS:	: *US-RUNUP	2R3	4	0	5,207,950:20:0
489	99	284	04:52:20.800		DMS:	: *US AT SP	2R3	4	0	5,207,950:22:1
490	99	284	04:52:26.066		DMS:	: *US RD	2R3	4	0	5,207,950:30:0
491	99	284	04:52:27.266		DMS:	: *RUNUP	2R3	4	0	5,207,950:31:8
492	99	284	04:52:30.733	175DG176A6A	6TMREC	MPW	2R3	4	0	5,207,950:37:0
493	99	284	04:52:31.266		DMS:	: *RECORD	2R3	4	0	5,207,950:37:8
494	99	284	04:52:31.266		DMS:	: *AT SPD	2R3	4	0	5,207,950:37:8
495	99	284	04:52:31.400	24NNCOLCHS02-	NIMPBK	301DG	2R3	4	0	:
496	99	284	04:52:47.400	24NNCOLCHS02-	NIMPBK	301DV	2R3	4	0	:
497	99	284	04:53:22.733	24NNCOLCHS02-	DESEL	300DV	2R3	4	0	:
498	99	284	04:53:22.733	24NNCOLCHS02-	DESEL	300DV	2R3	4	0	:
499	99	284	04:53:23.400		DMS:	: *RUNDOWN	2R3	4	0	5,207,951:25:0
500	99	284	04:53:23.400	175DG422A6B	6DMSC	RDY,0	2R3	4	0	5,207,951:25:0
501	99	284	04:53:24.600		DMS:	: *READY	2R3	4	0	5,207,951:26:8

502	99	284	04:53:30.733	20DH5A	37PL	Program Load (halts microprocessor & unwri	4	0	5,207,951:36:0	
503	99	284	04:53:30.733	165IH4A	75SCAN	NORM,44,754,12.2	4	0	5,207,951:36:0	
504	99	284	04:53:34.066	20DH5B	37MRL	Memory Realocate (software operates from R	4	0	5,207,951:41:0	
505	99	284	04:53:34.733	24NNTOHIL01-		-----START-----	4	0	:	
506	99	284	04:53:34.733	24INCOLCHS02-		-----STOP-----	4	0	:	
507	99	284	04:53:37.400	20DH6A	6MCOPI	NIMS	4	0	:	
508	99	284	04:53:47.400	20DH6B	6MCOPI	NIMS	4	0	5,207,951:46:0	
509	99	284	04:53:47.400	20DH5C	37IRT	Instrument Reset (goes into POR state)	4	0	5,207,951:61:0	
510	99	284	04:54:00.733	20DH5D	37MN	Memory Normal (software operates from ROM)	260	4	0	5,207,951:81:0
511	99	284	04:54:11.400	117IH	CSMOS	GS	260	4	0	5,207,952:06:0
512	99	284	04:54:27.400	175IH422A6A	6DMSC	R806,0	260	4	0	5,207,952:30:0
513	99	284	04:54:28.800		DMS:	:*US_AT_SP	260	4	0	5,207,952:32:1
514	99	284	04:54:34.066		DMS:	:*US_RD	260	4	0	5,207,952:40:0
515	99	284	04:54:35.266		DMS:	:*RUNUP	260	4	0	5,207,952:41:8
516	99	284	04:54:47.400	165IH4B	7VECT	R806, TRACK *4,*REV, TIC *5718.32 +/- 3	260	4	0	5,207,952:45:0
517	99	284	04:54:38.733	117IH105A106A4A	75TRP	Inert vext update UTC	260	4	0	5,207,952:47:0
518	99	284	04:54:40.066	175IH176A6A	6TMREC	AIB	260	4	0	5,207,952:49:0
519	99	284	04:54:40.533		DMS:	:*RECORD	260	4	0	5,207,952:49:7
520	99	284	04:54:40.533		DMS:	:*AT_SPD	260	4	0	5,207,952:49:7
521	99	284	04:54:47.400		DMS:	:*RUNDOWN	260	4	0	5,207,952:60:0
522	99	284	04:54:47.400	175IH422A6B	6DMSC	RDY,0	260	4	0	5,207,952:60:0
523	99	284	04:54:50.133		DMS:	:*READY	260	4	0	5,207,952:64:1
524	99	284	04:54:52.066	117IH105A106A4B	75TRP	-0.017902,0.0067	260	4	0	5,207,952:67:0
525	99	284	04:55:01.400	20DH4A	37IST	1,2,0,OFF,0,1,0	2R0	4	0	5,207,952:81:0
526	99	284	04:55:17.400	24NNTOHIL01-		-----START-----	2R0	4	0	:
527	99	284	04:55:17.400	24NNTOHIL01-		-----STOP-----	2R0	4	0	:
528	99	284	04:55:51.400	175IH422A6A	6DMSC	R806,0	2R0	4	0	5,207,953:65:0
529	99	284	04:55:51.400		DMS:	:*US-RUNUP	2R0	4	0	5,207,953:65:0
530	99	284	04:55:52.800		DMS:	:*US_AT_SP	2R0	4	0	5,207,953:67:1
531	99	284	04:55:58.066		DMS:	:*US_RD	2R0	4	0	5,207,953:75:0
532	99	284	04:55:59.266		DMS:	:*RUNUP	2R0	4	0	5,207,953:76:8
533	99	284	04:56:02.066	20DH4B	37IOP	3,0	2R3	4	0	5,207,953:81:0
534	99	284	04:56:02.733	117IH105A106A4C	75TRP	0.018202,0.0,0,0	2R3	4	0	5,207,953:82:0
535	99	284	04:56:04.066	20DH4C	37ETB	4,C4,35,FF,FF	2R3	4	0	5,207,953:84:0
536	99	284	04:56:04.533	175IH176A6A	6TMREC	AIB	2R3	4	0	5,207,953:84:7
537	99	284	04:56:11.400	175IH422A6B	6DMSC	RDY,0	2R3	4	0	5,207,954:04:0
538	99	284	04:56:11.400		DMS:	:*RUNDOWN	2R3	4	0	5,207,954:04:0
539	99	284	04:56:14.133		DMS:	:*READY	2R3	4	0	5,207,954:08:1
540	99	284	04:56:16.066	117IH11A	CSMOS	GE	2R3	4	0	5,207,954:11:0
541	99	284	04:56:20.066	116DH4A	75TRP	-0.0025,-0.00750	2R3	4	0	5,207,954:17:0
542	99	284	04:57:16.066	175DH422A6A	6DMSC	R28,0	2R3	4	0	5,207,955:10:0
543	99	284	04:57:16.066		DMS:	:*US-RUNUP	2R3	4	0	5,207,955:10:0
544	99	284	04:57:17.466		DMS:	:*US_AT_SP	2R3	4	0	5,207,955:12:1
545	99	284	04:57:22.733		DMS:	:*US_RD	2R3	4	0	5,207,955:20:0
546	99	284	04:57:23.933		DMS:	:*RUNUP	2R3	4	0	5,207,955:21:8
547	99	284	04:57:27.400	175DH176A6A	6TMREC	MPW	2R3	4	0	5,207,955:27:0
548	99	284	04:57:27.933		DMS:	:*AT_SPD	2R3	4	0	5,207,955:27:8
549	99	284	04:57:27.933		DMS:	:*RECORD	2R3	4	0	5,207,955:27:8
550	99	284	04:57:28.066	24NNTOHIL01-	NIMPBK	301DH	2R3	4	0	:
551	99	284	04:57:30.066	24NNTOHIL01-	NIMPBK	301DW	2R3	4	0	:
552	99	284	04:57:30.066	24NNTOHIL01-	DESEL	300DW	2R3	4	0	:
553	99	284	04:57:30.066	24NNTOHIL01-	DESEL	300DH	2R3	4	0	:
554	99	284	04:57:30.066	24NNTOHIL01-	6DMSC	RDY,0	2R3	4	0	5,207,956:15:0
555	99	284	04:57:37.400	175DH422A6B	6DMSC	RDY,0	2R3	4	0	5,207,956:15:0

558	99	284	04:58:20.066	DMS:	: *RUNDOWN	R28, TRACK 4, REV, TIC *5180.86 +/- 4	2R3	4	0	5,207,956:15:0
559	99	284	04:58:21.266	DMS:	: *READY	RDY, TRACK 4, REV, TIC *5180.56 +/- 4	2R3	4	0	5,207,956:16:8
560	99	284	04:58:24.066	7SCAN	NORM,44.166,17.7	Check S/P Position	2R3	4	0	5,207,956:21:0
561	99	284	04:58:27.400	24INNTOHIL01-	-----STOP-----		2R3	4	0	:
562	99	284	04:59:14.733	24NNPROMTH02-	-----START-----		2R3	4	0	:
563	99	284	04:59:14.733	1181I	GS		2R3	4	0	5,207,957:06:0
564	99	284	04:59:26.066	6DMSC	R806.0	DMS Control Tape runup 806.4kb	2R3	4	0	5,207,957:23:0
565	99	284	04:59:26.066	175IJ422A6A	: *US-RUNUP	P7, TRACK *1,*FWD, TIC 5180.56 +/- 4	2R3	4	0	5,207,957:23:0
566	99	284	04:59:27.466	DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *5180.68 +/- 4	2R3	4	0	5,207,957:25:1
567	99	284	04:59:32.733	DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *5181.91 +/- 4	2R3	4	0	5,207,957:33:0
568	99	284	04:59:33.933	DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *5181.97 +/- 4	2R3	4	0	5,207,957:34:8
569	99	284	04:59:37.400	7VECT	Inert vect update UTC		2R3	4	0	5,207,957:40:0
570	99	284	04:59:38.733	175IJ176A6A	6TMREC AIB	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0	5,207,957:42:0
571	99	284	04:59:39.200	DMS:	: *AT SPD	R806, TRACK 4, REV, TIC 5115.97 +/- 4	2R3	4	0	5,207,957:42:7
572	99	284	04:59:39.200	DMS:	: *RECORD	R806, TRACK 4, REV, TIC *5115.97 +/- 4	2R3	4	0	5,207,957:42:7
573	99	284	04:59:44.733	1181I10A111A4A	7STRP 0.00731,0.0,206,	Slew =2,3.6	2R3	4	0	5,207,957:51:0
574	99	284	04:59:46.066	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,207,957:53:0
575	99	284	04:59:46.066	DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *4946.99 +/- 4	2R3	4	0	5,207,957:53:0
576	99	284	04:59:48.800	DMS:	: *READY	RDY, TRACK 4, REV, TIC *4935.49 +/- 4	2R3	4	0	5,207,957:57:1
577	99	284	05:00:52.066	6DMSC	R806.0	DMS Control Tape runup 806.4kb	2R3	4	0	5,207,958:61:0
578	99	284	05:00:52.066	DMS:	: *US-RUNUP	P7, TRACK *1,*FWD, TIC 4935.49 +/- 4	2R3	4	0	5,207,958:61:0
579	99	284	05:00:53.400	1181I11A	GE		2R3	4	0	5,207,958:63:0
580	99	284	05:00:53.466	DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *4935.61 +/- 4	2R3	4	0	5,207,958:63:0
581	99	284	05:00:58.733	DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4936.84 +/- 4	2R3	4	0	5,207,958:71:0
582	99	284	05:00:58.733	24INPROMTH02-	-----START-----		2R3	4	0	:
583	99	284	05:00:59.933	24NNPROMTH02-	-----STOP-----		2R3	4	0	:
584	99	284	05:00:59.933	175IK176A6A	: *RUNUP	R806, TRACK *4, *REV, TIC *4936.90 +/- 4	2R3	4	0	5,207,958:72:8
585	99	284	05:01:04.733	6TMREC AIB	806.4 KBPS SSI RECORD Record Mode Change		2R3	4	0	5,207,958:80:0
586	99	284	05:01:05.200	DMS:	: *AT SPD	R806, TRACK 4, REV, TIC 4870.90 +/- 5	2R3	4	0	5,207,958:80:7
587	99	284	05:01:05.200	DMS:	: *RECORD	R806, TRACK 4, REV, TIC *4870.90 +/- 4	2R3	4	0	5,207,958:80:7
588	99	284	05:01:12.066	176IK6A	6TMREC IMB	806.4 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5,207,959:00:0
589	99	284	05:01:16.066	175IK422A6B	6DMSC	RDY,0	2R3	4	0	5,207,959:06:0
590	99	284	05:01:16.066	DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *4603.48 +/- 5	2R3	4	0	5,207,959:06:0
591	99	284	05:01:18.800	DMS:	: *READY	RDY, TRACK 4, REV, TIC *4591.98 +/- 5	2R3	4	0	5,207,959:10:1
592	99	284	05:02:27.400	175IL422A6A	6DMSC	DMS Control Tape runup 806.4kb	2R3	4	0	5,207,960:22:0
593	99	284	05:02:27.400	DMS:	: *US-RUNUP	P7, TRACK *1,*FWD, TIC 4591.98 +/- 5	2R3	4	0	5,207,960:22:0
594	99	284	05:02:28.800	DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *4592.10 +/- 5	2R3	4	0	5,207,960:24:1
595	99	284	05:02:34.066	DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4593.33 +/- 5	2R3	4	0	5,207,960:32:0
596	99	284	05:02:35.266	DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *4593.39 +/- 5	2R3	4	0	5,207,960:33:8
597	99	284	05:02:36.733	20DI5A	37PL	Program Load (halts microprocessor & unwri	4	0	5,207,960:36:0	
598	99	284	05:02:40.066	20DI5B	37MRL	Memory Realocate (software operates from R	4	0	5,207,960:41:0	
599	99	284	05:02:40.066	175IL176A6A	6TMREC IMB	806.4 KBPS IMAGE RECORD Record Mode Chang	4	0	5,207,960:41:0	
600	99	284	05:02:40.533	DMS:	: *AT SPD	R806, TRACK 4, REV, TIC 4527.39 +/- 5	4	0	5,207,960:41:7	
601	99	284	05:02:40.533	DMS:	: *RECORD	R806, TRACK 4, REV, TIC *4527.39 +/- 5	4	0	5,207,960:41:7	
602	99	284	05:02:42.733	175IL422A6B	6DMSC	DMS Control Tape stop	4	0	5,207,960:45:0	
603	99	284	05:02:42.733	DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *4473.25 +/- 5	4	0	5,207,960:45:0	
604	99	284	05:02:43.400	20DI6A	6MCOPI NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5,207,960:46:0	
605	99	284	05:02:45.466	DMS:	: *READY	RDY, TRACK 4, REV, TIC *4461.75 +/- 5	4	0	5,207,960:49:1	
606	99	284	05:02:53.400	20DI6B	6MCOPI NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,207,960:61:0	
607	99	284	05:03:03.400	20DI5C	37IRT	Instrument Reset (goes into POR state)	4	0	5,207,960:76:0	
608	99	284	05:03:06.733	20DI5D	37MNI	Memory Normal (software operates from ROM)	260	4	0	5,207,960:81:0
609	99	284	05:03:54.066	175IM422A6A	6DMSC	DMS Control Tape runup 806.4kb	260	4	0	5,207,961:61:0
610	99	284	05:03:54.066	DMS:	: *US-RUNUP	P7, TRACK *1,*FWD, TIC 4461.75 +/- 5	260	4	0	5,207,961:61:0
611	99	284	05:03:55.466	DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *4461.87 +/- 5	260	4	0	5,207,961:63:1
612	99	284	05:04:00.733	DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4463.11 +/- 5	260	4	0	5,207,961:71:0
613	99	284	05:04:01.933	DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *4463.17 +/- 5	260	4	0	5,207,961:72:8



614	99	284	05:04:06.733	175IM176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD	Record Mode Chang	260	4	0	5,207,961:80:0
615	99	284	05:04:07.200		DMS:	: *RECORD	R806, TRACK 4, REV, TIC *4397.17 +/-	5	260	4	0	5,207,961:80:7
616	99	284	05:04:07.200		DMS:	: *AT SPD	R806, TRACK 4, REV, TIC *4397.17 +/-	6	260	4	0	5,207,961:80:7
617	99	284	05:04:07.400	20DI4A	37IST	1,2,0,OFF,0,1,0	Chopper ON, Sync, Chopper (Ref)Gain State		2R0	4	0	5,207,961:81:0
618	99	284	05:04:09.400	175IM422A6B	6DMSC	RDY,0	DMS Control Tape stop		2R0	4	0	5,207,961:84:0
619	99	284	05:04:09.400		DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *4343.03 +/-	6	2R0	4	0	5,207,961:84:0
620	99	284	05:04:12.133		DMS:	: *READY	RDY, TRACK 4, REV, TIC *4331.53 +/-	6	2R0	4	0	5,207,961:88:1
621	99	284	05:05:08.066	20DI4B	37IOP	3,0	Long Map, Grating Start Position =00		2R3	4	0	5,207,962:81:0
622	99	284	05:05:08.733	20DI4C	37ETB	4,C,4,35,FF,FF	Loads wavelength edit table		2R3	4	0	5,207,962:82:0
623	99	284	05:05:14.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 4331.53 +/-	6	2R3	4	0	5,207,962:90:0
624	99	284	05:05:14.066	175DI422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp		2R3	4	0	5,207,962:90:0
625	99	284	05:05:15.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4331.65 +/-	6	2R3	4	0	5,207,963:01:1
626	99	284	05:05:20.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4332.88 +/-	6	2R3	4	0	5,207,963:09:0
627	99	284	05:05:21.933		DMS:	: *RUNUP	R28, TRACK *4, *REV, TIC *4332.94 +/-	6	2R3	4	0	5,207,963:10:8
628	99	284	05:05:22.066	116DI4A	75TRP	-0.0084,0,0,0,0	Slew =,0.02		2R3	4	0	5,207,963:11:0
629	99	284	05:05:25.400	175DI176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD	Record Mode C	2R3	4	0	5,207,963:16:0
630	99	284	05:05:25.933		DMS:	: *AT SPD	R28, TRACK 4, REV, TIC 4331.44 +/-	6	2R3	4	0	5,207,963:16:8
631	99	284	05:05:25.933		DMS:	: *RECORD	R28, TRACK 4, REV, TIC *4331.44 +/-	6	2R3	4	0	5,207,963:16:8
632	99	284	05:05:26.066	24INPROMTH02-	NIMPBK	301DI	IO PROMETHUS OBSERVATION		2R3	4	0	:
633	99	284	05:08:51.400	24INPROMTH02-	NIMPBK	301EI	IO PROMETHUSOBSERVATION		2R3	4	0	:
634	99	284	05:09:00.066	24INPROMTH02-	DESELC	300DI	IO PROMETHUS OBSERVATION		2R3	4	0	:
635	99	284	05:09:41.333	24INPROMTH02-	NIMPBK	301EM	IO PROMETHUSOBSERVATION		2R3	4	0	:
636	99	284	05:09:56.333	24INPROMTH02-	DESELC	300EM	IO PROMETHUS OBSERVATION		2R3	4	0	:
637	99	284	05:12:17.333	24INPROMTH02-	NIMPBK	301FN	IO PROMETHUSOBSERVATION		2R3	4	0	:
638	99	284	05:12:25.400	24INPROMTH02-	DESELC	300FN	IO PROMETHUS OBSERVATION		2R3	4	0	:
639	99	284	05:12:25.400	24INPROMTH02-	DESELC	300EI	IO PROMETHUS OBSERVATION		2R3	4	0	:
640	99	284	05:12:26.066	175DI422A6B	6DMSC	RDY,0	DMS Control Tape stop		2R3	4	0	5,207,970:10:0
641	99	284	05:12:26.066		DMS:	: *RUNDOWN	R28, TRACK 4, REV, TIC *3962.18 +/-	6	2R3	4	0	5,207,970:10:0
642	99	284	05:12:27.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC *3961.88 +/-	6	2R3	4	0	5,207,970:11:8
643	99	284	05:12:34.066	165IK4A	75SCAN	NORM,50,097,23,0	Check S/P Position		2R3	4	0	5,207,970:22:0
644	99	284	05:12:36.733	24INPROMTH02-	-----STOP-----				2R3	4	0	:
645	99	284	05:12:39.400	24INZAMAMA02-	-----START-----				2R3	4	0	:
646	99	284	05:13:24.066	117IK	CSMOS	GS	***** GROUP START CSMOS		2R3	4	0	5,207,971:06:0
647	99	284	05:13:30.733		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3961.88 +/-	6	2R3	4	0	5,207,971:16:0
648	99	284	05:13:30.733	175IN422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb		2R3	4	0	5,207,971:16:0
649	99	284	05:13:32.133		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3962.00 +/-	6	2R3	4	0	5,207,971:18:1
650	99	284	05:13:37.400		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *3963.24 +/-	6	2R3	4	0	5,207,971:26:0
651	99	284	05:13:38.600		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *3963.30 +/-	6	2R3	4	0	5,207,971:27:8
652	99	284	05:13:40.733	165IK4B	7VECT		Inert vect update UTC		2R3	4	0	5,207,971:31:0
653	99	284	05:13:42.066	117IK105A106A4A	75TRP	0.040522,0,0,0,0	Slew =,3.15		2R3	4	0	5,207,971:33:0
654	99	284	05:13:43.400	175IN176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD	Record Mode Change	2R3	4	0	5,207,971:35:0
655	99	284	05:13:43.866		DMS:	: *RECORD	R806, TRACK 4, REV, TIC *3897.30 +/-	6	2R3	4	0	5,207,971:35:7
656	99	284	05:13:43.866		DMS:	: *AT SPD	R806, TRACK 4, REV, TIC 3897.30 +/-	6	2R3	4	0	5,207,971:35:7
657	99	284	05:13:44.066	24INZAMAMA02+	NIMPBK	301EF	IO MONITORING WITH SSI		2R3	4	0	:
658	99	284	05:13:56.733	24INZAMAMA02+	DESELC	300EF	IO MONITORING WITH SSI		2R3	4	0	:
659	99	284	05:13:57.400		DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *3564.25 +/-	6	2R3	4	0	5,207,971:56:0
660	99	284	05:13:57.400	175IN422A6B	6DMSC	RDY,0	DMS Control Tape stop		2R3	4	0	5,207,971:56:0
661	99	284	05:14:00.133		DMS:	: *READY	RDY, TRACK 4, REV, TIC *3552.75 +/-	6	2R3	4	0	5,207,971:60:1
662	99	284	05:14:02.066	117IK105A106A4B	75TRP	-0.041524,0.0073	Slew =,6.7		4	0	5,207,971:63:0	
663	99	284	05:14:44.733	20DJ5A	37PL		Program Load (halts microprocessor & unwri		4	0	5,207,972:36:0	
664	99	284	05:14:48.066	20DJ5B	37MRL		Memory Realocate (software operates from R		4	0	5,207,972:41:0	
665	99	284	05:14:51.400	20DJ6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7		4	0	5,207,972:46:0	
666	99	284	05:15:01.400	20DJ6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D		4	0	5,207,972:61:0	
667	99	284	05:15:04.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 3552.75 +/-	6	4	0	5,207,972:65:0	
668	99	284	05:15:04.066	175IO422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb		4	0	5,207,972:65:0	
669	99	284	05:15:05.466		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *3552.87 +/-	6	4	0	5,207,972:67:1	

670	99	284	05:15:10.733	DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *3554.11 +/- 6	4	0	5,207,972:75:0
671	99	284	05:15:11.400	37IRT	20DJ5C	Instrument Reset (goes into POR state)	4	0	5,207,972:76:0
672	99	284	05:15:11.933	DMS:	:*RUNUP	R806, TRACK *4, *REV, TIC *3554.17 +/- 6	4	0	5,207,972:76:8
673	99	284	05:15:14.733	37MN	20DJ5D	Memory Normal (software operates from ROM)	260	4	0 5,207,972:81:0
674	99	284	05:15:15.400	75TRP	117K105A106A4C	Slew = 3.15	260	4	0 5,207,972:82:0
675	99	284	05:15:16.733	6TMREC	175IO176A6A	806.4 KBPS SSI RECORD Record Mode Change	260	4	0 5,207,972:84:0
676	99	284	05:15:17.200	DMS:	:*AT_SPD	R806, TRACK 4, REV, TIC 3488.17 +/- 7	260	4	0 5,207,972:84:7
677	99	284	05:15:17.200	DMS:	:*RECORD	R806, TRACK 4, REV, TIC *3488.17 +/- 6	260	4	0 5,207,972:84:7
678	99	284	05:15:30.733	6DMSC	175IO422A6B	DMS Control Tape stop	260	4	0 5,207,973:14:0
679	99	284	05:15:30.733	DMS:	:*RUNDOWN	R806, TRACK 4, REV, TIC *3155.12 +/- 7	260	4	0 5,207,973:14:0
680	99	284	05:15:33.466	DMS:	:*READY	RDY, TRACK 4, REV, TIC *3143.62 +/- 7	260	4	0 5,207,973:18:1
681	99	284	05:15:35.400	75TRP	117K105A106A4D	Slew = 0.6, 6.7	260	4	0 5,207,973:21:0
682	99	284	05:16:15.400	37IST	20DJ4A	Chopper ON, Sync, Chopper (Ref)Gain State	2R0	4	0 5,207,973:81:0
683	99	284	05:16:37.400	DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 3143.62 +/- 7	2R0	4	0 5,207,974:23:0
684	99	284	05:16:37.400	6DMSC	175IP422A6A	DMS Control Tape runup 806.4kb	2R0	4	0 5,207,974:23:0
685	99	284	05:16:38.800	DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *3143.74 +/- 7	2R0	4	0 5,207,974:25:1
686	99	284	05:16:44.066	DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *3144.97 +/- 7	2R0	4	0 5,207,974:33:0
687	99	284	05:16:45.266	DMS:	:*RUNUP	R806, TRACK *4, *REV, TIC *3145.03 +/- 7	2R0	4	0 5,207,974:34:8
688	99	284	05:16:48.733	75TRP	117K105A106A4E	Slew = 3.15	2R0	4	0 5,207,974:40:0
689	99	284	05:16:50.066	6TMREC	175IP176A6A	806.4 KBPS SSI RECORD Record Mode Change	2R0	4	0 5,207,974:42:0
690	99	284	05:16:50.533	DMS:	:*RECORD	R806, TRACK 4, REV, TIC *3079.03 +/- 7	2R0	4	0 5,207,974:42:7
691	99	284	05:16:50.533	DMS:	:*AT_SPD	R806, TRACK 4, REV, TIC 3079.03 +/- 7	2R0	4	0 5,207,974:42:7
692	99	284	05:16:50.733	24INZAMAMA02+	117K11A	IO MONITORING WITH SSI	2R0	4	0 : :
693	99	284	05:17:03.400	24INZAMAMA02+	117K11A	IO MONITORING WITH SSI	2R0	4	0 : :
694	99	284	05:17:04.066	DMS:	:*RUNDOWN	R806, TRACK 4, REV, TIC *2745.99 +/- 7	2R0	4	0 5,207,974:63:0
695	99	284	05:17:04.066	6DMSC	175IP422A6B	DMS Control Tape stop	2R0	4	0 5,207,974:63:0
696	99	284	05:17:06.800	DMS:	:*READY	RDY, TRACK 4, REV, TIC *2734.49 +/- 7	2R0	4	0 5,207,974:67:1
697	99	284	05:17:08.733	CSMOS	117K11A	***** GROUP END CSMOS	2R0	4	0 5,207,974:70:0
698	99	284	05:17:13.400	24INZAMAMA02-	117K11A	*****START*****	2R0	4	0 : :
699	99	284	05:17:13.400	24INZAMAMA02-	117K11A	*****STOP*****	2R0	4	0 : :
700	99	284	05:17:16.066	37IOP	20DJ4B	Long Map, Grating Start Position =00	2R3	4	0 5,207,974:81:0
701	99	284	05:17:16.733	37ETB	20DJ4C	Loads wavelength edit table	2R3	4	0 5,207,974:82:0
702	99	284	05:17:22.733	75TRP	116DJ4A	Slew = 4.81	2R3	4	0 5,207,975:00:0
703	99	284	05:18:08.733	DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 2734.49 +/- 7	2R3	4	0 5,207,975:69:0
704	99	284	05:18:08.733	6DMSC	175DJ422A6A	DMS Control Tape runup 28.8kbp	2R3	4	0 5,207,975:69:0
705	99	284	05:18:10.133	DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *2734.61 +/- 7	2R3	4	0 5,207,975:71:1
706	99	284	05:18:15.400	DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *2735.84 +/- 7	2R3	4	0 5,207,975:79:0
707	99	284	05:18:16.600	DMS:	:*RUNUP	R28, TRACK *4, *REV, TIC *2735.90 +/- 7	2R3	4	0 5,207,975:80:8
708	99	284	05:18:16.733	75TRP	116EJ4A	Slew = 0.02	2R3	4	0 5,207,975:81:0
709	99	284	05:18:20.066	6TMREC	175DJ176A6A	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0 5,207,975:86:0
710	99	284	05:18:20.600	DMS:	:*RECORD	R28, TRACK 4, REV, TIC *2734.40 +/- 7	2R3	4	0 5,207,975:86:8
711	99	284	05:18:20.600	DMS:	:*AT_SPD	R28, TRACK 4, REV, TIC 2734.40 +/- 7	2R3	4	0 5,207,975:86:8
712	99	284	05:18:20.733	24INZAMAMA02-	116EJ4A	IO ZAMAMA OBSERVATION	2R3	4	0 : :
713	99	284	05:18:21.400	24INZAMAMA02-	116EJ4A	IO ZAMAMA OBSERVATION	2R3	4	0 : :
714	99	284	05:18:51.400	24INZAMAMA02-	116EJ4A	IO ZAMAMA OBSERVATION	2R3	4	0 : :
715	99	284	05:20:56.066	24INZAMAMA02-	116EJ4A	IO ZAMAMA OBSERVATION	2R3	4	0 : :
716	99	284	05:20:56.733	6DMSC	175DJ422A6B	DMS Control Tape stop	2R3	4	0 5,207,978:48:0
717	99	284	05:20:56.733	DMS:	:*RUNDOWN	R28, TRACK 4, REV, TIC *2597.17 +/- 7	2R3	4	0 5,207,978:48:0
718	99	284	05:20:57.933	DMS:	:*READY	RDY, TRACK 4, REV, TIC *2596.87 +/- 7	2R3	4	0 5,207,978:49:8
719	99	284	05:21:02.066	24NNDORIAN01-	165IM4A	*****START*****	2R3	4	0 : :
720	99	284	05:21:02.066	24INZAMAMA02-	165IM4A	*****STOP*****	2R3	4	0 : :
721	99	284	05:21:02.733	75SCAN	165IM4A	NORM,51,944,18,8	2R3	4	0 5,207,978:57:0
722	99	284	05:21:02.733	37PL	20DK5A	Program Load (halts microprocessor & unwri	4	0	5,207,978:61:0
723	99	284	05:21:08.733	20DK5B	20DK5B	Memory Realocate (software operates from R	4	0	5,207,978:66:0
724	99	284	05:21:12.066	20DK6A	20DK6A	NIMS,1000,LLM1A,7300,77F7	4	0	5,207,978:71:0
725	99	284	05:21:22.066	20DK6B	20DK6B	NIMS,1598,LLM1A,77F8,781D	4	0	5,207,978:86:0

726	99	284	05:21:29.400	117IM	CSMOS	GS	***** GROUP START CSMOS	4	0	5,207,979:06:0
727	99	284	05:21:36.066	20DK5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,207,979:16:0
728	99	284	05:21:39.400	20DK5D	37MN		Memory Normal (software operates from ROM)	260	4	0 5,207,979:21:0
729	99	284	05:21:59.400	175IQ422A6A	6DMSC	R806.0	DMS Control Tape runup 806.4kb	260	4	0 5,207,979:51:0
730	99	284	05:21:59.400		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC *2596.87 +/- 7	260	4	0 5,207,979:51:0
731	99	284	05:22:00.800		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *2596.99 +/- 7	260	4	0 5,207,979:53:1
732	99	284	05:22:06.066		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2598.23 +/- 7	260	4	0 5,207,979:61:0
733	99	284	05:22:07.266		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *2598.29 +/- 7	260	4	0 5,207,979:62:8
734	99	284	05:22:09.400	165IM4B	7VECT		Inert vect update UTC	260	4	0 5,207,979:66:0
735	99	284	05:22:10.733	117IM105A106A4A	75TRP	0.025005,0.0,0.0	Slew =0,2.8	260	4	0 5,207,979:68:0
736	99	284	05:22:12.066	175IQ176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	260	4	0 5,207,979:70:0
737	99	284	05:22:12.533		DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC *2532.29 +/- 7	260	4	0 5,207,979:70:7
738	99	284	05:22:12.533		DMS:	: *RECORD	R806, TRACK 4, REV, TIC *2532.29 +/- 7	260	4	0 5,207,979:70:7
739	99	284	05:22:19.400	20DK4A	37IST	1.2,0,OFF,0.1,0	Chopper ON, Sync, Chopper (Ref)Gain State	2R0	4	0 5,207,979:81:0
740	99	284	05:22:21.400	175IQ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0 5,207,979:84:0
741	99	284	05:22:21.400		DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *2314.08 +/- 7	2R0	4	0 5,207,979:84:0
742	99	284	05:22:24.133		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2302.58 +/- 8	2R0	4	0 5,207,979:88:1
743	99	284	05:22:26.733	117IM11A	CSMOS	GE	***** GROUP END CSMOS	2R0	4	0 5,207,980:01:0
744	99	284	05:22:30.066	24INDORIAN01-		-----STOP-----		2R0	4	0 : :
745	99	284	05:22:31.400	24INDORIAN01-		-----START-----		2R0	4	0 : :
746	99	284	05:23:20.066	20DK4B	37IOP	3.0	Long Map, Grating Start Position =00	2R3	4	0 5,207,980:81:0
747	99	284	05:23:20.733	20DK4C	37ETB	4,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0 5,207,980:82:0
748	99	284	05:23:26.066	175DK422A6A	6DMSC	R28.0	DMS Control Tape runup 28.8kbp	2R3	4	0 5,207,980:90:0
749	99	284	05:23:26.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC *2302.58 +/- 8	2R3	4	0 5,207,980:90:0
750	99	284	05:23:26.733	116DK4A	75TRP	-0.0095,-0.0015,	Slew =0,4.5	2R3	4	0 5,207,981:00:0
751	99	284	05:23:27.466		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *2302.70 +/- 8	2R3	4	0 5,207,981:01:1
752	99	284	05:23:32.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2303.94 +/- 8	2R3	4	0 5,207,981:09:0
753	99	284	05:23:33.933		DMS:	: *RUNUP	R28, TRACK *4, *REV, TIC *2304.00 +/- 8	2R3	4	0 5,207,981:10:8
754	99	284	05:23:37.400	175DK176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0 5,207,981:16:0
755	99	284	05:23:37.933		DMS:	: *AT_SPD	R28, TRACK 4, REV, TIC *2302.50 +/- 8	2R3	4	0 5,207,981:16:8
756	99	284	05:23:37.933		DMS:	: *RECORD	R28, TRACK 4, REV, TIC *2302.50 +/- 8	2R3	4	0 5,207,981:16:8
757	99	284	05:23:38.066	24INDORIAN01-	NIMPBK	301DK	IO DORIAN OBSERVATION	2R3	4	0 : :
758	99	284	05:24:29.400	24INDORIAN01-	DESEL	300DK	IO DORIAN OBSERVATION	2R3	4	0 : :
759	99	284	05:24:30.066	175DK422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0 5,207,982:04:0
760	99	284	05:24:30.066		DMS:	: *RUNDOWN	R28, TRACK 4, REV, TIC *2256.68 +/- 8	2R3	4	0 5,207,982:04:0
761	99	284	05:24:31.266		DMS:	: *READY	RDY, TRACK 4, REV, TIC *2256.38 +/- 8	2R3	4	0 5,207,982:05:8
762	99	284	05:24:37.400	165IN4A	75SCAN	NORM,45.87,21.48	Check S/P Position	2R3	4	0 5,207,982:15:0
763	99	284	05:24:41.400	24INDORIAN01-		-----STOP-----		2R3	4	0 : :
764	99	284	05:24:44.733	24NAMSKGI01-		-----START-----		2R3	4	0 : :
765	99	284	05:25:32.066	117IN	CSMOS	GS	***** GROUP START CSMOS	2R3	4	0 5,207,983:06:0
766	99	284	05:25:34.066	175IR422A6A	6DMSC	R806.0	DMS Control Tape runup 806.4kb	2R3	4	0 5,207,983:09:0
767	99	284	05:25:34.066		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC *2256.38 +/- 8	2R3	4	0 5,207,983:09:0
768	99	284	05:25:35.466		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC *2256.50 +/- 8	2R3	4	0 5,207,983:11:1
769	99	284	05:25:40.733		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *2257.73 +/- 8	2R3	4	0 5,207,983:19:0
770	99	284	05:25:41.933		DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *2257.79 +/- 8	2R3	4	0 5,207,983:20:8
771	99	284	05:25:44.066	165IN4B	7VECT		Inert vect update UTC	2R3	4	0 5,207,983:24:0
772	99	284	05:25:45.400	117IN105A106A4A	75TRP	0.040522,0.0,0.0	Slew =-3,15	2R3	4	0 5,207,983:26:0
773	99	284	05:25:46.733	175IR176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	2R3	4	0 5,207,983:28:0
774	99	284	05:25:47.200		DMS:	: *RECORD	R806, TRACK 4, REV, TIC *2191.79 +/- 8	2R3	4	0 5,207,983:28:7
775	99	284	05:25:47.200		DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC *2191.79 +/- 8	2R3	4	0 5,207,983:28:7
776	99	284	05:25:47.400	24INAMSKGI01+	NIMPBK	301EJ	IO MONITORING WITH SSI	2R3	4	0 : :
777	99	284	05:26:00.066	24INAMSKGI01+	DESEL	300EJ	IO MONITORING WITH SSI	2R3	4	0 : :
778	99	284	05:26:00.733	175IR422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0 5,207,983:49:0
779	99	284	05:26:00.733		DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *1858.75 +/- 8	2R3	4	0 5,207,983:49:0
780	99	284	05:26:03.466		DMS:	: *READY	RDY, TRACK 4, REV, TIC *1847.25 +/- 8	2R3	4	0 5,207,983:53:1
781	99	284	05:26:05.400	117IN105A106A4B	75TRP	-0.039521,0.0072	Slew =0,6.7	2R3	4	0 5,207,983:56:0

782	99	284	05:27:07.400	DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1847.25 +/- 8	2R3	4	0	5,207,984:58:0
783	99	284	05:27:07.400	6DMSC	R806.0	DMS Control Tape runup 806.4kb	2R3	4	0	5,207,984:58:0
784	99	284	05:27:08.800	DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1847.37 +/- 8	2R3	4	0	5,207,984:60:1
785	99	284	05:27:09.400	37PL		<b>Program Load (halts microprocessor &amp; unwri</b>	4	0	5,207,984:61:0	
786	99	284	05:27:12.733	37MRL		<b>Memory Realocate (software operates from R</b>	4	0	5,207,984:66:0	
787	99	284	05:27:14.066	DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1848.60 +/- 8	4	0	5,207,984:68:0	
788	99	284	05:27:15.266	DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *1848.66 +/- 8	4	0	5,207,984:69:8	
789	99	284	05:27:16.066	6MCOPI	NIMS	NIMS,1000.LLM1A,7300,77F7	4	0	5,207,984:71:0	
790	99	284	05:27:18.733	75TRP	0.040522,0.0,0.0	Slew =,3.15	4	0	5,207,984:75:0	
791	99	284	05:27:20.066	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	4	0	5,207,984:77:0	
792	99	284	05:27:20.533	DMS:	: *RECORD	R806, TRACK 4, REV, TIC *1782.66 +/- 8	4	0	5,207,984:77:7	
793	99	284	05:27:20.533	DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC 1782.66 +/- 8	4	0	5,207,984:77:7	
794	99	284	05:27:26.066	6MCOPI	NIMS	NIMS,1598.LLM1A,77F8,781D	4	0	5,207,984:86:0	
795	99	284	05:27:34.066	6DMSC	RDY,0	DMS Control Tape stop	4	0	5,207,985:07:0	
796	99	284	05:27:34.066	DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *1449.61 +/- 8	4	0	5,207,985:07:0	
797	99	284	05:27:36.800	DMS:	: *READY	RDY, TRACK 4, REV, TIC *1438.11 +/- 9	4	0	5,207,985:11:1	
798	99	284	05:27:38.733	75TRP	-0.039521,0.0072	Slew =0,6.7	4	0	5,207,985:14:0	
799	99	284	05:27:40.066	37IRT		<b>Instrument Reset (goes into POR state)</b>	4	0	5,207,985:16:0	
800	99	284	05:27:43.400	37MN		<b>Memory Normal (software operates from ROM)</b>	260	4	0	5,207,985:21:0
801	99	284	05:28:23.400	37IST	1.2,0,OFF,0,1,0	<b>Chopper ON, Sync, Chopper (Ref)Gain State</b>	2R0	4	0	5,207,985:81:0
802	99	284	05:28:40.733	DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1438.11 +/- 9	2R0	4	0	5,207,986:16:0
803	99	284	05:28:40.733	6DMSC	R806.0	DMS Control Tape runup 806.4kb	2R0	4	0	5,207,986:16:0
804	99	284	05:28:42.133	DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1438.23 +/- 9	2R0	4	0	5,207,986:18:1
805	99	284	05:28:47.400	DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1439.47 +/- 9	2R0	4	0	5,207,986:26:0
806	99	284	05:28:48.600	DMS:	: *RUNUP	R806, TRACK *4, *REV, TIC *1439.53 +/- 9	2R0	4	0	5,207,986:27:8
807	99	284	05:28:52.066	75TRP	0.040522,0.0,0.0	Slew =,3.15	2R0	4	0	5,207,986:33:0
808	99	284	05:28:53.400	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	2R0	4	0	5,207,986:35:0
809	99	284	05:28:53.866	DMS:	: *AT_SPD	R806, TRACK 4, REV, TIC 1373.53 +/- 9	2R0	4	0	5,207,986:35:7
810	99	284	05:28:53.866	DMS:	: *RECORD	R806, TRACK 4, REV, TIC *1373.53 +/- 9	2R0	4	0	5,207,986:35:7
811	99	284	05:28:54.066	NIMPBK	301EK	<b>IO MONITORING WITH SSI</b>	2R0	4	0	5,207,986:35:7
812	99	284	05:29:06.733	DESEL	300EK	<b>IO MONITORING WITH SSI</b>	2R0	4	0	5,207,986:35:7
813	99	284	05:29:07.400	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0	5,207,986:56:0
814	99	284	05:29:07.400	DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC *1040.48 +/- 9	2R0	4	0	5,207,986:56:0
815	99	284	05:29:10.133	DMS:	: *READY	RDY, TRACK 4, REV, TIC *1028.98 +/- 9	2R0	4	0	5,207,986:60:1
816	99	284	05:29:12.066	CSMOS	GE	***** GROUP END CSMOS	2R0	4	0	5,207,986:63:0
817	99	284	05:29:17.400	24INAMSKGI01-		-----START-----	2R0	4	0	5,207,986:63:0
818	99	284	05:29:17.400	24NNAMSKGI01-		-----STOP-----	2R0	4	0	5,207,986:63:0
819	99	284	05:29:18.733	116DL4A		Slew =,1.01	2R0	4	0	5,207,986:73:0
820	99	284	05:29:24.066	20DL4B		<b>Long Map, Grating Start Position =00</b>	2R3	4	0	5,207,986:81:0
821	99	284	05:29:24.733	37ETB	4,C4,35,FF,FF	<b>Loads wavelength edit table</b>	2R3	4	0	5,207,986:82:0
822	99	284	05:30:12.066	6DMSC	R28.0	DMS Control Tape runup 28.8kb	2R3	4	0	5,207,987:62:0
823	99	284	05:30:12.066	DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 1028.98 +/- 9	2R3	4	0	5,207,987:62:0
824	99	284	05:30:13.466	DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *1029.10 +/- 9	2R3	4	0	5,207,987:64:1
825	99	284	05:30:18.733	DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *1030.34 +/- 9	2R3	4	0	5,207,987:72:0
826	99	284	05:30:19.933	DMS:	: *RUNUP	R28, TRACK *4, *REV, TIC *1030.40 +/- 9	2R3	4	0	5,207,987:73:8
827	99	284	05:30:20.066	75TRP	-0.00312,-0.0005	Slew =,0.02	2R3	4	0	5,207,987:74:0
828	99	284	05:30:23.400	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,207,987:79:0
829	99	284	05:30:23.933	DMS:	: *AT_SPD	R28, TRACK 4, REV, TIC 1028.90 +/- 9	2R3	4	0	5,207,987:79:8
830	99	284	05:30:23.933	DMS:	: *RECORD	R28, TRACK 4, REV, TIC *1028.90 +/- 9	2R3	4	0	5,207,987:79:8
831	99	284	05:30:24.066	24INAMSKGI01-	NIMPBK	<b>IO AMSKGI OBSERVATION</b>	2R3	4	0	5,207,987:79:8
832	99	284	05:31:04.066	24INAMSKGI01-	NIMPBK	<b>IO AMSKGI OBSERVATION</b>	2R3	4	0	5,207,987:79:8
833	99	284	05:31:34.066	DESEL	300DY	<b>IO AMSKGI OBSERVATION</b>	2R3	4	0	5,207,987:79:8
834	99	284	05:32:59.400	DESEL	300DL	<b>IO AMSKGI OBSERVATION</b>	2R3	4	0	5,207,987:79:8
835	99	284	05:33:00.066	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,207,990:41:0
836	99	284	05:33:00.066	DMS:	: *RUNDOWN	R28, TRACK 4, REV, TIC * 891.67 +/- 9	2R3	4	0	5,207,990:41:0
837	99	284	05:33:01.266	DMS:	: *READY	RDY, TRACK 4, REV, TIC * 891.37 +/- 9	2R3	4	0	5,207,990:42:8

838	99	284	05:33:02.066	165IP4A	75SCAN	NORM,45.078,19.4	Check S/P Position	2R3	4	0	5,207,990:44:0
839	99	284	05:33:03.400	24INAMSKG101-	-----STOP-----			2R3	4	0	5,207,990:44:0
840	99	284	05:33:04.066	24NINTERMAP01-	-----START-----			2R3	4	0	5,207,990:44:0
841	99	284	05:33:13.400	20DM5A	37PL		Program Load (halts microprocessor & unwri	4	0	5,207,990:61:0	
842	99	284	05:33:16.733	20DM5B	37MRL		Memory Realocate (software operates from R	4	0	5,207,990:66:0	
843	99	284	05:33:20.066	20DM6A	6MCPY NIMS		NIMS,1000,LLM1A,7300,77F7	4	0	5,207,990:71:0	
844	99	284	05:33:30.066	20DM6B	6MCPY NIMS		NIMS,1598,LLM1A,77F8,781D	4	0	5,207,990:86:0	
845	99	284	05:33:37.400	117IP	CSMOS GS		***** GROUP START CSMOS	4	0	5,207,991:06:0	
846	99	284	05:33:44.066	20DM5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,207,991:16:0	
847	99	284	05:33:47.400	20DM5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,207,991:21:0
848	99	284	05:34:07.400	175IU422A6A	6DMSC	R806,0	P7, TRACK *1,*FWD, TIC 891.37 +/- 9	260	4	0	5,207,991:51:0
849	99	284	05:34:08.800	175IU422A6A	DMS:		P7, TRACK 1, FWD, TIC * 891.49 +/- 9	260	4	0	5,207,991:53:1
850	99	284	05:34:14.066	165IP4B	DMS:		P7, TRACK 1, FWD, TIC * 892.72 +/- 9	260	4	0	5,207,991:61:0
851	99	284	05:34:15.266	165IP4B	DMS:		R806, TRACK *4,*REV, TIC * 892.78 +/- 9	260	4	0	5,207,991:62:8
852	99	284	05:34:15.400	165IP4B	DMS:		Inert vect update UTC	260	4	0	5,207,991:63:0
853	99	284	05:34:16.733	117IP105A106A4A	75STRP	-0.0018,0.049371	Slew =9.45	260	4	0	5,207,991:65:0
854	99	284	05:34:20.066	175IU176A6A	6TMREC AIB		806.4 KBPS SSI RECORD Record Mode Change	260	4	0	5,207,991:70:0
855	99	284	05:34:20.533	175IU176A6A	DMS:	:*AT SPD	R806, TRACK 4, REV, TIC 826.78 +/- 9	260	4	0	5,207,991:70:7
856	99	284	05:34:20.533	175IU176A6A	DMS:	:*RECORD	R806, TRACK 4, REV, TIC * 826.78 +/- 9	260	4	0	5,207,991:70:7
857	99	284	05:34:27.400	20DM4A	37IST	1,2,0,OFF,0,1,2	Chopper ON, Sync, Chopper (RefGain State	3R0	4	0	5,207,991:81:0
858	99	284	05:34:34.066	176IU6A	6TMREC IM8		806.4 KBPS IMAGE RECORD Record Mode Chang	3R0	4	0	5,207,992:00:0
859	99	284	05:34:38.066	175IU422A6B	DMS:	:*RUNDOWN	R806, TRACK 4, REV, TIC * 395.30 +/- 9	3R0	4	0	5,207,992:06:0
860	99	284	05:34:40.800	175IU422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R0	4	0	5,207,992:06:0
861	99	284	05:34:44.066	175IU422A6B	DMS:	:*READY	RDY, TRACK 4, REV, TIC * 383.80 +/- 9	3R0	4	0	5,207,992:10:1
862	99	284	05:34:50.733	117IP11A	CSMOS GE		***** GROUP END CSMOS	3R0	4	0	5,207,992:15:0
863	99	284	05:35:28.066	20DM4A	75STRP	-0.0035,-0.03119	Slew =13.4	3R0	4	0	5,207,992:25:0
864	99	284	05:35:28.733	20DM4C	37IOP	3.0	Long Map, Grating Start Position =00	3R3	4	0	5,207,992:81:0
865	99	284	05:35:28.733	20DM4C	37ETB	4,C,4,35,FF,FF	Loads wavelength edit table	3R3	4	0	5,207,992:82:0
866	99	284	05:35:38.733	24NINTERMAP01-	-----STOP-----			3R3	4	0	5,207,992:82:0
867	99	284	05:35:38.733	24NINTERMAP01-	-----START-----			3R3	4	0	5,207,992:82:0
868	99	284	05:35:42.733	175DM422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	3R3	4	0	5,207,993:12:0
869	99	284	05:35:42.733	175DM422A6A	DMS:	:*US-RUNUP	P7, TRACK *1,*FWD, TIC 383.80 +/- 9	3R3	4	0	5,207,993:12:0
870	99	284	05:35:44.133	175DM422A6A	DMS:	:*US AT SP	P7, TRACK 1, FWD, TIC * 383.92 +/- 9	3R3	4	0	5,207,993:14:1
871	99	284	05:35:49.400	175DM422A6A	DMS:	:*US RD	P7, TRACK 1, FWD, TIC * 385.15 +/- 9	3R3	4	0	5,207,993:22:0
872	99	284	05:35:50.600	175DM422A6A	DMS:	:*RUNUP	R28, TRACK *4,*REV, TIC * 385.21 +/- 10	3R3	4	0	5,207,993:23:8
873	99	284	05:35:54.066	175DM176A6A	6TMREC MPW		28.8 KBPS PWS + NIMS RECORD Record Mode C	3R3	4	0	5,207,993:29:0
874	99	284	05:35:54.600	175DM176A6A	DMS:	:*RECORD	R28, TRACK 4, REV, TIC * 383.71 +/- 10	3R3	4	0	5,207,993:29:8
875	99	284	05:35:54.600	175DM176A6A	DMS:	:*AT SPD	R28, TRACK 4, REV, TIC 383.71 +/- 10	3R3	4	0	5,207,993:29:8
876	99	284	05:35:54.600	24INTERMAP01-	NIMPBK 301DM		IO TERMAP OBSERVATION	3R3	4	0	5,207,993:29:8
877	99	284	05:35:54.733	24INTERMAP01-	DESEL 300DM		IO TERMAP OBSERVATION	3R3	4	0	5,207,993:29:8
878	99	284	05:37:12.066	175DM422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5,207,994:56:0
879	99	284	05:37:12.733	175DM422A6B	DMS:	:*READY	RDY, TRACK 4, REV, TIC * 314.74 +/- 10	3R3	4	0	5,207,994:56:0
880	99	284	05:37:13.933	175DM422A6B	DMS:	:*READY	DMS Control Tape stop	3R3	4	0	5,207,994:56:0
881	99	284	05:37:40.066	24INTERMAP01-	-----STOP-----			3R3	4	0	5,207,994:57:8
882	99	284	05:37:40.066	24INTERMAP01-	-----START-----			3R3	4	0	5,207,994:57:8
883	99	284	05:38:46.733	465KF6A	6DMSC	RDY,1	DMS Control Tape stop	3R3	4	0	5,207,996:15:0
884	99	284	05:38:46.733	465KF6A	DMS:	:*READY	RDY, TRACK *1,*FWD, TIC 314.74 +/- 10	3R3	4	0	5,207,996:15:0
885	99	284	05:56:48.066	165GJ4A	75SCAN	NORM,48.307,21.1	Check S/P Position	3R3	4	0	5,208,013:90:0
886	99	284	05:58:40.733	117GJ	CSMOS GS		***** GROUP START CSMOS	3R3	4	0	5,208,015:77:0
887	99	284	05:58:50.066	117GJ105A106A4A	75STRP	0.0054,0.0,0,0,0,0	Slew = 0.06	3R3	4	0	5,208,016:00:0
888	99	284	06:00:22.733	117GJ105A106A4B	75STRP	-0.0059,0.0016,0	Slew =12.01	3R3	4	0	5,208,017:48:0
889	99	284	06:00:32.066	117GJ105A106A4C	75STRP	0.0054,0.0,0,0,0,0	Slew =0.06	3R3	4	0	5,208,017:62:0
890	99	284	06:01:04.066	20RR6B	6RTSL1		R/T Select of DDS and	3R3	4	0	5,208,018:19:0
891	99	284	06:02:04.733	117GJ105A106A4D	75STRP	-0.0059,0.0016,0	Slew =12.01	3R3	4	0	5,208,019:19:0
892	99	284	06:02:14.066	117GJ105A106A4E	75STRP	0.0054,0.0,0,0,0,0	Slew = 0.06	3R3	4	0	5,208,019:33:0
893	99	284	06:03:46.733	117GJ105A106A4F	75STRP	-0.0059,0.0016,0	Slew =12.01	3R3	4	0	5,208,020:81:0

894	99	284	06:03:56.066	117GJ105A106A4G	7STRP	0.0054,0.0,0.0,0	Slew = 0.06	3R3	4	0	5,208,021:04:0
895	99	284	06:05:28.733	117GJ105A106A4H	7STRP	-0.0059,0.0016,0	Slew =12.01	3R3	4	0	5,208,022:52:0
896	99	284	06:05:38.066	117GJ105A106A4I	7STRP	0.0054,0.0,0.0,0	Slew = 0.06	3R3	4	0	5,208,022:66:0
897	99	284	06:05:58.733	24NREGION01-	-----START-----			3R3	4	0	:
898	99	284	06:06:35.400	20DN5A	37PL		Program Load (halts microprocessor & unwri		4	0	5,208,023:61:0
899	99	284	06:06:38.733	20DN5B	37MRL		Memory Realocate (software operates from R		4	0	5,208,023:66:0
900	99	284	06:06:42.066	20DN6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7		4	0	5,208,023:71:0
901	99	284	06:06:52.066	20DN6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D		4	0	5,208,023:86:0
902	99	284	06:07:06.066	20DN5C	37IRT		Instrument Reset (goes into POR state)		4	0	5,208,024:16:0
903	99	284	06:07:09.400	20DN5D	37MNI		Memory Normal (software operates from ROM)	260	4	0	5,208,024:21:0
904	99	284	06:07:10.733	117GJ105A106B4A	7STRP	0.030009,0.0,0.0,0	Slew =12.01	260	4	0	5,208,024:23:0
905	99	284	06:07:17.400	117GJ105A106B4B	7STRP	0.0,0.0,0.0,0.0,0	Slew = 0.06	260	4	0	5,208,024:33:0
906	99	284	06:07:49.400	20DN4A	37IST	1,2,0,OFF,0,1,0	Chopper ON, Sync, Chopper (Ref)Gain State	2R0	4	0	5,208,024:81:0
907	99	284	06:07:51.400	117GJ11A	CSMOS	GE	***** GROUP END CSMOS	2R0	4	0	5,208,024:84:0
908	99	284	06:07:55.400	165DN4A	7SCAN	NORM,50.423,21.1	Check S/P Position	2R0	4	0	5,208,024:90:0
909	99	284	06:08:00.066	24INREGION01-	-----START-----			2R0	4	0	:
910	99	284	06:08:00.066	24INREGION01-	-----STOP-----			2R0	4	0	:
911	99	284	06:08:47.400	117DN	CSMOS	GS	***** GROUP START CSMOS	2R0	4	0	5,208,025:77:0
912	99	284	06:08:50.066	20DN4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	5,208,025:81:0
913	99	284	06:08:50.733	20DN4C	37ETB	4,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	5,208,025:82:0
914	99	284	06:08:55.400	165DN4B	7VECT		Inert vect update UTC	2R3	4	0	5,208,025:89:0
915	99	284	06:08:56.733	117DN105A106A4A	7STRP	0.019653,0.0,0,0	Slew = 0.03	2R3	4	0	5,208,026:00:0
916	99	284	06:09:44.066		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 314.74 +/- 10	2R3	4	0	5,208,026:71:0
917	99	284	06:09:44.066	175DN422A6A	6DMSC	R28,1	DMS Control	2R3	4	0	5,208,026:71:0
918	99	284	06:09:50.733		DMS:	:*RUNUP	R28, TRACK 1, FWD, TIC 314.74 +/- 10	2R3	4	0	5,208,026:81:0
919	99	284	06:09:54.066	175DN176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,208,026:86:0
920	99	284	06:09:54.733		DMS:	:*AT_SPD	R28, TRACK 1, FWD, TIC 316.24 +/- 10	2R3	4	0	5,208,026:87:0
921	99	284	06:09:54.733	24INREGION01-	NIMPBK	301DN	IO REGION OBSERVATION	2R3	4	0	:
922	99	284	06:09:54.733		DMS:	:*RECORD	R28, TRACK 1, FWD, TIC * 316.24 +/- 10	2R3	4	0	5,208,026:87:0
923	99	284	06:19:55.400	117DN105A106A4B	7STRP	-0.018402,0.0075	Slew =12.01	2R3	4	0	5,208,036:78:0
924	99	284	06:20:06.066	117DN105A106A4C	7STRP	0.019653:0:0:0,0	Slew = 0.03	2R3	4	0	5,208,037:03:0
925	99	284	06:25:50.000	24INREGION01-	NIMPBK	301FO	IO REGION OBSERVATION	2R3	4	0	:
926	99	284	06:25:52.066	24INREGION01-	NIMPBK	301EN	IO REGION OBSERVATION	2R3	4	0	:
927	99	284	06:26:00.733	24INREGION01-	DESEL	300DN	IO REGION OBSERVATION	2R3	4	0	:
928	99	284	06:26:10.000	24INREGION01-	DESEL	300FO	IO REGION OBSERVATION	2R3	4	0	:
929	99	284	06:27:58.666	24INREGION01-	NIMPBK	301FP	IO REGION OBSERVATION	2R3	4	0	:
930	99	284	06:28:10.666	24INREGION01-	DESEL	300FP	IO REGION OBSERVATION	2R3	4	0	:
931	99	284	06:31:04.733	117DN105A106A4D	7STRP	-0.018402,0.0075	Slew =12.01	2R3	4	0	5,208,047:81:0
932	99	284	06:31:15.400	117DN105A106A4E	7STRP	0.019653,0.0,0,0	Slew = 0.03	2R3	4	0	5,208,048:06:0
933	99	284	06:32:01.333	24INREGION01-	NIMPBK	301FQ	IO REGION OBSERVATION	2R3	4	0	:
934	99	284	06:32:10.000	24INREGION01-	DESEL	300FQ	IO REGION OBSERVATION	2R3	4	0	:
935	99	284	06:35:12.000	24INREGION01-	NIMPBK	301ER	IO REGION OBSERVATION	2R3	4	0	:
936	99	284	06:35:24.000	24INREGION01-	DESEL	300ER	IO REGION OBSERVATION	2R3	4	0	:
937	99	284	06:36:30.000	24INREGION01-	NIMPBK	301ES	IO REGION OBSERVATION	2R3	4	0	:
938	99	284	06:39:50.000	24INREGION01-	DESEL	300ES	IO REGION OBSERVATION	2R3	4	0	:
939	99	284	06:40:41.333	24INREGION01-	NIMPBK	301ET	IO REGION OBSERVATION	2R3	4	0	:
940	99	284	06:41:16.000	24INREGION01-	DESEL	300ET	IO REGION OBSERVATION	2R3	4	0	:
941	99	284	06:41:22.066	24INREGION01-	-----STOP-----			2R3	4	0	:
942	99	284	06:41:54.066	24INREGION01-	DESEL	300EN	IO REGION OBSERVATION	2R3	4	0	:
943	99	284	06:41:54.733	175DN422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,208,058:55:0
944	99	284	06:41:54.733		DMS:	:*RUNDOWN	R28, TRACK 1, FWD, TIC *2003.74 +/- 10	2R3	4	0	5,208,058:55:0
945	99	284	06:41:55.933		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *2004.04 +/- 10	2R3	4	0	5,208,058:56:8
946	99	284	06:42:14.066	117DN11A	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	5,208,058:84:0
947	99	284	06:42:22.733	24NPPOLUME01-	-----START-----			2R3	4	0	:
948	99	284	06:42:59.400	20DO5A	37PL		Program Load (halts microprocessor & unwri	4	0	5,208,059:61:0	
949	99	284	06:43:02.733	20DO5B	37MRL		Memory Realocate (software operates from R	4	0	5,208,059:66:0	

950	99	284	06:43:06.066	20DO6A	6MCOPI	NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5,208,059:71:0	
951	99	284	06:43:16.066	20DO6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,208,059:86:0	
952	99	284	06:43:30.066	20DO5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,208,060:16:0	
953	99	284	06:43:33.400	20DO5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,208,060:21:0
954	99	284	06:44:13.400	20DO4A	37IST	1,2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (Ref)Gain State	4R0	4	0	5,208,060:81:0
955	99	284	06:45:14.066	20DO4C	37IOP	3,0	Long Map, Grating Start Position =00	4R3	4	0	5,208,061:81:0
956	99	284	06:45:14.733	20DO4B	37ETB	4,C4,35,FF,FF	Loads wavelength edit table	4R3	4	0	5,208,061:82:0
957	99	284	06:45:20.066	165IQ4A	7SCAN	NORM,52:101,20.5	Check S/P Position	4R3	4	0	5,208,061:90:0
958	99	284	06:45:24.733	24INPPLUME01-		-----STOP-----		4R3	4	0	;
959	99	284	06:46:10.066	175IV422A6A	6DMSC	R806.1	DMS Control	4R3	4	0	5,208,062:74:0
960	99	284	06:46:10.066		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 2004.04 +/- 10	4R3	4	0	5,208,062:74:0
961	99	284	06:46:16.733		DMS:	:*RUNUP	R806, TRACK 1, FWD, TIC 2004.04 +/- 10	4R3	4	0	5,208,062:84:0
962	99	284	06:46:20.066	165IQ4B	7VECT		Inert vect update UTC	4R3	4	0	5,208,062:89:0
963	99	284	06:46:21.400	175IV176A6A	6TMREC	AIB	806.4 KBPS SSI RECORD Record Mode Change	4R3	4	0	5,208,063:00:0
964	99	284	06:46:22.000		DMS:	:*AT_SPD	R806, TRACK 1, FWD, TIC 2070.04 +/- 10	4R3	4	0	5,208,063:00:9
965	99	284	06:46:22.000		DMS:	:*RECORD	R806, TRACK 1, FWD, TIC *2070.04 +/- 10	4R3	4	0	5,208,063:00:9
966	99	284	06:46:25.400	175IV422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,208,063:06:0
967	99	284	06:46:25.400		DMS:	:*RUNDOWN	R806, TRACK 1, FWD, TIC *2153.71 +/- 10	4R3	4	0	5,208,063:06:0
968	99	284	06:46:27.400	24INPPLUME01-		-----START-----		4R3	4	0	;
969	99	284	06:46:27.400	116IQ4A	7STRP	0.003,0.0,0.0,0.0,	Slew = 1.01	4R3	4	0	5,208,063:09:0
970	99	284	06:46:28.133		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *2165.21 +/- 10	4R3	4	0	5,208,063:10:1
971	99	284	06:47:28.733	175DO422A6A	6DMSC	R28.1	DMS Control	4R3	4	0	5,208,064:10:0
972	99	284	06:47:28.733		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 2165.21 +/- 10	4R3	4	0	5,208,064:10:0
973	99	284	06:47:30.066	116IQ4A	7STRP	-0.006,0.0,0.0,0.0	Slew = 0.02	4R3	4	0	5,208,064:12:0
974	99	284	06:47:35.400		DMS:	:*RUNUP	R28, TRACK 1, FWD, TIC 2165.21 +/- 10	4R3	4	0	5,208,064:20:0
975	99	284	06:47:38.733	175DO176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	4R3	4	0	5,208,064:25:0
976	99	284	06:47:39.400		DMS:	:*AT_SPD	R28, TRACK 1, FWD, TIC 2166.71 +/- 10	4R3	4	0	5,208,064:26:0
977	99	284	06:47:39.400		DMS:	:*RECORD	R28, TRACK 1, FWD, TIC *2166.71 +/- 10	4R3	4	0	5,208,064:26:0
978	99	284	06:47:39.400	24INPPLUME01-	NIMPBK	301DO	IO PLUME OBSERVATION	4R3	4	0	;
979	99	284	06:50:04.733	24INPPLUME01-	NIMPBK	301EO	IO PLUME OBSERVATION	4R3	4	0	;
980	99	284	06:50:13.400	24INPPLUME01-	DESELC	300DO	IO PLUME OBSERVATION	4R3	4	0	;
981	99	284	06:52:29.400	24INPPLUME01-		-----STOP-----		4R3	4	0	;
982	99	284	06:52:38.066	165GK4A	7SCAN	NORM,51.014,20.8	Check S/P Position	4R3	4	0	5,208,069:19:0
983	99	284	06:52:38.733	24INPPLUME01-	DESELC	300EO	IO PLUME OBSERVATION	4R3	4	0	;
984	99	284	06:52:39.400		DMS:	:*RUNDOWN	R28, TRACK 1, FWD, TIC *2430.38 +/- 10	4R3	4	0	5,208,069:21:0
985	99	284	06:52:39.400	175DO422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,208,069:21:0
986	99	284	06:52:40.600		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *2430.68 +/- 10	4R3	4	0	5,208,069:22:8
987	99	284	06:54:17.400	117GK	CSMOS	GS	***** GROUP START CSMOS	4R3	4	0	5,208,070:77:0
988	99	284	06:54:26.733	117GK105A106A4A	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,071:00:0
989	99	284	06:57:13.400	117GK105A106A4B	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,073:68:0
990	99	284	06:57:19.400	117GK105A106A4C	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,073:77:0
991	99	284	07:00:06.066	117GK105A106A4D	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,076:54:0
992	99	284	07:00:12.066	117GK105A106A4E	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,076:63:0
993	99	284	07:02:58.733	117GK105A106A4F	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,079:40:0
994	99	284	07:03:04.733	117GK105A106A4G	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,079:49:0
995	99	284	07:05:51.400	117GK105A106A4H	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,082:26:0
996	99	284	07:05:57.400	117GK105A106A4I	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,082:35:0
997	99	284	07:08:44.066	117GK105A106A4J	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,085:12:0
998	99	284	07:08:50.066	117GK105A106A4K	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,085:21:0
999	99	284	07:11:36.733	117GK105A106A4L	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,087:89:0
1000	99	284	07:11:42.733	117GK105A106A4M	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,088:07:0
1001	99	284	07:14:29.400	117GK105A106A4N	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,090:75:0
1002	99	284	07:14:35.400	117GK105A106A4O	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,090:84:0
1003	99	284	07:17:22.066	117GK105A106A4P	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,093:61:0
1004	99	284	07:17:28.066	117GK105A106A4Q	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,093:70:0
1005	99	284	07:20:14.733	117GK105A106A4R	7STRP	-0.012301,0.001,	Slew =12.01	4R3	4	0	5,208,096:47:0

1006	99	284	07:20:20.733	117GK105A106A4S	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,096:56:0	
1007	99	284	07:23:07.400	117GK105A106A4T	7STRP	-0.012301,0.001,1	Slew = 12.01	4R3	4	0	5,208,099:33:0	
1008	99	284	07:23:13.400	117GK105A106A4U	7STRP	0.013001,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,099:42:0	
1009	99	284	07:26:00.066	117GK105A106B4A	7STRP	-0.025005,0.0100	Slew = 12.01	4R3	4	0	5,208,102:19:0	
1010	99	284	07:26:11.400	117GK105A106B4B	7STRP	0.0,0.0,0.0,0.0,0	Slew = 0.08	4R3	4	0	5,208,102:36:0	
1011	99	284	07:27:12.066	117GK111A	CSMOS	GE	**** GROUP END	CSMOS	4R3	4	0	5,208,103:36:0
1012	99	284	07:27:48.066	165GL4A	CSMOS	NORM,50.275,19.8	Check S/P Position	4R3	4	0	5,208,103:90:0	
1013	99	284	07:29:40.733	117GL	CSMOS	GS	**** GROUP START	CSMOS	4R3	4	0	5,208,105:77:0
1014	99	284	07:29:50.066	117GL105A106A4A	7STRP	-0.0035,-0.03307	Slew = 0.17	4R3	4	0	5,208,106:00:0	
1015	99	284	07:38:54.066	117GL11A	CSMOS	GE	**** GROUP END	CSMOS	4R3	4	0	5,208,114:88:0
1016	99	284	07:38:55.400	165GM4A	CSMOS	NORM,50.56,21.39	Check S/P Position	4R3	4	0	5,208,114:90:0	
1017	99	284	07:39:47.400	117GM	CSMOS	GS	**** GROUP START	CSMOS	4R3	4	0	5,208,115:77:0
1018	99	284	07:39:56.733	117GM105A106A4A	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,116:00:0	
1019	99	284	07:42:08.733	117GM105A106A4B	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,118:16:0	
1020	99	284	07:42:14.733	117GM105A106A4C	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,118:25:0	
1021	99	284	07:44:26.733	117GM105A106A4D	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,120:41:0	
1022	99	284	07:44:32.733	117GM105A106A4E	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,120:50:0	
1023	99	284	07:46:44.733	117GM105A106A4F	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,122:66:0	
1024	99	284	07:46:50.733	117GM105A106A4G	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,122:75:0	
1025	99	284	07:49:02.733	117GM105A106A4H	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,125:00:0	
1026	99	284	07:49:08.733	117GM105A106A4I	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,125:09:0	
1027	99	284	07:51:20.733	117GM105A106A4J	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,127:25:0	
1028	99	284	07:51:26.733	117GM105A106A4K	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,127:34:0	
1029	99	284	07:53:38.733	117GM105A106A4L	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,129:50:0	
1030	99	284	07:53:44.733	117GM105A106A4M	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,129:59:0	
1031	99	284	07:55:56.733	117GM105A106A4N	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,131:75:0	
1032	99	284	07:56:02.733	117GM105A106A4O	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,131:84:0	
1033	99	284	07:58:14.733	117GM105A106A4P	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,134:09:0	
1034	99	284	07:58:20.733	117GM105A106A4Q	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,134:18:0	
1035	99	284	08:00:32.733	117GM105A106A4R	7STRP	-0.00998,0.0007,	Slew = 12.01	4R3	4	0	5,208,136:34:0	
1036	99	284	08:00:38.733	117GM105A106A4S	7STRP	0.0103,0.0,0.0,0.0	Slew = 0.08	4R3	4	0	5,208,136:43:0	
1037	99	284	08:01:04.066	20RG6B	6RTSL1		R/T Select of DDS and	4R3	4	0	5,208,136:81:0	
1038	99	284	08:02:15.400	24NNPELEPM01-		-----START-----		4R3	4	0	:	
1039	99	284	08:02:50.733	117GM11A	CSMOS	GE	**** GROUP END	CSMOS	4R3	4	0	5,208,138:59:0
1040	99	284	08:02:52.066	20DP5A	37PL		Program Load (halts microprocessor & unwri	4	0	5,208,138:61:0		
1041	99	284	08:02:55.400	20DP5B	37MRL		Memory Realocate (software operates from R	4	0	5,208,138:66:0		
1042	99	284	08:02:58.733	20DP6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5,208,138:71:0		
1043	99	284	08:03:08.733	20DP6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,208,138:86:0		
1044	99	284	08:03:22.733	20DP5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,208,139:16:0		
1045	99	284	08:03:26.066	20DP5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,208,139:21:0	
1046	99	284	08:04:06.066	20DP4A	37IST	1,2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (RefGain State	4R3	4	0	5,208,139:81:0	
1047	99	284	08:05:06.733	20DP4B	37IOP	3,0	Long Map, Grating Start Position =00	4R3	4	0	5,208,140:81:0	
1048	99	284	08:05:07.400	20DP4C	37ETB	4,C,4,35,FF,FF	Loads wavelength edit table	4R3	4	0	5,208,140:82:0	
1049	99	284	08:05:12.733	165DP4A	7SCAN	NORM,50.47,20.25	Check S/P Position	4R3	4	0	5,208,140:90:0	
1050	99	284	08:05:17.400	24INPELEPM01-		-----START-----		4R3	4	0	:	
1051	99	284	08:05:17.400	24NNPELEPM01-		-----STOP-----		4R3	4	0	:	
1052	99	284	08:06:00.733		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 2430.68 +/- 10	4R3	4	0	5,208,141:71:0	
1053	99	284	08:06:00.733	175DP422A6A	6DMSC	R28,1	DMS Control	4R3	4	0	5,208,141:71:0	
1054	99	284	08:06:04.733	117DP	CSMOS	GS	**** GROUP START	CSMOS	4R3	4	0	5,208,141:77:0
1055	99	284	08:06:07.400		DMS:	:*RUNUP	R28, TRACK 1, FWD, TIC 2430.68 +/- 10	4R3	4	0	5,208,141:81:0	
1056	99	284	08:06:10.733	175DP176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	4R3	4	0	5,208,141:86:0	
1057	99	284	08:06:11.400		DMS:	:*RECORD	R28, TRACK 1, FWD, TIC *2432.18 +/- 10	4R3	4	0	5,208,141:87:0	
1058	99	284	08:06:11.400		DMS:	:*AT SPD	R28, TRACK 1, FWD, TIC 2432.18 +/- 10	4R3	4	0	5,208,141:87:0	
1059	99	284	08:06:11.400	24INPELEPM01-	NIMPBK	301DP	IO PELE PLUME OBSERVATION	4R3	4	0	:	
1060	99	284	08:06:12.733	165DP4B	7VECT		Inert vect update UTC	4R3	4	0	5,208,141:89:0	
1061	99	284	08:06:14.066	117DP105A106A4A	7STRP	-0.0089,0.0,0.0,0	Slew = 0.03	4R3	4	0	5,208,142:00:0	



1062	99	284	08:08:39.400	24INPELEPM01-	NIMPBK	301EP		IO PELE PLUME OBSERVATION	4R3	4	0	:	:
1063	99	284	08:08:48.066	24INPELEPM01-	DESEL	300DP		IO PELE PLUME OBSERVATION	4R3	4	0	:	:
1064	99	284	08:11:10.733	24INPELEPM01-	DESEL	300EP		IO PELE PLUME OBSERVATION	4R3	4	0	:	:
1065	99	284	08:11:11.400		DMS:	: *RUNDOWN		R28, TRACK 1, FWD, TIC *2695.86 +/- 10	4R3	4	0	:	:
1066	99	284	08:11:11.400		6DMSC	RDY,0		DMS Control Tape stop	4R3	4	0	:	:
1067	99	284	08:11:12.600		DMS:	: *READY		RDY, TRACK 1, FWD, TIC *2696.16 +/- 10	4R3	4	0	:	:
1068	99	284	08:11:14.066		CSMOS	GE		**** GROUP END CSMOS	4R3	4	0	:	:
1069	99	284	08:11:21.400	24INPELEPM01-		****STOP			4R3	4	0	:	:
1070	99	284	08:12:17.400	165GN4A	7SCAN	NORM,50.007,21.4		Check S/P Position	4R3	4	0	:	:
1071	99	284	08:13:09.400	117GN	CSMOS	GS		**** GROUP START CSMOS	4R3	4	0	:	:
1072	99	284	08:13:18.733	117GN105A106A4B	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1073	99	284	08:15:49.400	117GN105A106A4B	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1074	99	284	08:15:56.066	117GN105A106A4C	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1075	99	284	08:18:26.733	117GN105A106A4D	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1076	99	284	08:18:33.400	117GN105A106A4E	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1077	99	284	08:21:04.066	117GN105A106A4F	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1078	99	284	08:21:10.733	117GN105A106A4G	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1079	99	284	08:23:41.400	117GN105A106A4H	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1080	99	284	08:23:48.066	117GN105A106A4I	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1081	99	284	08:26:18.733	117GN105A106A4J	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1082	99	284	08:26:25.400	117GN105A106A4K	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1083	99	284	08:28:56.066	117GN105A106A4L	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1084	99	284	08:29:02.733	117GN105A106A4M	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1085	99	284	08:31:33.400	117GN105A106A4N	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1086	99	284	08:31:40.066	117GN105A106A4O	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1087	99	284	08:34:10.733	117GN105A106A4P	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1088	99	284	08:34:17.400	117GN105A106A4Q	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1089	99	284	08:36:48.066	117GN105A106A4R	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1090	99	284	08:36:54.733	117GN105A106A4S	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1091	99	284	08:39:25.400	117GN105A106A4T	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1092	99	284	08:39:32.066	117GN105A106A4U	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1093	99	284	08:42:02.733	117GN105A106A4V	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1094	99	284	08:42:09.400	117GN105A106A4W	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1095	99	284	08:44:40.066	117GN105A106A4X	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1096	99	284	08:44:46.733	117GN105A106A4Y	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1097	99	284	08:47:17.400	117GN105A106A4Z	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1098	99	284	08:47:24.066	117GN105A106A4AA	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1099	99	284	08:49:54.733	117GN105A106A4AB	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1100	99	284	08:50:01.400	117GN105A106A4AC	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1101	99	284	08:52:32.066	117GN105A106A4AD	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1102	99	284	08:52:38.733	117GN105A106A4AE	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1103	99	284	08:55:09.400	117GN105A106A4AF	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1104	99	284	08:55:16.066	117GN105A106A4AG	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1105	99	284	08:57:46.733	117GN105A106A4AH	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1106	99	284	08:57:53.400	117GN105A106A4AI	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1107	99	284	09:00:24.066	117GN105A106A4AJ	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1108	99	284	09:00:30.733	117GN105A106A4AK	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1109	99	284	09:03:01.400	117GN105A106A4AL	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1110	99	284	09:03:08.066	117GN105A106A4AM	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1111	99	284	09:05:38.733	117GN105A106A4AN	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1112	99	284	09:05:45.400	117GN105A106A4AO	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1113	99	284	09:08:16.066	117GN105A106A4AP	7STRP	-0.024305,0.001,		Slew = 12.01	4R3	4	0	:	:
1114	99	284	09:08:22.733	117GN105A106A4AQ	7STRP	0.025005,0.0,0.0		Slew = 0.17	4R3	4	0	:	:
1115	99	284	09:10:53.400	117GN11A	CSMOS	GE		**** GROUP END CSMOS	4R3	4	0	:	:
1116	99	284	09:15:46.066	165IR4A	7SCAN	NORM,49.109,20.8		Check S/P Position	4R3	4	0	:	:
1117	99	284	09:16:52.066	175IW422A6A	6DMSC	R403.1		DMS Control	4R3	4	0	:	:

1118	99	284	09:16:52.066	DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 2696.16 +/- 10	4R3	4	0	5.208,211:78:0
1119	99	284	09:16:52.733	SMOS	GS		4R3	4	0	5.208,211:79:0
1120	99	284	09:16:58.733	DMS:	: *RUNUP	R403, TRACK 1, FWD, TIC 2696.16 +/- 10	4R3	4	0	5.208,211:88:0
1121	99	284	09:16:59.400	7VECT	165IR4B	Inert vect update UTC	4R3	4	0	5.208,211:89:0
1122	99	284	09:17:02.066	6TMREC	IM4	403.2 KBPS IMAGE RECORD Record Mode Chang	4R3	4	0	5.208,212:02:0
1123	99	284	09:17:02.600	DMS:	: *RECORD	R403, TRACK 1, FWD, TIC *2719.16 +/- 10	4R3	4	0	5.208,212:02:8
1124	99	284	09:17:02.600	DMS:	: *AT_SPD	R403, TRACK 1, FWD, TIC 2719.16 +/- 10	4R3	4	0	5.208,212:02:8
1125	99	284	09:17:02.733	7STRP	0.0063,0.0,26,0,	Slew =4,2.5	4R3	4	0	5.208,212:03:0
1126	99	284	09:17:02.733	24INSTEREO01	NIMPBK 301EL	IO MONITORING WITH SSI	4R3	4	0	:
1127	99	284	09:17:28.733	118R110A111A4B	7STRP -0.018902,0.0073	Slew =5,2.1	4R3	4	0	5.208,212:42:0
1128	99	284	09:17:37.400	118R110A111A4C	7STRP 0.0063,0.0,26,0,	Slew =4,2.5	4R3	4	0	5.208,212:55:0
1129	99	284	09:18:03.400	118R110A111A4D	7STRP -0.018902,0.0073	Slew =5,2.1	4R3	4	0	5.208,213:03:0
1130	99	284	09:18:12.066	118R110A111A4E	7STRP 0.0063,0.0,26,0,	Slew =4,2.5	4R3	4	0	5.208,213:16:0
1131	99	284	09:18:38.066	118IR11A	SMOS GE		4R3	4	0	5.208,213:55:0
1132	99	284	09:18:44.066	24INSTEREO01+	DESEL 300EL	IO MONITORING WITH SSI	4R3	4	0	:
1133	99	284	09:18:44.733	175IW422A6B	6DMSC RDY,0	DMS Control Tape stop	4R3	4	0	5.208,213:65:0
1134	99	284	09:18:44.733	DMS:	: *RUNDOWN	R403, TRACK 1, FWD, TIC *3975.88 +/- 10	4R3	4	0	5.208,213:65:0
1135	99	284	09:18:47.466	DMS:	: *READY	RDY, TRACK 1, FWD, TIC *3979.88 +/- 11	4R3	4	0	5.208,213:69:1
1136	99	284	09:19:01.400	165GO4A	7SCAN NORM,49.142,21.2	Check S/P Position	4R3	4	0	5.208,213:90:0
1137	99	284	09:19:53.400	117GO	CSMOS GS	***** GROUP START CSMOS	4R3	4	0	5.208,214:77:0
1138	99	284	09:20:02.733	117GO105A106A4A	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,215:00:0
1139	99	284	09:22:42.066	117GO105A106A4B	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,217:57:0
1140	99	284	09:22:48.733	117GO105A106A4C	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,217:67:0
1141	99	284	09:25:28.066	117GO105A106A4D	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,220:33:0
1142	99	284	09:25:34.733	117GO105A106A4E	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,220:43:0
1143	99	284	09:28:14.066	117GO105A106A4F	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,223:09:0
1144	99	284	09:28:20.733	117GO105A106A4G	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,223:19:0
1145	99	284	09:31:00.066	117GO105A106A4H	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,225:76:0
1146	99	284	09:31:06.733	117GO105A106A4I	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,225:86:0
1147	99	284	09:33:46.066	117GO105A106A4J	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,228:52:0
1148	99	284	09:33:52.733	117GO105A106A4K	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,228:62:0
1149	99	284	09:36:32.066	117GO105A106A4L	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,231:28:0
1150	99	284	09:36:38.733	117GO105A106A4M	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,231:38:0
1151	99	284	09:39:18.066	117GO105A106A4N	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,234:04:0
1152	99	284	09:39:24.733	117GO105A106A4O	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,234:14:0
1153	99	284	09:42:04.066	117GO105A106A4P	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,236:71:0
1154	99	284	09:42:10.733	117GO105A106A4Q	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,236:81:0
1155	99	284	09:44:50.066	117GO105A106A4R	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,239:47:0
1156	99	284	09:44:56.733	117GO105A106A4S	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,239:57:0
1157	99	284	09:47:36.066	117GO105A106A4T	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,242:23:0
1158	99	284	09:47:42.733	117GO105A106A4U	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,242:33:0
1159	99	284	09:50:22.066	117GO105A106A4V	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,244:90:0
1160	99	284	09:50:28.733	117GO105A106A4W	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,245:09:0
1161	99	284	09:53:08.066	117GO105A106A4X	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,247:66:0
1162	99	284	09:53:14.733	117GO105A106A4Y	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,247:76:0
1163	99	284	09:55:54.066	117GO105A106A4Z	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,250:42:0
1164	99	284	09:56:00.733	117GO105A106A4AA	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,250:52:0
1165	99	284	09:58:40.066	117GO105A106A4AB	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,253:18:0
1166	99	284	09:58:46.733	117GO105A106A4AC	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,253:28:0
1167	99	284	10:01:04.066	20RS6B	6RTSL1	R/T Select of DDS and	4R3	4	0	5.208,255:52:0
1168	99	284	10:01:26.066	117GO105A106A4AD	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,255:52:0
1169	99	284	10:01:32.733	117GO105A106A4AE	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,255:85:0
1170	99	284	10:04:12.066	117GO105A106A4AF	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,256:04:0
1171	99	284	10:04:18.733	117GO105A106A4AG	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,258:61:0
1172	99	284	10:06:58.066	117GO105A106A4AH	7STRP -0.024205,0.0009	Slew =12.01	4R3	4	0	5.208,261:37:0
1173	99	284	10:07:04.733	117GO105A106A4AI	7STRP 0.024805,0.0,0,0	Slew = 0.16	4R3	4	0	5.208,261:47:0

1174	99	284	10:09:00.066	480SF6A	6IMROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	4R3	4	0	5,208,263:38:0
1175	99	284	10:09:44.066	117GO105A106A4AJ	7STRP	-0.024205,0.0009	Slew =12.01	4R3	4	0	5,208,264:13:0
1176	99	284	10:09:50.733	117GO105A106A4AK	7STRP	0.024805,0.0,0.0	Slew = 0.16	4R3	4	0	5,208,264:23:0
1177	99	284	10:10:20.066	480SF6B	6IMROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	4R3	4	0	5,208,264:67:0
1178	99	284	10:12:30.066	117GO105A106A4AL	7STRP	-0.024205,0.0009	Slew =12.01	4R3	4	0	5,208,266:80:0
1179	99	284	10:12:36.733	117GO105A106A4AM	7STRP	0.024805,0.0,0.0	Slew = 0.16	4R3	4	0	5,208,266:90:0
1180	99	284	10:15:16.066	117GO105A106A4AN	7STRP	-0.024205,0.0009	Slew =12.01	4R3	4	0	5,208,269:56:0
1181	99	284	10:15:22.733	117GO105A106A4AO	7STRP	0.024805,0.0,0.0	Slew = 0.16	4R3	4	0	5,208,269:66:0
1182	99	284	10:18:02.066	117GO105A106A4AP	7STRP	-0.024205,0.0009	Slew =12.01	4R3	4	0	5,208,272:32:0
1183	99	284	10:18:08.733	117GO105A106A4AQ	7STRP	0.024805,0.0,0.0	Slew = 0.16	4R3	4	0	5,208,272:42:0
1184	99	284	10:20:48.066	117GO105A106A4AR	7STRP	-0.024205,0.0009	Slew =12.01	4R3	4	0	5,208,275:08:0
1185	99	284	10:20:54.733	117GO105A106A4AS	7STRP	0.024805,0.0,0.0	Slew = 0.16	4R3	4	0	5,208,275:18:0
1186	99	284	10:23:34.066	117GO11A	CSMOS	GE	***** GROUP END CSMOS	4R3	4	0	5,208,277:75:0
1187	99	284	10:24:45.400	192GP4A	7CONE	9,0,0,0	Check S/P Position	4R3	4	0	5,208,279:00:0
1188	99	284	10:36:53.400	192GP4B	7CONE	9,0,90,0	Check S/P Position	4R3	4	0	5,208,291:00:0
1189	99	284	10:39:59.400	24NREGION02-	*****	START	*****	4R3	4	0	*****
1190	99	284	10:40:36.066	20DQ5A	37PL		Program Load (halts microprocessor & unwri	4	0	5,208,294:61:0	
1191	99	284	10:40:39.400	20DQ5B	37MRL		Memory Realocate (software operates from R	4	0	5,208,294:66:0	
1192	99	284	10:40:42.733	20DQ6A	6MCOPI	NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5,208,294:71:0	
1193	99	284	10:40:52.733	20DQ6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,208,294:86:0	
1194	99	284	10:41:06.733	20DQ5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,208,295:16:0	
1195	99	284	10:41:10.066	20DQ5D	37MIN		Memory Normal (software operates from ROM)	260	4	0	5,208,295:21:0
1196	99	284	10:41:50.066	20DQ4A	37IST	1,2,0,OFF,0,1,0	Chopper ON, Sync, Chopper (Ref)Gain State	2R0	4	0	5,208,295:81:0
1197	99	284	10:41:56.066	165DZ4A	7SCAN	NORM,48,486,20.4	Check S/P Position	2R0	4	0	5,208,295:90:0
1198	99	284	10:42:00.733	24NREGION02-	*****	STOP	*****	2R0	4	0	*****
1199	99	284	10:42:00.733	24NREGION02-	*****	STOP	*****	2R0	4	0	*****
1200	99	284	10:42:50.733	20DQ4B	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	5,208,296:81:0
1201	99	284	10:42:51.400	20DQ4C	37ETB	4,C4,35,FF,FF	Loads wavelength edit table	2R3	4	0	5,208,296:82:0
1202	99	284	10:45:46.066		DMS:	*E4-DELAY	RDY, TRACK 1, FWD, TIC 3979.88 +/- 11	2R3	4	0	5,208,299:71:0
1203	99	284	10:45:46.066		6DMSC	R28,1	DMS Control	2R3	4	0	5,208,299:71:0
1204	99	284	10:45:50.066		117DZ		***** GROUP START CSMOS	2R3	4	0	5,208,299:77:0
1205	99	284	10:45:52.733		DMS:	*RUNUP	R28, TRACK 1, FWD, TIC 3979.88 +/- 11	2R3	4	0	5,208,299:81:0
1206	99	284	10:45:56.066		6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R3	4	0	5,208,299:86:0
1207	99	284	10:45:56.733		DMS:	*AT SPD	R28, TRACK 1, FWD, TIC 3981.38 +/- 11	2R3	4	0	5,208,299:87:0
1208	99	284	10:45:56.733		DMS:	*RECORD	R28, TRACK 1, FWD, TIC 3981.38 +/- 11	2R3	4	0	5,208,299:87:0
1209	99	284	10:45:56.733	24NREGION02-	NIMPBK	301DQ	IO MONITORING	2R3	4	0	*****
1210	99	284	10:45:59.400	117DZ105A106A4A	7STRP	0,016001,0,0,0,0	Slew =-0.03	2R3	4	0	5,208,300:00:0
1211	99	284	10:46:23.400	24NREGION02-	NIMPBK	301DR	IO MONITORING	2R3	4	0	*****
1212	99	284	10:47:20.066	24NREGION02-	DESEL	300DR	IO MONITORING	2R3	4	0	*****
1213	99	284	10:52:44.733	24NREGION02-	NIMPBK	301DS	IO MONITORING	2R3	4	0	*****
1214	99	284	10:53:34.733	24NREGION02-	DESEL	300DS	IO MONITORING	2R3	4	0	*****
1215	99	284	10:54:02.733	24NREGION02-	NIMPBK	301DT	IO MONITORING	2R3	4	0	*****
1216	99	284	10:54:22.733	24NREGION02-	DESEL	300DT	IO MONITORING	2R3	4	0	*****
1217	99	284	10:54:31.000	24NREGION02-	NIMPBK	301EU	IO MONITORING	2R3	4	0	*****
1218	99	284	10:54:54.733	24NREGION02-	NIMPBK	301EQ	IO MONITORING	2R3	4	0	*****
1219	99	284	10:54:58.066	117DZ105A106A4B	7STRP	-0.016001,0.0076	Slew =12.01	2R3	4	0	5,208,308:80:0
1220	99	284	10:55:03.400	24NREGION02-	DESEL	300DQ	IO MONITORING	2R3	4	0	*****
1221	99	284	10:55:11.333	24NREGION02-	DESEL	300EU	IO MONITORING	2R3	4	0	*****
1222	99	284	10:55:11.400	117DZ105A106A4C	7STRP	0,016001,0,0,0,0	Slew =-0.03	2R3	4	0	5,208,309:09:0
1223	99	284	10:56:41.000	24NREGION02-	NIMPBK	301EV	IO MONITORING	2R3	4	0	*****
1224	99	284	10:57:11.333	24NREGION02-	DESEL	300EV	IO MONITORING	2R3	4	0	*****
1225	99	284	10:57:50.000	24NREGION02-	NIMPBK	301EX	IO MONITORING	2R3	4	0	*****
1226	99	284	10:58:10.000	24NREGION02-	DESEL	300EX	IO MONITORING	2R3	4	0	*****
1227	99	284	11:00:00.000	24NREGION02-	NIMPBK	301EY	IO MONITORING	2R3	4	0	*****
1228	99	284	11:00:24.000	24NREGION02-	DESEL	300EY	IO MONITORING	2R3	4	0	*****
1229	99	284	11:02:22.066	24NREGION02-	DESEL	300EQ	IO MONITORING	2R3	4	0	*****

1230	99	284	11:02:22.733	DMS:	: *RUNDOWN	R28, TRACK 1, FWD, TIC *4847.98 +/- 11	2R3	4	0	5,208,316:19:0	
1231	99	284	11:02:22.733	6DMS	RDY,0	DMS Control Tape stop	2R3	4	0	5,208,316:19:0	
1232	99	284	11:02:23.933	DMS:	: *READY	RDY, TRACK 1, FWD, TIC *4848.28 +/- 11	2R3	4	0	5,208,316:20:8	
1233	99	284	11:04:10.066	CSMOS	GE	***** GROUP END CSMOS	2R3	4	0	5,208,317:89:0	
1234	99	284	11:06:16.733	24INREGION02-	-----STOP-----		2R3	4	0	: :	
1235	99	284	11:17:24.066	24NDETECT03-	-----START-----		2R3	4	0	: :	
1236	99	284	11:17:27.400	37PL		Program Load (halts microprocessor & unwri	4	0	5,208,331:11:0		
1237	99	284	11:17:29.400	20FC5B	37MRL	Memory Realocate (software operates from R	4	0	5,208,331:14:0		
1238	99	284	11:17:34.066	20FC6A	6MCOPY NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5,208,331:21:0		
1239	99	284	11:17:44.066	20FC6B	6MCOPY NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,208,331:36:0		
1240	99	284	11:17:54.066	20FC5C	37IRT	Instrument Reset (goes into POR state)	4	0	5,208,331:51:0		
1241	99	284	11:18:00.733	20FC5D	37MIN	Memory Normal (software operates from ROM)	260	4	0	5,208,331:61:0	
1242	99	284	11:18:13.400	20FC4A	37IST	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,208,331:80:0	
1243	99	284	11:19:14.066	20FC4B	37IST	Gain State 2	2R0	4	0	5,208,332:80:0	
1244	99	284	11:20:14.733	20FC4C	37MB	Selects mirror (spatial) edit table	2R0	4	0	5,208,333:80:0	
1245	99	284	11:21:15.400	20FC4D	37IOP	Long Map, Grating Start Position =00	2R3	4	0	5,208,334:80:0	
1246	99	284	11:21:16.066	20FC4E	37ETB	Loads wavelength edit table	2R3	4	0	5,208,334:81:0	
1247	99	284	11:23:28.066	20FH6A	6MCOPY B1A1A,5631,NIMS,	B1A1A,5631,NIMS,150F,1517	2R3	4	0	5,208,337:06:0	
1248	99	284	11:23:36.733	20FH6B	6MCOPY B1A1A,563A,NIMS,	B1A1A,563A,NIMS,150F,1517	2R3	4	0	5,208,337:19:0	
1249	99	284	11:24:29.400	20FH6C	6MCOPY B1A1A,5643,NIMS,	B1A1A,5643,NIMS,150F,1517	2R3	4	0	5,208,338:07:0	
1250	99	284	11:24:38.066	20FH6D	6MCOPY B1A1A,564C,NIMS,	B1A1A,564C,NIMS,150F,1517	2R3	4	0	5,208,338:20:0	
1251	99	284	11:25:30.733	20FH6E	6MCOPY B1A1A,5655,NIMS,	B1A1A,5655,NIMS,150F,1517	2R3	4	0	5,208,339:08:0	
1252	99	284	11:25:39.400	20FH6F	6MCOPY B1A1A,565E,NIMS,	B1A1A,565E,NIMS,150F,1517	2R3	4	0	5,208,339:21:0	
1253	99	284	11:26:32.066	20FH6G	6MCOPY B1A1A,5667,NIMS,	B1A1A,5667,NIMS,150F,1517	2R3	4	0	5,208,340:09:0	
1254	99	284	11:26:40.733	20FH6H	6MCOPY B1A1A,5670,NIMS,	B1A1A,5670,NIMS,150F,1517	2R3	4	0	5,208,340:22:0	
1255	99	284	11:27:33.400	20FH6I	6MCOPY B1A1A,5679,NIMS,	B1A1A,5679,NIMS,150F,1517	2R3	4	0	5,208,341:10:0	
1256	99	284	11:27:42.066	20FH6J	6MCOPY B1A1A,5682,NIMS,	B1A1A,5682,NIMS,150F,1517	2R3	4	0	5,208,341:23:0	
1257	99	284	11:28:34.733	20FH6K	6MCOPY B1A1A,568B,NIMS,	B1A1A,568B,NIMS,150F,1517	2R3	4	0	5,208,342:11:0	
1258	99	284	11:28:43.400	20FH6L	6MCOPY B1A1A,5694,NIMS,	B1A1A,5694,NIMS,150F,1517	2R3	4	0	5,208,342:24:0	
1259	99	284	11:29:36.066	20FH6M	6MCOPY B1A1A,569D,NIMS,	B1A1A,569D,NIMS,150F,1517	2R3	4	0	5,208,343:12:0	
1260	99	284	11:29:44.733	20FH6N	6MCOPY B1A1A,56A6,NIMS,	B1A1A,56A6,NIMS,150F,1517	2R3	4	0	5,208,343:25:0	
1261	99	284	11:30:37.400	20FH6O	6MCOPY B1A1A,56AF,NIMS,	B1A1A,56AF,NIMS,150F,1517	2R3	4	0	5,208,344:13:0	
1262	99	284	11:30:46.066	20FH6P	6MCOPY B1A1A,56B8,NIMS,	B1A1A,56B8,NIMS,150F,1517	2R3	4	0	5,208,344:26:0	
1263	99	284	11:31:38.733	20FH6Q	6MCOPY B1A1A,56C1,NIMS,	B1A1A,56C1,NIMS,150F,1517	2R3	4	0	5,208,345:14:0	
1264	99	284	11:31:47.400	20FH6R	6MCOPY B1A1A,56CA,NIMS,	B1A1A,56CA,NIMS,150F,1517	2R3	4	0	5,208,345:27:0	
1265	99	284	11:32:40.066	20FH6S	6MCOPY B1A1A,56D3,NIMS,	B1A1A,56D3,NIMS,150F,1517	2R3	4	0	5,208,346:15:0	
1266	99	284	11:32:48.733	20FH6T	6MCOPY B1A1A,56DC,NIMS,	B1A1A,56DC,NIMS,150F,1517	2R3	4	0	5,208,346:28:0	
1267	99	284	11:33:41.400	20FH6U	6MCOPY B1A1A,56E5,NIMS,	B1A1A,56E5,NIMS,150F,1517	2R3	4	0	5,208,347:16:0	
1268	99	284	11:33:50.066	20FH6V	6MCOPY B1A1A,56EE,NIMS,	B1A1A,56EE,NIMS,150F,1517	2R3	4	0	5,208,347:29:0	
1269	99	284	11:34:42.733	20FH6W	6MCOPY B1A1A,56F7,NIMS,	B1A1A,56F7,NIMS,150F,1517	2R3	4	0	5,208,348:17:0	
1270	99	284	11:34:51.400	20FH6X	6MCOPY B1A1A,5700,NIMS,	B1A1A,5700,NIMS,150F,1517	2R3	4	0	5,208,348:30:0	
1271	99	284	11:35:44.066	20FH6Y	6MCOPY B1A1A,5709,NIMS,	B1A1A,5709,NIMS,150F,1517	2R3	4	0	5,208,349:18:0	
1272	99	284	11:35:52.733	20FH6Z	6MCOPY B1A1A,5712,NIMS,	B1A1A,5712,NIMS,150F,151C	2R3	4	0	5,208,349:31:0	
1273	99	284	11:37:37.400	24NDETECT03-	-----STOP-----		2R3	4	0	: :	
1274	99	284	11:55:44.733	165CA4A	7SCAN	NORM,48.271,20.1	Check S/P Position	2R3	4	0	5,208,368:90:0
1275	99	284	11:59:46.733	165CA4B	7VECT		Inert vect update UTC	2R3	4	0	5,208,372:89:0
1276	99	284	12:01:04.066	20RH6B	6RTSL1		R/T Select of DDS and	2R3	4	0	5,208,374:23:0
1277	99	284	12:38:46.066	165CA4C	7VECT		Inert vect update UTC	2R3	4	0	5,208,411:49:0
1278	99	284	13:17:45.400	165CA4D	7VECT		Inert vect update UTC	2R3	4	0	5,208,450:09:0
1279	99	284	13:56:44.733	165CA4E	7VECT		Inert vect update UTC	2R3	4	0	5,208,488:60:0
1280	99	284	14:01:04.066	20RT6B	6RTSL1		R/T Select of DDS and	2R3	4	0	5,208,492:85:0
1281	99	284	14:35:44.066	165CA4F	7VECT		Inert vect update UTC	2R3	4	0	5,208,527:20:0
1282	99	284	15:14:43.400	165CA4G	7VECT		Inert vect update UTC	2R3	4	0	5,208,565:71:0
1283	99	284	15:53:42.733	165CA4H	7VECT		Inert vect update UTC	2R3	4	0	5,208,604:31:0
1284	99	284	16:01:04.066	20RI6B	6RTSL1		R/T Select of DDS and	2R3	4	0	5,208,611:56:0
1285	99	284	16:32:47.400	165CB4A	7SCAN	NORM,53.572,21.4	Check S/P Position	2R3	4	0	5,208,642:90:0

1286	99	284	16:33:47.400	165CB4B	7VECT	Inert vect update UTC	2R3	4	0	5,208,643:89:0	
1287	99	284	17:04:05.400	165CB4C	7VECT	Inert vect update UTC	2R3	4	0	5,208,673:86:0	
1288	99	284	17:12:22.066	20MC6A	6CKSUM	MAG,4040,46F0	2R3	4	0	5,208,682:12:0	
1289	99	284	17:13:18.733	480MB6	6MROH	12 read from LLM1A12,2282,0,A1	2R3	4	0	5,208,683:06:0	
1290	99	284	17:13:18.733	480MB6A	6MROH	read from LLM1A12,2282,0,A1	2R3	4	0	5,208,683:06:0	
1291	99	284	17:34:23.400	165CB4D	7VECT	Inert vect update UTC	2R3	4	0	5,208,703:83:0	
1292	99	284	17:35:00.066	480SH6A	6MROH	read from LLM2A44,23E8,0,A1	2R3	4	0	5,208,704:47:0	
1293	99	284	17:36:20.066	480SH6B	6MROH	read from LLM2B45,23E8,0,B1	2R3	4	0	5,208,705:47:0	
1294	99	284	18:01:04.066	20RU6B	6RTSL1	R/T Select of DDS and	2R3	4	0	5,208,730:27:0	
1295	99	284	18:04:45.400	165IS4A	7SCAN	NORM,56.642,22.1	2R3	4	0	5,208,733:86:0	
1296	99	284	18:04:57.400	DMS:	:*E4-DELAY	Check S/P Position	2R3	4	0	5,208,734:13:0	
1297	99	284	18:04:57.400	175IX422A6A	6DMSC	R403.1	RDY, TRACK 1, FWD, TIC 4848.28 +/- 11	2R3	4	0	5,208,734:13:0
1298	99	284	18:05:04.066	DMS:	:*RUNUP	DMS Control	2R3	4	0	5,208,734:23:0	
1299	99	284	18:05:04.733	165IS4B	7VECT	Inert vect update UTC	2R3	4	0	5,208,734:24:0	
1300	99	284	18:05:07.400	175IX176A6A	6TMREC	IM4	403.2 KBPS IMAGE RECORD Record Mode Chang	2R3	4	0	5,208,734:28:0
1301	99	284	18:05:07.933	DMS:	:*RECORD	R403, TRACK 1, FWD, TIC *4871.28 +/- 11	2R3	4	0	5,208,734:28:8	
1302	99	284	18:05:07.933	DMS:	:*AT_SPD	R403, TRACK 1, FWD, TIC 4871.28 +/- 11	2R3	4	0	5,208,734:28:8	
1303	99	284	18:05:08.066	24INGLOCOL01+	NIMPBK	301EZ	IO MONITORING WITH SSI	2R3	4	0	5,208,734:28:8
1304	99	284	18:05:57.400	24INGLOCOL01+	DESEL	300EZ	IO MONITORING WITH SSI	2R3	4	0	5,208,735:13:0
1305	99	284	18:05:58.066	DMS:	:*RUNDOWN	R403, TRACK 1, FWD, TIC *5488.15 +/- 11	2R3	4	0	5,208,735:13:0	
1306	99	284	18:05:58.066	175IX422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R3	4	0	5,208,735:17:1
1307	99	284	18:06:00.800	DMS:	:*READY	RDY, TRACK 1, FWD, TIC *5492.15 +/- 11	2R3	4	0	5,208,735:17:1	
1308	99	284	18:07:50.066	165CC4A	7SCAN	NORM,56.889,22.2	Check S/P Position	2R3	4	0	5,208,736:90:0
1309	99	284	18:11:52.066	165CC4B	7VECT	Inert vect update UTC	2R3	4	0	5,208,740:89:0	
1310	99	284	18:50:51.400	165CC4C	7VECT	Inert vect update UTC	2R3	4	0	5,208,779:49:0	
1311	99	284	19:29:50.733	165CC4D	7VECT	Inert vect update UTC	2R3	4	0	5,208,818:09:0	
1312	99	284	20:01:04.066	20RJ6B	6RTSL1	R/T Select of DDS and	2R3	4	0	5,208,848:89:0	
1313	99	284	20:08:50.066	165CC4E	7VECT	Inert vect update UTC	2R3	4	0	5,208,856:60:0	
1314	99	284	20:47:49.400	165CC4F	7VECT	Inert vect update UTC	2R3	4	0	5,208,895:20:0	
1315	99	284	21:26:48.733	165CC4G	7VECT	Inert vect update UTC	2R3	4	0	5,208,933:71:0	
1316	99	284	22:01:04.000	20RV6B	6RTSL1	R/T Select of DDS and	2R3	4	0	5,208,967:60:0	
1317	99	284	22:05:48.000	165CC4H	7VECT	Inert vect update UTC	2R3	4	0	5,208,972:31:0	
1318	99	284	22:47:54.666	165CD4A	7SCAN	NORM,68.518999,2	Check S/P Position	2R3	4	0	5,209,013:90:0
1319	99	284	22:48:54.666	165CD4B	7VECT	Inert vect update UTC	2R3	4	0	5,209,014:89:0	
1320	99	284	23:34:22.666	165CD4C	7VECT	Inert vect update UTC	2R3	4	0	5,209,059:86:0	
1321	99	285	00:01:04.000	20RK6B	6RTSL1	R/T Select of DDS and	2R3	4	0	5,209,086:31:0	
1322	99	285	00:20:55.333	431ZL6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,209,105:89:0
1323	99	285	00:22:00.000	20TS4A	7SAFE	STOP	S/P NO MOVEMENT	2R3	4	0	5,209,107:04:0
1324	99	285	00:22:50.000	20TS4B	7SLEW	DIS.POS,0.0	Stator movement	2R3	4	0	5,209,107:79:0
1325	99	285	00:22:58.000	20TS4F	7STAR	1,1610,278.815,3	Star catalog update	2R3	4	0	5,209,108:00:0
1326	99	285	00:23:00.000	20TS4G	7STAR	2,317,120,456,-3	Star catalog update	2R3	4	0	5,209,108:03:0
1327	99	285	00:23:02.000	20TS4H	7STAR	3,133,165,161,62	Star catalog update	2R3	4	0	5,209,108:06:0
1328	99	285	00:23:04.000	20TS4I	7STAR	4,0,0,0,0,0	Star catalog update	2R3	4	0	5,209,108:09:0
1329	99	285	00:23:06.000	20TS4J	7STAR	5,0,0,0,0,0	Star catalog update	2R3	4	0	5,209,108:12:0
1330	99	285	00:23:08.000	20TS4K	7STAR	6,0,0,0,0,0	Star catalog update	2R3	4	0	5,209,108:15:0
1331	99	285	00:25:09.333	20ZM6A	6EUVON			2R3	4	0	5,209,110:15:0
1332	99	285	00:26:00.000	431ZM6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS onl	2R3	4	0	5,209,111:00:0
1333	99	285	00:31:02.666	165BA4A	7SCAN	NORM,120.860999,	Check S/P Position	2R3	4	0	5,209,115:90:0
1334	99	285	00:32:06.000	432PB431A6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	2R3	4	0	5,209,117:03:0
1335	99	285	00:32:06.666	432PB6A	6RTSL1		R/T Select of DDS and	2R3	4	0	5,209,117:04:0
1336	99	285	02:01:04.000	20RW6B	6RTSL1		R/T Select of DDS and	2R3	4	0	5,209,205:02:0
1337	99	285	03:08:46.666	165CE4A	7SCAN	NORM,81.210999,2	Check S/P Position	2R3	4	0	5,209,271:90:0
1338	99	285	03:12:48.666	165CE4B	7VECT	Inert vect update UTC	2R3	4	0	5,209,275:89:0	
1339	99	285	03:30:00.000	480S16A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	2R3	4	0	5,209,292:89:0
1340	99	285	03:31:20.000	480S16B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	2R3	4	0	5,209,294:27:0
1341	99	285	03:55:24.666	165IT4A	7SCAN	NORM,83.264999,2	Check S/P Position	2R3	4	0	5,209,318:10:0

1342	99	285	03:56:17.333	165IT4B	7VECT	Inert vect update UTC	2R3	4	0	5,209,318:89:0
1343	99	285	03:56:19.333	118IT	SMOS	GS	2R3	4	0	5,209,319:01:0
1344	99	285	03:56:29.333	118IT110A111A4A	75STRP	-0.00352,0,0,234	2R3	4	0	5,209,319:16:0
1345	99	285	03:57:36.666	175Y422A6A	6DMSC	R403.1	2R3	4	0	5,209,320:26:0
1346	99	285	03:57:36.666		DMS:	:*E4-DELAY	2R3	4	0	5,209,320:26:0
1347	99	285	03:57:43.333		DMS:	:*RUNUP	2R3	4	0	5,209,320:36:0
1348	99	285	03:57:46.666	175Y176A6A	6TMREC	IM4	2R3	4	0	5,209,320:41:0
1349	99	285	03:57:47.200		DMS:	:*RECORD	2R3	4	0	5,209,320:41:0
1350	99	285	03:57:47.200		DMS:	:*AT SPD	2R3	4	0	5,209,320:41:8
1351	99	285	03:57:47.333	118IT110A111A4B	75STRP	0.00352,0,0,0,0,	2R3	4	0	5,209,320:42:0
1352	99	285	03:57:50.666		DMS:	:*RUNDOWN	2R3	4	0	5,209,320:47:0
1353	99	285	03:57:50.666	175Y422A6B	6DMSC	RDY,0	2R3	4	0	5,209,320:47:0
1354	99	285	03:57:53.400		DMS:	:*READY	2R3	4	0	5,209,320:51:1
1355	99	285	03:59:05.333	118IT110A111A4C	75STRP	-0.00352,0,0,234	2R3	4	0	5,209,321:68:0
1356	99	285	04:00:12.666	175Z422A6A	6DMSC	R403.1	2R3	4	0	5,209,322:78:0
1357	99	285	04:00:12.666		DMS:	:*E4-DELAY	2R3	4	0	5,209,322:78:0
1358	99	285	04:00:19.333		DMS:	:*RUNUP	2R3	4	0	5,209,322:88:0
1359	99	285	04:00:22.666	175Z176A6A	6TMREC	IM4	2R3	4	0	5,209,323:02:0
1360	99	285	04:00:23.200		DMS:	:*AT SPD	2R3	4	0	5,209,323:02:8
1361	99	285	04:00:23.200		DMS:	:*RECORD	2R3	4	0	5,209,323:02:8
1362	99	285	04:00:23.333	118IT110A111A4D	75STRP	0.00352,0,0,0,0,	2R3	4	0	5,209,323:03:0
1363	99	285	04:00:26.666		DMS:	:*RUNDOWN	2R3	4	0	5,209,323:08:0
1364	99	285	04:00:26.666	175Z422A6B	6DMSC	RDY,0	2R3	4	0	5,209,323:08:0
1365	99	285	04:00:29.400		DMS:	:*READY	2R3	4	0	5,209,323:12:1
1366	99	285	04:01:04.000	20RL6B	6RTSL1		2R3	4	0	5,209,323:64:0
1367	99	285	04:01:41.333	118IT110A111A4E	75STRP	-0.00352,0,0,234	2R3	4	0	5,209,324:29:0
1368	99	285	04:02:48.666		DMS:	:*E4-DELAY	2R3	4	0	5,209,325:39:0
1369	99	285	04:02:48.666	175JA422A6A	6DMSC	R403.1	2R3	4	0	5,209,325:39:0
1370	99	285	04:02:55.333		DMS:	:*RUNUP	2R3	4	0	5,209,325:49:0
1371	99	285	04:02:58.666	175JA176A6A	6TMREC	IM4	2R3	4	0	5,209,325:54:0
1372	99	285	04:02:59.200		DMS:	:*AT SPD	2R3	4	0	5,209,325:54:8
1373	99	285	04:02:59.200		DMS:	:*RECORD	2R3	4	0	5,209,325:54:8
1374	99	285	04:02:59.333	118IT11A	SMOS	GE	2R3	4	0	5,209,325:55:0
1375	99	285	04:03:02.666	175JA422A6B	6DMSC	RDY,0	2R3	4	0	5,209,325:60:0
1376	99	285	04:03:02.666		DMS:	:*RUNDOWN	2R3	4	0	5,209,325:60:0
1377	99	285	04:03:05.400		DMS:	:*READY	2R3	4	0	5,209,325:64:1
1378	99	285	04:03:52.666	165CF4A	7SCAN	NORM,83.757999,2	2R3	4	0	5,209,326:44:0
1379	99	285	04:04:22.666	165CF4B	7VECT		2R3	4	0	5,209,326:89:0
1380	99	285	04:17:36.733	24NNRELOAD01-		-----START-----	2R3	4	0	:
1381	99	285	04:19:14.000	20FN5A	37PL		4	0	5,209,341:61:0	
1382	99	285	04:19:17.333	20FN5B	37MRL	Program Load (halts microprocessor & unwri	4	0	5,209,341:66:0	
1383	99	285	04:19:20.666	20FN6A	6MCPY	NIMS	4	0	5,209,341:71:0	
1384	99	285	04:19:30.666	20FN6B	6MCPY	NIMS	4	0	5,209,341:86:0	
1385	99	285	04:19:44.666	20FN5C	37IRT	Instrument Reset (goes into POR state)	4	0	5,209,342:16:0	
1386	99	285	04:19:48.000	20FN5D	37MN	Memory Normal (software operates from ROM)	260	4	0	5,209,342:21:0
1387	99	285	04:20:28.000	20FN4A	37IST	1,2,0,OFF,0,1,0	2R0	4	0	5,209,342:81:0
1388	99	285	04:23:32.000	127FO4A	37IOP	3,0	2R3	4	0	5,209,345:84:0
1389	99	285	04:23:32.000	127FO	NIMSTAB	GS	2R3	4	0	5,209,345:84:0
1390	99	285	04:23:32.666	127FO4B	37ETB	04,C4,35,FF,FF	2R3	4	0	5,209,345:85:0
1391	99	285	04:23:40.666	127FO11A	NIMSTAB	GE	2R3	4	0	5,209,346:06:0
1392	99	285	04:23:40.733	24NNCHOPOF01-		-----START-----	2R3	4	0	:
1393	99	285	04:23:40.733	24NNRELOAD01-		-----STOP-----	2R3	4	0	:
1394	99	285	04:28:35.333	127FN	NIMSTAB	GS	2R3	4	0	5,209,350:84:0
1395	99	285	04:28:35.333	127FN4A	37IOP	0,0	2R0	4	0	5,209,350:84:0
1396	99	285	04:28:36.000	127FN4B	37ETB	04,C4,02,00,00	2R0	4	0	5,209,350:85:0
1397	99	285	04:28:44.000	127FN11A	NIMSTAB	GE	2R0	4	0	5,209,351:06:0

1398	99	285	04:31:37.333	125FN4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	260	4	0	5,209,353:84:0
1399	99	285	04:31:37.333	125FN	NIMSINIT	GS	##### GROUP START INIT	260	4	0	5,209,353:84:0
1400	99	285	04:32:38.000	125FN4B	37IST	1,1,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	200	4	0	5,209,354:84:0
1401	99	285	04:33:38.666	125FN4C	37MB	0,0,0,0,0,0,0	Selects mirror (spatial) edit table	200	4	0	5,209,355:84:0
1402	99	285	04:33:38.666	125FN11A	NIMSINIT	GE	##### GROUP END INIT	200	4	0	5,209,355:84:0
1403	99	285	04:33:47.400	24NCHOP0F01-	-----STOP-----			200	4	0	:
1404	99	285	05:33:22.000	165BB4A	7SCAN	NORM,122.467999,	Check S/P Position	200	4	0	5,209,414:90:0
1405	99	285	05:35:15.333	175KB422A6A	6DMSC	R7,1	RDY, TRACK 1, FWD, TIC 5701.12 +/- 12	200	4	0	5,209,416:78:0
1406	99	285	05:35:15.333	175KB176A6A	6TMREC	LPW	DMS Control Tape runup 7.68kbp	200	4	0	5,209,416:78:0
1407	99	285	05:35:23.333	175KB176A6A	6TMREC	LPW	R7, TRACK 1, FWD, TIC 5701.12 +/- 12	200	4	0	5,209,416:78:0
1408	99	285	05:35:23.333	175KB176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD	200	4	0	5,209,416:90:0
1409	99	285	05:35:23.400	20SV41	DMS:	:*AT_SPD	R7, TRACK 1, FWD, TIC 5701.24 +/- 12	200	4	0	5,209,416:90:1
1410	99	285	05:35:23.400	20SP4A	DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *5701.24 +/- 12	200	4	0	5,209,416:90:1
1411	99	285	05:35:46.666	20SP4B	DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *5706.69 +/- 12	200	4	0	5,209,417:34:0
1412	99	285	05:35:46.666	175KB422A6B	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5,209,417:34:0
1413	99	285	05:35:47.866	432JB6B	DMS:	:*READY	RDY, TRACK 1, FWD, TIC *5706.75 +/- 12	200	4	0	5,209,417:35:8
1414	99	285	05:56:36.666	20VL4A	6RTDS2	NIMNCG,AACDSL,RT	AACS DESELECT	200	4	0	5,209,437:89:0
1415	99	285	05:57:04.000	20VL4B	7SAFE	STOP	S/P NO MOVEMENT	200	4	0	5,209,438:39:0
1416	99	285	05:57:54.000	20SP4A	7SAFE	DIS,POS,0.0	Stator movement	200	4	0	5,209,439:23:0
1417	99	285	05:59:40.000	176WA6A	6TMREC	IPB	INITIATE PLAYBACK (PB CONTROL) Record Mod	200	4	0	5,209,441:00:0
1418	99	286	03:29:50.666	176SP6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,210,717:00:0
1419	99	286	03:33:05.333	20SZ4A	7SAFE	UNSTOW	S/P TO 153 deg cone	200	4	0	5,210,720:19:0
1420	99	286	03:37:04.000	20SP4A	7SAFE	STOP	S/P NO MOVEMENT	200	4	0	5,210,724:13:0
1421	99	286	03:37:54.000	20SP4B	7SAFE	DIS,POS,0.0	Stator movement	200	4	0	5,210,724:88:0
1422	99	286	03:40:58.000	176SQ6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	200	4	0	5,210,728:00:0
1423	99	286	16:33:27.266	176SL6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,211,492:00:0
1424	99	286	17:08:59.933	20SV41	7MODE	INT	AACS INERTIAL MODE	200	4	0	5,211,527:14:0
1425	99	286	17:23:59.933	20SV4K	7SLEW	INIT,POS,17.45	Stator movement	200	4	0	5,211,541:90:0
1426	99	286	17:35:59.933	20SV4L	7SLEW	DIS,POS,0.0	Stator movement	200	4	0	5,211,553:78:0
1427	99	286	17:42:59.933	20SV4M	7SLEW	INIT,NEG,17.45	Stator movement	200	4	0	5,211,560:71:0
1428	99	286	17:54:59.933	20SV4N	7SLEW	DIS,POS,0.0	Stator movement	200	4	0	5,211,572:59:0
1429	99	286	18:06:59.933	20SV4AH	7MODE	CRU	AACS CRUISE MODE	200	4	0	5,211,584:47:0
1430	99	286	18:23:03.933	20SU4A	7SAFE	STOP	S/P NO MOVEMENT	200	4	0	5,211,600:37:0
1431	99	286	18:23:53.933	20SU4B	7SLEW	DIS,POS,0.0	Stator movement	200	4	0	5,211,601:21:0
1432	99	286	18:24:40.600	176TE6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	200	4	0	5,211,602:00:0
1433	99	287	01:06:03.933	431YL6A	6RCDSL	DDSNCG,PLSNCG,EP	Record Deselect (DDS o	200	4	0	5,211,998:89:0
1434	99	287	01:09:19.933	20YC6A	6HICON			200	4	0	5,212,002:19:0
1435	99	287	01:10:07.933	431YM6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS onl	200	4	0	5,212,003:00:0
1436	99	287	02:29:59.933	41AB99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	200	4	0	5,212,081:90:0
1437	99	287	02:31:53.933	41AB3G	40T1P		1 PCT Heater 1 ON (primary relay)	200	4	0	5,212,083:79:0
1438	99	287	02:32:03.933	41AB3H	40T1P		2 PCT Heater 1 ON (primary relay)	200	4	0	5,212,084:03:0
1439	99	287	02:32:13.933	41AB3I	40T2		1 PCT Heater 2 ON	200	4	0	5,212,084:18:0
1440	99	287	02:32:24.600	41AB3J	40T2		2 PCT Heater 2 ON	200	4	0	5,212,084:34:0
1441	99	287	02:49:13.266	176SA6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,212,101:00:0
1442	99	287	02:52:05.266	20KA4A	7SAFE	UNSTOW	S/P TO 153 deg cone	200	4	0	5,212,103:76:0
1443	99	287	02:59:59.933		DMS:	:*READY	RDY, TRACK 1, FWD, TIC 5706.75 +/- 12	200	4	0	5,212,111:60:0
1444	99	287	03:00:00.000	20A3EY	37C1PR	Final Condition	Optics Heater 1 OFF (primary relay)	200	4	0	5,212,111:60:1
1445	99	287	03:00:00.000	20A3EZ	37C2PR	Final Condition	Optics Heater 2 OFF (primary relay)	200	4	0	5,212,111:60:1
1446	99	287	03:00:00.000	20A3FA	37F1PR	Final Condition	Radiator Flash Heater OFF (primary relay)	200	4	0	5,212,111:60:1
1447	99	287	03:00:00.000	20A3FB	37F2PR	Final Condition	Shield Flash Heater OFF (primary relay)	200	4	0	5,212,111:60:1
1448	99	287	03:00:00.000	20A3FD	40HRPR	Final Condition	RCT Heater OFF (primary relay)	200	4	0	5,212,111:60:1
1449	99	287	03:00:00.000	20A3FE	40T1P	Final Condition	PCT Heater 1 ON (primary relay)	200	4	0	5,212,111:60:1
1450	99	287	03:00:00.000	20A3FF	40T2	Final Condition	PCT Heater 2 ON	200	4	0	5,212,111:60:1
1451	99	287	03:00:00.000	20A3EX	37HR	Final Condition	Replacement Heaters OFF	200	4	0	5,212,111:60:1
1452	99	287	03:00:00.000	20A3EW	37A	Final Condition	NIMS Power ON	200	4	0	5,212,111:60:1

Sequence:		I24BFC		Created: 9/30/99		Begin: 99-287/03:00:00		Finish: 99-329/04:00:00				
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1	99	287	02:59:59.933		DMS:	: READY	RDY, TRACK 1, FWD, TIC 5862.69 +/- 12	200	4	0	5,212,111:60:0	
2	99	287	03:00:00.000	20A3EW	37A	CMD,37A,20A3EW,,	NIMS Power ON	200	4	0	5,212,111:60:1	
3	99	287	03:00:00.000	20A3EX	37HR	CMD,37HR,20A3EX,	Replacement Heaters OFF	200	4	0	5,212,111:60:1	
4	99	287	03:00:00.000	20A3EY	37C1PR	CMD,37C1PR,20A3E	Optics Heater 1 OFF (primary relay)	200	4	0	5,212,111:60:1	
5	99	287	03:00:00.000	20A3EZ	37C2PR	CMD,37C2PR,20A3E	Optics Heater 2 OFF (primary relay)	200	4	0	5,212,111:60:1	
6	99	287	03:00:00.000	20A3FA	37F1PR	CMD,37F1PR,20A3F	Radiator Flash Heater OFF (primary relay)	200	4	0	5,212,111:60:1	
7	99	287	03:00:00.000	20A3FB	37F2PR	CMD,37F2PR,20A3F	Shield Flash Heater OFF (primary relay)	200	4	0	5,212,111:60:1	
8	99	287	03:00:00.000	20A3FD	40HRPR	CMD,40HRPR,20A3F	RCT Heater OFF (primary relay)	200	4	0	5,212,111:60:1	
9	99	287	03:00:00.000	20A3FE	40T1P	CMD,40T1P,20A3FE	PCT Heater 1 ON (primary relay)	200	4	0	5,212,111:60:1	
10	99	287	03:00:00.000	20A3FF	40T2	CMD,40T2,20A3FF,	PCT Heater 2 ON	200	4	0	5,212,111:60:1	
11	99	287	03:01:19.933	432NA6B	6RTDS2	NIMDSL,AACDSL,RT	NIMS RT DESELECTAACS DESELECT	200	4	0	5,212,112:89:0	
12	99	287	03:02:19.266	488AA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,212,113:87:0	
13	99	287	03:05:03.933	20WA4A	7SAFE	STOP	S/P NO MOVEMENT	200	4	0	5,212,116:61:0	
14	99	287	03:05:53.933	20WA4B	7SLEW	DIS,POS,0.0	Stator movement	200	4	0	5,212,117:45:0	
15	99	287	03:07:25.266	176SA6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	200	4	0	5,212,119:00:0	
16	99	287	03:27:55.266	488AA6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,212,139:25:0	
17	99	287	03:55:16.600	488AA6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,212,166:30:0	
18	99	287	04:19:49.933	488AA6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,212,190:56:0	
19	99	287	09:19:55.266	488AB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,212,487:37:0	
20	99	287	10:08:59.266	488AB6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,212,535:85:0	
21	99	287	11:55:20.600	488AB6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,212,641:11:0	
22	99	287	11:57:47.266	488AB6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	200	4	0	5,212,643:49:0	
23	99	287	11:59:27.266	488AB6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	200	4	0	5,212,645:17:0	
24	99	287	16:00:59.200	488AC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,212,884:06:0	
25	99	287	17:49:47.200	488AC6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,212,991:61:0	
26	99	287	18:30:19.200	488AC6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,213,031:69:0	
27	99	287	19:12:59.200	488AC6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,213,073:87:0	
28	99	287	19:43:53.866	488AC6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,213,104:48:0	
29	99	287	20:10:43.200	488AD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,213,131:05:0	
30	99	288	03:33:53.866	488AE6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,213,569:33:0	
31	99	288	04:05:43.200	488AE6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,213,600:76:0	
32	99	288	10:02:35.200	488AF6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,213,953:71:0	
33	99	288	10:25:16.533	488AF6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,213,976:20:0	
34	99	288	10:49:49.866	488AF6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,214,000:46:0	
35	99	288	11:44:41.200	488AF6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,214,054:69:0	
36	99	288	11:47:07.200	488AF6E	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	200	4	0	5,214,057:15:0	
37	99	288	11:48:47.200	488AG6A	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	200	4	0	5,214,058:74:0	
38	99	288	12:51:39.866	176QA6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,214,121:00:0	
39	99	288	12:56:19.866	20UM4B	7SAFE	INSTOW	S/P TO 153 deg cone	200	4	0	5,214,125:56:0	
40	99	288	13:15:19.866	20UM4D	7MODE	INT	AACS INERTIAL MODE	200	4	0	5,214,144:37:0	
41	99	288	15:52:59.866	488AG6B	6TMSED	NORM,AH8	Sci, Eng, and D/L Chan	200	4	0	5,214,300:31:0	
42	99	288	16:00:59.200	488AG6C	6TMSED	NORM,AH7	Sci, Eng, and D/L Chan	200	4	0	5,214,308:22:0	
43	99	288	17:45:31.200	488AG6D	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	200	4	0	5,214,411:57:0	
44	99	288	18:26:03.200	488AH6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	200	4	0	5,214,451:65:0	
45	99	288	19:08:43.200	488AH6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	200	4	0	5,214,493:83:0	
46	99	288	19:38:53.866	488AH6C	6TMSED	FILL,AH6	Sci, Eng, and D/L Chan	200	4	0	5,214,523:69:0	
47	99	288	20:05:43.200	488AH6D	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	200	4	0	5,214,550:26:0	
48	99	289	01:41:15.133	488AI6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	200	4	0	5,214,882:12:0	
49	99	289	02:17:31.133	488AI6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	200	4	0	5,214,918:00:0	
50	99	289	02:53:53.866	488AI6C	6TMSED	FILL,AH6	Sci, Eng, and D/L Chan	200	4	0	5,214,953:89:0	
51	99	289	03:00:59.800	488AI6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,214,961:00:0	
52	99	289	03:01:03.800	176QJ6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,214,961:06:0	
53	99	289	03:04:59.800	444QA443A4A	7MODE	CRU	AACS CRUISE MODE	200	4	0	5,214,964:87:0	



Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	99	289	03:10:03.800	20QA4A	7SAFE	STOP	S/P NO MOVEMENT	200	4	0	5,214,969:88:0	
55	99	289	03:10:53.800	20QA4B	7SLEW	DIS,POS,0.0	Stator movement	200	4	0	5,214,970:72:0	
56	99	289	03:13:07.800	176QB6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	200	4	0	5,214,973:00:0	
57	99	289	03:25:43.133	488AJ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,214,985:41:0	
58	99	289	09:54:03.133	488AJ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,215,369:47:0	
59	99	289	10:20:16.466	488AJ6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,215,395:41:0	
60	99	289	10:44:49.800	488AJ6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,215,419:67:0	
61	99	289	11:40:25.133	488AJ6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,215,474:65:0	
62	99	289	11:42:51.133	488AJ6E	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	200	4	0	5,215,477:11:0	
63	99	289	11:44:31.133	488AK6A	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	200	4	0	5,215,478:70:0	
64	99	289	15:54:35.133	488AK6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,215,726:08:0	
65	99	289	17:41:15.133	488AK6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,215,831:53:0	
66	99	289	18:19:39.133	488AL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,215,869:51:0	
67	99	289	19:02:19.133	488AL6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,215,911:69:0	
68	99	289	19:33:54.466	488AL6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,215,943:00:0	
69	99	289	20:00:44.466	488AL6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,215,969:49:0	
70	99	290	03:08:43.133	488AM6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,216,392:74:0	
71	99	290	03:40:17.800	488AM6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,216,424:04:0	
72	99	290	04:04:51.133	488AM6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,216,448:30:0	
73	99	290	09:04:59.066	488AM6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,216,745:15:0	
74	99	290	09:54:03.066	488AN6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,216,793:63:0	
75	99	290	11:36:09.066	488AN6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,216,894:61:0	
76	99	290	11:38:35.066	488AN6C	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	200	4	0	5,216,897:07:0	
77	99	290	11:40:15.066	488AN6D	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	200	4	0	5,216,898:66:0	
78	99	290	15:50:19.066	488AN6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,217,146:04:0	
79	99	290	17:34:51.066	488AO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,217,249:39:0	
80	99	290	18:15:23.066	488AO6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,217,289:47:0	
81	99	290	18:32:27.066	488AO6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,217,306:36:0	
82	99	290	20:34:03.066	488AO6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,217,426:60:0	
83	99	291	02:15:23.066	488AP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,217,764:22:0	
84	99	291	03:02:19.066	488AP6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,217,810:60:0	
85	99	291	09:00:43.066	488AQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,218,165:11:0	
86	99	291	09:47:39.066	488AQ6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,218,211:49:0	
87	99	291	09:59:59.733	488EO6A	6MROH	17,5453,22,B2	read from B1A2B17,5453,22,B	200	4	0	5,218,223:68:0	
88	99	291	11:29:44.400	488AQ6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,218,312:46:0	
89	99	291	11:32:11.066	488AQ6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	200	4	0	5,218,314:84:0	
90	99	291	11:33:51.066	488AQ6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	200	4	0	5,218,316:52:0	
91	99	291	15:46:03.000	488AR6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,218,566:00:0	
92	99	291	17:30:35.000	488AR6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,218,669:35:0	
93	99	291	18:11:07.000	488AR6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,218,709:43:0	
94	99	291	18:53:47.000	488AR6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,218,751:61:0	
95	99	291	19:23:54.333	488AR6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,218,781:42:0	
96	99	291	19:50:44.333	488AS6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,218,808:00:0	
97	99	292	03:02:19.000	488AT6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,219,234:76:0	
98	99	292	03:30:17.666	488AT6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,219,262:46:0	
99	99	292	03:54:51.000	488AT6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,219,286:72:0	
100	99	292	04:56:44.333	176UW6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,219,348:00:0	
101	99	292	05:02:00.333	20UQ4B	7SLEW	DIS,POS,0.0	Stator movement	200	4	0	5,219,353:19:0	
102	99	292	05:03:00.333	20UQ4D	7MODE	SPNL	AACS ALL-SPIN LOW	200	4	0	5,219,354:18:0	
103	99	292	05:05:00.333	20UQ4E	7SAFE	UNSTOW	S/P TO 153 deg cone	200	4	0	5,219,356:16:0	
104	99	292	05:10:30.333	20UQ4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	200	4	0	5,219,361:56:0	
105	99	292	05:10:31.000	20UQ4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	200	4	0	5,219,361:57:0	
106	99	292	05:10:51.000	20UQ4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	200	4	0	5,219,361:87:0	
107	99	292	05:10:51.666	20UQ4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	200	4	0	5,219,361:88:0	
108	99	292	05:11:11.666	20UQ4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	200	4	0	5,219,362:27:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	99	292	05:11:12.333	20UQ4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	200	4	0	5,219,362:28:0	
110	99	292	05:11:22.333	20UQ4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	200	4	0	5,219,362:43:0	
111	99	292	05:11:23.000	20UQ4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	200	4	0	5,219,362:44:0	
112	99	292	05:11:33.000	20UQ4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	200	4	0	5,219,362:59:0	
113	99	292	05:11:33.666	20UQ4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	200	4	0	5,219,362:60:0	
114	99	292	05:13:20.333	20UQ4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	200	4	0	5,219,364:38:0	
115	99	292	05:13:21.000	20UQ4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	200	4	0	5,219,364:39:0	
116	99	292	05:13:41.000	20UQ4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	200	4	0	5,219,364:69:0	
117	99	292	05:13:41.666	20UQ4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	200	4	0	5,219,364:70:0	
118	99	292	05:14:01.666	20UQ4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	200	4	0	5,219,365:09:0	
119	99	292	05:14:02.333	20UQ4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	200	4	0	5,219,365:10:0	
120	99	292	05:14:12.333	20UQ4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	200	4	0	5,219,365:25:0	
121	99	292	05:14:13.000	20UQ4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	200	4	0	5,219,365:26:0	
122	99	292	05:14:23.000	20UQ4W	7VENT	1.211,1.333,9	ALERT -- Thruster fire	200	4	0	5,219,365:41:0	
123	99	292	05:14:23.666	20UQ4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	200	4	0	5,219,365:42:0	
124	99	292	05:15:20.333	20UQ4Z	7MODE	CRU	AACS CRUISE MODE	200	4	0	5,219,366:36:0	
125	99	292	05:40:04.333	20UW4A	7SAFE	STOP	S/P NO MOVEMENT	200	4	0	5,219,390:78:0	
126	99	292	05:40:54.333	20UW4B	7SLEW	DIS,POS,0.0	Stator movement	200	4	0	5,219,391:62:0	
127	99	292	05:42:14.333	176UX6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	200	4	0	5,219,393:00:0	
128	99	292	08:54:19.000	488AT6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,219,582:88:0	
129	99	292	09:43:23.000	488AU6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,219,631:45:0	
130	99	292	11:25:29.000	488AU6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,219,732:43:0	
131	99	292	11:27:55.000	488AU6C	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	200	4	0	5,219,734:80:0	
132	99	292	11:29:35.000	488AU6D	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	200	4	0	5,219,736:48:0	
133	99	292	15:39:39.000	488AU6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,219,983:77:0	
134	99	292	17:24:11.000	488AV6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,220,087:21:0	
135	99	292	18:11:07.000	488AV6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,220,133:59:0	
136	99	292	18:28:11.000	488AV6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,220,150:48:0	
137	99	292	20:27:39.000	488AV6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,220,268:62:0	
138	99	293	02:04:42.933	488AW6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,220,602:04:0	
139	99	293	02:58:02.933	488AW6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,220,654:72:0	
140	99	293	08:50:02.933	488AX6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,221,002:84:0	
141	99	293	09:36:58.933	488AX6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,221,049:31:0	
142	99	293	11:25:28.933	488AX6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,221,156:59:0	
143	99	293	11:27:54.933	488AX6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	200	4	0	5,221,159:05:0	
144	99	293	11:29:34.933	488AX6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	200	4	0	5,221,160:64:0	
145	99	293	15:31:06.933	488AY6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,221,399:53:0	
146	99	293	17:19:54.933	488AY6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,221,507:17:0	
147	99	293	18:04:42.933	488AY6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,221,551:45:0	
148	99	293	18:09:32.266	488AY6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	5,221,556:24:0	
149	99	293	18:11:06.933	488AY6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	5,221,557:75:0	
150	99	293	18:19:38.933	488AZ6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,221,566:24:0	
151	99	293	20:14:34.266	488AZ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,221,679:84:0	
152	99	293	21:23:55.600	488AZ6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,221,748:47:0	
153	99	293	21:50:44.933	488AZ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,221,775:04:0	
154	99	294	02:01:27.600	431MA6A	6RCSEL	DDSSSEL,PLSNCG,EP	Record Select (DDS onl	200	4	0	5,222,023:00:0	
155	99	294	02:58:02.933	488BA6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,222,078:88:0	
156	99	294	03:20:18.933	488BA6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,222,100:90:0	
157	99	294	03:44:51.600	488BA6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,222,125:24:0	
158	99	294	08:45:46.866	488BA6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,222,422:80:0	
159	99	294	09:32:42.866	488BB6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,222,469:27:0	
160	99	294	11:25:28.866	488BB6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,222,580:75:0	
161	99	294	11:27:54.866	488BB6C	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	200	4	0	5,222,583:21:0	
162	99	294	11:29:34.866	488BB6D	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	200	4	0	5,222,584:80:0	
163	99	294	15:24:42.866	488BB6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,222,817:39:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	99	294	17:15:38.866	488BC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,222,927:13:0	
165	99	294	17:56:10.866	488BC6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,222,967:21:0	
166	99	294	18:13:14.866	488BC6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,222,984:10:0	
167	99	294	20:23:22.866	488BC6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,223,112:74:0	
168	99	295	01:56:10.866	488BD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,223,441:87:0	
169	99	295	02:53:46.866	488BD6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,223,498:84:0	
170	99	295	08:39:22.866	488BE6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,223,840:66:0	
171	99	295	08:59:56.866	24NNPCTRLT01-		-----START-----		200	4	0	:	
172	99	295	09:00:00.866	41FB3A	40T1PR		1 PCT Heater 1 OFF (primary relay)	200	4	0	5,223,861:12:0	
173	99	295	09:00:10.866	41FB3B	40T1PR		2 PCT Heater 1 OFF (primary relay)	200	4	0	5,223,861:27:0	
174	99	295	09:00:20.866	41FB3C	40T2R		1 PCT Heater 2 OFF	200	4	0	5,223,861:42:0	
175	99	295	09:00:30.866	41FB3D	40T2R		2 PCT Heater 2 OFF	200	4	0	5,223,861:57:0	
176	99	295	09:17:46.866	488BE6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,223,878:64:0	
177	99	295	09:48:56.866	488BE6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,223,909:48:0	
178	99	295	10:15:46.200	488BE6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,223,936:05:0	
179	99	295	15:03:52.800	176FB6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,224,221:00:0	
180	99	295	15:07:01.466	444FB443A4A	7SAFE	UNSTOW	S/P TO 153 deg cone	200	4	0	5,224,224:10:0	
181	99	295	15:11:01.466	444FB443A4B	7MODE	SPNL	AACS ALL-SPIN LOW	200	4	0	5,224,228:06:0	
182	99	295	15:20:01.466	444FB443A4C	7CLK	17.45,0.0	Check S/P Position	200	4	0	5,224,236:88:0	
183	99	295	15:23:00.800	125FB	NIMSINIT	GS	##### GROUP START INIT	200	4	0	5,224,239:84:0	
184	99	295	15:23:00.800	125FB4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	260	4	0	5,224,239:84:0	
185	99	295	15:24:01.466	125FB4B	37IST	1,2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (Ref)Gain State	4R0	4	0	5,224,240:84:0	
186	99	295	15:25:02.133	125FB11A	NIMSINIT	GE	##### GROUP END INIT	4R0	4	0	5,224,241:84:0	
187	99	295	15:25:02.133	125FB4C	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	4R0	4	0	5,224,241:84:0	
188	99	295	15:28:04.133	127FB	NIMSTAB	GS	%%%%% GROUP START TAB	4R0	4	0	5,224,244:84:0	
189	99	295	15:28:04.133	127FB4A	37IOP	3,0	Long Map, Grating Start Position =00	4R3	4	0	5,224,244:84:0	
190	99	295	15:28:04.800	127FB4B	37ETB	0A,CA,19,FF,C0,1	Loads wavelength edit table	4R3	4	0	5,224,244:85:0	
191	99	295	15:28:12.800	127FB11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R3	4	0	5,224,245:06:0	
192	99	295	15:28:28.800	432FB6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	4R3	4	0	5,224,245:30:0	
193	99	295	15:30:28.800	432FC6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	4R3	4	0	5,224,247:28:0	
194	99	295	15:31:10.800	192FC4A	7CONE	17,0,54,88	Check S/P Position	4R3	4	0	5,224,248:00:0	
195	99	295	15:31:11.466	192FC4B	7CLK	17,0,244,07	Check S/P Position	4R3	4	0	5,224,248:01:0	
196	99	295	15:34:32.800	432FD6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	4R3	4	0	5,224,251:30:0	
197	99	295	15:44:38.133	432FE6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	4R3	4	0	5,224,261:28:0	
198	99	295	15:45:15.466	127FE	NIMSTAB	GS	%%%%% GROUP START TAB	4R3	4	0	5,224,261:84:0	
199	99	295	15:45:16.133	127FE4A	37IOP	0,0	Safe, Grating Start Position =00	4R0	4	0	5,224,261:84:0	
200	99	295	15:45:16.133	127FE4B	37ETB	04,C,4,02,00,00	Loads wavelength edit table	4R0	4	0	5,224,261:85:0	
201	99	295	15:45:24.133	127FE11A	NIMSTAB	GE	%%%%% GROUP END TAB	4R0	4	0	5,224,262:06:0	
202	99	295	15:45:24.133	20FE4A	7SAFE	UNSTOW	S/P TO 153 deg cone	4R0	4	0	5,224,262:06:0	
203	99	295	15:47:16.800	125FE4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	5,224,263:84:0	
204	99	295	15:47:16.800	125FE	NIMSINIT	GS	##### GROUP START INIT	460	4	0	5,224,263:84:0	
205	99	295	15:48:17.466	125FE4B	37IST	1,1,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	5,224,264:84:0	
206	99	295	15:49:18.133	125FE4C	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	400	4	0	5,224,265:84:0	
207	99	295	15:49:18.133	125FE11A	NIMSINIT	GE	##### GROUP END INIT	400	4	0	5,224,265:84:0	
208	99	295	15:50:30.133	444FF443A4A	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,224,267:10:0	
209	99	295	15:54:30.133	444FF443A4B	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,224,271:06:0	
210	99	295	16:04:36.800	41FG99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	400	4	0	5,224,281:06:0	
211	99	295	16:06:30.800	41FG3G	40T1P		1 PCT Heater 1 ON (primary relay)	400	4	0	5,224,282:86:0	
212	99	295	16:06:40.800	41FG3H	40T1P		2 PCT Heater 1 ON (primary relay)	400	4	0	5,224,283:10:0	
213	99	295	16:06:50.800	41FG3I	40T2		1 PCT Heater 2 ON	400	4	0	5,224,283:25:0	
214	99	295	16:07:00.800	41FG3J	40T2		2 PCT Heater 2 ON	400	4	0	5,224,283:40:0	
215	99	295	16:08:43.466	20FH4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,224,285:12:0	
216	99	295	16:09:33.466	20FH4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,224,285:87:0	
217	99	295	16:10:36.800	176FH6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,224,287:00:0	
218	99	295	16:50:06.866	24NNPCTRLT01-		-----STOP-----		400	4	0	:	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	99	295	17:24:10.800	488BF6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,224,359:69:0	
220	99	295	17:54:02.800	488BF6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,224,389:27:0	
221	99	295	18:02:34.800	488BF6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,224,397:67:0	
222	99	295	18:08:58.800	488BF6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,224,404:06:0	
223	99	295	18:53:57.466	488BF6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,224,448:50:0	
224	99	295	19:20:47.466	488BG6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,224,475:08:0	
225	99	295	20:23:22.800	488BG6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,224,536:90:0	
226	99	296	00:00:00.133	481UC4A	7VECT		Inertvect update UTC	400	4	0	5,224,751:21:0	
227	99	296	01:49:46.800	488BH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,224,859:73:0	
228	99	296	02:53:46.800	488BH6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,224,923:09:0	
229	99	296	08:35:06.800	488BI6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,225,260:62:0	
230	99	296	09:28:26.800	488BI6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,225,313:39:0	
231	99	296	11:25:28.800	488BI6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,225,429:16:0	
232	99	296	11:27:54.800	488BI6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	400	4	0	5,225,431:53:0	
233	99	296	11:29:34.800	488BI6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	400	4	0	5,225,433:21:0	
234	99	296	15:05:30.800	488BJ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,225,646:72:0	
235	99	296	17:04:58.800	488BJ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,225,764:86:0	
236	99	296	17:49:46.800	488BJ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,225,809:23:0	
237	99	296	18:53:46.800	488BJ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,225,872:50:0	
238	99	296	19:03:58.800	488BJ6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,225,882:58:0	
239	99	296	19:30:48.133	488BK6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,225,909:15:0	
240	99	297	03:04:26.733	488BL6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,226,357:75:0	
241	99	297	04:20:22.066	488BL6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,226,432:83:0	
242	99	297	04:44:54.733	488BL6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,226,457:17:0	
243	99	297	08:35:06.733	488BL6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,226,684:78:0	
244	99	297	09:22:02.733	488BM6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,226,731:25:0	
245	99	297	11:25:28.733	488BM6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,226,853:32:0	
246	99	297	11:27:54.733	488BM6C	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	400	4	0	5,226,855:69:0	
247	99	297	11:29:34.733	488BM6D	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	400	4	0	5,226,857:37:0	
248	99	297	14:54:50.733	488BM6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,227,060:38:0	
249	99	297	17:00:42.733	488BN6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,227,184:82:0	
250	99	297	17:45:30.733	488BN6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,227,229:19:0	
251	99	297	18:02:34.733	488BN6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,227,246:08:0	
252	99	297	20:27:38.733	488BN6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,227,389:51:0	
253	99	298	01:39:06.733	488BO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,227,697:55:0	
254	99	298	02:47:22.733	488BO6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,227,765:11:0	
255	99	298	08:30:50.666	488BP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,228,104:74:0	
256	99	298	09:22:02.666	488BP6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,228,155:41:0	
257	99	298	11:25:28.666	488BP6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,228,277:48:0	
258	99	298	11:27:54.666	488BP6D	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	400	4	0	5,228,279:85:0	
259	99	298	11:29:34.666	488BP6E	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	400	4	0	5,228,281:53:0	
260	99	298	14:44:10.666	488BQ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,228,474:04:0	
261	99	298	16:54:18.666	488BQ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,228,602:68:0	
262	99	298	17:39:06.666	488BQ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,228,647:05:0	
263	99	298	18:32:26.666	488BQ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,228,699:73:0	
264	99	298	18:54:00.666	488BQ6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,228,721:12:0	
265	99	298	19:20:50.000	488BR6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,228,747:60:0	
266	99	299	02:43:06.666	488BS6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,229,185:07:0	
267	99	299	02:55:24.000	488BS6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,229,197:21:0	
268	99	299	03:19:56.666	488BS6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,229,221:46:0	
269	99	299	08:24:26.666	488BS6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,229,522:60:0	
270	99	299	09:17:46.666	488BT6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,229,575:37:0	
271	99	299	11:29:44.000	488BT6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,229,705:83:0	
272	99	299	11:32:10.666	488BT6C	6TMSED	FILL,AL8	Sci, Eng, and D/L Chan	400	4	0	5,229,708:30:0	
273	99	299	11:33:50.666	488BT6D	6TMSED	NORM,AL8	Sci, Eng, and D/L Chan	400	4	0	5,229,709:89:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	99	299	12:52:59.933	488BT6E	6TMSED	NORM,AH8	Sci, Eng, and D/L Chan	400	4	0	5,229,788:24:0	
275	99	299	12:56:46.600	176UA6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,229,792:00:0	
276	99	299	13:05:59.933	20RP4C	7STAT	10.00,204.79,-5.	Stator inertial point	400	4	0	5,229,801:11:0	
277	99	299	13:06:11.933	20RP6D	6MROH	7,6744.0,A10	read from AACSA7,6744.0,A10	400	4	0	5,229,801:29:0	
278	99	299	13:25:01.933	490UA412A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,229,819:86:0	
279	99	299	13:29:59.933	490UA412A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,229,824:78:0	
280	99	299	13:30:19.933	20RP4D	7STAT	17.45,204.79,-5.	Stator inertial point	400	4	0	5,229,825:17:0	
281	99	299	13:34:09.933	490UA412A4E	7VECT		Inert vect update UTC	400	4	0	5,229,828:89:0	
282	99	299	13:34:13.933	490UA412A4F	7TURN	2,RTH	ALERT Thruster	400	4	0	5,229,829:04:0	
283	99	299	13:38:01.933	490UA412A40A4A	7STAR	11,610,278.81	Star catalog update	400	4	0	5,229,832:73:0	
284	99	299	13:38:03.933	490UA412A40A4B	7STAR	2,111,285.778,13	Star catalog update	400	4	0	5,229,832:76:0	
285	99	299	13:38:05.933	490UA412A40A4C	7STAR	3,371,138.16	Star catalog update	400	4	0	5,229,832:79:0	
286	99	299	13:38:07.933	490UA412A40A4D	7STAR	4,317,120.46	Star catalog update	400	4	0	5,229,832:82:0	
287	99	299	13:38:09.933	490UA412A40A4E	7STAR	5,0,0,0,0,0	Star catalog update	400	4	0	5,229,832:85:0	
288	99	299	13:38:11.933	490UA412A40A4F	7STAR	6,0,0,0,0,0	Star catalog update	400	4	0	5,229,832:88:0	
289	99	299	13:48:05.933	20RP4F	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,229,842:69:0	
290	99	299	13:56:09.933	490UA412A4A	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,229,850:67:0	
291	99	299	14:35:38.600	488BU6A	6TMSED	NORM,AH7	Sci, Eng, and D/L Chan	400	4	0	5,229,889:71:0	
292	99	299	15:30:03.933	20US4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,229,943:55:0	
293	99	299	15:30:53.933	20US4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,229,944:39:0	
294	99	299	15:30:59.933	488BU6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,229,944:48:0	
295	99	299	15:32:29.266	176UB6A	6TMREC	PPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,229,946:00:0	
296	99	299	16:45:46.600	488BU6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,230,018:44:0	
297	99	299	17:30:34.600	488BU6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,230,062:72:0	
298	99	299	18:17:30.600	488BU6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,230,109:19:0	
299	99	300	01:49:46.600	488BV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,230,556:46:0	
300	99	300	02:13:14.600	488BV6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,230,579:65:0	
301	99	300	03:04:01.933	488BV6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,230,629:86:0	
302	99	300	03:30:51.266	488BV6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,230,656:43:0	
303	99	300	08:20:10.600	488BW6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,230,942:56:0	
304	99	300	08:37:14.600	488BW6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,230,959:45:0	
305	99	300	09:17:39.266	488BW6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,230,999:42:0	
306	99	300	09:49:46.600	488BW6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,231,031:21:0	
307	99	300	09:51:20.600	488BW6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,231,032:71:0	
308	99	300	11:52:59.933	488BX6A	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	400	4	0	5,231,153:09:0	
309	99	300	11:56:56.600	176UC6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,231,157:00:0	
310	99	300	12:23:29.933	20RN4I	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,231,183:24:0	
311	99	300	12:38:29.933	20RN4K	7SLEW	INIT,POS,17.45	Stator movement	400	4	0	5,231,198:09:0	
312	99	300	12:50:29.933	20RN4L	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,231,209:88:0	
313	99	300	12:57:29.933	20RN4M	7SLEW	INIT,NEG,17.45	Stator movement	400	4	0	5,231,216:81:0	
314	99	300	13:09:29.933	20RN4N	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,231,228:69:0	
315	99	300	13:16:29.933	20RN4O	7SLEW	INIT,POS,4.36	Stator movement	400	4	0	5,231,235:62:0	
316	99	300	13:28:29.933	20RN4P	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,231,247:50:0	
317	99	300	13:35:29.933	20RN4Q	7SLEW	INIT,NEG,4.36	Stator movement	400	4	0	5,231,254:43:0	
318	99	300	13:47:29.933	20RN4R	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,231,266:31:0	
319	99	300	13:59:29.933	20RN4AH	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,231,278:19:0	
320	99	300	14:14:59.933	488BX6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,231,293:49:0	
321	99	300	14:15:03.933	20UC4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,231,293:55:0	
322	99	300	14:15:53.933	20UC4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,231,294:39:0	
323	99	300	14:17:29.266	176UD6A	6TMREC	PPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,231,296:00:0	
324	99	300	16:15:54.600	488BX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,231,413:11:0	
325	99	300	17:24:10.600	488BX6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,231,480:58:0	
326	99	300	17:47:38.600	488BX6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,231,503:77:0	
327	99	300	18:32:39.266	488BY6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,231,548:33:0	
328	99	300	19:11:45.933	488BY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,231,587:04:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	99	300	19:17:14.600	488BY6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,231,592:42:0	
330	99	301	03:00:10.533	488BZ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,232,050:28:0	
331	99	301	04:29:46.533	488BZ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,232,138:84:0	
332	99	301	04:55:22.533	488BZ6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,232,164:22:0	
333	99	301	05:40:26.533	488BZ6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,232,208:74:0	
334	99	301	06:04:59.866	488BZ6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,232,233:09:0	
335	99	301	08:15:54.533	488CA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,232,362:52:0	
336	99	301	08:32:58.533	488CA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,232,379:41:0	
337	99	301	09:17:40.533	488CA6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,232,423:60:0	
338	99	301	09:39:06.533	488CA6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,232,444:78:0	
339	99	301	09:44:56.533	488CA6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,232,450:57:0	
340	99	301	16:09:30.533	488CB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,232,830:88:0	
341	99	301	17:24:10.533	488CB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,232,904:74:0	
342	99	301	17:47:38.533	488CB6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,232,928:02:0	
343	99	301	18:27:41.200	488CB6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,232,967:57:0	
344	99	301	19:11:47.866	488CB6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,233,011:23:0	
345	99	301	19:12:58.533	488CC6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,233,012:38:0	
346	99	302	02:44:04.533	488CD6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,233,458:51:0	
347	99	302	03:10:54.533	488CD6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,233,485:09:0	
348	99	302	03:42:50.533	488CD6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,233,516:62:0	
349	99	302	08:09:30.466	488CD6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,233,780:38:0	
350	99	302	08:28:42.466	488CD6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,233,799:37:0	
351	99	302	09:36:58.466	488CE6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,233,866:84:0	
352	99	302	16:05:14.466	488CF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,234,250:84:0	
353	99	302	17:19:54.466	488CF6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,234,324:70:0	
354	99	302	17:43:22.466	488CF6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,234,347:89:0	
355	99	302	18:37:42.466	488CF6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,234,401:65:0	
356	99	302	19:06:48.466	488CF6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,234,430:45:0	
357	99	302	19:08:42.466	488CG6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,234,432:34:0	
358	99	303	02:39:06.466	488CH6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,234,877:75:0	
359	99	303	03:05:56.466	488CH6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,234,904:33:0	
360	99	303	03:32:10.466	488CH6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,234,930:28:0	
361	99	303	08:05:14.466	488CH6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,235,200:34:0	
362	99	303	08:22:18.466	488CH6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,235,217:23:0	
363	99	303	09:28:26.466	488CI6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,235,282:60:0	
364	99	303	16:00:58.400	488CJ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,235,670:80:0	
365	99	303	17:13:30.400	488CJ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,235,742:56:0	
366	99	303	17:58:18.400	488CJ6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,235,786:84:0	
367	99	304	03:27:54.400	488CK6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,236,350:24:0	
368	99	304	08:05:14.400	488CK6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,236,624:50:0	
369	99	304	09:22:02.400	488CK6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,236,700:46:0	
370	99	304	15:54:34.400	488CL6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,237,088:66:0	
371	99	304	17:09:14.400	488CL6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,237,162:52:0	
372	99	304	17:15:38.400	488CL6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,237,168:82:0	
373	99	304	17:32:42.400	488CL6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,237,185:71:0	
374	99	304	18:27:46.400	488CL6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,237,240:22:0	
375	99	304	18:53:46.400	488CM6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,237,265:87:0	
376	99	304	18:56:11.066	488CM6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,237,268:31:0	
377	99	305	02:29:09.666	488CN6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,237,716:31:0	
378	99	305	02:55:59.000	488CN6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,237,742:79:0	
379	99	305	03:17:14.333	488CN6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,237,763:81:0	
380	99	305	07:54:34.333	488CN6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,238,038:16:0	
381	99	305	08:13:46.333	488CN6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,238,057:15:0	
382	99	305	09:17:46.333	488CO6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,238,120:42:0	
383	99	305	15:54:34.333	488CP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,238,512:82:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	99	305	17:09:14.333	488CP6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,238,586:68:0	
385	99	305	17:28:26.333	488CP6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,238,605:67:0	
386	99	305	18:22:48.333	488CP6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,238,659:46:0	
387	99	305	18:49:30.333	488CP6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,238,685:83:0	
388	99	305	18:51:23.666	488CQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,238,687:71:0	
389	99	306	01:19:54.333	488CR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,239,072:02:0	
390	99	306	01:36:58.333	488CR6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,239,088:82:0	
391	99	306	02:29:11.666	488CR6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,239,140:50:0	
392	99	306	03:01:01.000	488CR6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,239,172:02:0	
393	99	306	07:54:34.266	488CS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,239,462:32:0	
394	99	306	08:51:50.933	176QC6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,239,519:00:0	
395	99	306	08:52:49.600	488CS6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,239,519:88:0	
396	99	306	08:56:20.266	20UL4B	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,239,523:40:0	
397	99	306	09:13:30.266	488CS6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,239,540:38:0	
398	99	306	09:15:20.266	20UL4D	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,239,542:21:0	
399	99	306	09:23:39.600	488CS6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,239,550:42:0	
400	99	306	11:53:00.266	488CS6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,239,698:15:0	
401	99	306	11:55:04.266	20QI4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,239,700:19:0	
402	99	306	11:55:54.266	20QI4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,239,701:03:0	
403	99	306	15:54:34.266	488CT6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,239,937:07:0	
404	99	306	17:04:58.266	488CT6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,240,006:64:0	
405	99	306	17:22:02.266	488CT6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,240,023:53:0	
406	99	306	18:02:50.266	488CT6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,240,063:85:0	
407	99	306	18:43:06.266	488CT6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,240,103:69:0	
408	99	306	18:46:04.266	488CU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,240,106:63:0	
409	99	307	01:00:42.266	488CV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,240,477:19:0	
410	99	307	01:32:42.266	488CV6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,240,508:78:0	
411	99	307	02:01:00.266	488CV6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,240,536:77:0	
412	99	307	02:01:09.600	176QK6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,240,537:00:0	
413	99	307	02:05:00.266	444QB443A4A	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,240,540:73:0	
414	99	307	02:09:13.600	488CV6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,240,544:89:0	
415	99	307	02:10:04.266	20QB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,240,545:74:0	
416	99	307	02:10:54.266	20QB4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,240,546:58:0	
417	99	307	02:13:17.600	176QD6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,240,549:00:0	
418	99	307	02:41:02.933	488CV6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,240,576:41:0	
419	99	307	08:59:14.933	488CW6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,240,950:45:0	
420	99	307	09:19:54.266	488CW6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,240,970:84:0	
421	99	307	09:24:07.600	488CW6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,240,975:09:0	
422	99	307	15:43:54.200	488CX6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,241,350:64:0	
423	99	307	17:00:42.200	488CX6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,241,426:60:0	
424	99	307	17:36:58.200	488CX6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,241,462:48:0	
425	99	308	03:02:18.200	488CY6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,242,021:59:0	
426	99	308	07:41:43.533	176VA6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,242,298:00:0	
427	99	308	07:43:54.200	488CY6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,242,300:14:0	
428	99	308	07:47:47.533	DMS:	:	*US-RUNUP	P7, TRACK *1, *FWD, TIC 5862.69 +/- 12	400	4	0	5,242,304:00:0	
429	99	308	07:47:47.533	DMS:	:	*SLEW-TIC	P7, TRACK *2, *REV, TIC 5862.69 +/- 12	400	4	0	5,242,304:00:0	
430	99	308	07:47:47.533	465WA6A	6DMST		5000 DMS Slew to TIC	400	4	0	5,242,304:00:0	
431	99	308	07:47:48.933	DMS:	:	*US_AT_SP	P7, TRACK 1, FWD, TIC *5862.81 +/- 12	400	4	0	5,242,304:02:1	
432	99	308	07:47:54.200	DMS:	:	*US_RD	P7, TRACK 1, FWD, TIC *5864.04 +/- 12	400	4	0	5,242,304:10:0	
433	99	308	07:47:55.400	DMS:	:	*RUNUP	P7, TRACK *2, *REV, TIC *5864.10 +/- 12	400	4	0	5,242,304:11:8	
434	99	308	07:47:56.800	DMS:	:	*AT_SPD	P7, TRACK 2, REV, TIC *5863.98 +/- 12	400	4	0	5,242,304:13:9	
435	99	308	08:49:13.666	DMS:	:	*RUNDOWN	P7, TRACK 2, REV, TIC *5002.06 +/- 12	400	4	0	5,242,364:69:2	
436	99	308	08:49:14.866	DMS:	:	*READY	RDY, TRACK 2, REV, TIC *5002.00 +/- 12	400	4	0	5,242,364:71:0	
437	99	308	09:02:50.200	488CZ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,242,378:20:0	
438	99	308	13:41:28.866	DMS:	:	*US-RUNUP	P7, TRACK *1, *FWD, TIC 5002.00 +/- 12	400	4	0	5,242,653:73:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
439	99	308	13:41:28.866	465WB6A	6DMSC	P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	5,242,653:73:0	
440	99	308	13:41:30.266		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *5002.12 +/- 12	400	4	0	5,242,653:75:1	
441	99	308	13:41:35.533		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *5003.35 +/- 12	400	4	0	5,242,653:83:0	
442	99	308	13:41:36.733		DMS:	:*RUNUP	P100, TRACK *4, *REV, TIC *5003.41 +/- 12	400	4	0	5,242,653:84:8	
443	99	308	13:41:40.600		DMS:	:*P_SLEW	P100, TRACK 4, REV, TIC *4997.91 +/- 12	400	4	0	5,242,653:90:6	
444	99	308	13:41:40.600		DMS:	:*AT_SPD	P100, TRACK 4, REV, TIC 4997.91 +/- 12	400	4	0	5,242,653:90:6	
445	99	308	14:07:20.866	465WB6B	6DMSC	RDY.4	DMS Control Tape stop	400	4	0	5,242,679:35:0	
446	99	308	14:07:20.866		DMS:	:*RUNDOWN	P100, TRACK 4, REV, TIC *259.79 +/- 12	400	4	0	5,242,679:35:0	
447	99	308	14:07:22.066		DMS:	:*READY	RDY, TRACK 4, REV, TIC *258.99 +/- 13	400	4	0	5,242,679:36:8	
448	99	308	15:43:54.200	488DA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,242,774:80:0	
449	99	308	16:05:08.866		DMS:	:*DMS-TURN	P7, TRACK 4, REV, TIC 258.99 +/- 13	400	4	0	5,242,795:81:0	
450	99	308	16:05:08.866	465WC6A	6DTRN	CMD,6DTRN,465WC6	DMS TRACK TURNAROUND	400	4	0	5,242,795:81:0	
451	99	308	16:05:08.866		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 258.99 +/- 13	400	4	0	5,242,795:81:0	
452	99	308	16:05:10.266		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *259.11 +/- 13	400	4	0	5,242,795:83:1	
453	99	308	16:05:15.533		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *260.34 +/- 13	400	4	0	5,242,796:00:0	
454	99	308	16:05:16.733		DMS:	:*RUNUP	P7, TRACK *4, *REV, TIC *260.40 +/- 13	400	4	0	5,242,796:01:8	
455	99	308	16:05:18.133		DMS:	:*AT_SPD	P7, TRACK 4, REV, TIC *260.28 +/- 13	400	4	0	5,242,796:03:9	
456	99	308	16:09:09.533	488DA6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	400	4	0	5,242,799:78:0	
457	99	308	16:09:35.866		DMS:	:*REVERSE	P7, TRACK 4, REV, TIC *199.87 +/- 13	400	4	0	5,242,800:26:5	
458	99	308	16:09:37.066		DMS:	:*TURNARND	P7, TRACK *1, *FWD, TIC *199.81 +/- 13	400	4	0	5,242,800:28:3	
459	99	308	16:09:37.066		DMS:	:*RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/- 13	400	4	0	5,242,800:28:3	
460	99	308	16:09:38.466		DMS:	:*AT_SPD	P7, TRACK 1, FWD, TIC *199.93 +/-	400	4	0	5,242,800:30:4	
461	99	308	16:09:50.466		DMS:	:*AUTOSTOP	P7, TRACK 1, FWD, TIC *202.06 +/-	400	4	0	5,242,800:48:4	
462	99	308	16:09:51.666		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *202.12 +/-	400	4	0	5,242,800:50:2	
463	99	308	16:15:11.533		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,242,805:75:0	
464	99	308	16:15:11.533	465WD6A	6DMSC	P100.1	DMS Control Tape P/B 100.8kbps	400	4	0	5,242,805:75:0	
465	99	308	16:15:18.200		DMS:	:*RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,242,805:85:0	
466	99	308	16:15:22.066		DMS:	:*AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	400	4	0	5,242,805:90:8	
467	99	308	16:15:22.066		DMS:	:*P_SLEW	P100, TRACK 1, FWD, TIC *207.62 +/-	400	4	0	5,242,805:90:8	
468	99	308	16:47:05.533	465WD6B	6DMSC	RDY.1	DMS Control Tape stop	400	4	0	5,242,837:34:0	
469	99	308	16:47:05.533		DMS:	:*RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	400	4	0	5,242,837:34:0	
470	99	308	16:47:06.733		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	400	4	0	5,242,837:35:8	
471	99	308	16:54:18.200	488DA6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,242,844:46:0	
472	99	308	17:00:42.200	488DA6D	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	5,242,850:76:0	
473	99	308	17:02:41.533	465WE6A	6DMSC	P100.2	DMS Control Tape P/B 100.8kbps	400	4	0	5,242,852:73:0	
474	99	308	17:02:41.533		DMS:	:*US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	400	4	0	5,242,852:73:0	
475	99	308	17:02:42.933		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	400	4	0	5,242,852:75:1	
476	99	308	17:02:48.200		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	400	4	0	5,242,852:83:0	
477	99	308	17:02:49.400		DMS:	:*RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	400	4	0	5,242,852:84:8	
478	99	308	17:02:53.266		DMS:	:*AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	400	4	0	5,242,852:90:6	
479	99	308	17:02:53.266		DMS:	:*P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	400	4	0	5,242,852:90:6	
480	99	308	17:17:46.200	488DA6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,242,867:65:0	
481	99	308	17:34:49.533		DMS:	:*RUNDOWN	P100, TRACK 2, REV, TIC *164.96 +/-	400	4	0	5,242,884:53:0	
482	99	308	17:34:49.533	465WF6A	6DMSC	P100.3	DMS Control Tape P/B 100.8kbps	400	4	0	5,242,884:53:0	
483	99	308	17:34:50.733		DMS:	:*RUNUP	P100, TRACK *3, *FWD, TIC *164.16 +/-	400	4	0	5,242,884:54:8	
484	99	308	17:34:54.600		DMS:	:*P_SLEW	P100, TRACK 3, FWD, TIC *169.66 +/-	400	4	0	5,242,884:60:6	
485	99	308	17:34:54.600		DMS:	:*AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	400	4	0	5,242,884:60:6	
486	99	308	18:06:50.200		DMS:	:*RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	400	4	0	5,242,916:22:0	
487	99	308	18:06:50.200	465WF6B	6DMSC	RDY.3	DMS Control Tape stop	400	4	0	5,242,916:22:0	
488	99	308	18:06:51.400		DMS:	:*READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	400	4	0	5,242,916:23:8	
489	99	308	18:12:54.200	488DB6A	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	400	4	0	5,242,922:22:0	
490	99	308	18:21:33.533	465WG6A	6DMSC	P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	5,242,930:73:0	
491	99	308	18:21:33.533		DMS:	:*US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	400	4	0	5,242,930:73:0	
492	99	308	18:21:34.933		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	400	4	0	5,242,930:75:1	
493	99	308	18:21:40.200		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	400	4	0	5,242,930:83:0	



Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
494	99	308	18:21:41.400		DMS:	: *RUNUP	P100, TRACK 4, *REV, TIC *6064.59 +/-	400	4	0	5,242,930:84:8	
495	99	308	18:21:45.266		DMS:	: *AT SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	400	4	0	5,242,930:90:6	
496	99	308	18:21:45.266		DMS:	: *P SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	400	4	0	5,242,930:90:6	
497	99	308	18:34:34.200	488DB6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,242,943:61:0	
498	99	308	18:40:14.200	488DB6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,242,949:25:0	
499	99	308	18:53:40.866	465WH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kpbs	400	4	0	5,242,962:52:0	
500	99	308	18:53:40.866		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	400	4	0	5,242,962:52:0	
501	99	308	18:53:42.066		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	400	4	0	5,242,962:53:8	
502	99	308	18:53:45.933		DMS:	: *AT SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	400	4	0	5,242,962:59:6	
503	99	308	18:53:45.933		DMS:	: *P SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	400	4	0	5,242,962:59:6	
504	99	308	18:54:46.866	465WH6B	6DMSC	RDY,3	DMS Control Tape stop	400	4	0	5,242,963:60:0	
505	99	308	18:54:46.866		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	400	4	0	5,242,963:60:0	
506	99	308	18:54:48.066		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	400	4	0	5,242,963:61:8	
507	99	308	18:55:59.533	488DB6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,242,964:78:0	
508	99	308	19:09:16.866		DMS:	: READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	400	4	0	5,242,978:00:0	
509	99	308	19:09:16.866	465WI6A	6DMSC	RDY,4	DMS Control Tape stop	400	4	0	5,242,978:00:0	
510	99	308	19:10:10.866	465WJ6A	6DTRN	CMD,6DTRN,465WJ6	DMS TRACK TURNAROUND	400	4	0	5,242,978:81:0	
511	99	308	19:10:10.866		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	400	4	0	5,242,978:81:0	
512	99	308	19:10:10.866		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	400	4	0	5,242,978:81:0	
513	99	308	19:10:12.266		DMS:	: *US AT SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	400	4	0	5,242,978:83:1	
514	99	308	19:10:17.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	400	4	0	5,242,979:00:0	
515	99	308	19:10:18.733		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	400	4	0	5,242,979:01:8	
516	99	308	19:10:20.133		DMS:	: *AT SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	400	4	0	5,242,979:03:9	
517	99	308	19:21:45.933		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	400	4	0	5,242,990:31:6	
518	99	308	19:21:47.133		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	400	4	0	5,242,990:33:4	
519	99	308	19:21:47.133		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	5,242,990:33:4	
520	99	308	19:21:48.533		DMS:	: *AT SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	400	4	0	5,242,990:35:5	
521	99	308	19:22:00.533		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	400	4	0	5,242,990:53:5	
522	99	308	19:22:01.733		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	400	4	0	5,242,990:55:3	
523	99	308	19:37:54.200	20VB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,243,005:44:0	
524	99	308	19:37:54.200	20VB4B	DIS,POS,0.0		Stator movement	400	4	0	5,243,006:28:0	
525	99	308	19:39:36.866	176VB6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,243,008:00:0	
526	99	309	00:50:02.133	488DC6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,243,315:01:0	
527	99	309	01:28:26.133	488DC6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,243,352:90:0	
528	99	309	01:59:18.800	488DC6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,243,383:48:0	
529	99	309	02:31:08.133	488DC6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,243,415:00:0	
530	99	309	07:39:38.133	488DD6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,243,720:10:0	
531	99	309	07:56:42.133	488DD6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,243,736:90:0	
532	99	309	08:49:18.800	488DD6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,243,789:02:0	
533	99	309	09:09:14.133	488DD6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,243,808:66:0	
534	99	309	09:13:56.800	488DD6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,243,813:35:0	
535	99	309	15:39:38.133	488DE6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,244,194:76:0	
536	99	309	16:50:02.133	488DE6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,244,264:42:0	
537	99	309	17:00:42.133	488DE6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,244,275:01:0	
538	99	309	17:01:06.800	488DE6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,244,275:38:0	
539	99	309	17:28:10.800	488DE6E	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,244,302:17:0	
540	99	309	17:36:58.133	488DF6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,244,310:80:0	
541	99	309	18:28:10.133	488DF6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,244,361:47:0	
542	99	309	18:34:19.466	488DF6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,244,367:55:0	
543	99	309	19:01:09.466	488DF6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,244,394:13:0	
544	99	310	02:30:18.133	488DG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,244,838:32:0	
545	99	310	03:30:02.133	488DG6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,244,897:39:0	
546	99	310	04:45:44.066	488DG6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,244,972:27:0	
547	99	310	05:10:16.733	488DG6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,244,996:52:0	
548	99	310	07:35:22.066	488DG6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,245,140:06:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	99	310	07:52:26.066	488DH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,245,156:86:0	
550	99	310	08:52:10.066	488DH6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,245,216:02:0	
551	99	310	15:35:22.066	488DI6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,245,614:72:0	
552	99	310	16:50:02.066	488DI6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,245,688:58:0	
553	99	310	17:07:09.066	488DI6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,245,705:47:0	
554	99	310	18:02:59.400	488DI6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,245,760:72:0	
555	99	310	18:23:54.066	488DI6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,245,781:43:0	
556	99	310	18:30:08.066	488DJ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,245,787:58:0	
557	99	311	03:29:23.400	488DK6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,246,320:88:0	
558	99	311	04:01:13.400	488DK6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,246,352:41:0	
559	99	311	07:28:58.066	488DK6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,246,557:83:0	
560	99	311	07:48:10.066	488DK6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,246,576:82:0	
561	99	311	08:28:00.733	488DK6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,246,616:28:0	
562	99	311	08:50:02.066	488DL6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,246,638:08:0	
563	99	311	08:59:10.733	488DL6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,246,647:12:0	
564	99	311	15:39:38.000	488DM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,247,043:17:0	
565	99	311	16:43:38.000	488DM6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,247,106:44:0	
566	99	311	16:52:10.000	488DM6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,247,114:84:0	
567	99	311	17:22:02.000	488DM6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,247,144:42:0	
568	99	311	17:44:24.666	488DM6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,247,166:54:0	
569	99	311	18:11:14.000	488DN6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,247,193:11:0	
570	99	312	02:43:06.000	488DO6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,247,699:33:0	
571	99	312	05:02:32.666	488DO6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,247,837:25:0	
572	99	312	05:03:54.000	488DO6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,247,838:56:0	
573	99	312	07:29:57.333	488DO6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,247,983:06:0	
574	99	312	07:41:46.000	488DO6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,247,994:68:0	
575	99	312	08:41:30.000	488DP6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,248,053:75:0	
576	99	312	15:24:42.000	488DQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,248,452:54:0	
577	99	312	16:39:22.000	488DQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,248,526:40:0	
578	99	312	16:56:26.000	488DQ6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,248,543:29:0	
579	99	312	17:53:04.666	488DQ6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,248,599:31:0	
580	99	312	17:59:52.666	41XE99A	POWER	PWR MODE change	Change to Calib/Decon Mode	400	4	0	5,248,606:06:0	
581	99	312	17:59:52.666	24NNRCTRLT01-		-----START-----		400	4	0	:	
582	99	312	17:59:56.666	41XE31	40T1PR		1 PCT Heater 1 OFF (primary relay)	400	4	0	5,248,606:12:0	
583	99	312	18:00:06.666	41XE3J	40T1PR		2 PCT Heater 1 OFF (primary relay)	400	4	0	5,248,606:27:0	
584	99	312	18:00:16.666	41XE3K	40T2R		1 PCT Heater 2 OFF	400	4	0	5,248,606:42:0	
585	99	312	18:00:26.666	41XE3L	40T2R		2 PCT Heater 2 OFF	400	4	0	5,248,606:57:0	
586	99	312	18:10:56.000	176XU6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,248,617:00:0	
587	99	312	18:14:02.000	20XE4A	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,248,620:06:0	
588	99	312	18:15:22.000	488DQ6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,248,621:35:0	
589	99	312	18:18:08.666	20DA4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,248,624:12:0	
590	99	312	18:18:58.666	20DA4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,248,624:87:0	
591	99	312	18:20:33.333	488DR6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,248,626:47:0	
592	99	312	18:21:02.666	176XV6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,248,627:00:0	
593	99	312	18:22:03.333	185XE10A3A	40HRP		1 RCT Heater ON (primary relay)	400	4	0	5,248,628:00:0	
594	99	312	18:22:08.666	185XE10B3A	40HRP		2 RCT Heater ON (primary relay)	400	4	0	5,248,628:08:0	
595	99	313	01:54:28.600	488DS6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,249,075:41:0	
596	99	313	02:21:17.933	488DS6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,249,101:89:0	
597	99	313	02:36:41.933	488DS6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,249,117:19:0	
598	99	313	06:16:49.933	125XE4A	37IST	1.0,0,OFF,0.0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	5,249,334:84:0	
599	99	313	06:16:49.933	125XE4E	NIMSINIT	GS	##### GROUP START INIT	460	4	0	5,249,334:84:0	
600	99	313	06:17:50.600	125XE4B	37IST	1.2,0,OFF,0.0,0	Chopper ON, Sync, Chopper (Ref)	4R0	4	0	5,249,335:84:0	
601	99	313	06:18:51.266	125XE4C	37IST	0.2,0,OFF,0.1,3	Gain State 1	1R0	4	0	5,249,336:84:0	
602	99	313	06:19:51.933	125XE4D	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	1R0	4	0	5,249,337:84:0	
603	99	313	06:19:51.933	125XE11A	NIMSINIT	GE	##### GROUP END INIT	1R0	4	0	5,249,337:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
604	99	313	06:21:53.266	127XE	NIMSTAB	GS	%%%%GROUP START TAB	1R0	4	0	5,249,339:84:0	
605	99	313	06:21:53.266	127XE4A	37IOP	3.0	Long Map, Grating Start Position =00	1R3	4	0	5,249,339:84:0	
606	99	313	06:21:53.933	127XE4B	37ETB	0A,CA,18,03,FF,1	Loads wavelength edit table	1R3	4	0	5,249,339:85:0	
607	99	313	06:22:01.933	127XE11A	NIMSTAB	GE	%%%%GROUP END TAB	1R3	4	0	5,249,340:06:0	
608	99	313	06:26:00.600	176XE6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1R3	4	0	5,249,344:00:0	
609	99	313	06:32:04.600	192XE4A	7CONE	17.0,119.7	Check S/P Position	1R3	4	0	5,249,350:00:0	
610	99	313	06:34:25.933	432XE6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	1R3	4	0	5,249,352:30:0	
611	99	313	06:35:25.266	432XF6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	1R3	4	0	5,249,353:28:0	
612	99	313	06:38:08.600	192XE4B	7CONE	17.0,0.0	Check S/P Position	1R3	4	0	5,249,356:00:0	
613	99	313	06:40:29.933	432XU6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	1R3	4	0	5,249,358:30:0	
614	99	313	06:42:29.933	432XV6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	1R3	4	0	5,249,360:28:0	
615	99	313	06:44:12.600	192XE4C	7CONE	17.0,119.7	Check S/P Position	1R3	4	0	5,249,362:00:0	
616	99	313	06:46:13.933	185XE10C3A	40HRPR		1 RCT Heater OFF (primary relay)	1R3	4	0	5,249,364:00:0	
617	99	313	06:46:19.266	185XE10D3A	40HRPR		2 RCT Heater OFF (primary relay)	1R3	4	0	5,249,364:08:0	
618	99	313	06:46:33.933	432XW6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	1R3	4	0	5,249,364:30:0	
619	99	313	06:47:33.266	432XY6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	1R3	4	0	5,249,365:28:0	
620	99	313	06:49:11.266	125DC11A	NIMSINIT	GE	##### GROUP END INIT	1R3	4	0	5,249,366:84:0	
621	99	313	06:49:11.266	125DC	NIMSINIT	GS	##### GROUP START INIT	1R3	4	0	5,249,366:84:0	
622	99	313	06:49:11.266	125DC4A	37IST	0.2,0,OFF,0,1,1	Gain State 4	4R3	4	0	5,249,366:84:0	
623	99	313	06:50:11.933	127DC	NIMSTAB	GS	%%%%GROUP START TAB	4R3	4	0	5,249,367:84:0	
624	99	313	06:50:11.933	127DC4A	37IOP	3.0	Long Map, Grating Start Position =00	4R3	4	0	5,249,367:84:0	
625	99	313	06:50:12.600	127DC4B	37ETB	07,C7,31,80,00,0	Loads wavelength edit table	4R3	4	0	5,249,367:85:0	
626	99	313	06:50:16.600	192XE4D	7CONE	17.0,153.0	Check S/P Position	4R3	4	0	5,249,368:00:0	
627	99	313	06:50:20.600	127DC11A	NIMSTAB	GE	%%%%GROUP END TAB	4R3	4	0	5,249,368:06:0	
628	99	313	06:50:36.600	432DC6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	4R3	4	0	5,249,368:30:0	
629	99	313	06:51:12.600	125DD	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	5,249,368:84:0	
630	99	313	06:51:12.600	125DD4A	37IST	0.2,1,OFF,1,0,1	OPCAL	4R3	4	0	5,249,368:84:0	
631	99	313	06:51:12.600	125DD11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	5,249,368:84:0	
632	99	313	06:53:13.933	125DE11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	5,249,370:84:0	
633	99	313	06:53:13.933	125DE	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	5,249,370:84:0	
634	99	313	06:53:13.933	125DE4A	37IST	0.2,1,OFF,1,0,1	OPCAL	4R3	4	0	5,249,370:84:0	
635	99	313	06:53:37.266	432DE6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	4R3	4	0	5,249,371:28:0	
636	99	313	06:57:16.600	127XF4A	37IOP	0.0	Safe, Grating Start Position =00	4R0	4	0	5,249,374:84:0	
637	99	313	06:57:16.600	127XF	NIMSTAB	GS	%%%%GROUP START TAB	4R0	4	0	5,249,374:84:0	
638	99	313	06:57:17.266	127XF4B	37ETB	04,C4,02,00,00	Loads wavelength edit table	4R0	4	0	5,249,374:85:0	
639	99	313	06:57:25.266	127XF11A	NIMSTAB	GE	%%%%GROUP END TAB	4R0	4	0	5,249,375:06:0	
640	99	313	07:00:18.600	125XF4A	37MB	0.0,0.0,0.0	Selects mirror (spatial) edit table	4R0	4	0	5,249,377:84:0	
641	99	313	07:00:18.600	125XF	NIMSINIT	GS	##### GROUP START INIT	4R0	4	0	5,249,377:84:0	
642	99	313	07:01:19.266	125XF4B	37IST	1.0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	5,249,378:84:0	
643	99	313	07:02:19.933	125XF11A	NIMSINIT	GE	##### GROUP END INIT	460	4	0	5,249,379:84:0	
644	99	313	07:02:19.933	125XF4C	37IST	1.0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	5,249,379:84:0	
645	99	313	07:08:32.600	41XU99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	400	4	0	5,249,386:06:0	
646	99	313	07:10:26.600	41XU3G	40T1P		1 PCT Heater 1 ON (primary relay)	400	4	0	5,249,387:86:0	
647	99	313	07:10:36.600	41XU3H	40T1P		2 PCT Heater 1 ON (primary relay)	400	4	0	5,249,388:10:0	
648	99	313	07:10:46.600	41XU3I	40T2		1 PCT Heater 2 ON	400	4	0	5,249,388:25:0	
649	99	313	07:10:56.600	41XU3J	40T2		2 PCT Heater 2 ON	400	4	0	5,249,388:40:0	
650	99	313	07:15:37.332	24NNRCTRLT01-		-----STOP-----		400	4	0	:	
651	99	313	07:18:43.266	20DB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,249,396:12:0	
652	99	313	07:19:33.266	20DB4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,249,396:87:0	
653	99	313	07:21:37.266	176XF6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,249,399:00:0	
654	99	313	07:24:41.933	488DS6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,249,402:04:0	
655	99	313	08:37:13.933	488DT6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,249,473:71:0	
656	99	313	15:24:41.933	488DU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,249,876:70:0	
657	99	313	16:35:05.933	488DU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,249,946:36:0	
658	99	313	17:11:21.933	488DU6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,249,982:24:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	99	314	00:39:21.933	488DV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,250,425:31:0	
660	99	314	01:02:49.933	488DV6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,250,448:50:0	
661	99	314	01:54:30.600	488DV6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,250,499:60:0	
662	99	314	02:21:19.933	488DV6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,250,526:17:0	
663	99	314	07:14:01.866	488DW6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,250,815:61:0	
664	99	314	07:33:13.866	488DW6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,250,834:60:0	
665	99	314	08:18:08.533	488DW6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,250,879:07:0	
666	99	314	08:39:21.866	488DW6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,250,900:06:0	
667	99	314	08:49:06.533	488DW6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,250,909:64:0	
668	99	314	15:24:41.866	488DX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,251,300:86:0	
669	99	314	16:28:41.866	488DX6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,251,364:22:0	
670	99	314	16:47:53.866	488DX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,251,383:21:0	
671	99	314	17:33:09.200	488DX6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,251,427:90:0	
672	99	314	18:08:57.866	488DX6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,251,463:37:0	
673	99	314	18:11:31.200	488DY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,251,465:85:0	
674	99	314	18:52:59.866	488DY6B	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	400	4	0	5,251,506:87:0	
675	99	314	18:56:04.533	176QE6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,251,510:00:0	
676	99	315	00:00:59.866	488DY6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,251,811:52:0	
677	99	315	00:01:25.866	176QF6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,251,812:00:0	
678	99	315	00:26:42.533	176UY6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,251,837:00:0	
679	99	315	00:31:59.866	20UR4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,251,842:21:0	
680	99	315	00:32:59.866	20UR4D	7MODE	SPNL	AACS ALL-SPIN LOW	400	4	0	5,251,843:20:0	
681	99	315	00:34:59.866	20UR4E	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,251,845:18:0	
682	99	315	00:40:29.866	20UR4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	400	4	0	5,251,850:58:0	
683	99	315	00:40:30.533	20UR4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	400	4	0	5,251,850:59:0	
684	99	315	00:40:50.533	20UR4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	400	4	0	5,251,850:89:0	
685	99	315	00:40:51.200	20UR4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	400	4	0	5,251,850:90:0	
686	99	315	00:41:11.200	20UR4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	5,251,851:29:0	
687	99	315	00:41:11.866	20UR4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	5,251,851:30:0	
688	99	315	00:41:21.866	20UR4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	5,251,851:45:0	
689	99	315	00:41:22.533	20UR4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	5,251,851:46:0	
690	99	315	00:41:32.533	20UR4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	400	4	0	5,251,851:61:0	
691	99	315	00:41:33.200	20UR4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	400	4	0	5,251,851:62:0	
692	99	315	00:43:19.866	20UR4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	400	4	0	5,251,853:40:0	
693	99	315	00:43:20.533	20UR4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	400	4	0	5,251,853:41:0	
694	99	315	00:43:40.533	20UR4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	400	4	0	5,251,853:71:0	
695	99	315	00:43:41.200	20UR4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	400	4	0	5,251,853:72:0	
696	99	315	00:44:01.200	20UR4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	5,251,854:11:0	
697	99	315	00:44:01.866	20UR4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	5,251,854:12:0	
698	99	315	00:44:11.866	20UR4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	5,251,854:27:0	
699	99	315	00:44:12.533	20UR4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	5,251,854:28:0	
700	99	315	00:44:22.533	20UR4AW	7VENT	1.211,1.333,9	ALERT -- Thruster fire	400	4	0	5,251,854:43:0	
701	99	315	00:44:23.200	20UR4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	400	4	0	5,251,854:44:0	
702	99	315	00:45:19.866	20UR4Z	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,251,855:38:0	
703	99	315	01:10:03.866	20UY4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,251,879:80:0	
704	99	315	01:10:53.866	20UY4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,251,880:64:0	
705	99	315	01:12:12.533	176UZ6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,251,882:00:0	
706	99	315	02:59:33.866	488DZ6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,251,988:16:0	
707	99	315	03:31:23.200	488DZ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,252,019:59:0	
708	99	315	08:24:34.533	488DZ6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,252,309:56:0	
709	99	315	08:45:45.866	488DZ6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,252,330:52:0	
710	99	315	08:49:37.866	488DZ6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,252,334:36:0	
711	99	315	15:14:01.800	488EA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,252,714:52:0	
712	99	315	16:24:25.800	488EA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,252,784:18:0	
713	99	315	16:35:05.800	488EA6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,252,794:68:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	99	315	16:35:50.466	488EA6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,252,795:44:0	
715	99	315	16:56:25.800	488EA6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,252,815:77:0	
716	99	315	17:23:54.466	488EB6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,252,843:02:0	
717	99	316	00:32:03.800	488EC6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,253,266:43:0	
718	99	316	01:48:53.133	488EC6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,253,342:41:0	
719	99	316	02:28:09.800	488EC6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,253,381:27:0	
720	99	316	07:09:45.800	488ED6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,253,659:73:0	
721	99	316	08:26:33.800	488ED6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,253,735:69:0	
722	99	316	15:09:45.800	488EE6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,254,134:48:0	
723	99	316	16:20:09.800	488EE6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,254,204:14:0	
724	99	316	16:28:41.800	488EE6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,254,212:54:0	
725	99	316	16:30:48.466	488EE6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,254,214:62:0	
726	99	316	16:50:01.800	488EE6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,254,233:63:0	
727	99	316	16:59:45.800	488EF6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,254,243:29:0	
728	99	316	17:58:17.800	488EF6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,254,301:19:0	
729	99	316	18:09:38.466	488EF6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,254,312:39:0	
730	99	316	18:36:28.466	488EF6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,254,338:88:0	
731	99	317	01:34:39.733	488EG6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,254,752:51:0	
732	99	317	02:01:29.066	488EG6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,254,779:08:0	
733	99	317	02:21:45.733	488EG6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,254,799:13:0	
734	99	317	05:42:21.733	488EG6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,254,997:49:0	
735	99	317	05:44:25.733	488EG6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,254,999:53:0	
736	99	317	07:07:50.400	488EH6A	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,255,082:07:0	
737	99	317	07:18:17.733	488EH6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,255,092:38:0	
738	99	317	08:22:17.733	488EH6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,255,155:65:0	
739	99	317	15:03:21.733	488EI6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,255,552:34:0	
740	99	317	16:20:09.733	488EI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,255,628:30:0	
741	99	317	16:56:25.733	488EI6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,255,664:18:0	
742	99	318	02:21:45.733	488EJ6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,256,223:29:0	
743	99	318	05:42:13.000	488EJ6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,256,421:52:0	
744	99	318	05:44:25.666	488EJ6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	5,256,423:69:0	
745	99	318	07:06:47.666	488EJ6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	5,256,505:20:0	
746	99	318	07:11:53.666	488EJ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,256,510:24:0	
747	99	318	08:03:20.333	488EK6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,256,561:13:0	
748	99	318	08:24:25.666	488EK6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,256,582:00:0	
749	99	318	08:30:31.666	488EK6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,256,588:03:0	
750	99	318	15:03:21.666	488EL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,256,976:50:0	
751	99	318	16:13:45.666	488EL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,257,046:16:0	
752	99	318	16:17:43.000	488EL6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,257,050:08:0	
753	99	318	16:24:25.666	488EL6D	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	400	4	0	5,257,056:66:0	
754	99	318	17:00:41.666	488EL6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,257,092:54:0	
755	99	318	17:08:45.000	488EM6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,257,100:51:0	
756	99	318	17:14:44.333	488EM6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,257,106:44:0	
757	99	318	17:41:34.333	488EM6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,257,133:02:0	
758	99	319	02:49:29.666	488EN6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,257,674:84:0	
759	99	319	03:15:05.666	488EN6B	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,257,700:22:0	
760	99	319	06:54:49.666	488EN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,257,917:51:0	
761	99	319	07:11:53.666	488EN6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,257,934:40:0	
762	99	319	08:18:01.666	488EN6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,257,999:77:0	
763	99	319	14:54:49.600	488EO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,258,392:26:0	
764	99	319	16:09:29.600	488EO6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,258,466:12:0	
765	99	319	16:26:33.600	488EO6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,258,483:01:0	
766	99	319	17:23:24.266	488EO6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,258,539:21:0	
767	99	319	17:51:53.600	488EO6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,258,567:37:0	
768	99	319	17:52:26.266	488EP6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,258,567:86:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
769	99	320	01:24:48.933	488EQ6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,259,015:32:0	
770	99	320	01:51:38.266	488EQ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,259,041:80:0	
771	99	320	02:21:45.600	488EQ6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,259,071:61:0	
772	99	320	06:48:25.600	488EQ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,259,335:37:0	
773	99	320	07:07:37.600	488EQ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,259,354:36:0	
774	99	320	08:11:37.600	488ER6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,259,417:63:0	
775	99	320	14:44:09.600	488ES6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,259,805:83:0	
776	99	320	16:05:13.600	488ES6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,259,886:08:0	
777	99	320	16:47:53.600	488ES6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,259,928:26:0	
778	99	321	02:32:25.533	488ET6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,260,506:36:0	
779	99	321	06:44:09.533	488ET6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,260,755:33:0	
780	99	321	07:01:13.533	488ET6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,260,772:22:0	
781	99	321	08:18:01.533	488ET6D	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,260,848:18:0	
782	99	321	14:33:29.533	488EU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,261,219:49:0	
783	99	321	15:58:49.533	488EU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,261,303:85:0	
784	99	321	16:05:13.533	488EU6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,261,310:24:0	
785	99	321	16:22:17.533	488EU6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,261,327:13:0	
786	99	321	17:18:30.200	488EU6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,261,382:67:0	
787	99	321	17:47:36.866	488EV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,261,411:48:0	
788	99	321	17:56:09.533	488EV6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,261,419:89:0	
789	99	322	01:13:29.533	488EW6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,261,852:46:0	
790	99	322	02:53:45.533	488EW6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,261,951:61:0	
791	99	322	03:12:57.533	488EW6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,261,970:60:0	
792	99	322	04:11:18.800	488EW6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,262,028:34:0	
793	99	322	04:35:52.133	488EW6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,262,052:60:0	
794	99	322	06:39:53.466	488EX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,262,175:29:0	
795	99	322	06:56:57.466	488EX6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,262,192:18:0	
796	99	322	08:22:17.466	488EX6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,262,276:54:0	
797	99	322	14:18:33.466	488EY6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,262,628:86:0	
798	99	322	15:48:09.466	488EY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,262,717:51:0	
799	99	322	16:47:53.466	488EY6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,262,776:58:0	
800	99	323	02:13:13.466	488EZ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,263,335:69:0	
801	99	323	02:58:01.466	488EZ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,263,380:06:0	
802	99	323	06:33:29.466	488EZ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,263,593:15:0	
803	99	323	06:50:33.466	488EZ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,263,610:04:0	
804	99	323	07:43:36.800	488EZ6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,263,662:47:0	
805	99	323	08:12:42.800	488FA6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,263,691:27:0	
806	99	323	08:26:33.466	488FA6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,263,704:90:0	
807	99	323	13:59:21.400	488FA6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,264,034:12:0	
808	99	323	14:29:37.400	488FB6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,264,064:06:0	
809	99	323	14:33:29.400	488FB6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,264,067:81:0	
810	99	323	16:09:30.733	488FB6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,264,162:78:0	
811	99	323	16:22:17.400	488FB6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,264,175:45:0	
812	99	323	16:58:37.400	488FB6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,264,211:39:0	
813	99	323	17:27:43.400	488FC6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,264,240:19:0	
814	99	323	18:47:21.400	488FC6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,264,318:88:0	
815	99	323	23:43:53.400	488FD6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,264,612:22:0	
816	99	324	00:00:57.400	488FD6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,264,629:11:0	
817	99	324	01:05:01.400	488FD6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,264,692:44:0	
818	99	324	01:31:51.400	488FD6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,264,719:02:0	
819	99	324	06:29:13.400	488FE6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,265,013:11:0	
820	99	324	06:52:41.400	488FE6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,265,036:30:0	
821	99	324	07:38:39.400	488FE6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,265,081:72:0	
822	99	324	08:07:45.400	488FE6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,265,110:52:0	
823	99	324	09:07:05.400	488FE6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,265,169:23:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
824	99	324	13:08:09.400	488FF6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,265,407:61:0	
825	99	324	15:28:57.400	488FF6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,265,546:84:0	
826	99	324	16:11:37.400	488FF6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,265,589:11:0	
827	99	324	16:48:40.733	488FF6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,265,625:70:0	
828	99	324	17:09:13.400	488FF6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,265,646:08:0	
829	99	324	17:15:43.400	488FG6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,265,652:47:0	
830	99	324	23:58:49.333	488FH6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,266,051:17:0	
831	99	325	01:13:41.333	488FH6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,266,125:21:0	
832	99	325	01:42:47.333	488FH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,266,154:01:0	
833	99	325	01:51:53.333	488FH6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,266,163:01:0	
834	99	325	06:33:29.333	488FI6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,266,441:47:0	
835	99	325	07:01:13.333	488FI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,266,468:86:0	
836	99	325	07:43:42.666	488FI6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,266,510:88:0	
837	99	325	08:17:48.666	488FI6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,266,544:63:0	
838	99	325	15:14:01.333	488FJ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,266,956:30:0	
839	99	325	16:07:21.333	488FJ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,267,009:07:0	
840	99	325	16:48:43.333	488FJ6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,267,049:90:0	
841	99	325	17:17:49.333	488FJ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,267,078:70:0	
842	99	325	17:36:57.333	488FJ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,267,097:63:0	
843	99	326	00:50:01.333	488FK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,267,526:00:0	
844	99	326	01:00:01.333	488FK6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,267,535:81:0	
845	99	326	01:04:57.333	488FK6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,267,540:70:0	
846	99	326	03:59:05.266	432MC431A6A	6RCDL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	400	4	0	5,267,712:90:0	
847	99	326	03:59:05.933	432MC6A	6RTSL1		R/T Select of DDS and	400	4	0	5,267,713:00:0	
848	99	326	06:31:02.600	488FL6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,267,863:25:0	
849	99	326	07:07:37.266	488FL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,267,899:41:0	
850	99	326	07:28:45.266	488FL6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,267,920:32:0	
851	99	326	07:57:51.933	488FL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,267,949:13:0	
852	99	326	14:54:49.266	488FM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,268,361:47:0	
853	99	326	15:43:45.933	488FM6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,268,409:84:0	
854	99	326	15:48:09.266	488FM6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	5,268,414:24:0	
855	99	326	16:11:20.600	488FM6D	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	5,268,437:18:0	
856	99	326	16:15:53.266	488FM6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,268,441:63:0	
857	99	326	16:40:59.933	488FN6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,268,466:48:0	
858	99	326	17:04:57.266	488FN6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,268,490:20:0	
859	99	326	17:11:31.933	488FN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,268,496:66:0	
860	99	326	17:13:46.600	488FN6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,268,498:86:0	
861	99	326	17:42:52.600	488FN6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,268,527:66:0	
862	99	327	01:48:47.266	488FO6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,269,008:27:0	
863	99	327	02:22:53.933	488FO6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,269,042:03:0	
864	99	327	06:18:33.266	488FO6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,269,275:09:0	
865	99	327	07:16:09.266	488FO6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,269,332:06:0	
866	99	327	07:18:48.600	488FO6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,269,334:63:0	
867	99	327	07:52:54.600	488FP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,269,368:38:0	
868	99	327	14:44:09.200	488FQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,269,775:13:0	
869	99	327	16:36:03.200	488FQ6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,269,885:74:0	
870	99	327	17:11:21.200	488FQ6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,269,920:66:0	
871	99	327	17:17:01.866	488FQ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,269,926:31:0	
872	99	327	17:52:59.866	488FQ6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,269,961:83:0	
873	99	327	17:56:07.200	176QG6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,269,965:00:0	
874	99	327	23:00:59.866	488FR6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,270,266:48:0	
875	99	327	23:01:28.533	176QH6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,270,267:00:0	
876	99	327	23:04:59.866	41FZ99A	POWER	PWR MODE change	Change to Data Taking Mode	400	4	0	5,270,270:44:0	
877	99	327	23:05:03.866	41FZ3A	40T1PR		1 PCT Heater 1 OFF (primary relay)	400	4	0	5,270,270:50:0	
878	99	327	23:05:13.866	41FZ3B	40T1PR		2 PCT Heater 1 OFF (primary relay)	400	4	0	5,270,270:65:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
879	99	327	23:05:23.866	41FZ3C	40T2R	1 PCT Heater 2 OFF	400	4	0	5,270,270:80:0	
880	99	327	23:05:33.866	41FZ3D	40T2R	2 PCT Heater 2 OFF	400	4	0	5,270,271:04:0	
881	99	328	02:13:50.533	488FR6B	6TMSD	FILL,AL5 Sci, Eng, and D/L Chan	400	4	0	5,270,457:23:0	
882	99	328	02:47:56.533	488FR6C	6TMSD	NORM,AL5 Sci, Eng, and D/L Chan	400	4	0	5,270,490:89:0	
883	99	328	03:54:41.866	176SB6A	6TMRD	TPB TERMINATE PLAYBACK (PB CONTROL) Record Mo	400	4	0	5,270,557:00:0	
884	99	328	06:14:17.200	488FS6A	6TMSD	NORM,AL4 Sci, Eng, and D/L Chan	400	4	0	5,270,695:05:0	
885	99	328	06:31:21.200	488FS6B	6TMSD	NORM,AL5 Sci, Eng, and D/L Chan	400	4	0	5,270,711:85:0	
886	99	328	07:16:09.200	488FS6C	6TMSD	NORM,AL6 Sci, Eng, and D/L Chan	400	4	0	5,270,756:22:0	
887	99	328	07:25:13.866	488FS6D	6TMSD	FILL,AL6 Sci, Eng, and D/L Chan	400	4	0	5,270,765:20:0	
888	99	328	07:47:15.200	DMS:	: *SLEW-TIC RDY, TRACK 1, FWD, TIC 202.12 +/-		400	4	0	5,270,787:00:0	
889	99	328	07:47:15.200	DMS:	: *E4-DELAY RDY, TRACK 1, FWD, TIC 202.12 +/-		400	4	0	5,270,787:00:0	
890	99	328	07:47:15.200	465WK6A	6DMST	5000 DMS Slew to TIC	400	4	0	5,270,787:00:0	
891	99	328	07:47:15.200	DMS:	: *TURNARND P7, TRACK 1, FWD, TIC 202.12 +/-		400	4	0	5,270,787:00:0	
892	99	328	07:47:21.866	DMS:	: *RUNUP P7, TRACK 1, FWD, TIC 202.12 +/-		400	4	0	5,270,787:10:0	
893	99	328	07:47:23.266	DMS:	: *AT SPD P7, TRACK 1, FWD, TIC * 202.24 +/-		400	4	0	5,270,787:12:1	
894	99	328	07:52:03.200	488FS6E	6TMSD	NORM,AL6 Sci, Eng, and D/L Chan	400	4	0	5,270,791:68:0	
895	99	328	08:59:59.866	481UA4A	7VECT	Inert vect update UTC	400	4	0	5,270,858:86:0	
896	99	328	13:28:24.000	DMS:	: *RUNDOWN P7, TRACK 1, FWD, TIC *4997.94 +/-		400	4	0	5,271,124:36:2	
897	99	328	13:28:25.200	DMS:	: *READY RDY, TRACK 1, FWD, TIC *4998.00 +/-		400	4	0	5,271,124:38:0	
898	99	328	13:40:56.533	DMS:	: *US-RUNUP P7, TRACK 1, FWD, TIC 4998.00 +/-		400	4	0	5,271,136:73:0	
899	99	328	13:40:56.533	465WL6A	6DMSC	P100,4 DMS Control Tape P/B 100.8kbps	400	4	0	5,271,136:73:0	
900	99	328	13:40:57.933	DMS:	: *US AT SP P7, TRACK 1, FWD, TIC *4998.12 +/-		400	4	0	5,271,136:75:1	
901	99	328	13:41:03.200	DMS:	: *US RD P7, TRACK 1, FWD, TIC *4999.35 +/-		400	4	0	5,271,136:83:0	
902	99	328	13:41:04.400	DMS:	: *RUNUP P100, TRACK 4, *REV, TIC *4999.41 +/-		400	4	0	5,271,136:84:8	
903	99	328	13:41:08.266	DMS:	: *AT SPD P100, TRACK 4, REV, TIC 4993.91 +/-		400	4	0	5,271,136:90:6	
904	99	328	13:41:08.266	DMS:	: *P SLEW P100, TRACK 4, REV, TIC *4993.91 +/-		400	4	0	5,271,136:90:6	
905	99	328	14:06:48.533	465WL6B	6DMSC	RDY,4 DMS Control Tape stop	400	4	0	5,271,162:35:0	
906	99	328	14:06:48.533	DMS:	: *RUNDOWN P100, TRACK 4, REV, TIC * 255.79 +/-		400	4	0	5,271,162:35:0	
907	99	328	14:06:49.733	DMS:	: *READY RDY, TRACK 4, REV, TIC * 254.99 +/-		400	4	0	5,271,162:36:8	
908	99	328	14:39:53.200	488FT6A	6TMSD	NORM,AL5 Sci, Eng, and D/L Chan	400	4	0	5,271,195:09:0	
909	99	328	15:33:13.200	488FT6B	6TMSD	NORM,AL4 Sci, Eng, and D/L Chan	400	4	0	5,271,247:77:0	
910	99	328	16:05:37.200	465WM6A	6DTRN	GMD,6DTRN,465WM6 DMS TRACK TURNAROUND	400	4	0	5,271,279:81:0	
911	99	328	16:05:37.200	DMS:	: *DMS-TURN P7, TRACK 4, REV, TIC 254.99 +/-		400	4	0	5,271,279:81:0	
912	99	328	16:05:37.200	DMS:	: *US-RUNUP P7, TRACK *1, *FWD, TIC 254.99 +/-		400	4	0	5,271,279:81:0	
913	99	328	16:05:38.600	DMS:	: *US AT SP P7, TRACK 1, FWD, TIC * 255.11 +/-		400	4	0	5,271,279:83:1	
914	99	328	16:05:43.866	DMS:	: *US RD P7, TRACK 1, FWD, TIC * 256.34 +/-		400	4	0	5,271,280:00:0	
915	99	328	16:05:45.066	DMS:	: *RUNUP P7, TRACK *4, *REV, TIC * 256.40 +/-		400	4	0	5,271,280:01:8	
916	99	328	16:05:46.466	DMS:	: *AT SPD P7, TRACK 4, REV, TIC * 256.28 +/-		400	4	0	5,271,280:03:9	
917	99	328	16:09:09.200	488FT6C	6TMSD	NORM,AL4 Sci, Eng, and D/L Chan	400	4	0	5,271,283:35:0	
918	99	328	16:09:47.133	DMS:	: *REVERSE P7, TRACK 4, REV, TIC * 199.87 +/-		400	4	0	5,271,284:00:9	
919	99	328	16:09:48.333	DMS:	: *TURNARND P7, TRACK *1, *FWD, TIC * 199.81 +/-		400	4	0	5,271,284:02:7	
920	99	328	16:09:48.333	DMS:	: *RUNUP P7, TRACK 1, FWD, TIC 199.81 +/-		400	4	0	5,271,284:02:7	
921	99	328	16:09:49.733	DMS:	: *AT SPD P7, TRACK 1, FWD, TIC * 199.93 +/-		400	4	0	5,271,284:04:8	
922	99	328	16:10:01.733	DMS:	: *AUTOSTOP P7, TRACK 1, FWD, TIC * 202.06 +/-		400	4	0	5,271,284:22:8	
923	99	328	16:10:02.933	DMS:	: *READY RDY, TRACK 1, FWD, TIC * 202.12 +/-		400	4	0	5,271,284:24:6	
924	99	328	16:15:39.866	DMS:	: *E4-DELAY RDY, TRACK 1, FWD, TIC 202.12 +/-		400	4	0	5,271,289:75:0	
925	99	328	16:15:39.866	465WN6A	6DMSC	P100,1 DMS Control Tape P/B 100.8kbps	400	4	0	5,271,289:75:0	
926	99	328	16:15:46.533	DMS:	: *RUNUP P100, TRACK 1, FWD, TIC 202.12 +/-		400	4	0	5,271,289:85:0	
927	99	328	16:15:50.400	DMS:	: *P SLEW P100, TRACK 1, FWD, TIC * 207.62 +/-		400	4	0	5,271,289:90:8	
928	99	328	16:15:50.400	DMS:	: *AT SPD P100, TRACK 1, FWD, TIC 207.62 +/-		400	4	0	5,271,289:90:8	
929	99	328	16:47:02.533	488FT6D	6TMSD	FILL,AL4 Sci, Eng, and D/L Chan	400	4	0	5,271,320:78:0	
930	99	328	16:47:33.866	DMS:	: *RUNDOWN P100, TRACK 1, FWD, TIC *6063.01 +/-		400	4	0	5,271,321:34:0	
931	99	328	16:47:33.866	465WN6B	6DMSC	RDY,1 DMS Control Tape stop	400	4	0	5,271,321:34:0	
932	99	328	16:47:35.066	DMS:	: *READY RDY, TRACK 1, FWD, TIC *6063.81 +/-		400	4	0	5,271,321:35:8	
933	99	328	16:52:09.200	488FT6E	6TMSD	FILL,AL5 Sci, Eng, and D/L Chan	400	4	0	5,271,325:83:0	



Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
934	99	328	17:03:09.866		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	400	4	0	5,271,336:73:0	
935	99	328	17:03:09.866	465WO6A	6DMSC	P100.2	DMS Control Tape P/B 100.8kbps	400	4	0	5,271,336:73:0	
936	99	328	17:03:11.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	400	4	0	5,271,336:75:1	
937	99	328	17:03:16.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	400	4	0	5,271,336:83:0	
938	99	328	17:03:17.733		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	400	4	0	5,271,336:84:8	
939	99	328	17:03:21.600		DMS:	: *AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	400	4	0	5,271,336:90:6	
940	99	328	17:03:21.600		DMS:	: *P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	400	4	0	5,271,336:90:6	
941	99	328	17:17:57.866	488FU6A	6TMSED	NORMAH5	Sci, Eng, and D/L Chan	400	4	0	5,271,351:40:0	
942	99	328	17:35:17.866		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC *164.96 +/-	400	4	0	5,271,368:53:0	
943	99	328	17:35:17.866	465WP6A	6DMSC	P100.3	DMS Control Tape P/B 100.8kbps	400	4	0	5,271,368:53:0	
944	99	328	17:35:19.066		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC *164.16 +/-	400	4	0	5,271,368:54:8	
945	99	328	17:35:22.933		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	400	4	0	5,271,368:60:6	
946	99	328	17:35:22.933		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC *169.66 +/-	400	4	0	5,271,368:60:6	
947	99	328	18:07:18.533		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	400	4	0	5,271,400:22:0	
948	99	328	18:07:18.533	465WP6B	6DMSC	RDY.3	DMS Control Tape stop	400	4	0	5,271,400:22:0	
949	99	328	18:07:19.733		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	400	4	0	5,271,400:23:8	
950	99	328	18:22:01.866		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	400	4	0	5,271,414:73:0	
951	99	328	18:22:01.866	465WQ6A	6DMSC	P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	5,271,414:73:0	
952	99	328	18:22:03.266		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	400	4	0	5,271,414:75:1	
953	99	328	18:22:08.533		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	400	4	0	5,271,414:83:0	
954	99	328	18:22:09.733		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	400	4	0	5,271,414:84:8	
955	99	328	18:22:13.600		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	400	4	0	5,271,414:90:6	
956	99	328	18:22:13.600		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	400	4	0	5,271,414:90:6	
957	99	328	18:54:09.133		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC *166.58 +/-	400	4	0	5,271,446:52:0	
958	99	328	18:54:09.133	465WR6A	6DMSC	P100.3	DMS Control Tape P/B 100.8kbps	400	4	0	5,271,446:52:0	
959	99	328	18:54:10.333		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC *165.78 +/-	400	4	0	5,271,446:53:8	
960	99	328	18:54:14.200		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.28 +/-	400	4	0	5,271,446:59:6	
961	99	328	18:54:14.200		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC *171.28 +/-	400	4	0	5,271,446:59:6	
962	99	328	18:55:15.133	465WR6B	6DMSC	RDY.3	DMS Control Tape stop	400	4	0	5,271,447:60:0	
963	99	328	18:55:15.133		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *358.72 +/-	400	4	0	5,271,447:60:0	
964	99	328	18:55:16.333		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *359.52 +/-	400	4	0	5,271,447:61:8	
965	99	328	18:55:59.133	488FU6B	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	5,271,448:35:0	
966	99	328	19:09:45.133		DMS:	: *READY	RDY, TRACK *4, *REV, TIC 359.52 +/-	400	4	0	5,271,462:00:0	
967	99	328	19:09:45.133	465WS6A	6DMSC	RDY.4	DMS Control Tape stop	400	4	0	5,271,462:00:0	
968	99	328	19:10:39.133	465WT6A	6DTRN	CMD.6DTRN.465WT6	DMS TRACK TURNAROUND	400	4	0	5,271,462:81:0	
969	99	328	19:10:39.133		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.52 +/-	400	4	0	5,271,462:81:0	
970	99	328	19:10:39.133		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.52 +/-	400	4	0	5,271,462:81:0	
971	99	328	19:10:40.533		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *359.64 +/-	400	4	0	5,271,462:83:1	
972	99	328	19:10:45.800		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *360.88 +/-	400	4	0	5,271,463:00:0	
973	99	328	19:10:47.000		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC *360.94 +/-	400	4	0	5,271,463:01:8	
974	99	328	19:10:48.400		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC *360.82 +/-	400	4	0	5,271,463:03:9	
975	99	328	19:22:15.066		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC *199.87 +/-	400	4	0	5,271,474:32:9	
976	99	328	19:22:16.266		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC *199.81 +/-	400	4	0	5,271,474:34:7	
977	99	328	19:22:16.266		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	5,271,474:34:7	
978	99	328	19:22:17.666		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *199.93 +/-	400	4	0	5,271,474:36:8	
979	99	328	19:22:29.666		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC *202.06 +/-	400	4	0	5,271,474:54:8	
980	99	328	19:22:30.866		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *202.12 +/-	400	4	0	5,271,474:56:6	
981	99	328	22:54:49.133	488FU6C	6TMSED	NORMAL4	Sci, Eng, and D/L Chan	400	4	0	5,271,684:54:0	
982	99	328	23:59:59.800	481UD4A	7VECT		Inert vect update UTC	400	4	0	5,271,749:05:0	
983	99	329	00:00:57.133	488FV6A	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	5,271,750:00:0	
984	99	329	00:03:51.800	488FV6B	6TMSED	FILL.AL5	Sci, Eng, and D/L Chan	400	4	0	5,271,752:80:0	
985	99	329	00:37:57.800	488FV6C	6TMSED	NORMAL5	Sci, Eng, and D/L Chan	400	4	0	5,271,766:55:0	
986	99	329	03:59:59.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,271,986:38:0	
987	99	329	04:00:00.000	20A3EW	37A	Final Condition	NIMS Power ON	400	4	0	5,271,986:38:3	
988	99	329	04:00:00.000	20A3EX	37HR	Final Condition	Replacement Heaters OFF	400	4	0	5,271,986:38:3	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
989	99	329	04:00:00.000	20A3EY	37C1PR	Final Condition	Optics Heater 1 OFF (primary relay)	400	4	0	5,271,986:38:3	
990	99	329	04:00:00.000	20A3EZ	37C2PR	Final Condition	Optics Heater 2 OFF (primary relay)	400	4	0	5,271,986:38:3	
991	99	329	04:00:00.000	20A3FA	37F1PR	Final Condition	Radiator Flash Heater OFF (primary relay)	400	4	0	5,271,986:38:3	
992	99	329	04:00:00.000	20A3FB	37F2PR	Final Condition	Shield Flash Heater OFF (primary relay)	400	4	0	5,271,986:38:3	
993	99	329	04:00:00.000	20A3FD	40HRPR	Final Condition	RCT Heater OFF (primary relay)	400	4	0	5,271,986:38:3	
994	99	329	04:00:00.000	20A3FE	40T1PR	Final Condition	PCT Heater 1 OFF (primary relay)	400	4	0	5,271,986:38:3	
995	99	329	04:00:00.000	20A3FF	40T2R	Final Condition	PCT Heater 2 OFF	400	4	0	5,271,986:38:3	

# 24INLOKIRA01

```

OAPEL: 24INLOKIRA01      ALIAS: 24INLOKIRA01
EXT: A                    PSID: DA
SCLK1: 05207919:87:0     SCLK2: 05207924:80:0
SCET1: 99-284/04:21:43.400 SCET2: 99-284/04:26:42.733
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INH SPELE01

```

OAPEL: 24INH SPELE01      ALIAS: 24INH SPELE01
EXT: A                    PSID: DB
SCLK1: 05207926:43:0     SCLK2: 05207927:28:0
SCET1: 99-284/04:28:18.733 SCET2: 99-284/04:29:10.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INPILLAN01

```

OAPEL: 24INPILLAN01      ALIAS: 24ISPILLAN01
EXT: B                    PSID: IB
SCLK1: 05207929:49:0     SCLK2: 05207930:04:0
SCET1: 99-284/04:31:25.400 SCET2: 99-284/04:31:56.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000         RATE_CON2: 65525
NWAVETOT: 360            TLMFMT: AI8
  
```

```

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

```

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

## EDIT TABLE

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

# 24INPILLAN01

```

OAPEL: 24INPILLAN01      ALIAS: 24INPILLAN01
EXT: A                    PSID: DC
SCLK1: 05207930:66:0     SCLK2: 05207931:51:0
SCET1: 99-284/04:32:36.733 SCET2: 99-284/04:33:28.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INCOLCHS01

```

OAPEL: 24INCOLCHS01      ALIAS: 24INCOLCHS01
EXT: A                    PSID: DD
SCLK1: 05207933:66:0     SCLK2: 05207934:51:0
SCET1: 99-284/04:35:38.733 SCET2: 99-284/04:36:30.066
TARGET: IO                PARTITION: 1
    
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24 INZAMAMA01

```

OAPEL: 24INZAMAMA01      ALIAS: 24INZAMAMA01
EXT: A                    PSID: DE
SCLK1: 05207937:66:0     SCLK2: 05207938:51:0
SCET1: 99-284/04:39:41.400 SCET2: 99-284/04:40:32.733
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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



# 24INPROMTH01

```

OAPEL: 24INPROMTH01      ALIAS: 24ISPROMTH01
EXT: B                    PSID: IE
SCLK1: 05207940:64:0     SCLK2: 05207941:05:0
SCET1: 99-284/04:42:42.066 SCET2: 99-284/04:43:03.400
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 360           TLMFMT: AI8
  
```

```

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

```

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

## EDIT TABLE

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

# 24INPROMTH01

```

OAPEL: 24INPROMTH01      ALIAS: 24INPROMTH01
EXT: A                    PSID: DF
SCLK1: 05207945:52:0     SCLK2: 05207946:39:0
SCET1: 99-284/04:47:38.066 SCET2: 99-284/04:48:29.400
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INCOLCHS02

```

OAPEL: 24INCOLCHS02      ALIAS: 24INCOLCHS02
EXT: A                    PSID: DG
SCLK1: 05207950:38:0     SCLK2: 05207951:23:0
SCET1: 99-284/04:52:31.400 SCET2: 99-284/04:53:22.733
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INNTOHIL01

```

OAPEL: 24INNTOHIL01      ALIAS: 24INNTOHIL01
EXT: A                    PSID: DH
SCLK1: 05207955:27:0     SCLK2: 05207956:14:0
SCET1: 99-284/04:57:28.066 SCET2: 99-284/04:58:19.400
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

## 24INPROMTH02

```

OAPEL: 24INPROMTH02      ALIAS: 24INPROMTH02
EXT: A                    PSID: DI
SCLK1: 05207963:16:0     SCLK2: 05207970:09:0
SCET1: 99-284/05:05:26.066 SCET2: 99-284/05:12:25.400
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

### EDIT TABLE

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

# 24 INZAMAMA02

```

OAPEL: 24INZAMAMA02      ALIAS: 24ISZAMAMA02
EXT: B                    PSID: IK
SCLK1: 05207971:36:0    SCLK2: 05207971:54:0
SCET1: 99-284/05:13:44.066 SCET2: 99-284/05:13:56.733
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 360           TLMFMT: AI8
  
```

```

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

```

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

## EDIT TABLE

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

# 24 INZAMAMA02

```

OAPEL: 24INZAMAMA02      ALIAS: 24ISZAMAMA02
EXT: C                    PSID: IK
SCLK1: 05207974:43:0    SCLK2: 05207974:62:0
SCET1: 99-284/05:16:50.733 SCET2: 99-284/05:17:03.400
TARGET: IO                PARTITION: 1
  
```

```

MODE: 0                   GAIN: 2
CHOP: 1                   GRAT_OFF: 4
PTAB_A: 1 0 0 0 0 12    PTAB_B: 1 0 0 0 0 12
ECAL: 0                   OPCAL: 0
R/T: 0                    RECORD: 1
  
```

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0           EST_COMPV: 0.3
RATE_CON1: 00000       RATE_CON2: 65525
NWAVETOT: 15           TLMFMT: AI8
  
```

```

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

```

WETGID: 0013015001      00 13 015 001
WTGRP_SIZ: 13
  
```

## EDIT TABLE

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

# 24 INZAMAMA02

```

OAPEL: 24INZAMAMA02      ALIAS: 24INZAMAMA02
EXT: A                    PSID: DJ
SCLK1: 05207975:86:0     SCLK2: 05207978:46:0
SCET1: 99-284/05:18:20.733 SCET2: 99-284/05:20:56.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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



# 24INDORIAN01

```

OAPEL: 24INDORIAN01      ALIAS: 24INDORIAN01
EXT: A                    PSID: DK
SCLK1: 05207981:16:0     SCLK2: 05207982:03:0
SCET1: 99-284/05:23:38.066 SCET2: 99-284/05:24:29.400
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INAMSKGI01

```

OAPEL: 24INAMSKGI01      ALIAS: 24ISAMSKGI01
EXT: B                    PSID: IN
SCLK1: 05207983:29:0     SCLK2: 05207983:47:0
SCET1: 99-284/05:25:47.400 SCET2: 99-284/05:26:00.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 360           TLMFMT: AI8
  
```

```

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

```

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

## EDIT TABLE

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

# 24INAMSKGI01

```

OAPEL: 24INAMSKGI01      ALIAS: 24ISAMSKGI01
EXT: C                    PSID: IN
SCLK1: 05207986:36:0     SCLK2: 05207986:54:0
SCET1: 99-284/05:28:54.066 SCET2: 99-284/05:29:06.733
TARGET: IO                PARTITION: 1
  
```

```

MODE: 0                   GAIN: 2
CHOP: 1                   GRAT_OFF: 4
PTAB_A: 1 0 0 0 0 12     PTAB_B: 1 0 0 0 0 12
ECAL: 0                   OPCAL: 0
R/T: 0                    RECORD: 1
  
```

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 15            TLMFMT: AI8
  
```

```

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

```

WETGID: 0013015001      00 13 015 001
WTGRP_SIZ: 13
  
```

## EDIT TABLE

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

# 24INAMSKGI01

```

OAPEL: 24INAMSKGI01      ALIAS: 24INAMSKGI01
EXT: A                    PSID: DL
SCLK1: 05207987:79:0     SCLK2: 05207990:40:0
SCET1: 99-284/05:30:24.066 SCET2: 99-284/05:32:59.400
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INTERMAP01

```

OAPEL: 24INTERMAP01      ALIAS: 24INTERMAP01
EXT: A                    PSID: DM
SCLK1: 05207993:29:0     SCLK2: 05207994:54:0
SCET1: 99-284/05:35:54.733 SCET2: 99-284/05:37:12.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INREGION01

```

OAPEL: 24INREGION01      ALIAS: 24INREGION01
EXT: A                    PSID: DN
SCLK1: 05208026:87:0     SCLK2: 05208058:53:0
SCET1: 99-284/06:09:54.733 SCET2: 99-284/06:41:54.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INPPLUME01

```

OAPEL: 24INPPLUME01      ALIAS: 24INPPLUME01
EXT: A                    PSID: DO
SCLK1: 05208064:26:0     SCLK2: 05208069:19:0
SCET1: 99-284/06:47:39.400 SCET2: 99-284/06:52:38.733
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24INPELEPM01

```

OAPEL: 24INPELEPM01      ALIAS: 24INPELEPM01
EXT: A                    PSID: DP
SCLK1: 05208141:87:0     SCLK2: 05208146:80:0
SCET1: 99-284/08:06:11.400 SCET2: 99-284/08:11:10.733
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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



# 24INSTEREO01

```

OAPEL: 24INSTEREO01      ALIAS: 24ISSTEREO01
EXT: A                    PSID: IR
SCLK1: 05208212:02:0     SCLK2: 05208213:63:0
SCET1: 99-284/09:17:02.733 SCET2: 99-284/09:18:44.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 360           TLMFMT: IM4
  
```

```

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

```

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

## EDIT TABLE

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

## 24INREGION02

```

OAPEL: 24INREGION02      ALIAS: 24INREGION02
EXT: A                    PSID: DZ
SCLK1: 05208299:87:0     SCLK2: 05208316:17:0
SCET1: 99-284/10:45:56.733 SCET2: 99-284/11:02:22.066
TARGET: IO                PARTITION: 1
  
```

```

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

```

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

```

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

```

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

### EDIT TABLE

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

# 24INGLOCOL01

```

OAPEL: 24INGLOCOL01      ALIAS: 24ISGLOCOL01
EXT: A                    PSID: IS
SCLK1: 05208734:28:0     SCLK2: 05208735:12:0
SCET1: 99-284/18:05:08.066 SCET2: 99-284/18:05:57.400
TARGET: IO                PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 360           TLMFMT: IM4
  
```

```

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

```

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

## EDIT TABLE

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

# 24NNPCTRLT01

```

OAPEL: 24NNPCTRLT01      ALIAS: LSNNPCTRLT01
EXT: R                    PSID: FB
SCLK1: 05224246:00:0     SCLK2: 05224247:12:0
SCET1: 1999-295/15:29:09.466 SCET2: 1999-295/15:30:18.133
TARGET: CAL              PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24NNPCTRLT01

```

OAPEL: 24NNPCTRLT01      ALIAS: LSNNPCTRLT01
EXT: S                    PSID: FB
SCLK1: 05224252:00:0     SCLK2: 05224261:12:0
SCET1: 1999-295/15:34:73.466 SCET2: 1999-295/15:44:27.466
TARGET: CAL              PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24NNOPCAL\_02

```

OAPEL: 24NNOPCAL_02      ALIAS: 24NNOPCAL_02
EXT: R                    PSID: XA
SCLK1: 05226464:00:0     SCLK2: 05226468:12:0
SCET1: 1999-297/04:51:48.066 SCET2: 1999-297/04:55:58.733
TARGET: CAL              PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24NNOPCAL\_03

```

OAPEL: 24NNOPCAL_03      ALIAS: 24NNOPCAL_03
EXT: R                    PSID: XB
SCLK1: 05238071:00:0     SCLK2: 05238074:12:0
SCET1: 1999-305/08:27:45.666  SCET2: 1999-305/08:30:55.666
TARGET: CAL              PARTITION: 1
  
```

```

MODE: 8                  GAIN: 4
CHOP: 1                 GRAT_OFF: 4
PTAB_A: 1 1 011 0 1    PTAB_B: 1 1 023 0 1
ECAL: 1                 OPCAL: 1
R/T: 1                  RECORD: 0
  
```

```

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

```

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

```

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

## EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	1FFFF	1,1111,1111,1111,1111
1	1FFFF	1,1111,1111,1111,1111
2	1FFFF	1,1111,1111,1111,1111
3	1FFFF	1,1111,1111,1111,1111

# 24NNRCTRLT01

```

OAPEL: 24NNRCTRLT01          ALIAS: LSNNRCTRTA01
EXT: R                        PSID: XU
SCLK1: 05249353:00:0        SCLK2: 05249353:12:0
SCET1: 1999-313/06:35:06.600 SCET2: 1999-313/06:35:14.600
TARGET: CAL                   PARTITION: 1
  
```

```

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

```

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

```

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



# 24NNRCTRLT01

```

OAPEL: 24NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: S                    PSID: XU
SCLK1: 05249359:00:0     SCLK2: 05249360:12:0
SCET1: 1999-313/06:41:10.600 SCET2: 1999-313/06:42:19.266
TARGET: CAL              PARTITION: 1
  
```

```

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

```

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

```

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

```

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

## EDIT TABLE

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

# 24NNRCTRLT01

```

OAPEL: 24NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: T                    PSID: XU
SCLK1: 05249365:00:0     SCLK2: 05249365:12:0
SCET1: 1999-313/06:47:14.600 SCET2: 1999-313/06:47:22.600
TARGET: CAL              PARTITION: 1
  
```

```

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

```

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

```

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

# 24NNOPCAL\_01

```

OAPEL: 24NNOPCAL_01      ALIAS: LSNNOPCAL_01
EXT: R                    PSID: DC
SCLK1: 05249369:00:0     SCLK2: 05249371:12:0
SCET1: 1999-313/06:50:77.266  SCET2: 1999-313/06:53:26.600
TARGET: CAL              PARTITION: 1
  
```

```

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

```

MB_DOWN: 11011          MB_UP: 11011
COMP_FLAG: 0
EST_COMP: 0.0           EST_COMPV: 0.0
RATE_CON1: 00000       RATE_CON2: 00000
NWAVETOT: 048          TLMFMT: RT
  
```

```

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

```

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

## EDIT TABLE

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

NIMS I24 OBSTAB

This is a time-ordered ASCII TABLE (listing) of GALILEO NIMS observation parameters for use by downlink data processing of the NIMS I24 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=freeerun
GRAT_OFF  1 76 - 76      .Grating Offset (0-7, default 4)   SEF: 37GOF, data byte 2, bits 5-8
PTAB_A(6) 12 77 - 88      |repeat count,mirror op,autobias...SEF: functions of MODE (from 37IOP) as modified by
PTAB_B(6) 12 89 - 100  |...grating start, grating delta... 37MPT, unless special sequence (modes 12-15)
.         |...number of grating positions) in which case values come from 37SS
                                         parameters <tbd>
ECAL      1 101 - 101     .Electronics Calibration Active (1=yes) SEF: 37IST, data byte 3, bit 4 (1=on)
OPCAL     1 102 - 102     .Optics Calibration active (1=yes)   SEF: 37IST, data byte 3, bit 5 (1=on)
# REAL_TIME 1 103 - 103     .NIMS in Real-Time Telemetry (1=yes) SEF: track RT_INST_SEL .and. 37RT
# RECORD   1 104 - 104     .NIMS in Record Telemetry (1=yes)   SEF: track DMS status event:
                                         RECORD, REVERSE, RESUME, RUNDOWN <tbd>

* THRESHSEL 1 105 - 105     .Threshold value select (>0 = yes)   PBK: THRESHLD_TBL > 0 (i.e. 1-3)
<spare>    1 106 - 106     .
# RTISELDN 5 107 - 111     .RTI select, 5 binary bits (for mirror SEF: 37MB data byte 1, bits 4-8 <tbd>
                                         position blocking, down scan)
# RTISELUP 5 112 - 116     .RTI select, 5 binary bits (for mirror SEF: 37MB data byte 2, bits 4-8 <tbd>
                                         position blocking, up scan)
<spare>    1 117 - 117     .
* RICEFLAG 1 118 - 118     .Rice compression flag              PBK: 0 no compression
                                         1 Rice compression, ref vals each mirror scan
                                         3 Rice compression, ref vals each RIM rollover

<spare>    1 119 - 119     .
ESTCOMP    3 120 - 122     .Rice estimated compression ratio (m.n) PBK: CMPR_DVSR <tbd>
ESTCOMPV   3 123 - 125     .Rice estimated error in compression ratio (m.n)PBK: CMPR_UNC <tbd>
# RATECON1 5 126 - 130     .Rate control lower limit           PBK: | S/W table entry indexed by LOSSY_COMP (1-7)
# RATECON2 5 131 - 135     .Rate control upper limit           PBK: | or 0 if LOSSY_COMP = 0 (no rate control)
                                         |
<spare>    17 136 - 152     .
NWAVERTOT 3 153 - 155     .Total number of wavelengths selected Compute from relevant Wavelength Edit Table group
TLMFMT     3 156 - 158     .Telemetry format (MPW et al, LPU or LNR) SEF: 6TMREC command
SCET1      21 159 - 179     .Start time of played-back OBS in UTC PBK (except realtime data: SEF)
SCET2      21 180 - 200     .Stop time of played-back OBS in UTC  PBK (except realtime data: SEF)
<spares>   67 201 - 267     .Start time of played-back OBS in UTC  PBK (except realtime data: SEF)
* THRESH   51 268 - 318     .Threshold values (17 3-digit values, 0-999) PBK: S/W table indexed by THRESH_TBL > 0, else 0s
-----

```

```

-----
# WETGID      10 319 - 328      .Wavelength selection group ID (unique)      PBK: WET_GID      (realtime <tbd>)
Rule of formation: mmeelll1nnn where
mm = instrument mode (0-15)
ee = # entries in group
lll = number of wavelengths selected
nnn = sequence number

* WETGRPSIZ      2 329 - 330      .# Wavelength Edit entries (1-26)      PBK: ED_GRP_LEN      (realtime SEF: 37ETB <tbd>)
* WETGRP      182 331 - 512      .Wavelength Edit Table group: WETGRPSIZ      PBK: ED_GRP      (realtime SEF: 37ETB data bytes 2..)
entries, each one has 7 characters. The
first 2 characters are the repeat count
(01-26). The other 5 characters contain
5 hex digits, representing the detector
mask in the form BHHH where B is 0 or 1
and H has range 0-15. (These entries are
from the 37ETB instrument edit group for
realtime data and from the logical AND of
corresponding entries in the instrument
and playback edit groups for playback data.)

```

-----  
.The TARGET names used are:

```

CAL      - N - non-science targets, usually calibration targets
EARTH    - W - Earth
MOON     - L - Moon
SKY      - H - Stellar Space (space and stars)
VENUS    - V - Venus
GASPRA   - P - Gaspra
IDA      - U - Ida
JUPITER  - J - Jupiter
IO       - I - Io
EUROPA   - E - Europa
GANYMEDE - G - Ganymede
CALLISTO - C - Callisto
J_RING   - R - Jupiter rings
(the single letter abbreviation appears as the third character in the OAPEL name ).
-----

```

-----  
24INLOKIRA0124INLOKIRA01ADA05207919:87:005207924:80:01 IO 3414 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 1 360MPW 99-284/04:21:43.400 99-284/04:26:42.733  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INHSPELE0124INHSPELE01ADB05207926:43:005207927:28:01 IO 3414 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 1 360MPW 99-284/04:28:18.733 99-284/04:29:10.066  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INPILLAN0124INPILLAN01BIB05207929:49:005207930:04:01 IO 3414 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 3 360AI8 99-284/04:31:25.400 99-284/04:31:56.066  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INPILLAN0124INPILLAN01ADC05207930:66:005207931:51:01 IO 3414 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 1 360MPW 99-284/04:32:36.733 99-284/04:33:28.066  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INCOLCHS0124INCOLCHS01ADD05207933:66:005207934:51:01 IO 3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 1 360MPW 99-284/04:35:38.733 99-284/04:36:30.066  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INZAMAMA0124INZAMAMA01ADE05207937:66:005207938:51:01 IO 3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 1 360MPW 99-284/04:39:41.400 99-284/04:40:32.733  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INPROMTH0124INPROMTH01BIE05207940:64:005207941:05:01 IO 3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 3 360AI8 99-284/04:42:42.066 99-284/04:43:03.400  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INPROMTH0124INPROMTH01ADF05207945:52:005207946:39:01 IO 3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 1 360MPW 99-284/04:47:38.066 99-284/04:48:29.400  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INCOLCHS0224INCOLCHS02ADG05207950:38:005207951:23:01 IO 3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 1 360MPW 99-284/04:52:31.400 99-284/04:53:22.733  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
24INNTOHIL0124INNTOHIL01ADH05207955:27:005207956:14:01 IO 3214 1 1 0 0 124 1 1 0 0 12400010 0000000000 1 2.00.3000  
0065525 1 360MPW 99-284/04:57:28.066 99-284/04:58:19.400  
FF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDDFF011BDD  
-----







```
-----
24NNRCTRLT01LSNNRCTRTA01SXU05249359:00:005249360:12:01      CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                252RT 1999-313/06:41:10.6001999-313/06:42:19.266
00000000000000000000000000000000000000000000000000000000 312003FF12007FF02000000

24NNRCTRLT01LSNNRCTRTA01TXU05249365:00:005249365:12:01      CAL      3114 1 1 0 0 124 1 1 0 0 12400100 1101111011 0 0.00.0000
0000000                252RT 1999-313/06:47:14.6001999-313/06:47:22.600
0000000000000000000000000000000000000000000000000000000 312003FF12007FF02000000

24NNOPCAL_01LSNNOPCAL_01RDC05249369:00:005249371:12:01      CAL      3414 1 1 0 0 124 1 1 0 0 12401100 1101111011 0 0.00.0000
0000000                048RT 1999-313/06:50:77.2661999-313/06:53:26.600
0000000000000000000000000000000000000000000000000000000 22418000002000000

-----
```

## Chapter 5 - Detailed Observation Designs

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## Introduction to Chapter 5

### Detailed Observation Designs

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

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

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

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

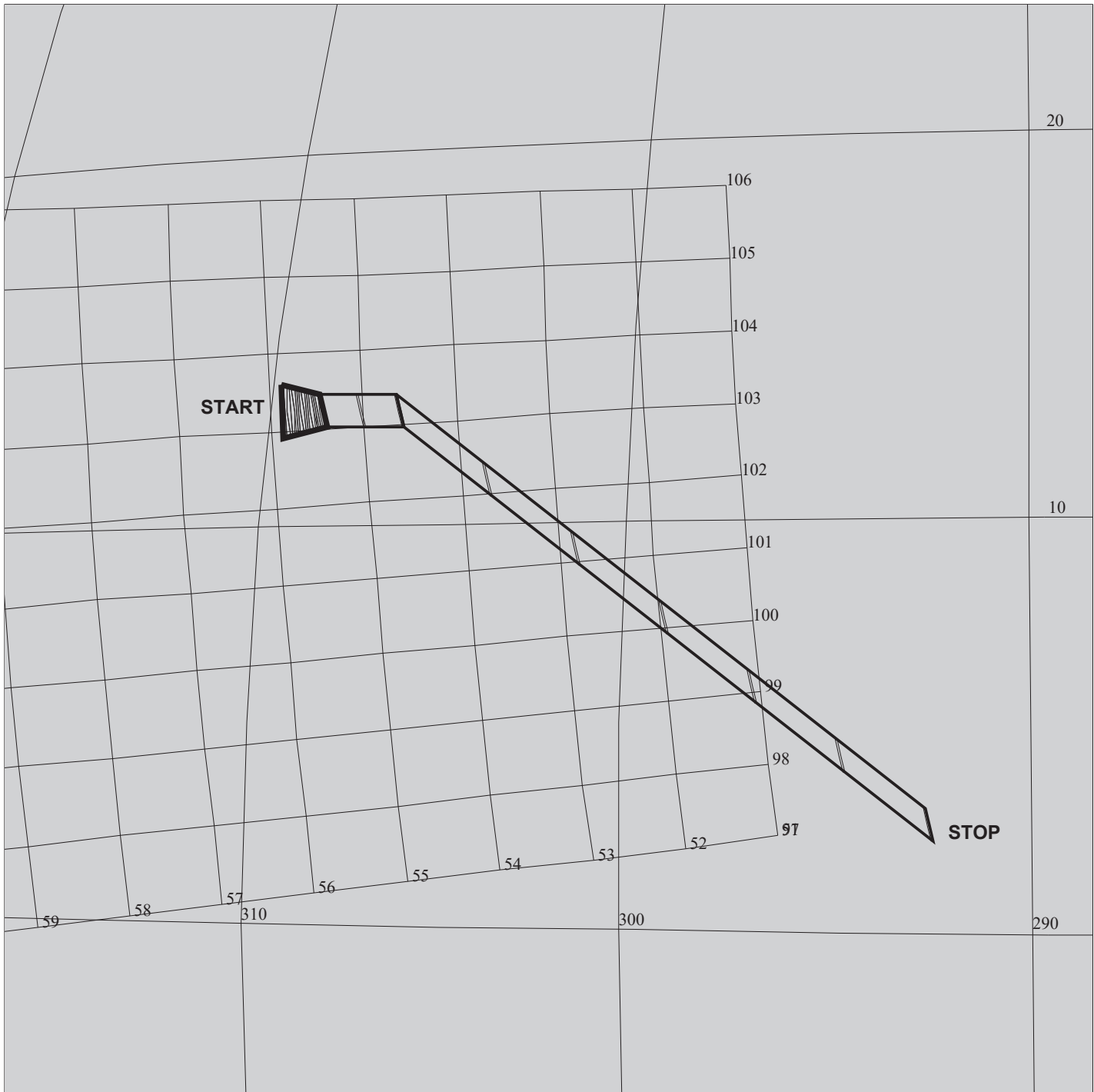
```
"Data Returned"      == Data from this observation returned
"No Data Returned"   == NO Data from this observation returned
"Processor Halted"   == The NIMS Processor had halted at this time.
```

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

Grating Step Test #1		ACTIVITY ID: 24NNDETECT01-	
		START TIME: 99-284/00:30:17.400	
Activity ID: Orbit 24 Target N Inst N OAPEL DETECT SeqNo 01 -			
Title	Grating Step Test #1	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE-CDS 00000240:00:0	99-284/00:30:17.400	IEE-000/04:02:40.000
End	IEE-CDS 00000220:00:0	99-284/00:50:30.734	IEE-000/03:42:26.666
Duration	00000020:00:0	000/00:20:13.334	000/00:20:13.334
Top Label	24NNDETECT01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	0	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Store NIMS Housekeeping Bytes in CDS memory to measure the NIMS Grating Cycle in engineering units.			
This will help in the NIMS grating calibration.			
No Data Returned			
Design Detail			
Use 6MCOPY command to copy NIMS Housekeeping values from NIMS RAM to CDS RAM.			
This process collects data equivalent to two full long map grating cycles. The data are collected over a 13 RIM period.			
The NIMS Houskeeping will be returned via CDS MRO sometime after the I24 encounter period.			
This first of three tests captures NIMS Housekeeping about 1 to 2 hours before J24 Perijove.			
This calibration did not take place due to spacecraft safing			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99

Grating Step Test #2		ACTIVITY ID: 24NNDETECT02-	
		START TIME: 99-284/03:42:24.067	
Activity ID: Orbit 24 Target N Inst N OAPEL DETECT SeqNo 02 -			
Title	Grating Step Test #2	Instrument	
Requestor	NIMS-SWG/M. Segura	Team NIMS	Working Group NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE-CDS 00000050:00:0	99-284/03:42:24.067	IEE-000/00:50:33.333
End	IEE-CDS 00000030:00:0	99-284/04:02:37.400	IEE-000/00:30:20.000
Duration	00000020:00:0	000/00:20:13.333	000/00:20:13.333
Top Label	24NNDETECT02-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	0	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Store NIMS Housekeeping Bytes in CDS memory to measure the NIMS Grating Cycle in engineering units.			
This will help in the NIMS grating calibration.			
Data Returned			
Design Detail			
Use 6MCOPY command to copy NIMS Housekeeping values from NIMS RAM to CDS RAM.			
This process collects data equivalent to two full long map grating cycles. The data are collected over a 13 RIM period.			
The NIMS Houskeeping will be returned via CDS MRO sometime after the I24 encounter period.			
This second of three tests captures NIMS Housekeeping about 1 hour before I24 and 1.5 hours after J24 Perijove.			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99

NIMS Software Reload		ACTIVITY ID: 24NNLOKIRA01-	
		START TIME: 99-181/06:42:33.200	
Activity ID: Orbit 24 Target N Inst N OAPEL LOKIRA SeqNo 01 -			
Title	NIMS Software Reload	Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team NIMS Working Group	AWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE-CDS 00000016:00:0	99-284/04:16:46.734	IEE-000/00:16:10.666
End	IEE-CDS 00000014:00:0	99-284/04:18:48.067	IEE-000/00:14:09.333
Duration	00000002:00:0	000/00:02:01.333	000/00:02:01.333
Top Label	24NNLOKIRA01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	0	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
NIMS reload			
Each NIMS GEM observation will have an instrument reload before the start of each observation. Each reload has its own OAPEL form, but only this first form is included in the NIMSGUIDE.			
The NIMS I24 reload OAPELS are:			
24NNLOKIRA01, 24NNPILLAN01, 24NNZAMAMA01, 24NNPROMTH01,			
24NNCOLCHS02, 24NNTOHIL01, 24NNPROMTH02, 24NNZAMAMA02,			
24NNNDORIAN01, 24NNAMSKGI01, 24NNTERMAP01, 24NNREGION01,			
24NNPPLUME01, 24NNPELEPM01, 24NNREGION02, 24NNRELOAD01			
24INHSPLE01, 24INCOLCHS01, 24NNPCTRLT01 and 24NNRCTRL01 did not have reloads.			
Design Detail			
Use a standard set of commands to halt the instrument, load the software and reinitialize the instrument.			
37PL - Halt NIMS Processor			
37MRL - Memory Reallocate			
6MCPY - Copy flight software from CDS to NIMS 1000			
6MCPY - Copy flight software from CDS to NIMS 1598			
37IRT - Instrument Reset			
37MN - Memory Normal			
37IST - Chopper Reference.			
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**24INLOKIRA01**

165DA:TT= 0 TMC=1 C= 4.00 XC= 0.00 BS= 0/0318 TC= 1(13 309 )  
 A= 182 pD= 800 SR=17.450 RA50=265.40 DEC50=-22.15 cone= 55.87 clock=103.25  
 117DA:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0318  
 1:#s= 1 Cs= -7.90 XCs= 0.00 Cr= 0.00 XCr= -0.60 sD= 808 rD= 20

TARGET G3.1 lisac: 9/24/1999 10:48:44

FILE:P.24INLOKIRA01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 -CDS 11:00:0

OBSERVATION:24INLOKIRA01

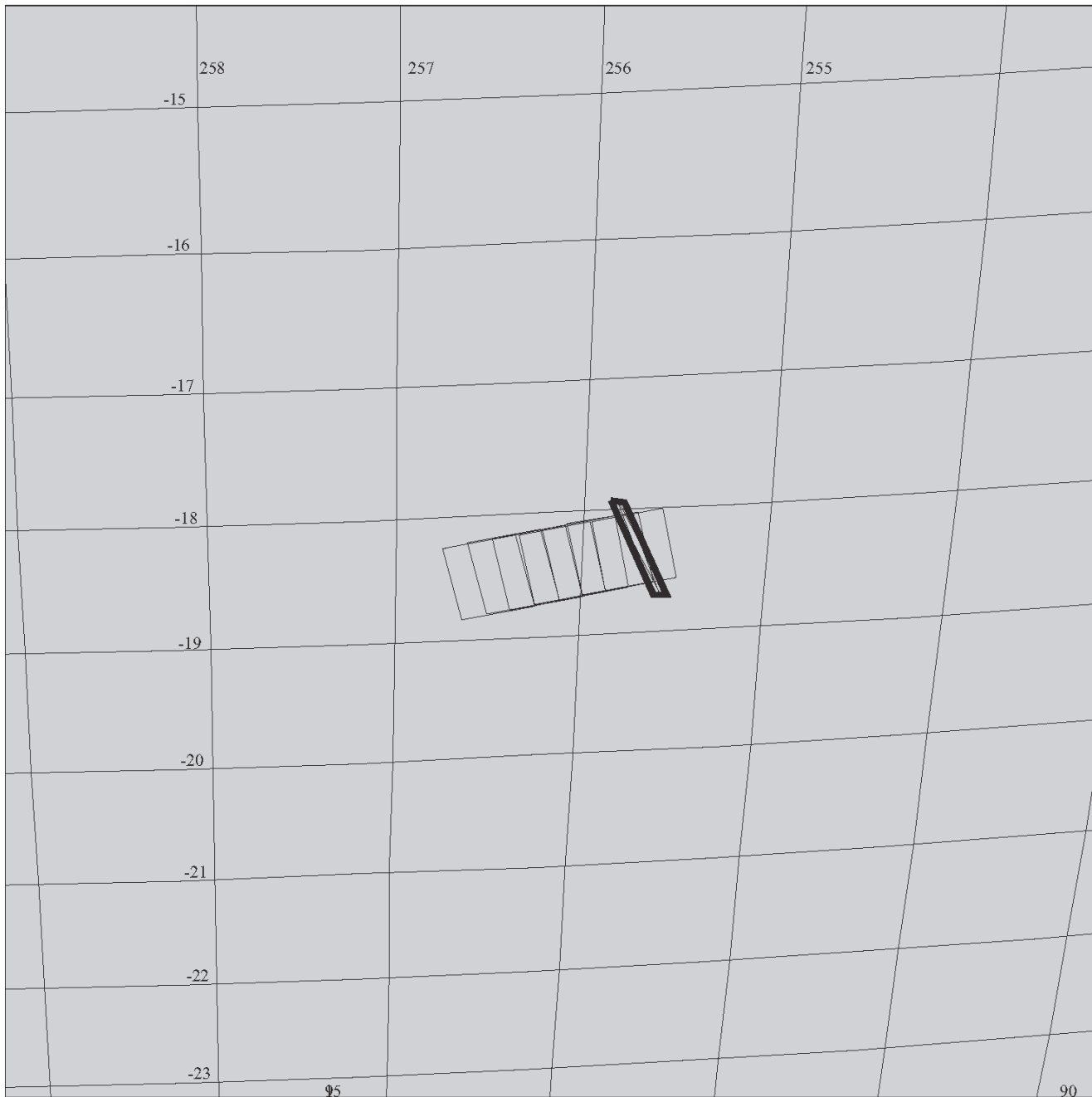
THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 800 S= 3.000

DESCRIP:I24\_LOKI\_HOT\_SPOT\_01



Io Loki Obs		ACTIVITY ID: 24INLOKIRA01-	
		START TIME: 99-284/04:20:49.400	
Activity ID: Orbit 24 Target I Inst N OAPEL LOKIRA SeqNo 01 -			
Title	Io Loki Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE-CDS 00000012:00:0	99-284/04:20:49.400	IEE-000/00:12:08.000
End	IEE-CDS 00000005:00:0	99-284/04:27:54.067	IEE-000/00:05:03.333
Duration	00000007:00:0	000/00:07:04.667	000/00:07:04.667
Top Label	24INLOKIRA01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
			Scan Platform
			No
			No
Observation Objective			
Nightside observation of Loki to search for thermal emission from the caldera.			
Data Returned			
Design Detail			
BTG=2.16 MB, TICS=266 FMT=MPW			
Mosaic part of Loki's caldera.			
Gain state 4			
The mosaic covered the 'island' in the center of Loki's caldera. NIMS data were recorded past the end of the CSMOS. At that time TMC was turned off and soon afterwards the scan platform started its reposition slew to target the next observation.			
After TMC was turned off but before the target reposition, the NIMS FOV drifted eastward across the dark caldera. The reposition took NIMS at a fast rate across the surrounding terrain.			
Grating Stuck			
Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



165A:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS=43/1410 TC= 1(-18.3 255.7 )  
 A= 364 pD= 294 SR= 6.000 RA50=268.99 DEC50=-49.81 cone= 64.36 clock= 72.56  
 116A:OR= 8.750 Cs= 17.50 XCs= 0.00 sD= 16 BS=30/1592 TF=N  
 117A:#SB= 1 OR= 1.160 RR=12.000 BM=F RC= 1 BS=47/1592  
 1:#s= 1 Cs= -35.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 104 rD= 2

**24INH SPELE01**

DESIGN G3.2 lisac: 9/17/1999 12:14:24

FILE:P.24ISPELE\_01

TARGET BODY : IO

MINI:m.24ISPELE\_01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 -CDS 05:00:0

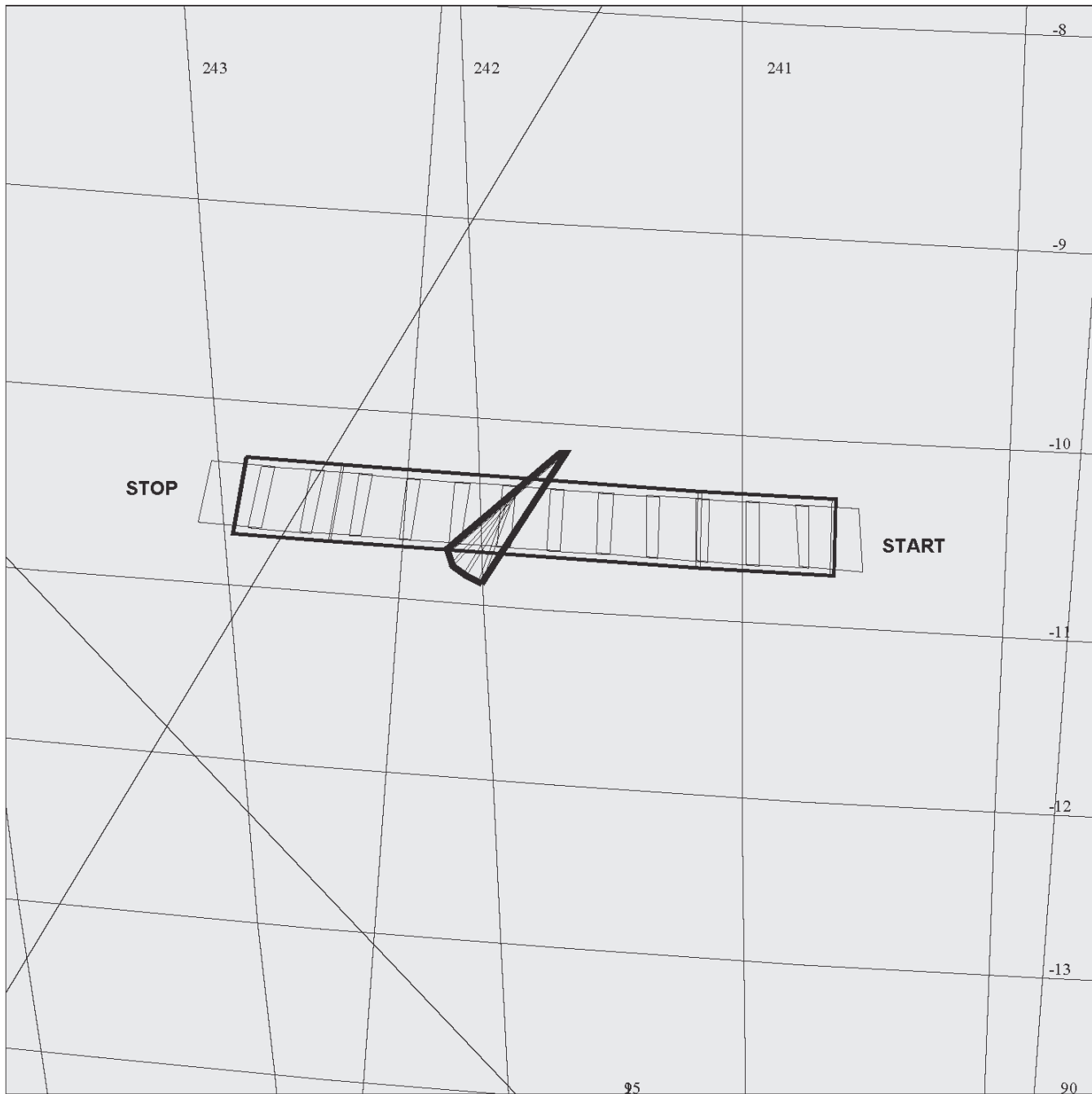
OBSERVATION:24ISPELE\_01

THINNING:NIM 2

BODY PLOT TIME:99-284/04:29:38.000 D= 294 S= 10.000

DESCRIP:PELE IN DARKNESS

Io Pele Obs		ACTIVITY ID: 24INHSPLE01-	
		START TIME: 99-284/04:27:54.067	
Activity ID: Orbit 24 Target I Inst N OAPEL HSPELE SeqNo 01 -			
Title	Io Pele Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE-CDS 00000005:00:0	99-284/04:27:54.067	IEE-000/00:05:03.333
End	IEE-CDS 00000003:61:0	99-284/04:29:14.734	IEE-000/00:03:42.666
Duration	00000001:30:0	000/00:01:20.667	000/00:01:20.667
Top Label	24INHSPLE01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
			Scan Platform
			No
			No
Observation Objective			
Nightside observation of Pele to search for thermal emission from the caldera.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative nightside observation with SSI obs 24ISPELE__01.			
Gain state 4.			
Point and Stare observation to build up NIMS spectra.			
Ride-along behind SSI not returned due to NIMS Reload activity.			
Grating Stuck			
Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



165IB:TT= 0 TMC= 1 C= -40.00 XC= 0.00 BS=4711956 TC= 1(-10.5 241.8 )  
 A= 232 pD= 306 SR=17.450 RA50=318.94 DEC50=-53.17 cone= 94.76 clock= 68.56  
 1171B:#SB= 1 OR= 2.740 RR=12.000 BM=F RC= 1 BS=4711956  
 1:#s= 1 Cs= 78.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 106 rD= 2  
 116DC:OR=17.000 Cs= -35.00 XCs= -4.00 sD= 40 BS=1112138 TF=N

**24INPILLAN01**

**DESIGN G3.2 lisac: 9/17/1999 12:14:53**

**FILE:P.24ISPILLAN01**

**TARGET BODY : IO**

**MINI:m.24ISPILLAN01**

**S/C EPH:/DATA/NAVIO/990607-tour.NS**

**PERIAPSIS:**

**START:IEE 99-284/04:32:57.400 -CDS 02:00:0**

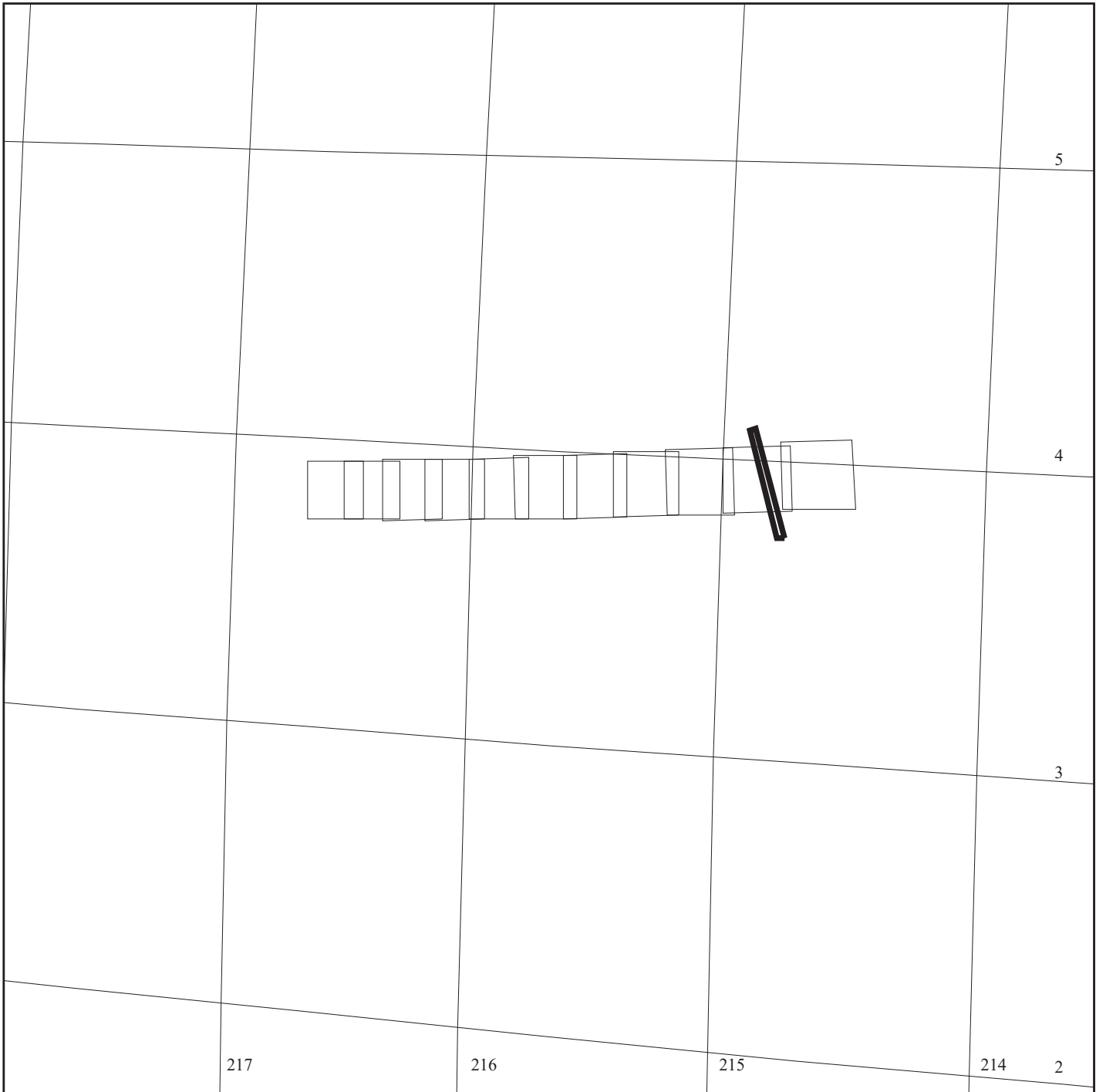
**OBSERVATION:24ISPILLAN01**

**THINNING:NIM 2**

**BODY PLOT TIME:99-284/04:31:38.000 D= 306 S= 10.000**

**DESCRIP:PILLAN PATERA**

Io Pillan Obs		ACTIVITY ID: 24INPILLAN01-	
		START TIME: 99-284/04:31:11.400	
Activity ID: Orbit 24 Target I Inst N OAPEL PILLAN SeqNo 01 -			
Title	Io Pillan Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE-CDS 00000001:68:0	99-284/04:31:11.400	IEE-000/00:01:46.000
End	IEE+CDS 00000000:28:0	99-284/04:33:16.066	IEE+000/00:00:18.666
Duration	00000002:05:0	000/00:02:04.666	000/00:02:04.666
Top Label	24INPILLAN01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
			Scan Platform
			No
			No
Observation Objective			
Dayside observation of Pillan caldera to search for thermal emission from the caldera.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative nightside observation with SSI obs 24ISPILLAN01.			
Gain state 4.			
Point and Stare observation to build up NIMS spectra.			
Ride-along behind SSI also returned for context.			
Grating Stuck			
Fixed Long Map (XLM), Gain 4, Grating Start 0, AI8, ILM442, ILM360			
Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ILM442, ILM360			
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165IC:TT= 0 TMC= 1 C= 33.00 XC= -1.50 BS=54/2502 TC= 1(+3.9 215.7 )  
 A= 232 pD= 238 SR=17.450 RA50= 2.98 DEC50= -3.43 cone=151.54 clock=100.01  
 117IC:#SB= 1 OR= 2.670 RR=12.000 BM=F RC= 1 BS=54/2502  
 1:#s= 1 Cs= -64.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 94 rD= 2  
 116DD:OR=14.300 Cs= 18.00 XCs= -29.00 sD= 44 BS=12/2684 TF=N

**24INCOLCHS01**

DESIGN G3.2 lisac: 9/17/1999 12:13:10

FILE:P.24ISCOLCHS01

TARGET BODY : IO

MINI:m.24ISCOLCHS01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 01:00:0

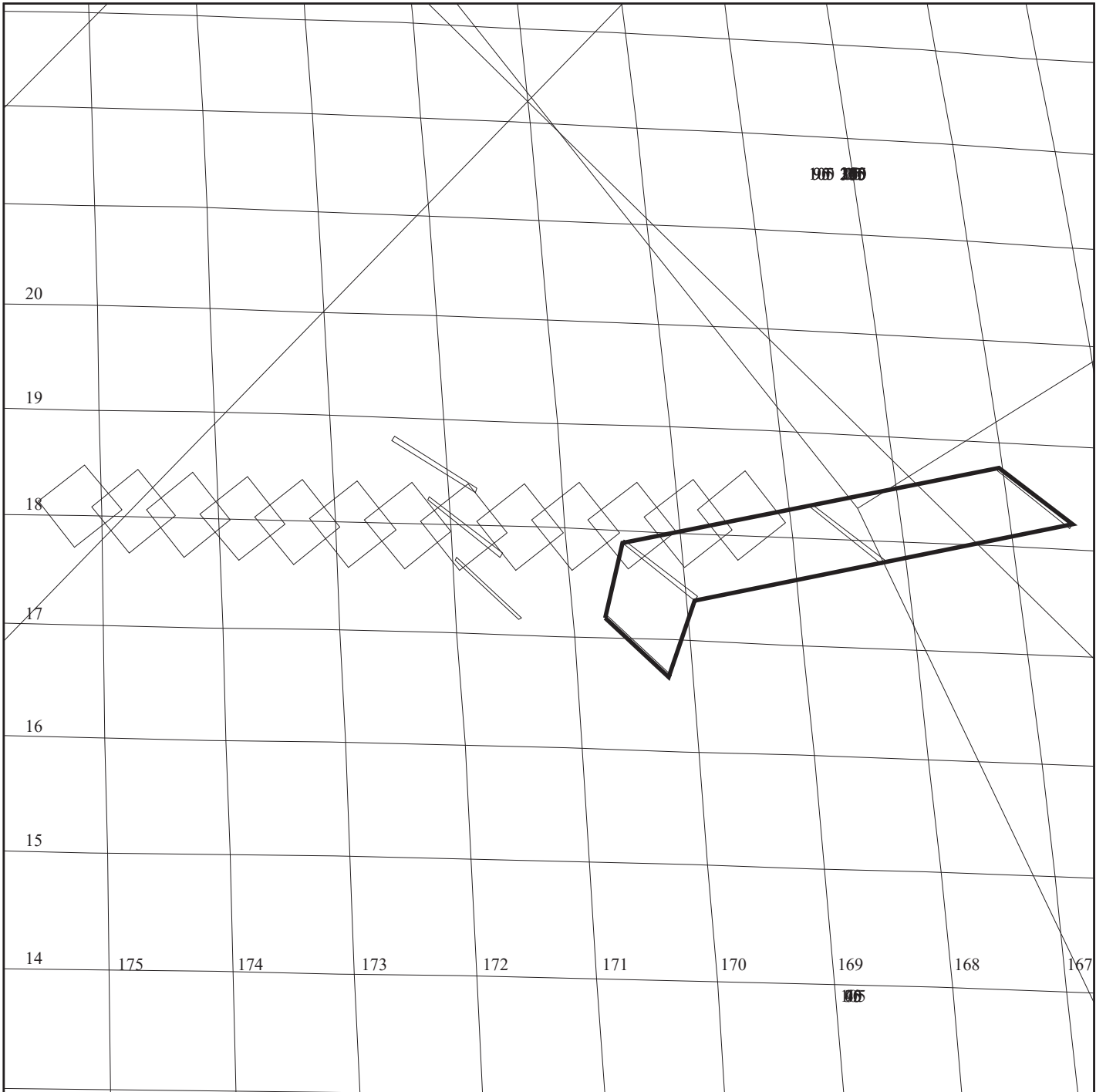
OBSERVATION:24ISCOLCHS01

THINNING:NIM 2

BODY PLOT TIME:99-284/04:34:44.000 D= 238 S= 10.000

DESCRIP:COLCHIS MONTES

Io Colchis Obs		ACTIVITY ID: 24INCOLCHS01-	
		START TIME: 99-284/04:35:05.400	
Activity ID: Orbit 24 Target I Inst N OAPEL COLCHS SeqNo 01 -			
Title	Io Colchis Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000002:10:0	99-284/04:35:05.400	IEE+000/00:02:08.000
End	IEE+CDS 00000003:26:0	99-284/04:36:16.733	IEE+000/00:03:19.333
Duration	00000001:16:0	000/00:01:11.333	000/00:01:11.333
Top Label	24INCOLCHS01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of Colchis region to investigate surface composition.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISCOLCHS01.			
Gain state 2.			
Point and Stare observation to build up NIMS spectra.			
Ride-along behind SSI not returned.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
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165ID:TT= 0 TMC= 1 C= 35.00 XC= 29.00 BS=47/3230 TC= 1(+18.1 172.5 )  
 A= 404 pD= 302 SR=17.450 RA50= 4.31 DEC50= 15.72 cone=155.08 clock=142.90  
 117ID:#SB= 1 OR= 5.570 RR=12.000 BM=F RC= 1 BS=47/3230  
 1:#s= 1 Cs= -61.00 XCs= -75.00 Cr= 0.00 XCr= 0.00 sD= 108 rD= 2  
 116DE:OR=15.000 Cs= 37.00 XCs= 7.50 sD= 34 BS=12/3412 TF=N

**24INZAMAMA01**

DESIGN G3.2 lisac: 9/17/1999 12:23:43

FILE:P.24ISZAMAMA01

TARGET BODY : IO

MINI:m.24ISZAMAMA01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 05:00:0

OBSERVATION:24ISZAMAMA01

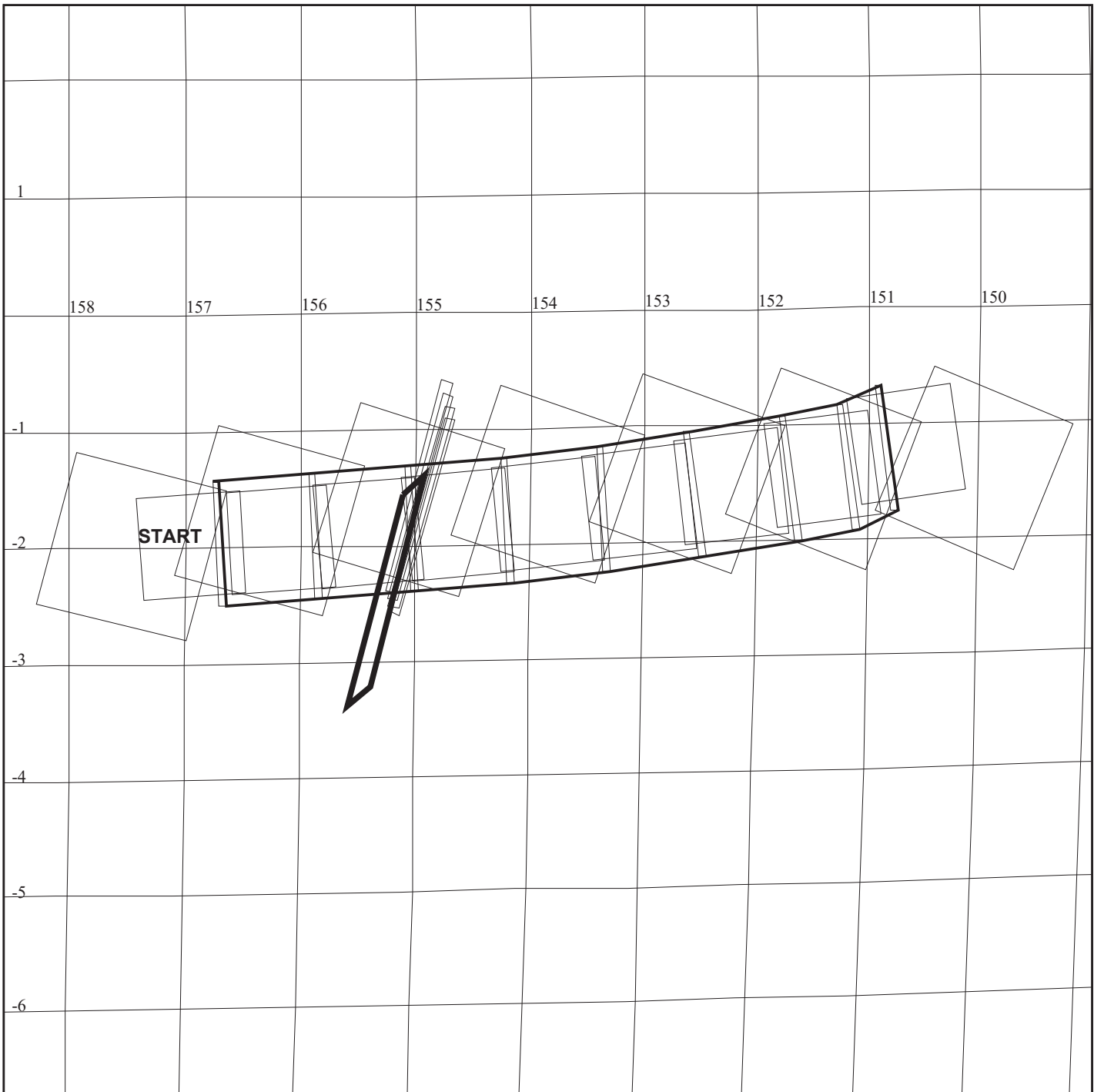
THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 302 S= 9.000

DESCRIP:ZAMAMA



Io ZAMAMA OBS		ACTIVITY ID: 24INZAMAMA01-	
		START TIME: 99-284/04:39:08.066	
Activity ID: Orbit 24 Target I Inst N OAPEL ZAMAMA SeqNo 01 -			
Title	Io Zamama Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000006:10:0	99-284/04:39:08.066	IEE+000/00:06:10.666
End	IEE+CDS 00000008:05:0	99-284/04:41:06.066	IEE+000/00:08:08.666
Duration	00000001:86:0	000/00:01:58.000	000/00:01:58.000
Top Label	24INZAMAMA01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of Zamama hot spot to investigate surface composition.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISZAMAMA01.			
Gain state 2.			
Point and Stare observation to build up NIMS spectra in the center of the SSI mosaic.			
Ride-along behind SSI not returned.			
The scan platform did not reposition to the planned lat/lon after the SSI observation.			
Also, the scan platform drifted away from the target area during the observation.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



## 24INPROMTH01

DESIGN G3.2 lisac: 9/17/1999 12:21:19

FILE:P.24ISPROMTH01

TARGET BODY : IO

MINI:m.24ISPROMTH01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 09:00:0

OBSERVATION:24ISPROMTH01

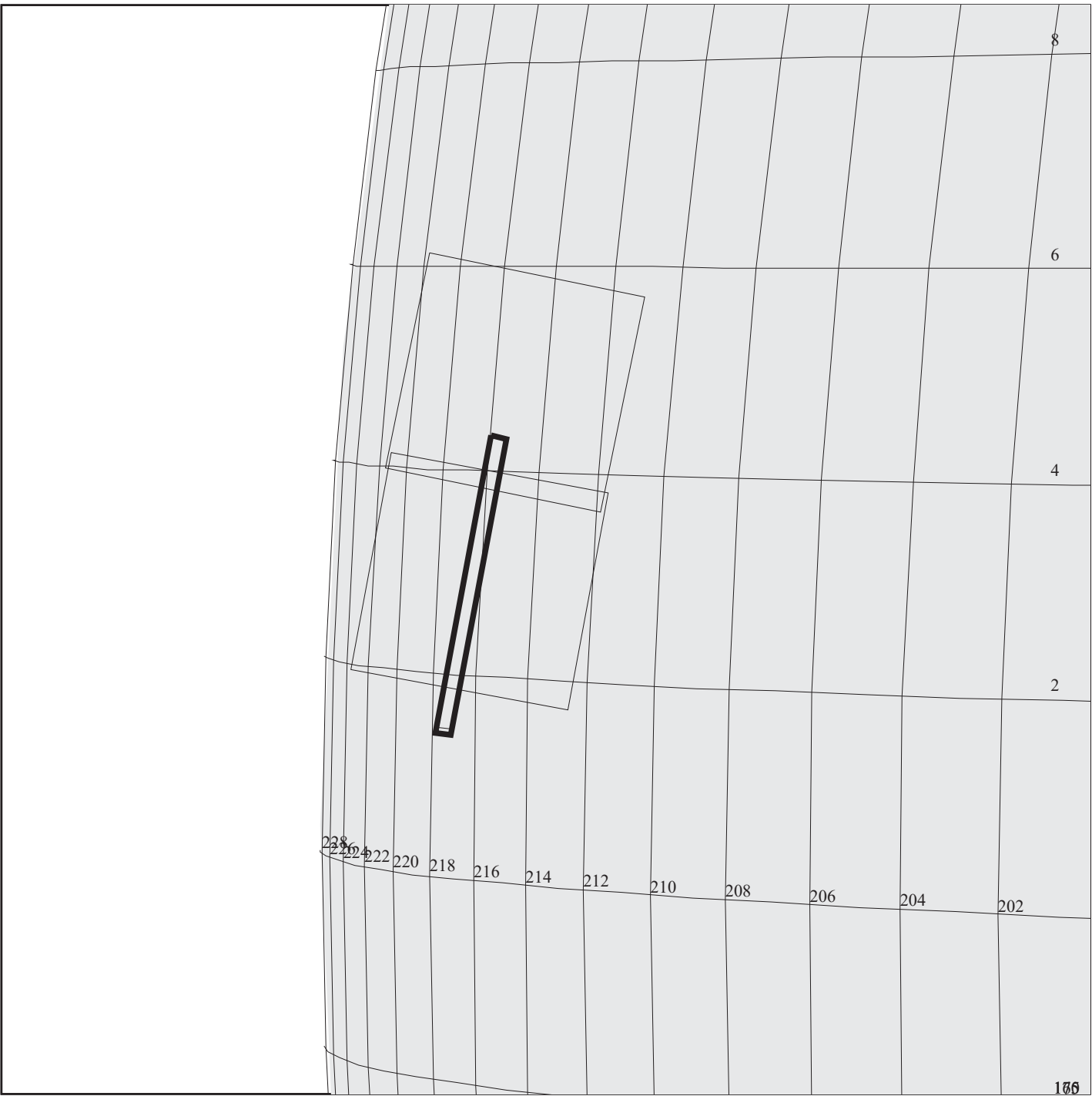
165IE:TT= 0 TMC= 1 C= 31.00 XC= -1.00 BS=61/3958 TC= 1(-1.7 153.8 )  
 A= 292 pD= 100 SR=17.450 RA50= 24.66 DEC50= 7.32 cone=175.68 clock=105.82  
 117IE:#SB= 1 OR= 3.060 RR= 4.000 BM=F RC= 1 BS=61/3958  
 1:#s= 1 Cs= -58.50 XCs= -1.50 Cr= 0.00 XCr= 0.00 sD= 100 rD= 2  
 165IF:TT= 0 TMC= 1 C= -25.25 XC= 9.00 BS=65/4686 TC= 1(-1.7 153.8 )  
 A= 616 pD= 310 SR=17.450 RA50= 34.96 DEC50= 12.85 cone=172.67 clock=269.15  
 117IF:#SB= 1 OR=11.000 RR= 4.000 BM=F RC= 1 BS=65/4686  
 1:#s= 1 Cs= 47.00 XCs= -14.00 Cr= 0.00 XCr= 0.00 sD= 100 rD= 2  
 116DF:OR=17.000 Cs= -27.50 XCs= 11.50 sD= 46 BS=28/4868 TF=N

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 310 S= 8.000

DESCRIP:PROMETHEUS

Io Prometheus Obs		ACTIVITY ID: 24INPROMTH01-	
		START TIME: 99-284/04:47:24.733	
Activity ID: Orbit 24 Target I Inst N OAPEL PROMTH SeqNo 01 -			
Title	Io Prometheus Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000014:27:0	99-284/04:47:24.733	IEE+000/00:14:27.333
End	IEE+CDS 00000017:00:0	99-284/04:50:08.733	IEE+000/00:17:11.333
Duration	00000002:64:0	000/00:02:44.000	000/00:02:44.000
Top Label	24INPROMTH01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of Prometheus hot spot to investigate surface composition.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISPROMTH01.			
Gain state 2.			
Point and Stare observation to build up NIMS spectra in the center of the SSI mosaic.			
Ride-along behind first SSI mosaic also returned.			
The scan platform did not reposition to the planned lat/lon after the SSI observation.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



**24INCOLCHS02**

DESIGN G3.2 lisac: 9/17/1999 12:12:54

FILE:P.24ISCOLCHS02

TARGET BODY : IO

MINI:m.24ISCOLCHS02

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 18:00:0

OBSERVATION:24ISCOLCHS02

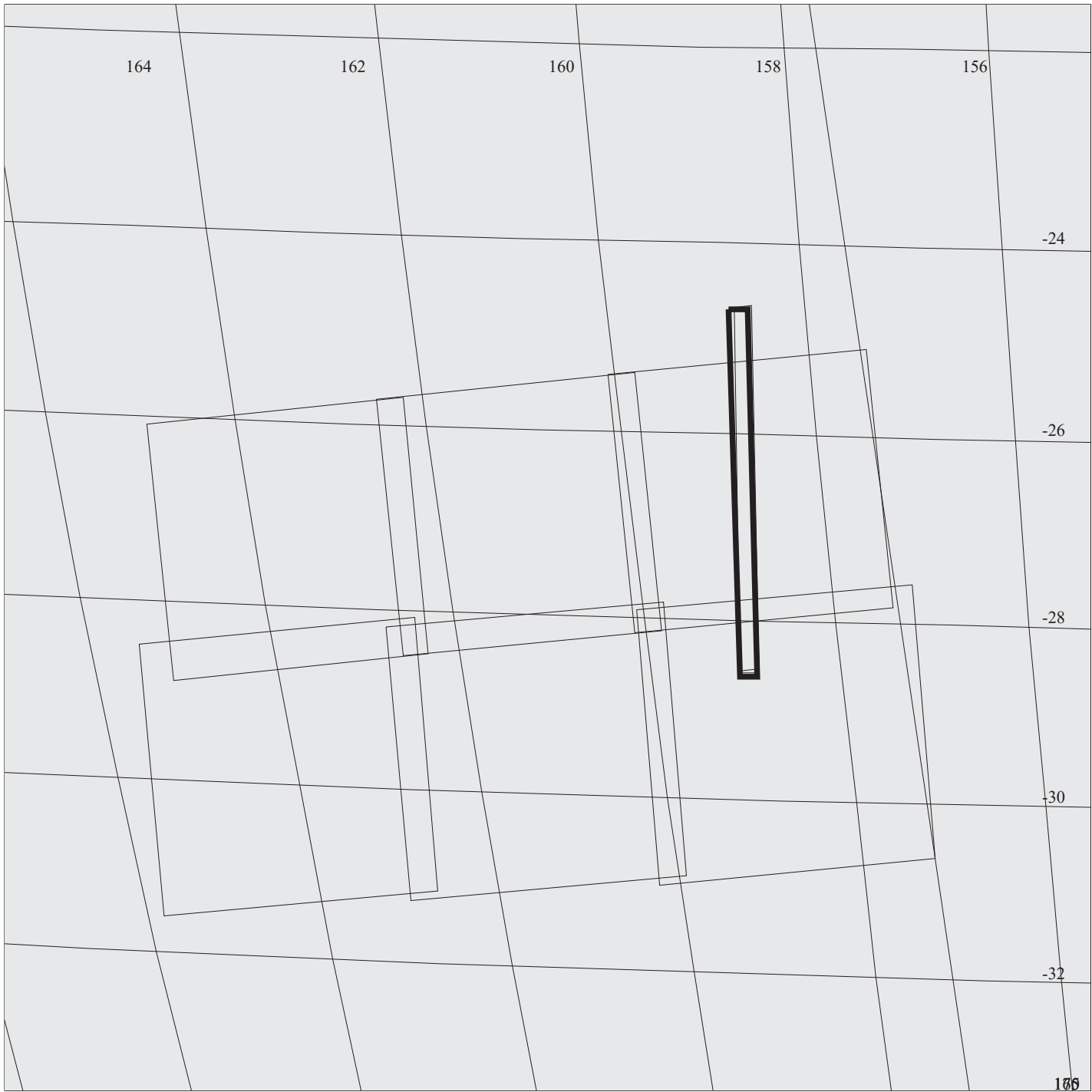
165IG:TT= 0 TMC= 1 C= 0.00 XC= -10.00 BS= 2/5596 TC= 1(+3.9 215.7 )  
 A= 182 pD= 406 SR=17.450 RA50= 48.77 DEC50= 20.32 cone=157.49 clock=270.93  
 117IG:#SB= 1 OR= 8.400 RR=12.000 BM=F RC= 1 BS= 2/5596  
 1:#s= 1 Cs= 0.60 XCs= 18.00 Cr= 0.00 XCr= 0.00 sD= 48 rD= 2  
 116DG:OR= 2.300 Cs= -0.50 XCs= -4.75 sD= 42 BS=36/5596 TF=N

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 406 S= 10.000

DESCRIP:COLCHIS MONTES

Io Colchis Obs		ACTIVITY ID: 24INCOLCHS02-	
		START TIME: 99-284/06:42:33.200	
Activity ID: Orbit 24 Target I Inst N OAPEL COLCHS SeqNo 02 -			
Title	Io Colshis Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000018:27:0	99-284/04:51:27.400	IEE+000/00:18:30.000
End	IEE+CDS 00000020:36:0	99-284/04:53:34.733	IEE+000/00:20:37.333
Duration	00000002:09:0	000/00:02:07.333	000/00:02:07.333
Top Label	24INCOLCHS02-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of Colchis Montes region to investigate surface composition.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISCOLCHS02.			
Gain state 2.			
Point and Stare observation to build up NIMS spectra in the center of the SSI mosaic.			
Ride-along behind SSI not returned.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



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165IH:TT= 0 TMC= 1 C= -12.97 XC= -3.65 BS=47/6142 TC= 1(-28.0 160.0 )  
 A= 202 pD= 660 SR=17.450 RA50= 44.75 DEC50= 12.29 cone=163.91 clock=289.91  
 117IH:#SB= 1 OR= 3.150 RR= 6.000 BM=F RC= 1 BS=47/6142  
 1:#s= 2 Cs= 18.20 XCs= 0.00 Cr= -17.90 XCr= 6.70 sD= 40 rD= 212  
 116DH:OR= 4.000 Cs= -2.50 XCs= -7.50 sD= 44 BS=17/6506 TF=N

## 24INNTOHIL01

DESIGN G3.2 lisac: 9/17/1999 12:23:11

FILE:P.24ISTOHIL\_01

TARGET BODY : IO

MINI:m.24ISTOHIL\_01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 21:00:0

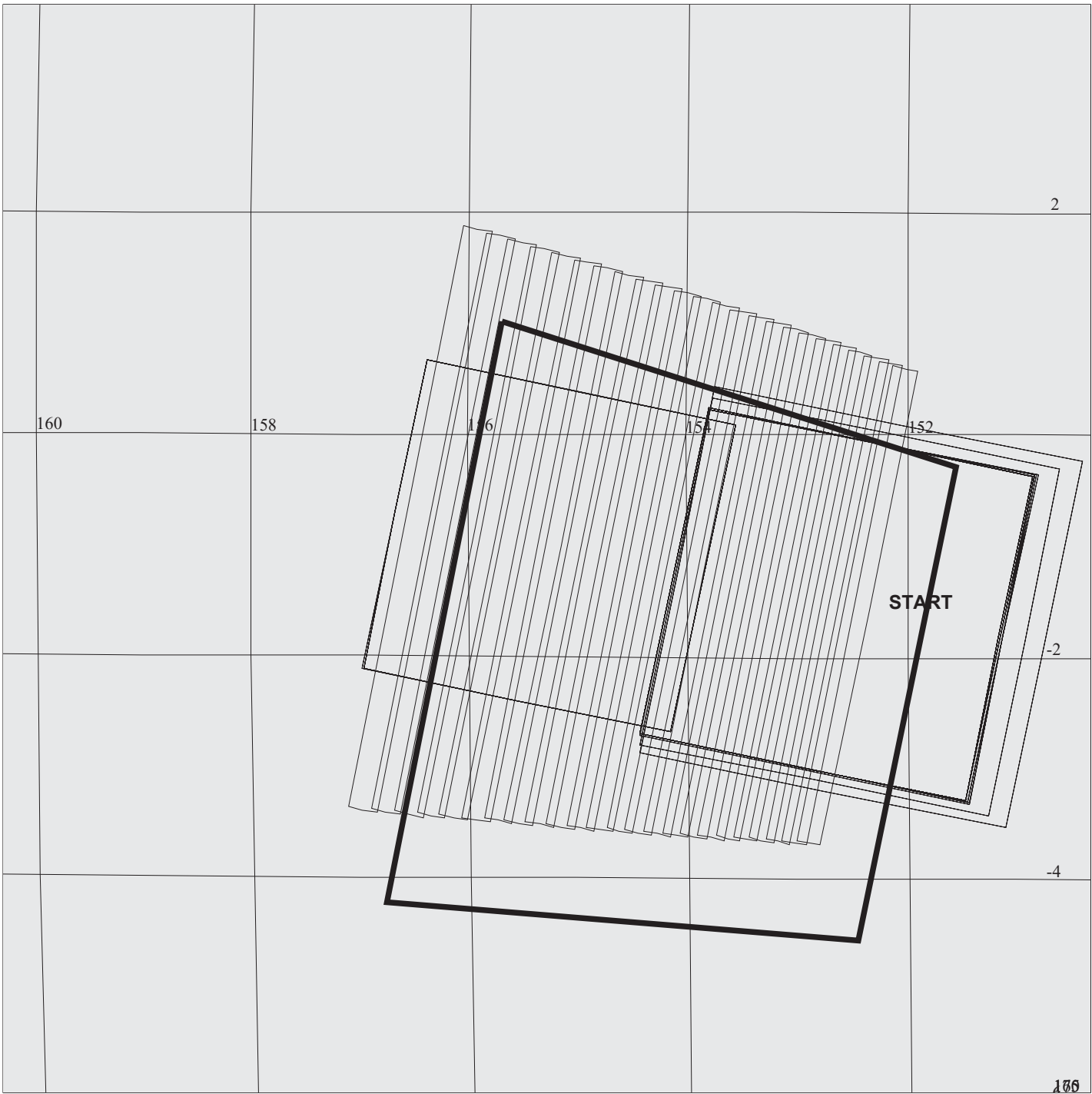
OBSERVATION:24ISTOHIL\_01

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 660 S= 10.000

DESCRIP:TOHIL MONS

Io Tohil Obs		ACTIVITY ID: 24INNTOHIL01-	
		START TIME: 99-284/04:55:17.400	
Activity ID: Orbit 24 Target I Inst N OAPEL NTOHIL SeqNo 01 -			
Title	Io Tohil Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000022:08:0	99-284/04:55:17.400	IEE+000/00:22:20.000
End	IEE+CDS 00000025:20:0	99-284/04:58:27.400	IEE+000/00:25:30.000
Duration	00000003:12:0	000/00:03:10.000	000/00:03:10.000
Top Label	24INNTOHIL01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of Tohil's colorful deposits to investigate surface composition.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISTOHIL_01.			
Gain state 2.			
Point and Stare observation to build up NIMS spectra in the center of the SSI mosaic.			
Ride-along behind SSI not returned.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



**24INPROMTH02**

TARGET G3.1 lisac: 9/ 8/1999 11:18: 0

FILE:P.24ISPROMTH02

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 26:00:0

OBSERVATION:24ISPROMTH02

165II:TT= 0 TMC= 1 C= -3.65 XC= 0.00 BS=42/7052 TC= 1(-1.26 154.0 )  
 A= 222 pD= 2298 SR=17.450 RA50= 44.17 DEC50= 17.73 cone=162.55 clock=271.47  
 118II:#SB= 1 Cs= 7.31 XCs= 0.00 TPP= 206 SR= 3.600 RR=12.000 BM=F RC= 1 BS=51/7052  
 1:#s= 2 #p= 1 Cr= 0.00 XCr= 0.00  
 116DI:OR= 0.020 Cs= -8.40 XCs= 0.00 sD= 1268 BS=11/8144 TF=N

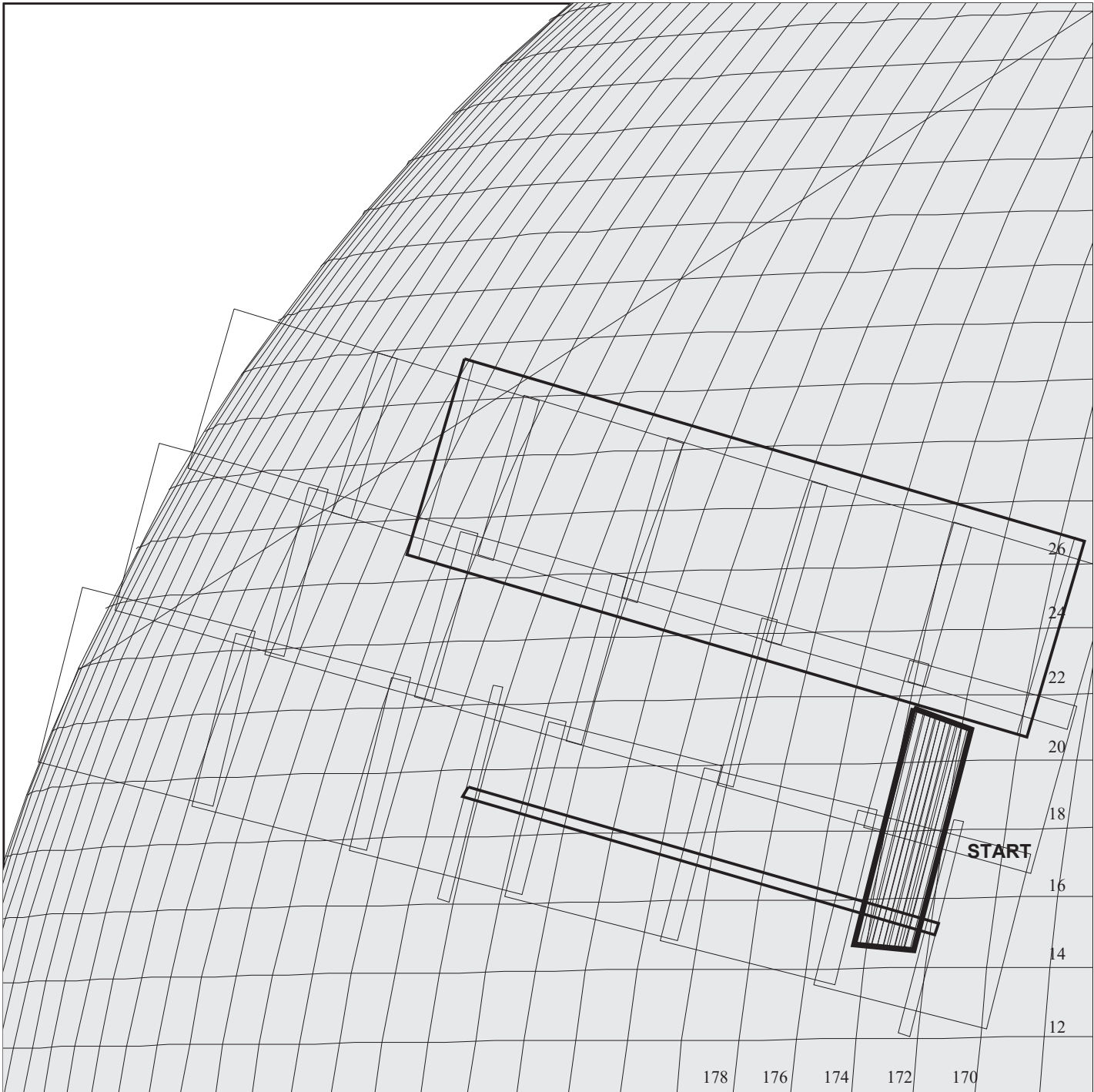
THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 2298 S= 10.000

DESCRIP:PROMETHEUS COLOR



Io Prometheus Obs		ACTIVITY ID: 24INPROMTH02-	
		START TIME: 99-284/05:00:58.733	
Activity ID: Orbit 24 Target I Inst N OAPEL PROMTH SeqNo 02 -			
Title	Io Prometheus Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000027:65:0	99-284/05:00:58.733	IEE+000/00:28:01.333
End	IEE+CDS 00000039:20:0	99-284/05:12:36.733	IEE+000/00:39:39.333
Duration	00000011:46:0	000/00:11:38.000	000/00:11:38.000
Top Label	24INPROMTH02-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of Prometheus hot spot to investigate surface composition.			
Data Returned			
Design Detail			
BTG=3.02 MB, TICS=372, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISPROMTH02.			
Gain state 2.			
NIMS mosaic to map the Prometheus region, covering terrain similar to the SSI mosaic.			
Ride-along behind SSI not returned.			
The scan platform did not reposition to the planned lat/lon after the SSI observation.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



**24INZAMAMA02**

DESIGN G3.2 herb : 9/14/1999 14:32:38

FILE:P.24ISZAMAMA02

TARGET BODY : IO

MINI:m.24ISZAMAMA02

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 40:00:0

OBSERVATION:24ISZAMAMA02

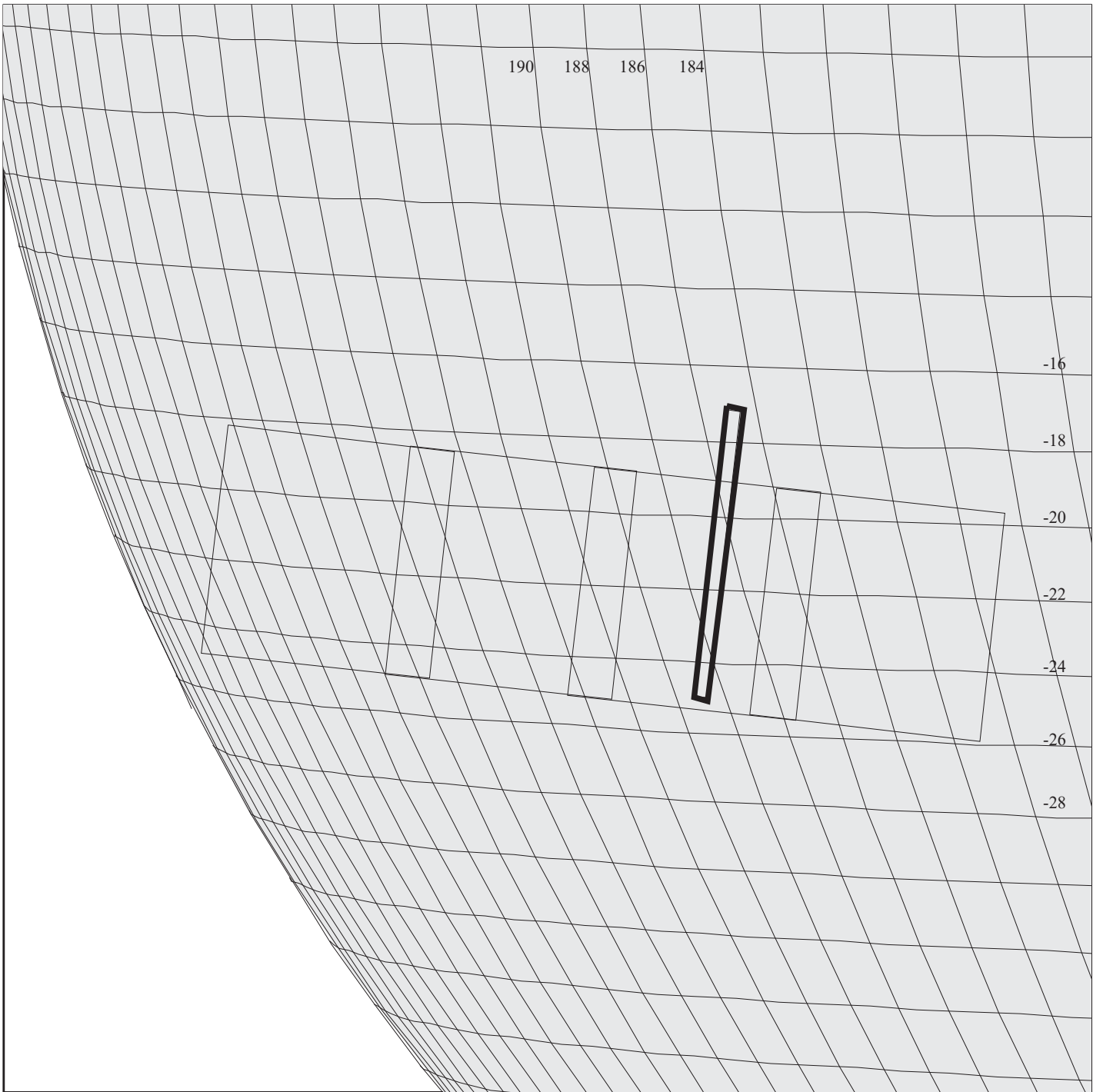
165IK:TT= 0 TMC= 1 C= -16.00 XC= -7.32 BS=33/9602 TC= 1(24.0 190.0 )  
 A= 202 pD= 1300 SR=17.450 RA50= 50.10 DEC50= 23.06 cone=155.05 clock=266.56  
 117IK:#SB= 1 OR= 3.140 RR= 6.700 BM=F RC= 1 BS=33/9602  
 1:#s= 3 Cs= 40.50 XCs= 0.00 Cr= -41.50 XCr= 7.31 sD= 60 rD= 220  
 116DJ:OR= 4.800 Cs= -2.75 XCs= -3.75 sD= 40 BS= 0/0330 TF=N  
 116EJ:OR= 0.020 Cs= -3.12 XCs= 0.00 sD= 476 BS=81/0330 TF=N

THINNING:NIM 2

BODY PLOT TIME:CENTER-TIME D= 1300 S= 3.500

DESCRIP:ISUM/ZAMAMA CONTEXT

Io Zamama Obs		ACTIVITY ID: 24INZAMAMA02-	
		START TIME: 99-284/05:17:13.400	
Activity ID: Orbit 24 Target I Inst N OAPEL ZAMAMA SeqNo 02 -			
Title	Io Zamama Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000043:71:0	99-284/05:17:13.400	IEE+000/00:44:16.000
End	IEE+CDS 00000047:50:0	99-284/05:21:02.066	IEE+000/00:48:04.666
Duration	00000003:70:0	000/00:03:48.666	000/00:03:48.666
Top Label	24INZAMAMA02-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of Zamama hot spot to investigate surface composition.			
Data Returned			
Design Detail			
BTG=1.12 MB, TICS=139, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISZAMAMA01.			
Gain state 2.			
Nims mosaic to map part of the Zamama region, covering part of the terrain covered by the SSI mosaic.			
Ride-along behind SSI also returned:			
(B) SSI Swath 1 in XLM,			
SSI Swath 2, NIMS halted, no return,			
(C) SSI Swath 3, NIMS in XS (Safe mode).			
Grating Stuck			
Fixed Spectrometer (XS), Gain 2, Grating Start 0, MPW, ILM017, ILM015			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



## 24INDORIAN01

DESIGN G3.2 lisac: 9/17/1999 12:13:53

FILE:P.24ISDORIAN01

TARGET BODY : IO

MINI:m.24ISDORIAN01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 48:00:0

OBSERVATION:24ISDORIAN01

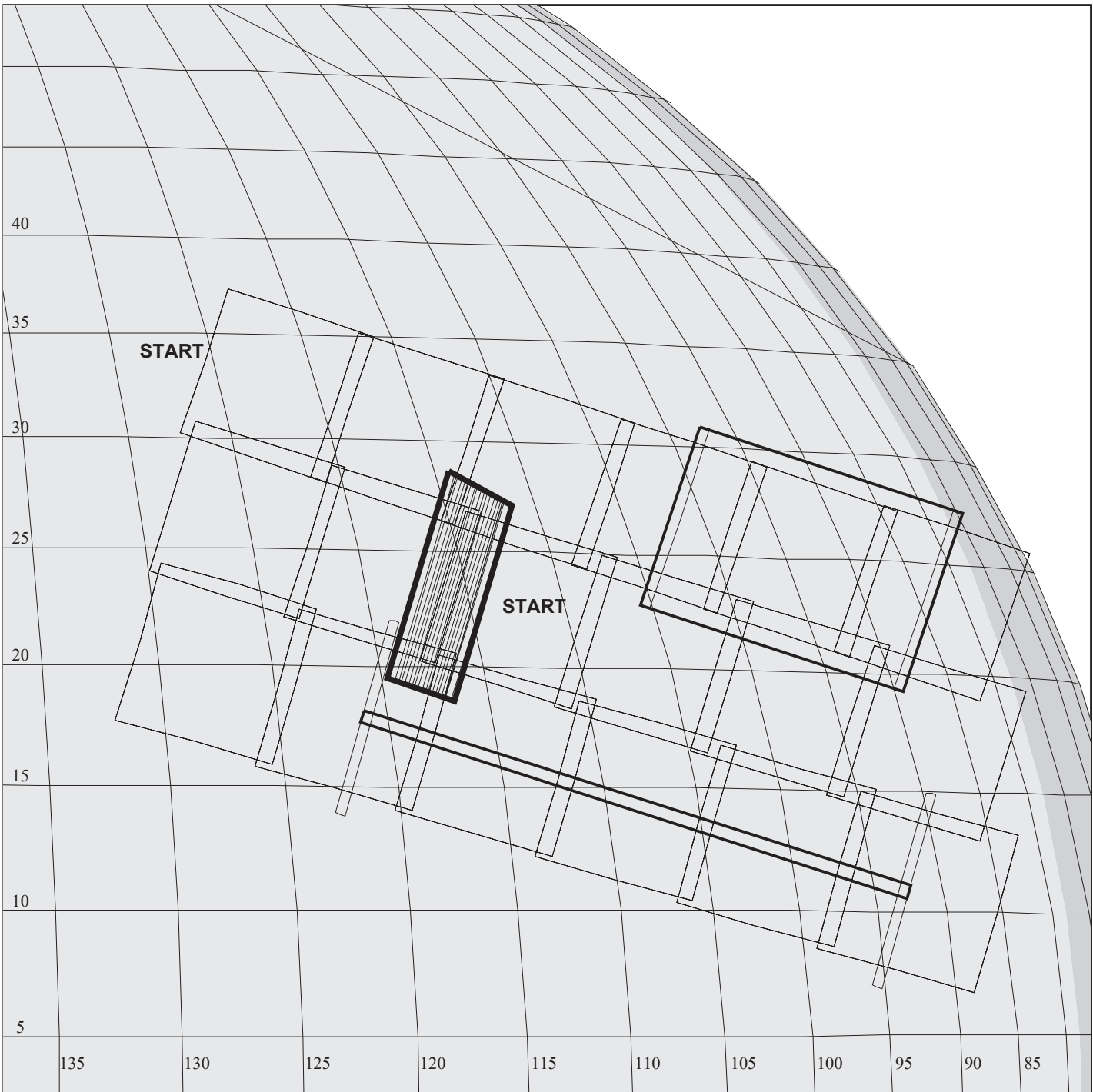
165IM:TT= 0 TMC= 1 C= -13.00 XC= 0.00 BS=68/1056 TC= 1(-22.0 190.0 )  
 A= 202 pD= 414 SR=17.450 RA50= 51.94 DEC50= 18.82 cone=155.39 clock=277.46  
 117IM:#SB= 1 OR= 2.790 RR=12.000 BM=F RC= 1 BS=68/1056  
 1:#s= 1 Cs= 25.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 48 rD= 2  
 116DK:OR= 4.500 Cs= -9.50 XCs= -1.50 sD= 30 BS= 0/1420 TF=N

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 414 S= 4.000

DESCRIP:DORIAN MONS

Io Dorian Obs		ACTIVITY ID: 24INDORIAN01-	
		START TIME: 99-284/06:42:33.200	
Activity ID: Orbit 24 Target I Inst N OAPEL DORIAN SeqNo 01 -			
Title	Io Dorian Obs		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000049:02:0		99-284/05:22:31.400 IEE+000/00:49:34.000
End	IEE+CDS 00000051:15:0		99-284/05:24:41.400 IEE+000/00:51:44.000
Duration	00000002:13:0		000/00:02:10.000 000/00:02:10.000
Top Label	24INDORIAN01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of green deposits ("Golf course") to investigate surface composition.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISDORIAN01.			
Gain state 2.			
Point and Stare observation to build up NIMS spectra in the center of the SSI mosaic.			
Ride-along behind SSI not returned.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



**24INAMSKGI01**

TARGET G3.1 lisac: 9/ 8/1999 11:18: 0

FILE:P.24ISAMSKGI01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 52:00:0

OBSERVATION:24ISAMSKGI01

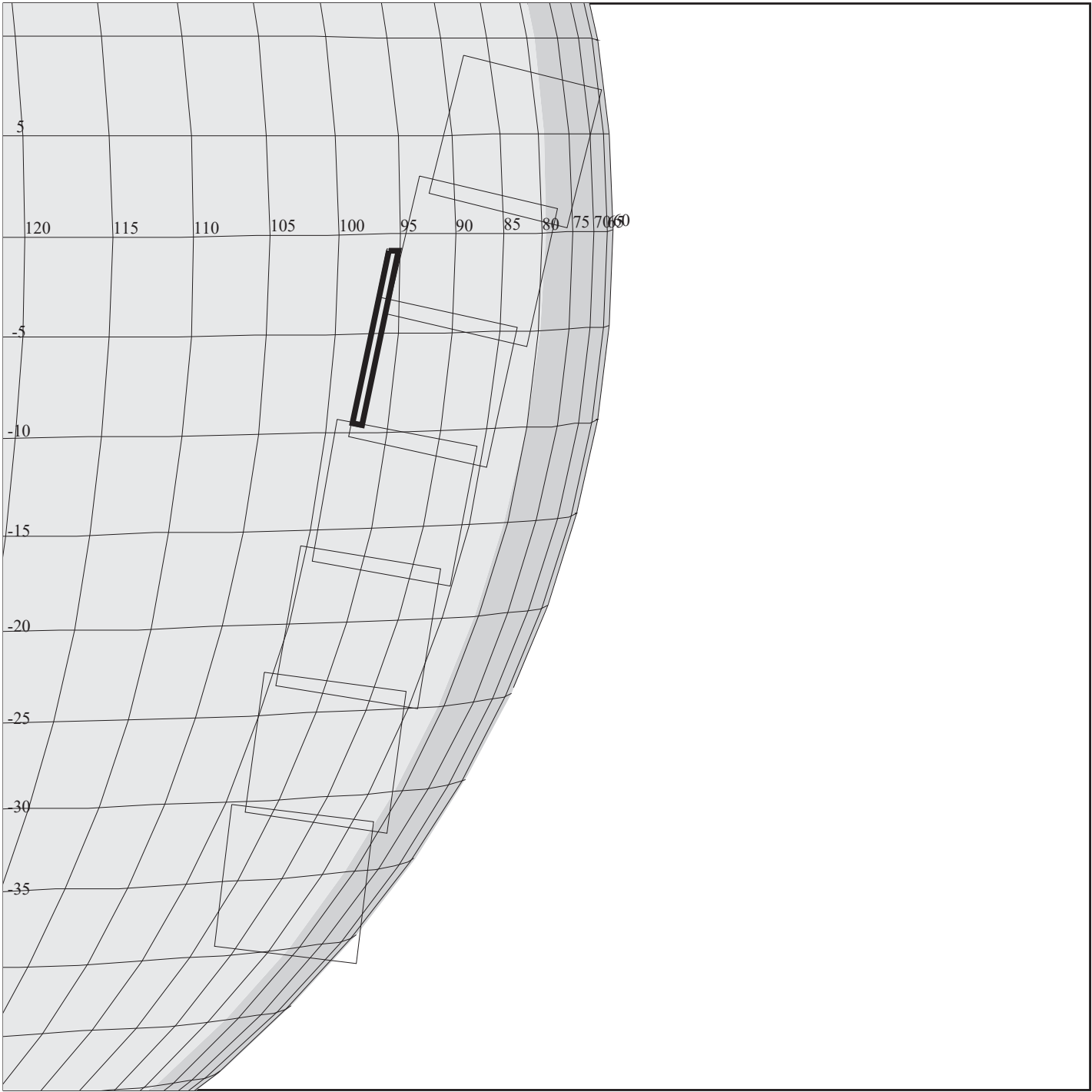
165IN:TT= 0 TMC= 1 C= -12.96 XC= -5.65 BS=26/1784 TC= 1(25.0 116.0 )  
 A= 202 pD= 1300 SR=17.450 RA50= 45.87 DEC50= 21.48 cone=159.18 clock=264.39  
 117IN:#SB= 1 OR= 3.140 RR= 6.700 BM=F RC= 1 BS=26/1784  
 1:#s= 3 Cs= 40.50 XCs= 0.00 Cr= -39.50 XCr= 7.20 sD= 60 rD= 220  
 116DL:OR= 1.000 Cs= -27.00 XCs= -7.00 sD= 164 BS=73/2330 TF=N  
 116EL:OR= 0.020 Cs= -3.12 XCs= -0.50 sD= 476 BS=74/2512 TF=N

THINNING:NIM 2

BODY PLOT TIME:CENTER-TIME D= 1300 S= 2.500

DESCRIP:AMIRANI/SKYTHIA/GISH BAR

Io Amirani Obs		ACTIVITY ID: 24INAMSKGI01-	
		START TIME: 99-284/05:29:17.400	
Activity ID: Orbit 24 Target I Inst N OAPEL AMSKGI SeqNo 01 -			
Title	Io Amarani Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000055:65:0	99-284/05:29:17.400	IEE+000/00:56:20.000
End	IEE+CDS 00000059:40:0	99-284/05:33:03.400	IEE+000/01:00:06.000
Duration	00000003:66:0	000/00:03:46.000	000/00:03:46.000
Top Label	24INAMSKGI01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Dayside observation of Amiriani hot spot to investigate surface composition.			
Data Returned			
Design Detail			
BTG=1.12 MB, TICS=139, FMT=MPW Collaborative dayside observation with SSI obs 24ISAMSKGI01. Gain state 2.			
Nims mosaic to map part of the Amirani region, covering part of the terrain covered by the SSI mosaic. Ride-along behind SSI also returned: (B) SSI Swath 1 in XLM, SSI Swath 2, NIMS halted, no return, (C) SSI Swath 3, NIMS in XS (Safe mode).			
Grating Stuck Fixed Spectrometer (XS), Gain 2, Grating Start 0, MPW, ILM017, ILM015 Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



**24INTERMAP01**

DESIGN G3.2 lisac: 9/17/1999 12:22:44

FILE:P.24ISTERMAP01

TARGET BODY : IO

MINI:m.24ISTERMAP01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 60:00:0

OBSERVATION:24ISTERMAP01

165IP:TT= 0 TMC= 1 C= -1.50 XC= -21.70 BS=65/3240 TC= 1(-10.0 85.0 )  
 A= 222 pD= 446 SR=17.450 RA50= 45.08 DEC50= 19.45 cone=160.93 clock=268.15  
 117IP:#SB= 1 OR= 9.450 RR= 6.700 BM=F RC= 1 BS=65/3240  
 1:#s= 1 Cs= -1.80 XCs= 49.00 Cr= 0.00 XCr= 0.00 sD= 82 rD= 2  
 116DM:OR=13.400 Cs= -3.50 XCs= -31.10 sD= 80 BS=25/3422 TF=N

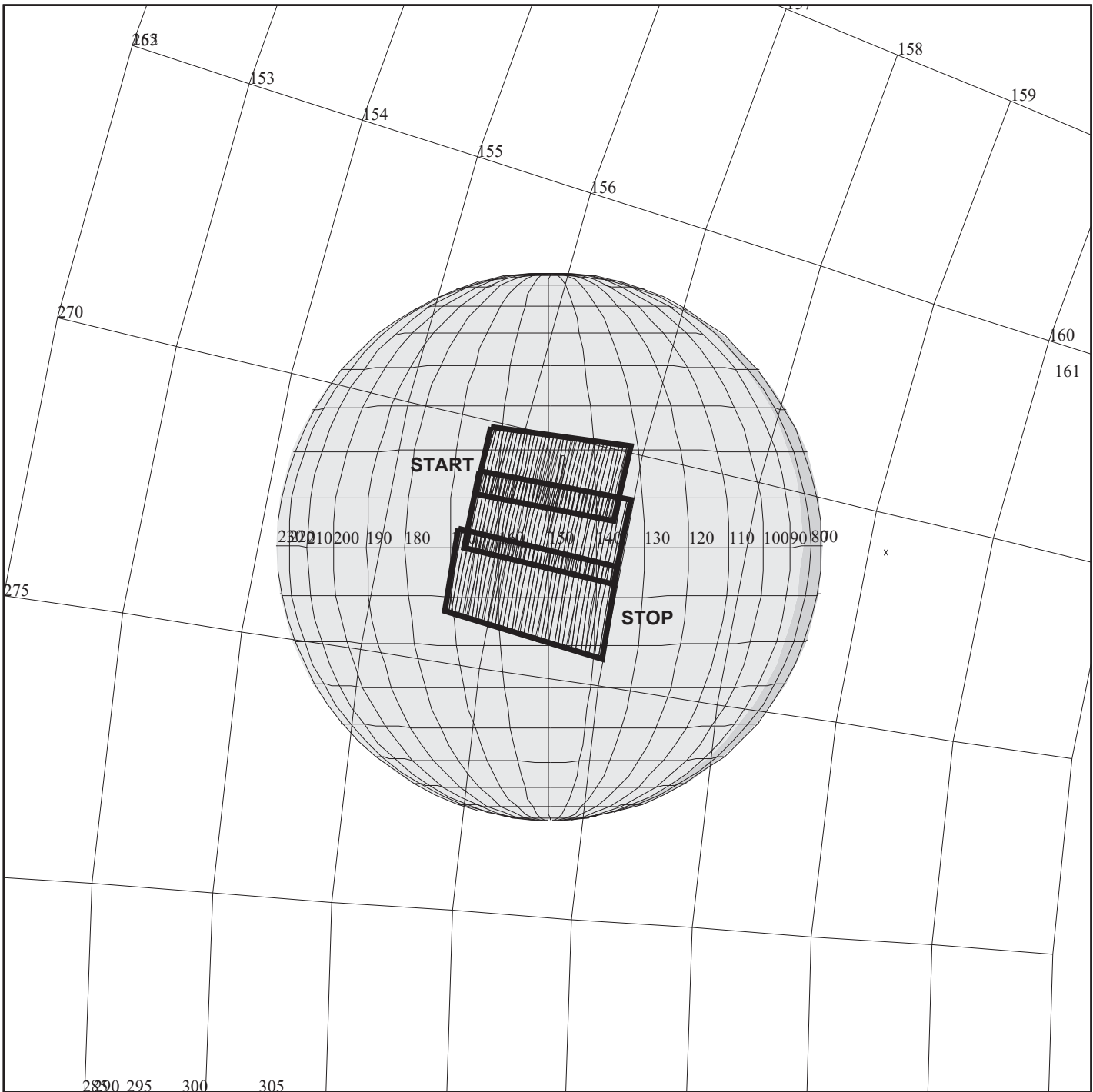
THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 446 S= 2.000

DESCRIP:TERMINATOR STRIP WITH HI'IAKA



Io Terminator Obs		ACTIVITY ID: 24INTERMAP01-	
		START TIME: 99-284/05:35:38.733	
Activity ID: Orbit 24 Target I Inst N OAPEL TERMAP SeqNo 01 -			
Title	Io Terminator Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
		NIMS SWG	
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000062:00:0	99-284/05:35:38.733	IEE+000/01:02:41.333
End	IEE+CDS 00000064:00:0	99-284/05:37:40.066	IEE+000/01:04:42.666
Duration	00000002:00:0	000/00:02:01.333	000/00:02:01.333
Top Label	24INTERMAP01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Near-Terminator observation of dark caldera.			
Data Returned			
Design Detail			
BTG=0.37 MB, TICS=48, FMT=MPW			
Collaborative dayside observation with SSI obs 24ISTERMAP01.			
Gain state 2.			
Point and Stare observation to build up NIMS spectra near the SSI mosaic.			
Ride-along behind SSI not returned.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



**24INREGION01**

165DN:TT= 0 TMC= 1 C= -12.00 XC= -10.00 BS= 0/9610 TC= 3  
 A= 182 pD= 5996 SR=17.450 RA50= 50.42 DEC50= 21.18 cone=155.72 clock=270.84  
 117DN:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/9610  
 1:#s= 3 Cs= 19.65 XCs= 0.00 Cr= -18.40 XCr= 7.50 sD= 1976 rD= 32

TARGET G3.1 lisac: 9/24/1999 10:48:44

FILE:P.24INREGION01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

THINNING:NIM 2

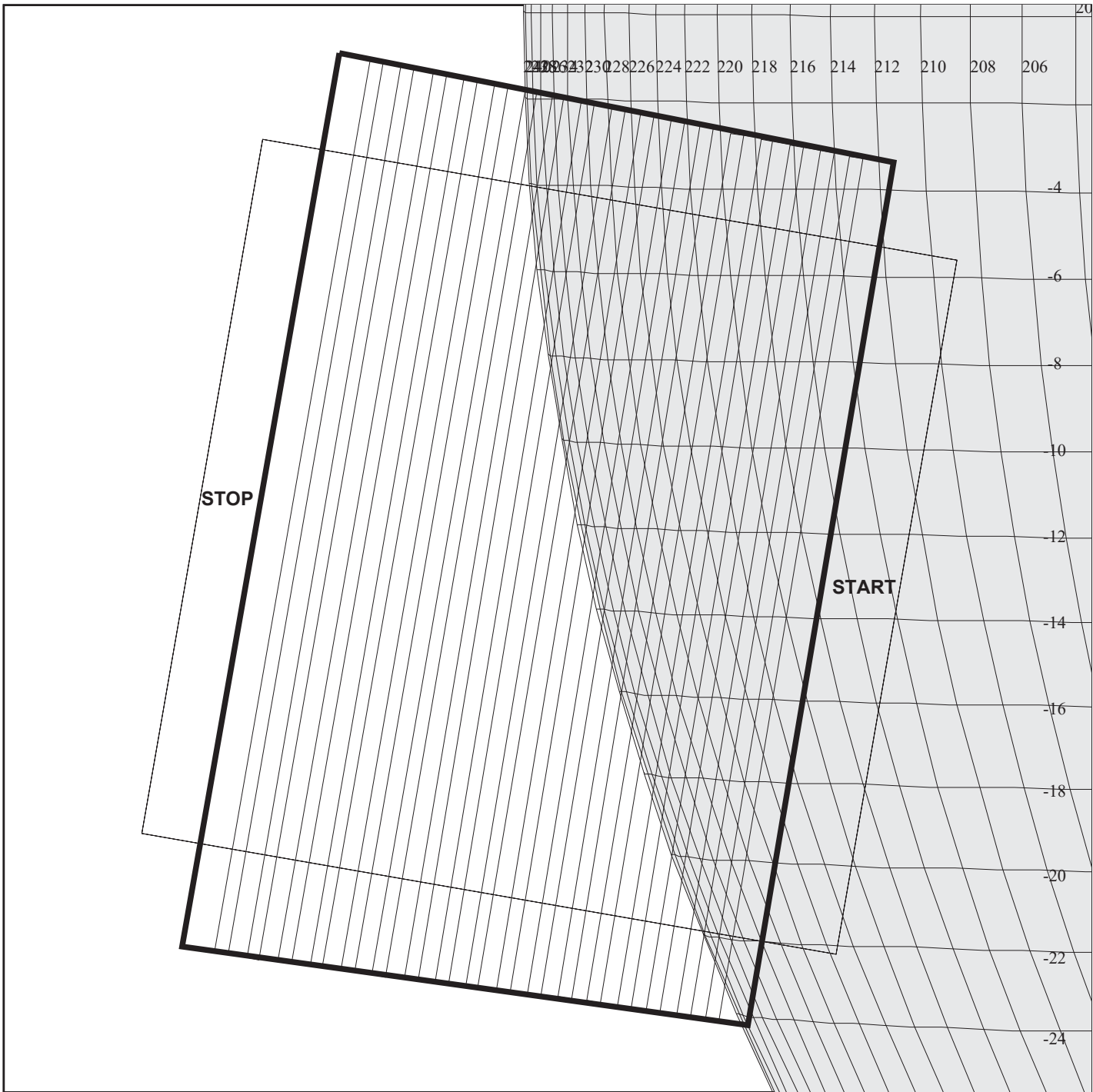
START:IEE 99-284/04:32:57.400 +CDS 95:00:0

BODY PLOT TIME:TARGET-TIME D= 5996 S= 0.500

OBSERVATION:24INREGION01

DESCRIP:NIMS\_I24\_IO\_REGION\_01

Io Regional Obs		ACTIVITY ID: 24INREGION01-	
		START TIME: 99-284/06:42:33.200	
Activity ID: Orbit 24 Target I Inst N OAPEL REGION SeqNo 01 -			
Title	Io Regional Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
		NIMS SWG	
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000094:00:0	99-284/06:08:066734	IEE+000/01:35:02.666
End	IEE+CDS 00000127:00:0	99-284/06:41:22.066	IEE+000/02:08:24.666
Duration	00000033:00:0	000/00:33:22.000	000/00:33:22.000
Top Label	24INREGION01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Regional Mosaic centered about 150 degrees West Longitude, 0 degrees Latitude to investigate surface composition and search for thermal emission.			
Data Returned			
Design Detail			
BTG=15.87 MB, TICS=1690, FMT=MPW			
Mosaic of 3 swaths.			
Gain state 2.			
Mosaic of the terrain surrounding Prometheus, centered at 0 deg Latitude, 150 deg W. Longitude.			
Regional map of hotspots.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



165I:TT= 0 TMC= 1 C= 0.00 XC= 1.00 BS= 0/6346 TC= 1(-10.5 242.0 )  
 A= 182 pD= 1116 SR=17.450 RA50= 52.10 DEC50= 20.57 cone=154.57 clock=273.78  
 116I:OR= 1.000 Cs= 3.00 XCs= 0.00 sD= 182 BS= 9/6346 TF=N  
 116J:OR= 0.020 Cs= -6.00 XCs= 0.00 sD= 910 BS=12/6528 TF=N

## 24INPPLUME01

DESIGN G3.2 herb : 9/16/1999 9:49:12

FILE:P.24ISPILLAN02

TARGET BODY : IO

MINI:m.24ISPILLAN02

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 132:00:0

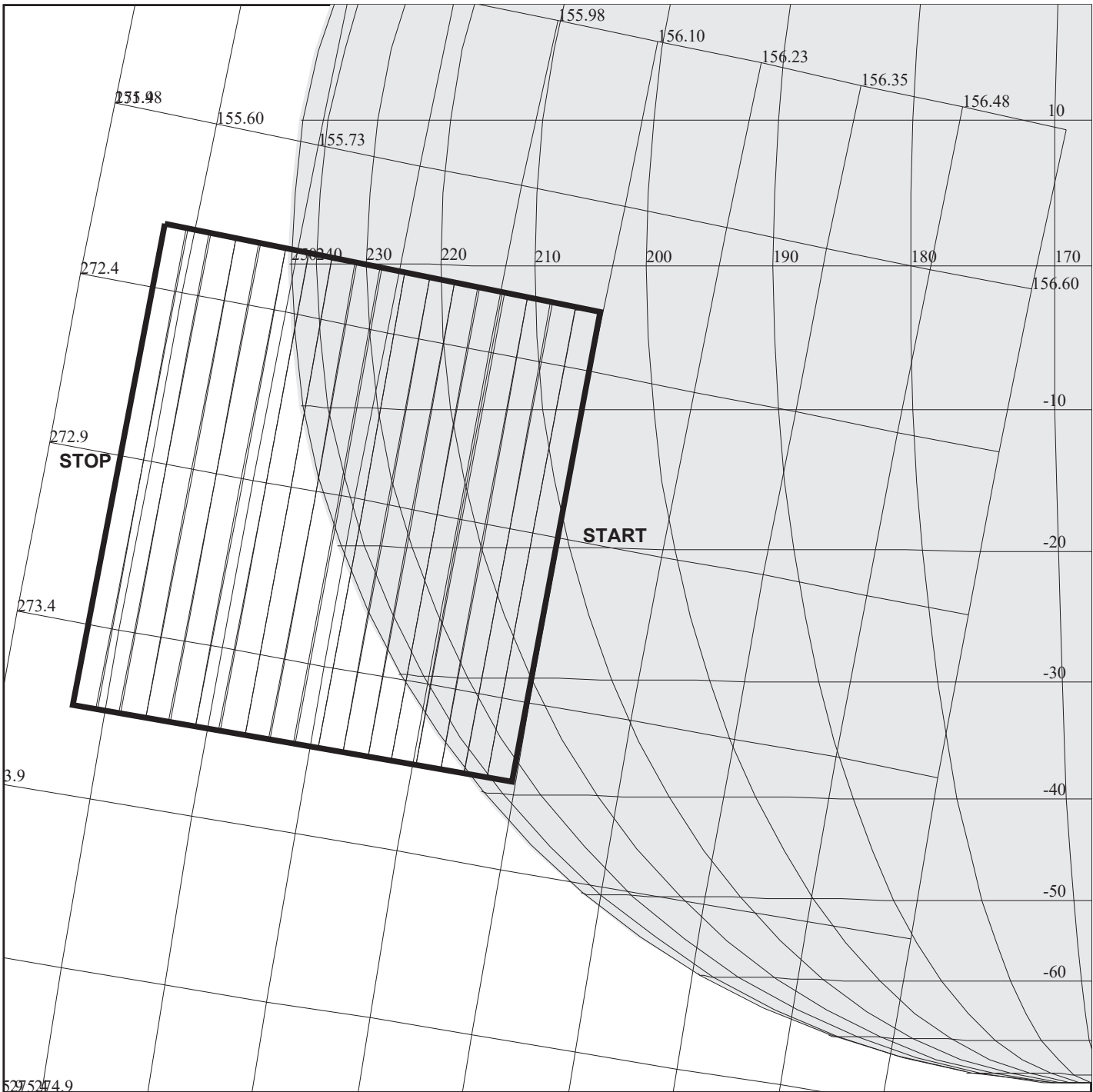
OBSERVATION:24ISPILLAN02

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 1116 S= 4.500

DESCRIP:PILLAN PLUME

Io Pillan Plume Obs		ACTIVITY ID: 24INPPLUME01-	
		START TIME: 99-284/06:46:27.400	
Activity ID: Orbit 24 Target I Inst N OAPEL PPLUME SeqNo 01 -			
Title	Io Pillan Plume Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
		NIMS SWG	
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000132:03:0	99-284/06:46:27.400	IEE+000/02:13:30.000
End	IEE+CDS 00000138:00:0	99-284/06:52:29.400	IEE+000/02:19:32.000
Duration	00000005:88:0	000/00:06:02.000	000/00:06:02.000
Top Label	24INPPLUME01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Mosaic going from Pillan hot spot onto the limb to detect the Pillan plume if active.			
Collaborative limb observation with SSI obs 24ISPILLAN02.			
Data Returned			
Design Detail			
BTG=2.16 MB, TICS=266, FMT=MPW			
Mosaic in Long Map.			
Gain state 4.			
NIMS mosaic covering area similar to area covered by SSI			
Ride-along behind SSI not returned.			
Search for Pillan's plume.			
Grating Stuck			
Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



5275274.9

165DP:TT= 0 TMC= 1 C= 3.00 XC= 0.00 BS= 0/0722 TC= 1(-18 229 )  
 A= 182 pD= 900 SR=17.450 RA50= 50.47 DEC50= 20.25 cone=156.09 clock=272.91  
 117DP:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0722  
 1:#s= 1 Cs= -8.90 XCs= 0.00 Cr= 0.00 XCr= -0.60 sD= 900 rD= 20

## 24INPELEPM01

TARGET G3.1 lisac: 9/24/1999 10:48:44

FILE:P.24INPELEPM01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 211:00:0

OBSERVATION:24INPELEPM01

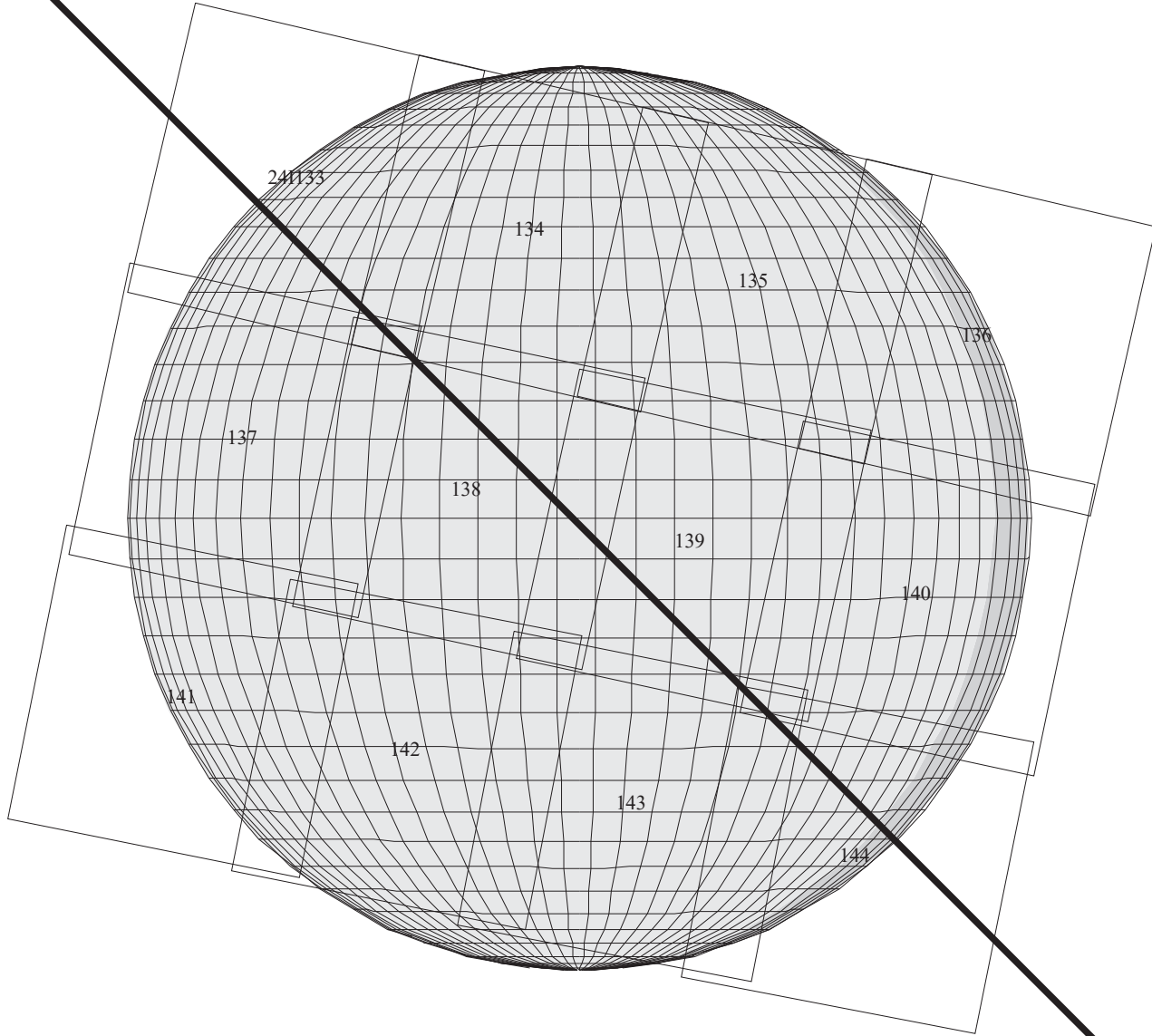
THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 900 S= 1.500

DESCRIP:NIMS\_I24\_PELE\_PLUME\_01

Io Pele Plume Obs		ACTIVITY ID: 24INPELEPM01-	
		START TIME: 99-284/08:05:17.400	
Activity ID: Orbit 24 Target I Inst N OAPEL PELEPM SeqNo 01 -			
Title	Io Pele Plume Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000210:00:0	99-284/08:05:17.400	IEE+000/03:32:20.000
End	IEE+CDS 00000216:00:0	99-284/08:11:21.400	IEE+000/03:38:24.000
Duration	00000006:00:0	000/00:06:04.000	000/00:06:04.000
Top Label	24INPELEPM01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Observation of Pele plume on limb against Jupiter's disk.			
Data Returned			
Design Detail			
BTG=2.16 MB, TICS=266, FMT=MPW			
Mosaic extending from Pele hot spot onto limb. Long Map.			
Gain state 4.			
Grating Stuck			
Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ILM442, ILM360			
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PROCESSOR HALTED



## 24INSTEREO01

DESIGN G3.2 herb : 9/16/1999 9:50:11

FILE:P.24ISSTEREO01

TARGET BODY : IO

MINI:m.24ISSTEREO01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 281:00:0

OBSERVATION:24ISSTEREO01

165IR:TT= 0 TMC= 1 C= -9.32 XC= -7.31 BS= 0/3464 TC= 3  
A= 222 pD= 292 SR=17.450 RA50= 49.11 DEC50= 20.84 cone=156.96 clock=270.13  
118IR:#SB= 1 Cs= 6.30 XCs= 0.00 TPP= 26 SR= 2.500 RR= 5.200 BM=F RC= 1 BS= 3/3464  
1:#s= 4 #p= 3 Cr= -18.90 XCr= 7.31

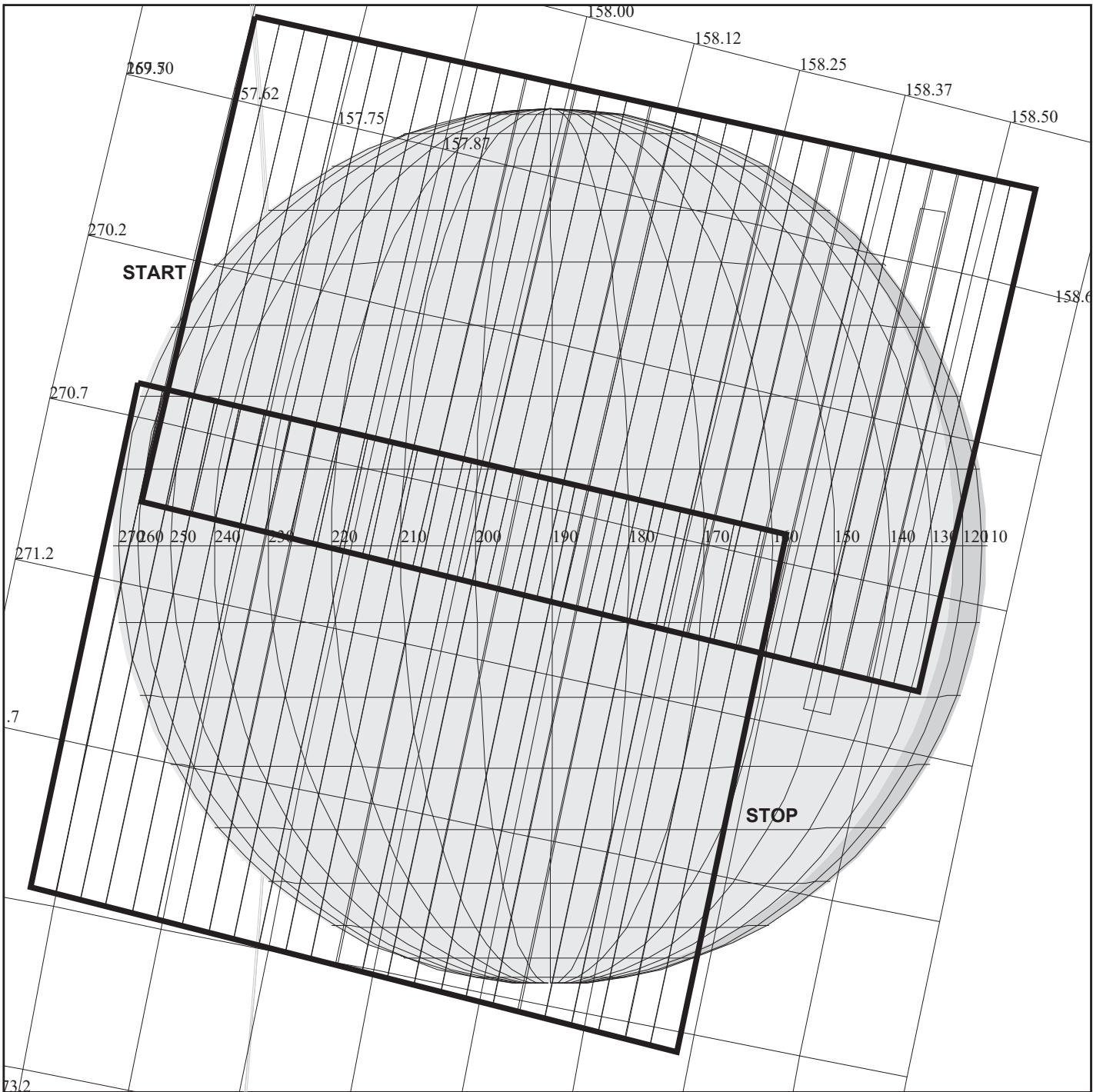
THINNING:

BODY PLOT TIME:TARGET-TIME D= 292 S= 0.700

DESCRIP:REGIONAL STEREO



SSI Io Stereo Obs		ACTIVITY ID: 24INSTEREO01-	
		START TIME: 99-284/09:13:02.066	
Activity ID: Orbit 24 Target I Inst N OAPEL STEREO SeqNo 01 -			
Title	SSI Io Stereo Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000277:00:0	99-284/09:13:02.066	IEE+000/04:40:04.666
End	IEE+CDS 00000283:00:0	99-284/09:19:06.066	IEE+000/04:46:08.666
Duration	00000006:00:0	000/00:06:04.000	000/00:06:04.000
Top Label	24INSTEREO01-		
Bottom Label			
Plot Key	Type	SCI	
CDS Bytes	Report Options	BOTH	Scan Platform
CDS Source	OAP	Spin State	DUAL
			DMS
			No
			No
Observation Objective			
Ride-along with SSI's Stereo observation. Full disk covered in three quick scans.			
Data Returned, Processor Halted			
Design Detail			
Ride-along behind SSI global observation. NIMS packets did not decompress properly. We assume that NIMS had halted.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, IM4, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



**24INREGION02**

165DZ:TT= 0 TMC= 1 C= -8.00 XC= -4.00 BS= 0/9478 TC= 3  
 A= 728 pD= 0 SR=17.450 RA50= 48.49 DEC50= 20.49 cone=157.63 clock=270.19  
 117DZ:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/9478  
 1:#s= 2 Cs= 16.00 XCs= 0.00 Cr= -16.00 XCr= 7.60 sD= 1616 rD= 40

DESIGN G3.2 lisac: 9/27/1999 14:39:21

FILE:P.24INREGION02

TARGET BODY : IO

MINI:m.24INREGION02

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:IEE 99-284/04:32:57.400 +CDS 369:00:0

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

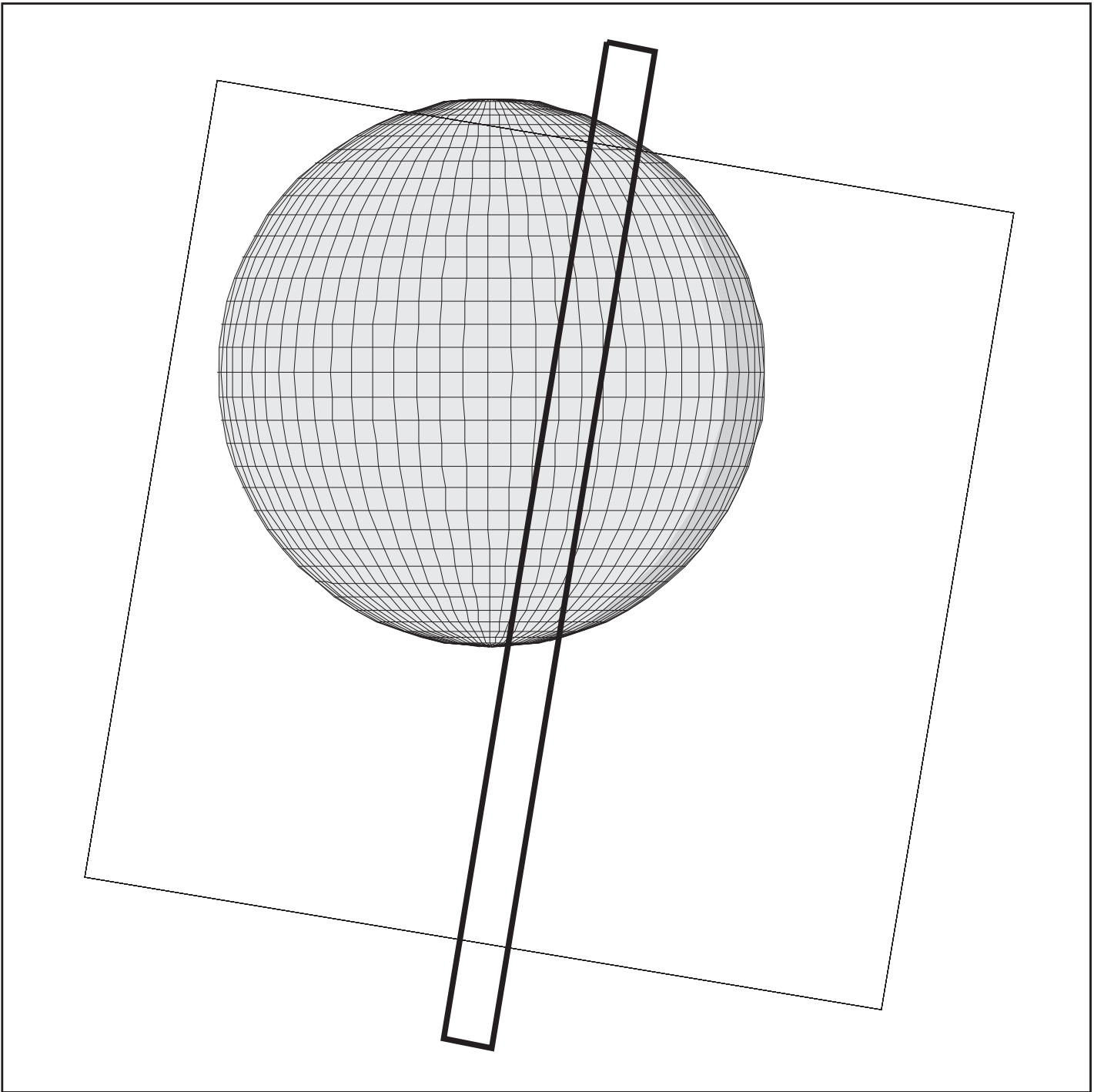
OBSERVATION:24INREGION02

DESCRIP:IO\_MONITORING

Io Regional Obs		ACTIVITY ID: 24INREGION02-	
		START TIME: 99-284/10:42:00.733	
Activity ID: Orbit 24 Target I Inst N OAPEL REGION SeqNo 02 -			
Title	Io Regional Obs	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000365:00:0	99-284/10:42:00.733	IEE+000/06:09:03.333
End	IEE+CDS 00000389:00:0	99-284/11:06:16.733	IEE+000/06:33:19.333
Duration	00000024:00:0	000/00:24:16.000	000/00:24:16.000
Top Label	24INREGION02-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Mosaic of Io's surface to investigate surface composition and to search for thermal emission.			
Data Returned			
Design Detail			
BTG=7.28 MB, TICS=869, FMT=MPW Long Map, Gain state 2.			
Full-disk mosaic in two swaths. Last two Rims of the mosaic were not recorded due to insertion of a DMS D-Turn			
Mosaic centered at about 190 degrees West Longitude, 0 degrees Latitude.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
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Grating Step Test #3		ACTIVITY ID: 24NNDETECT03-	
		START TIME: 99-284/11:17:24.066	
Activity ID: Orbit 24 Target N Inst N OAPEL DETECT SeqNo 03 -			
Title	Grating Step Test #3	Instrument	NIMS
Requestor	NIMS-SWG/M. Segura	Team NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000400:00:0	99-284/11:17:24.066	IEE+000/06:44:26.666
End	IEE+CDS 00000420:00:0	99-284/11:37:37.400	IEE+000/07:04:40.000
Duration	00000020:00:0	000/00:20:13.334	000/00:20:13.334
Top Label	24NNDETECT03-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	0	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Store NIMS Housekeeping Bytes in CDS memory to measure the NIMS Grating Cycle in engineering units.			
This will help in the NIMS grating calibration.			
Design Detail			
Use 6MCOPY command to copy NIMS Housekeeping values from NIMS RAM to CDS RAM.			
This process collects data equivalent to two full long map grating cycles. The data are collected over a 13 RIM period.			
The NIMS Houskeeping will be returned via CDS MRO sometime after the I24 encounter period.			
This third of three tests captures NIMS Housekeeping about 30 minutes after the last NIMS I24 observation.			
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165IS:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS=26/8468 TC= 3  
A= 60 pD= 138 SR=17.450 RA50= 56.64 DEC50= 22.15 cone=150.06 clock=274.26

## 24ISGLOCOL01

DESIGN G3.2 herb : 9/16/1999 9:50:55

FILE:P.24ISGLOCOL01

TARGET BODY : IO

MINI:m.24ISGLOCOL01

S/C EPH:/DATA/NAVIO/990607-tour.NS

PERIAPSIS:

START:IEE 99-284/04:32:57.400 +CDS 803:00:0

OBSERVATION:24ISGLOCOL01

THINNING:

BODY PLOT TIME:TARGET-TIME D= 138 S= 0.500

DESCRIP:FULL-DISK COLOR

SSI Io Global Color		ACTIVITY ID: 24INGLOCOL01-	
		START TIME: 99-284/18:04:52.733	
Activity ID: Orbit 24 Target I Inst N OAPEL GLOCOL SeqNo 01 -			
Title	SSI Io Global Color	Instrument	
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00000803:00:0	99-284/18:04:52.733	IEE+000/13:31:55.333
End	IEE+CDS 00000806:00:0	99-284/18:07:54.733	IEE+000/13:34:57.333
Duration	00000003:00:0	000/00:03:02.000	000/00:03:02.000
Top Label	24INGLOCOL01-		
Bottom Label			
Plot Key	Type	SCI	
CDS Bytes	Report Options	BOTH	Scan Platform
CDS Source	OAP	Spin State	DUAL DMS
			No No
Observation Objective			
Ride-along with SSI's global color observation. NIMS returns single scan north/south across center of disk.			
Data Returned			
Design Detail			
Long Map, Gain state 2.			
Ride-along behind SSI global color observation.			
Centered at about 245 degrees West Longitude, 0 degrees Latitude.			
NIMS returns a single north/south jailbar across center of disk.			
Pointing problems caused the observation to not be centered on Io's disk.			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM360			
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NIMS Software Reload		ACTIVITY ID: 24INRELOAD01-	
		START TIME: 99-285/04:17:36.733	
Activity ID: Orbit 24 Target I Inst N OAPEL RELOAD 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 10/11/99 Week 41
Start	IEE+CDS 00001409:00:0	99-285/04:17:36.733	IEE+000/23:44:39.333
End	IEE+CDS 00001415:00:0	99-285/04:23:40.733	IEE+000/23:50:43.333
Duration	00000006:00:0	000/00:06:04.000	000/00:06:04.000
Top Label	24INRELOAD01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Reload NIMS Software after the spacecraft is outbound outside of Ganymede's orbit.			
Design Detail			
Use a standard set of commands to halt the instrument, load the software and reinitialize the instrument.			
37PL - Halt NIMS Processor			
37MRL - Memory Reallocate			
6MCPY - Copy flight software from CDS to NIMS 1000			
6MCPY - Copy flight software from CDS to NIMS 1598			
37IRT - Instrument Reset			
37MN - Memory Normal			
37IST - Chopper Reference.			
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NIMS Chopper Off		ACTIVITY ID: 24INCHOPOF01-	
		START TIME: 99-285/04:23:40.733	
Activity ID: Orbit 24 Target I Inst N OAPEL CHOPOF SeqNo 01 -			
Title	NIMS Chopper Off		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date 10/11/99 Week 41
Start	IEE+CDS 00001415:00:0		99-285/04:23:40.733
End	IEE+CDS 00001425:00:0		99-285/04:33:47.400
Duration	00000010:00:0		000/00:10:06.667
Top Label	24INCHOPOF01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	300	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
Turn Off the NIMS Chopper.			
Design Detail			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99

NIMS Real-Time PCT Calibration		ACTIVITY ID: 24NNPCTRLT01-	
		START TIME: 99-295/08:59:56.866	
Activity ID: Orbit 24 Target N Inst N OAPEL PCTRLT SeqNo 01 -			
Title	NIMS Real-Time PCT Calibration		Instrument
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 10/22/99 Week 43
Start	PCT+CDS 0:00:0	99-295/08:59:56.866	PCT+000/00:00:00.000
End	PCT+CDS 00000465:00:0	99-295/16:50:06.866	PCT+000/07:50:10.000
Duration	00000465:00:0	000/07:50:10.000	000/07:50:10.000
Top Label	24NNPCTRLT01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	275	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	Yes
		DMS	No
Observation Objective			
<p>This observation is an NIMS photometric calibration usint the PCT target. The data will be used to calibrate the NIMS visible detectors. The calibration data will be returned using Real-Time telemetry. At this time the off sun angle is about 2.0 degrees.</p>			
Data Returned			
Design Detail			
<ol style="list-style-type: none"> <li>1) Turn off PCT heaters 6 hours before calibration.</li> <li>2) Scan Platform is at Safe/Unstow (cone = 153.00, clock = 0.00)</li> <li>3) Chopper on, Gain State 4,</li> <li>4) Set NIMS to Long Map Mode, ETB = PCT252, Mirror Blocking (1B, 1B) (11011, 11011)</li> <li>5) Select 2 RIMs of Dark in Real-Time (Return 2 LM grating cycle)</li> <li>6) Slew to PCT (cone 54.88, clock = 244.07)</li> <li>7) Select 10 RIMS of PCT in Real-Time (Return 10 LM grating cycles)</li> <li>8) Slew to Safe (cone = 153.00, clock = 0.00)</li> <li>9) NIMS to Safe Mode, Reset Mirror Blocking (00,00) (00000, 00000)</li> <li>10) Chopper Off.</li> </ol>			
Grating Stuck			
Fixed Long Map (XLM), Gain 4, Grating Start 0, R/T, PCT252			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99

NIMS RCT Real Time Calibration		ACTIVITY ID:	24NNRCTRLT01-		
		START TIME:	99-312/17:59:52.666		
Activity ID: Orbit 24 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	11/18/99	Week 82
Start	RTA+CDS	00000000:00:0	99-312/17:59:52.666	RTA+000/00:00:00.000	
End	RTA+CDS	00000787:00:0	99-313/07:15:37.332	RTA+000/13:15:14.666	
Duration		00000787:00:0	000/13:21:48.666	000/13:15:14.666	
Top Label	24NNRCTRLT01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	450	Report Options	BOTH		
CDS Source	OAP	Spin State	DUAL	Scan Platform	No
			DMS		No
Observation Objective					
<p>This observation is a NIMS radiometric calibration using the RCT target. The data will be used to calibrate the NIMS thermal detectors. The calibration data will be returned using Real-time Telemetry</p> <p>The NIMS OPCAL has been included in the RCT calibration for GEM. Perform NIMS Optical Calibration to calibrate the NIMS grating.</p> <p>This is a GEM Library Sequence The Dark cone angle must be selected using Pointer.</p> <p>Data Returned</p>					
Design Detail					
<ol style="list-style-type: none"> <li>1) Turn on RCT Heaters for 12 hours.</li> <li>2) Set Engineering Variable Map to return NIMS Temps more frequently.</li> <li>3) Set NIMS to Long Map Mode, Gain state 1, Chopper Reference, Mirror Blocking (11011,11011), ETB=RCT252.</li> <li>4) Pause playback before using scan platform.</li> <li>5) Slew to Dark (cone = 119.7), return 1 grating cycle (12 mf) in R/T</li> <li>6) Slew to RCT (cone = 0.0), return 2 grating cycles (12 mf) in R/T</li> <li>7) Slew to Dark (cone = 119.7), return 1 grating cycle (12 mf) in R/T</li> <li>8) Slew to Safe (cone = 153.0)</li> <li>9) Long Map, gain state 4, ETB=OPCAL48.</li> <li>10) Use 37IST to turn on OPCAL Lamp (two times).</li> <li>11) Select NIMS Real Time 1 Rim OPCAL, 1 Rim Dark, 1 Rim OPCAL</li> <li>12) Set NIMS to Safe Mode and turn off Chopper.</li> <li>13) Resume Playback after using scan platform.</li> </ol> <p>Fixed Long Map (XLM), Gain 1, Grating Start 0, R/T, RCT252 Fixed Long Map (XLM), Gain 4, Grating Start 0, R/T, OPCAL48</p>					
Galileo Activity Plan Form			09/28/99	10:48:23	rev 1/99

## Chapter 6 - Edit Tables

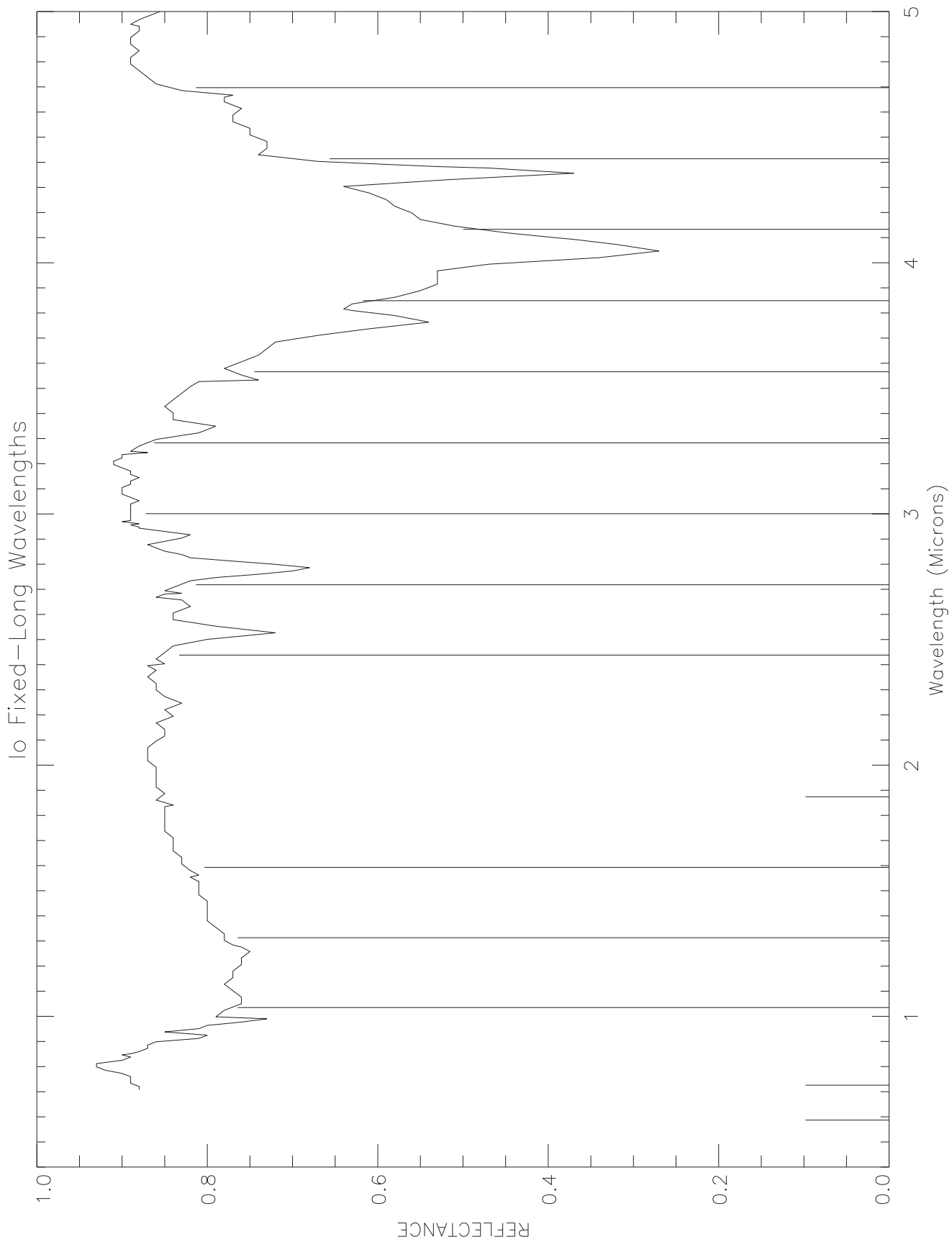
### Contents

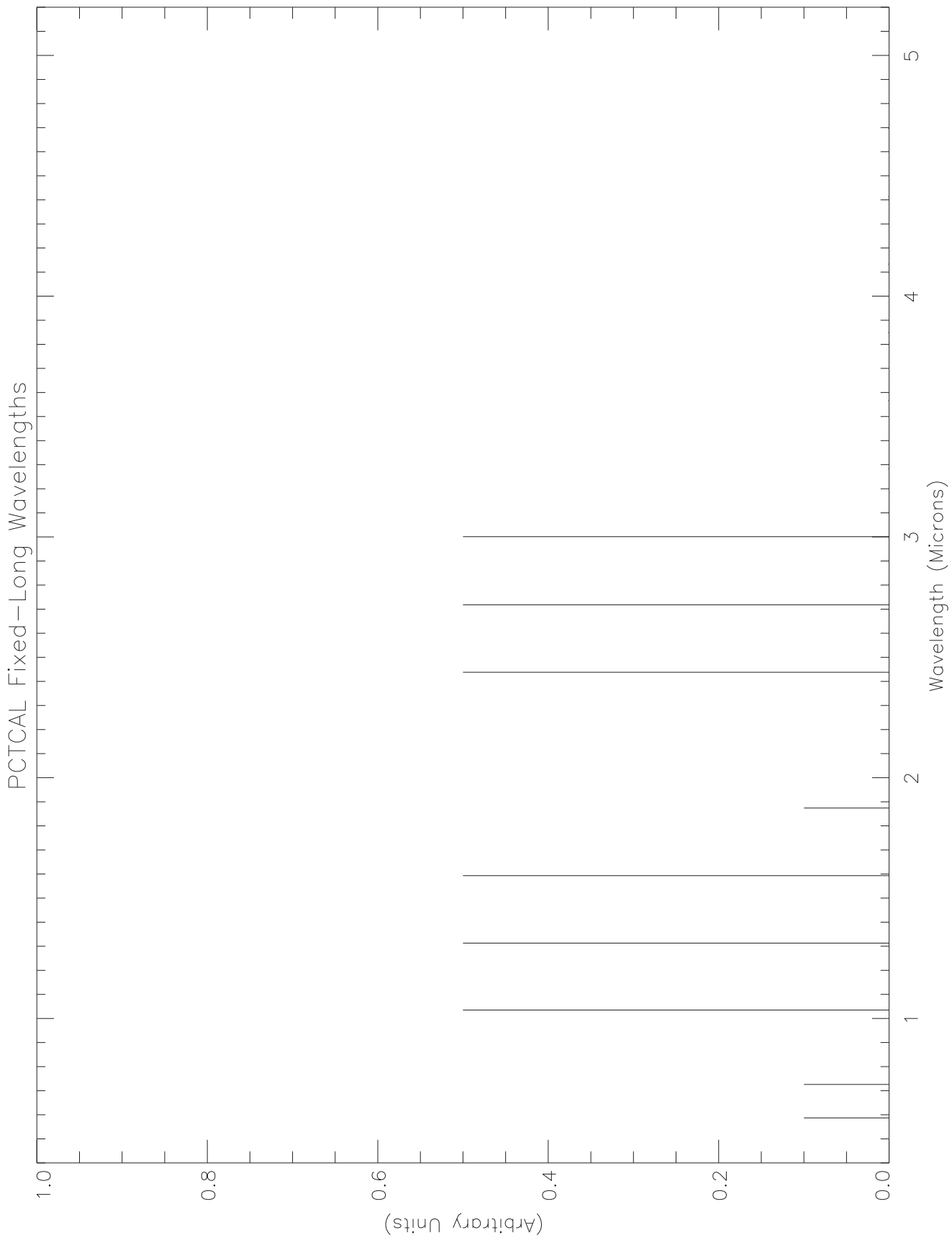
	Sub-Section	Page
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6.2	Io .....	3
6.3	PCT .....	4
6.4	RCT .....	5

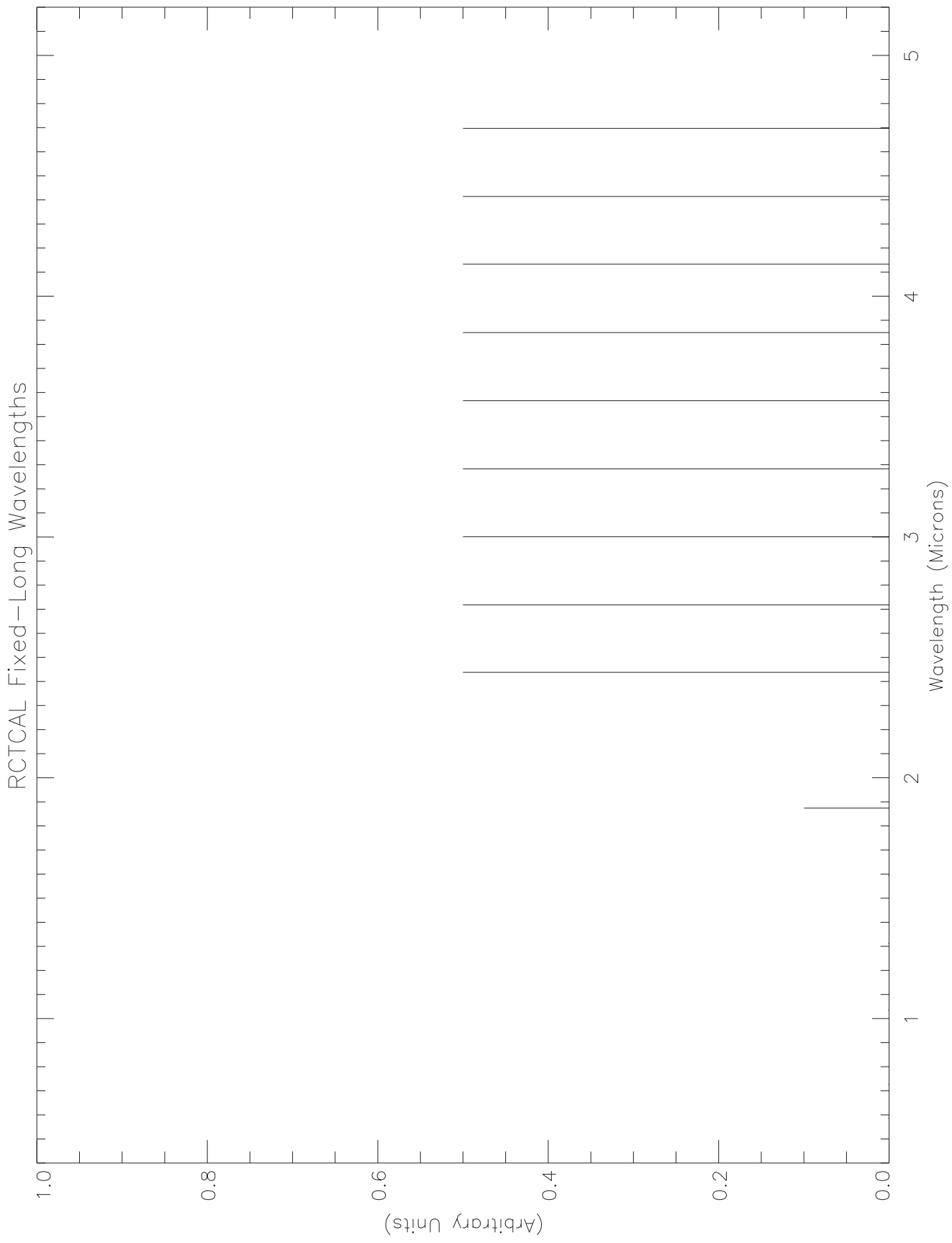
## Introduction to Chapter 6

### NIMS Edit Table Plots

This chapter contains plots of the NIMS Edit Tables used in I24. 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.









## Chapter 7 - Data Return

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## Introduction to Chapter 7

This chapter is a report on the NIMS data return for the I24 orbit. Due to the low downlink data rates available for Galileo Jupiter Operations and other unforeseen and unpredictable events during the I24 Encounter and Cruise, not all NIMS data recorded on the tape recorder or selected in real-time were returned. The previous 6 chapters nominally describe the planning and intention of the NIMS observations for this orbit, except the obstab section in chapter 4 which was updated to give the latest parameters for the data that were actually returned.

There were sixteen autonomous reloads of the NIMS RAM code from CDS during the I24 encounter, one just before each science observation. No primary observations were lost due to a NIMS processor halt. A single unprotected ride-along observation was lost due to an apparent processor halt. 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 instrument.

The spacecraft safed due to a CDS memory error during I24 inbound. CDS was restarted and the sequence recovered in time for the I24 Io Flyby.

The plots on the pages 3, 4 and 5 show the geometry of the NIMS I24 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 through 9 summarize the 'final' playback model for the 'returned' I24 data returned during I24 cruise.

The text on page 10 gives a 'recap' of the I24 playback events which affected which observations were returned.

A Timeline of I24 playback events is on pages 10 through 19.

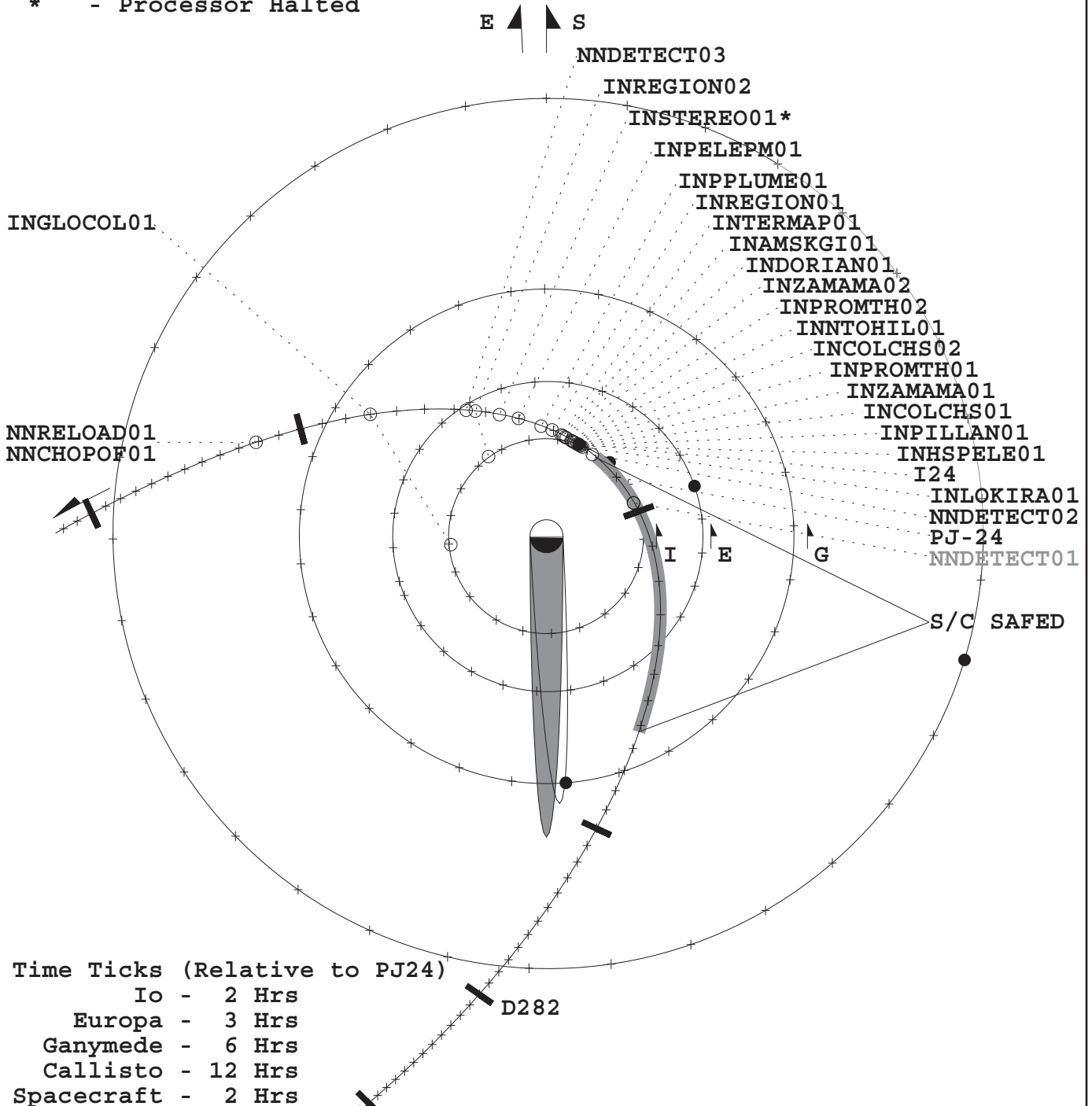
The text on pages 20 through 22 describes the I24 NIMS and Spacecraft Anomalies.

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 I24 OBSERVATIONS

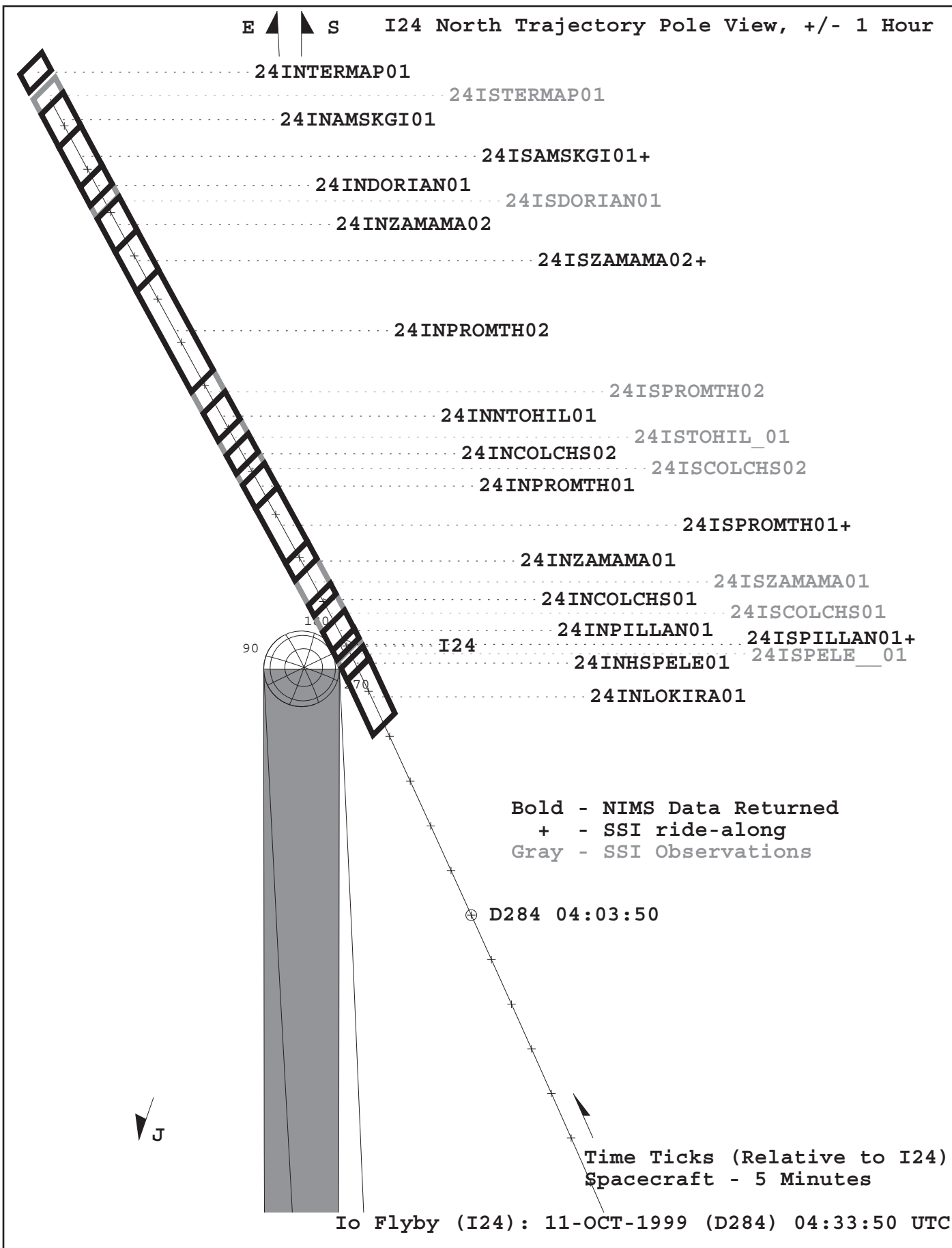
**Bold** - Returned  
 Gray - Not Returned  
 \* - Processor Halted



Io Flyby (I24): 11-OCT-1999 (D284) 04:33:50 UTC  
 Perijove (PJ24): 11-OCT-1999 (D284) 02:03:35 UTC

I24 North Trajectory Pole View

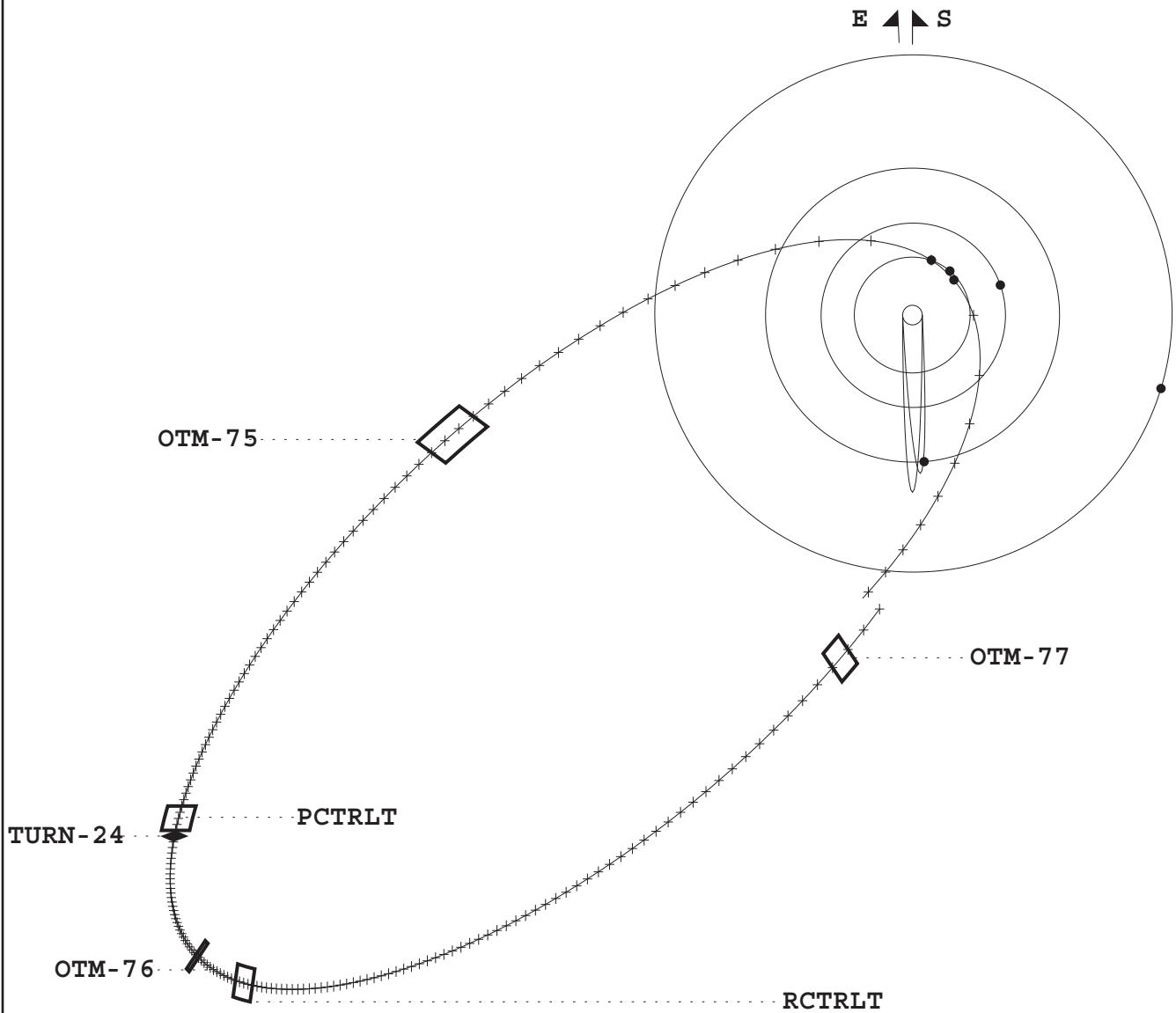
# NIMS & SSI I24 IO FLYBY OBSERVATIONS



# NIMS I24 CRUISE CALIBRATIONS

Io Flyby (I24): 11-OCT-1999 (D284) 04:37:21 UTC  
Perijove (PJ24): 11-OCT-1999 (D284) 02:05:11 UTC  
Apojove (AJ24): 02-NOV-1999 (D306) 17:00:00 UTC

Time Ticks (Relative to I24)  
Spacecraft - 6 Hours



I24 North Trajectory Pole View, Perijove to Perijove

# NIMS I24 DATA RETURN

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating	Grating	Record	PSID
					Start	Offset	Format		
24NNDETECT01	Grating Step Test								
24NNDETECT02	Grating Step Test								
24INLOKIRA01-	Io Loki Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INHSPLE01-	Io Pele Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INPILLAN01-	Io Pillan Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INCOLCHS01-	Io Colchs Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INZAMAMA01-	Io Zamama Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INPROMTH01-	Io Prometheus Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INCOLCHS02-	Io Colchs Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INNTOHIL01-	Io Tohil Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INPROMTH02-	Io Prometheus Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INZAMAMA02-	Io Zamama Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INDORIAN01-	Io Dorian Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INAMSKGI01-	Io Amskgi Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INTERMAP01-	Io Termap Obs	I24ILM442	I24ILM360	LM	3	0	4	MPW	
24INREGION01-	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INPLUME01-	Io Plume Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INPELEPM01-	Io Pele Plume Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INREGION02-	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24NNDETECT03	Grating Step Test								
24NNRECTRLT01-	RCT Calibration	I24RCT252	R/T	LM	1	0	4	R/T	
24NNROPAL01	NIMS OPCAL	I24OPCAL48	R/T	LM	4	0	4	R/T	
24NNPCTRLT01-	PCT Calibration	I24PCT252	R/T	LM	4	0	4	R/T	
24INLOKIRA01-	Io Loki Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INPROMTH02-	Io Prometheus Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INREGION01-	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INPLUME01-	Io Plume Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INPELEPM01-	Io Pele Plume Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INREGION02-gf	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	

# NIMS I24 DATA RETURN

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating	Grating	Record	PSID
						Start	Offset	Format	
24INREGION02-	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INGLOCOL01+	Io Global Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INHSPLE01-gf	Io Pele Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24INPILLAN01+	Io Pillan Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INPROMTH01+	Io Prometheus Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INCOLCHS02-gf	Io Colchs Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INNTOHIL01-gf	Io Tohil Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INPROMTH02-gf	Io Prometheus Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INZAMAMA01+ (A)	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INZAMAMA01+ (C)	Io Zamama Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INZAMAMA02-gf	Io Zamama Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INAMSKGI01+ (A)	Io Amskgi Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INAMSKGI01+ (B)	Io Amskgi Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INAMSKGI01-gf	Io Amskgi Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INREGION01-gf	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INSTEREO01+	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INREGION02-gf	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	
24INGLOCOL01+gf	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	

# NIMS I24 DATA RETURN

Activity ID	Mode	Record	Wave-lengths	Record Time (sec)	PB Time (sec)	Selected Bits of Tape (sec)	Total Bits of Tape (sec)	Mode Cycle (sec)	Comp	Thold	RT	Total BTG (4% ahead)	Data Reducton Factor (sBOT/BTG)	Pass
24NNDETECT01														
24NNDETECT02														
24INLOKIRA01-	LM	MPW	360	300.00	150.00	1.73	3.46	8.667	1.20			1.0800	1.60	1
24INHSPLE01-	LM	MPW	360	52.02	51.40	0.59	0.60	8.667	1.23			0.3610	1.64	1
24INPILLAN01-	LM	MPW	360	52.02	51.40	0.59	0.60	8.667	1.30			0.3416	1.73	1
24INCOLCHS01-	LM	MPW	360	52.02	51.40	0.59	0.60	8.667	1.45			0.3063	1.93	1
24INZAMAMA01-	LM	MPW	360	52.02	51.40	0.59	0.60	8.667	1.28			0.3469	1.71	1
24INPROMTH01-	LM	MPW	360	52.02	51.40	0.59	0.60	8.667	1.17			0.3796	1.56	1
24INCOLCHS02-	LM	MPW	360	52.02	51.40	0.59	0.60	8.667	1.23			0.3610	1.64	1
24INNTOHIL01-	LM	MPW	360	52.02	51.40	0.59	0.60	8.667	1.11			0.4001	1.48	1
24INPROMTH02-	LM	MPW	360	420.00	214.00	2.47	4.84	8.667	1.12			1.6508	1.49	1
24INZAMAMA02-	LM	MPW	360	156.00	155.35	1.79	1.80	8.667	1.11			1.2092	1.48	1
24INDORIAN01-	LM	MPW	360	52.02	51.40	0.59	0.60	8.667	1.22			0.3640	1.63	1
24INAMSKGI01-	LM	MPW	360	156.00	155.35	1.79	1.80	8.667	1.12			1.1984	1.49	1
24INTERMAP01-	LM	MPW	360	78.00	77.34	0.89	0.90	8.667	1.23			0.5432	1.64	1
24INREGION01-	LM	MPW	360	1,920.00	966.00	11.13	22.12	8.667	1.20			6.9549	1.60	1
24INPPPLUMB01-	LM	MPW	360	300.00	154.00	1.77	3.46	8.667	1.22			1.0906	1.63	1
24INPELEPM01-	LM	MPW	360	300.00	157.00	1.81	3.46	8.667	1.22			1.1118	1.63	1
24INREGION02-	LM	MPW	360	986.00	547.00	6.30	11.36	8.667	1.33			3.5533	1.77	1
24NNDETECT03														
24NNRCTRLT01-														
24NNROPAL01														
24NNPCTRLT01-														
24INLOKIRA01-	LM	MPW	360	300.00	158.00	1.82	3.46	8.667	1.20			1.1376	1.60	2
24INPROMTH02-	LM	MPW	360	420.00	214.00	2.47	4.84	8.667	1.11			1.6657	1.48	2
24INREGION01-	LM	MPW	360	1,920.00	962.00	11.08	22.12	8.667	1.20			6.9261	1.60	2
24INPPPLUMB01-	LM	MPW	360	300.00	154.00	1.77	3.46	8.667	1.15			1.1570	1.53	2
24INPELEPM01-	LM	MPW	360	300.00	151.00	1.74	3.46	8.667	1.20			1.0872	1.60	2
24INREGION02-gf	LM	MPW	360	986.00	127.00	1.46	11.36	8.667	1.30			0.8440	1.73	2



# NIMS I24 DATA RETURN

Activity ID	Mode	Record Format	Wave-lengths Returned	Record Time (sec)	PB Time (sec)	Selected Bits of Tape (sBOT (Mbits))	Total Bits of Tape BOT(Mbit)	Mode Cycle (sec)	Comp	Thold	RT	Total BTG (4% ahead)	Data Reducton Factor	Pass
24INREGION02-	LM	MPW	360	986.00	447.00	5.15	11.36	8.667	1.30			2.9707	1.73	2
24INGLOCOI01+	LM	MPW	360	51.00	49.00	0.56	0.59	8.667	1.30			0.3256	1.73	2
24INHSPLE01-gf	LM	MPW	360	52.02	12.00	0.14	0.60	8.667	1.20			0.0864	1.60	3
24INPILLAN01+	LM	MPW	360	32.00	30.00	0.35	0.37	8.667	1.15			0.2254	1.53	3
24INPROMTH01+	LM	MPW	360	23.00	21.00	0.24	0.26	8.667	1.15			0.1578	1.53	3
24INCOLCHS02-gf	LM	MPW	360	52.02	36.00	0.41	0.60	8.667	1.20			0.2592	1.60	3
24INNTOHIL01-gf	LM	MPW	360	52.02	20.00	0.23	0.60	8.667	1.10			0.1571	1.47	3
24INPROMTH02-gf	LM	MPW	360	420.00	23.00	0.26	4.84	8.667	1.11			0.1790	1.48	3
24INZAMAMA01+ (A)	LM	MPW	360	14.00	12.00	0.14	0.16	8.667	1.15			0.0902	1.53	3
24INZAMAMA01+ (C)	LM	MPW	360	14.00	12.00	0.14	0.16	8.667	1.15			0.0902	1.53	3
24INZAMAMA02-gf	LM	MPW	360	156.00	30.00	0.35	1.80	8.667	1.10			0.2356	1.47	3
24INAMSKGI01+ (A)	LM	MPW	360	14.00	12.00	0.14	0.16	8.667	1.15			0.0902	1.53	3
24INAMSKGI01+ (B)	LM	MPW	360	14.00	12.00	0.14	0.16	8.667	1.15			0.0902	1.53	3
24INAMSKGI01-gf	LM	MPW	360	156.00	30.00	0.35	1.80	8.667	1.10			0.2356	1.47	3
24INREGION01-gf	LM	MPW	360	1,920.00	298.00	3.43	22.12	8.667	1.20			2.1455	1.60	3
24INSTEREO01+	LM	MPW	360	102.00	100.00	1.15	1.18	8.667	1.30			0.6646	1.73	3
24INREGION02-gf	LM	MPW	360	986.00	114.00	1.31	11.36	8.667	1.30			0.7576	1.73	3
24INGLOCOI01+gf	LM	MPW	360	51.00	11.00	0.13	0.59	8.667	1.30			0.0731	1.73	4
													42.9041	
													Alloc.	47.9620
													Over	-5.0579

## RECAP OF I24 PLAYBACK EVENTS

I24 represented the Galileo spacecraft's first return to the inner portions of Jupiter's magnetosphere since Jupiter Orbit Insertion (JOI), with the goal of imaging Io at high resolution. The more intense radiation experienced apparently caused a number of problems. A spacecraft safing occurred approximately 19 hours prior to Io close approach, but a revised encounter sequence was transmitted to the spacecraft in time for recording of the planned close approach observations. A location in one of the CDS memory buffers was permanently damaged, necessitating some adaptive maneuvering. Although no NIMS software crashes were noted, a problem involving either the grating drive electronics or the physical grating drive itself resulted in a "stuck" grating. It was determined that the grating appeared to have become stuck at one end of its range of motion, which had the effect of reducing the number of wavelengths that could be recorded from 360 (15 detectors x 24 grating steps) to 15 (15 detectors, single grating position). In addition, detectors 1, 2, and 7 began to record very low signal levels, due apparently to the shift in wavelength (due to the stuck grating) to a range where obscuration by the built-in blocking filters became a problem. On the other hand, oversampling of the 12 (or 15) wavelengths (due to no grating motion) resulted in high-quality, low-noise observations with great spatial detail. The extraordinary Io images that resulted received considerable attention, particularly since many of SSI's initial images came down in scrambled form.

The following timeline details the most significant events of the I24 playback period. Most of the text below is excerpted from messages issued at the time.

### I24 Playback Events Timeline (08-31-99 to 11-24-99)

- 08-31-99: (M. Segura) The I24 sequence is designed very differently from anything we've ever done before. The I24 closest approach period has minimal to no stand-alone NIMS observations. All the targeting or pointing is done within the SSI observations. The bulk of the observations are sit and stare with NO planned scan platform motion. The observations have been very tightly integrated in time and tape space as well.
- 09-02-99: (J. Gross) Here are your first I24 PB allocations, based on the I24ABA and I24BDA products. The team allocations are based on percentages derived from the GEM OPG, with this minor exception: at the June PSG PPR was allocated 2.0 MB "off the top" for Jupiter radiometry experiments. SSI/NIMS/UVS/MWG/DDS have all seen their OPG percentages decrease slightly in order to accommodate PPR.  
NIMS 42.605
- 09-16-99: (J. Gross) I've looked at the capability in the latest I24 cruise product (I24BFA) and we took a slight 2.5% hit. Here are your updated allocations:  
NIMS 41.742

I24 Playback Events Timeline (08-31-99 to 11-24-99)

- 09-23-99: (J. Gross) There is a PBT delivery on the schedule for Thursday, Oct 7 (final I24B product is out Oct. 5), but we will most likely not need this delivery BEFORE playback initiates late Monday the 11th.
- 09-30-99: (J. Erickson) Decision Regarding Use of DMS Turns and DMS Track Changes in I24A. The purpose of this memo is to document the decision to use all Track Changes and no DMS Turns in I24A.
- Background: The goal in developing the I24A DMS strategy was to maximize the chances that the highest priority I24A science would be successfully recorded. The highest-priority science was the recordings roughly +/- one hour around Io closest approach, which used the entirety of Tracks 3 and 4. The nominal record plan began on Track 2, executed a DMS Turn from Track 2 to Track 3, executed a Track Change from Track 3 to Track 4, and executed a DMS Turn from Track 4 to Track 1. The record sequence then ended on Track 1. However, questions were raised about the use of DMS Turns. Testbed testing showed that there are a number of possible fault scenarios which could result from a Despun Bus Reset during a DMS Turn. A single Despun Bus Reset during a DMS Turn with BURP enabled could result in the DMS continuing to slew into the marker for 50 tincs until it is halted by fault protection. This would result in the loss of further I24A science recordings, but would not be fatal to the DMS. Based on the statistics of the Despun Bus Resets that have occurred up through and including C23, the total probability of this failure is estimated at 0.3 - 6.9%. A single Despun Bus Reset during a DMS Turn with BURP enabled could result in the DMS failing to recognize the edge of the marker as it slews out of the marker on the desired track. The DMS then continues slewing toward the opposite end of the tape in search of the other marker. This slew would be stopped by fault protection 50 tincs into the second marker. This fault would result in the loss of all I24A recordings after the start of the DMS Turn, but would not be fatal to the DMS. However, if a second Despun Bus Reset occurred during the slew across the tape, it could result in the tinc counter being reset in the middle of the tape. This could result in subsequent record activities writing over the marker and onto the tape beyond the marker. If the Beginning of Track marker is overwritten in this fashion, it is believed that the DMS could be recovered in time for I25A. If the End of Track marker is overwritten, it is believed that this would be a catastrophic loss of the tape recorder. The total probability of the two Despun Bus Resets resetting the tinc counter in the middle of the track is estimated at 0.01 - 0.2%.

## I24 Playback Events Timeline (08-31-99 to 11-24-99)

A single Despun Bus Reset during a DMS Turn with BURP disabled will result in spacecraft safing and the loss of further recording in I24A, but would not be fatal to the DMS. Total probability of this failure is estimated at 1.7 - 17.2%. However, there are also risks associated with not doing DMS Turns. The function of the DMS Turn is to re-synchronize the tape and the CDS knowledge of the tape position by slewing to the edge of the marker and resetting the tinc count. This mitigates the problems that arise in the event that the DMS sticks and slips, which can result in a large mismatch between the actual tape position and the CDS tinc count. However, throughout the Prime Mission and GEM, there have been approximately 35000 DMS start/stop cycles with no evidence of sticking and slipping. Therefore the probability of sticking and slipping is estimated to be in the range of 0.003%.

Decisions: The two DMS Turns in I24A will be replaced with Track Changes. The risks associated with doing DMS Turns, either with BURP enabled or disabled, were deemed unacceptably high, given the above statistics. The cost of doing all Track Changes in I24A necessitated cuts of 140 tincs to the Track 1 record plan in order to meet the DMS rules on accumulated uncertainty and margin. The affected teams, SSI and NIMS, agreed that these cuts were preferable to the risks associated with doing DMS Turns.

- 10-10-99: Start of I24 encounter (04:00 UTC).
- 10-10-99: Spacecraft enters safe mode at approximately 09:30 UTC.
- 10-11-99: Perijove occurs at 02:03 UTC.
- 10-11-99: (M. Segura) The latest news is: Uplink of the I24 prime sequence was successful. The encounter load picked up ~ 284/03:30:00 SCET.
  2. The instrument telemetry indicates all is well. The hardware status indicates chopper ref/gain state 4 and the clock reading indicates active phase 2 software just at the first memory copy command in the first grating step test segment.
  3. Other engineering telemetry indicates that the scan platform and DMS are in working order and recording our first Io observation.
  4. We did see a rise in temperature of the electronics of 5 DN but that dropped off fast and the instrument is now sitting at 169 DN as it was prior to the safing evnt.
- 10-11-99: Io close approach occurs at 04:33 UTC.

I24 Playback Events Timeline (08-31-99 to 11-24-99)

- 10-12-99: (M. Segura) The memory error or corruption occurred in the circular buffer which stores the PPR Burst to Tape data and the NIMS LPU and LNR data on the record side of things (data is moved from instrument to buffer and then on to tape) and all SSI data is placed in that buffer area on the playback side (data is moved from tape to buffer for editing and then telemetered to ground). This memory error could well be a transient or a permanent memory failure and testing to determine which is the case will occur over the next few days.  
Meanwhile - all except the first BPT of PPR data was lost in I24 as well as the MWG torus recording (the BPTs due to the memory error and the torus due to safing recovery time). This has implications for both the playback of I24 data and the taking of I25 data for NIMS. The I24 data playback is a positive impact for now. The project, in order to give the troops time to diagnose the memory corruption (transient or permanent), pulled out all the SSI data return from the first few segments of playback. This means that all of the NIMS closest approach data should be on the ground by Monday, Oct 17th. The BTG allocation will undoubtedly increase somewhat due to the loss of the torus data.
- 10/15/99 (J. Erickson) The Galileo spacecraft is operating normally. The primary activities over the past week have been the pre-encounter safing on October 10, the safing recovery, the Io 24 encounter, and the beginning of the Io 24 playback. At 3:09 a.m. PDT ground receipt time (19 hours prior to the Io 24 close approach on 10/10, a memory chip error caused a spacecraft safing. The spacecraft was returned to normal operations, and a revised encounter sequence was transmitted to the spacecraft to avoid the use of the suspect memory area. This was accomplished in time to resume normal encounter operations at 8:00 p.m. ground receipt time. All observations for Io close approach were made as planned, but some pre-encounter PPR observations and fields and particles Io torus recording was not accomplished due to the memory anomaly.  
Playback of the Io 24 data began on 10/11, but the initial playback will be done without playback of SSI data. The bad memory chip is located in a buffer area used for recording three types of data (PPR and two types of NIMS), and is also used for the playback of imaging data. Memory testing is continuing, in order to identify the particular bit (or bits) that is bad, with a goal of beginning imaging data playback during the week of 11/18. The area of failed memory has been isolated to a unique 127-byte area.
- 10-15-99: Problems with detectors 1, 2, and 7 in data tubes are reported (J. Shirley, R. Mehlman). This is the first indication of the stuck grating.

I24 Playback Events Timeline (08-31-99 to 11-24-99)

10-20-99: (J. Gross) Duane and I have come up with a plan for releasing the "unusable" MBTG from MWG and PPR. After estimating the remaining need for BTG for PPR and MWG, there were 41.5 MB available for release. We set aside 13.5 MB as SPOT Margin to cover expected/feared station losses in the coming weeks. That left 28 MB to be given out. The OPG split between SSI/NIMS was roughly 3:1, so SSI was given 21 additional MB and NIMS received 7 MB.

Therefore, as of Monday AM, October 18, here is how the allocations v. usage for each team looked:

	TOTAL	PB	PB	RTS	UNUSED
NIMS	48.582	47.962	37.129	0.620	10.833

2-Pass inefficiency margin = 10.481 MB

SPOT Margin = 15.5 MB

10-22-99: A revised version of our playback table was delivered this afternoon. Ten sets of singles have been added to the table, commanding playback of the NIMS data embedded within the AI8, IM4, and IM8 SSI recordings. Only a minority of the SSI observations contained NIMS data in useful quantities, and in some cases we could not retrieve our data because we were issuing instrument commands to NIMS while the SSI data was being recorded. (The I24 sequence was packed very tightly and therefore commands to reload the NIMS software were sometimes placed within the periods when SSI data was recorded).

For all of the ride-along observations listed below we will receive one (or more) strip(s) of 20 pixels, in which data recorded over at least 0.5 of an instrument cycle is present. The total downlink bits required amounts to about 1.9 Mbits. The new observation names are differentiated from our own by the addition of the plus sign (+) at the end of the name. In the playback singles, in addition, the observation description field contains the words "with SSI."

Observation	Duration (sec)	PSID
24INPILLAN01+	30	EB
24INPROMTH01+	21	EC
24INTOHIL_01+	6	ED
24INZAMAMA01+ (A)	12	EF
24INSAMAMA01+ (B)	12	EG
24INZAMAMA01+ (C)	12	EH
24INAMSKGI01+ (A)	12	EJ
24INAMSKGI01+ (B)	12	EK
24INSTEREO01+	100	EL
24INGLOCOL01+	49	EZ

Of these, only the last can be returned in the current tape pass (2). The balance will come down during November.

I24 Playback Events Timeline (08-31-99 to 11-24-99)

- 10-22-99: (J. Erickson) Testing of the memory failure discovered at I24 was completed on Saturday, October 16. There is a hard failure in HLMB in an area used as a buffer during burst PPR to tape. Fortunately, the stuck bit is outside the area used for SSI playback processing and for NIMS LNR and LPU recording. Efforts are underway to patch the flight software to work around the bad address.
- A reserved box sequence was generated to acquire fields and particles, dusk side observations. This sequence uses the maneuver box and will end on November 1, a few days short of apojoive.
- Prior to OTM-75, some of the AACS parameter changes made for the I24 encounter were removed by real-time commanding. Fault monitors 1 (Acquisition Sensor Output), 23 and 24 (Spin Rate too high/low) were enabled and the default POR table was updated to match the current fault monitor states and to disable the spin detector. In addition, gyro scale factors were updated.
- Data from the auto-gyro drift calibration performed prior to OTM-75 indicated that the drift rate had significantly increased since the previous calibration. The drift rate is different from the scale factors. The later have not changed significantly.
- The I25 development schedule has been adjusted to allow for reworking the SSI observation strategy to use IM8 rather than AI8 imaging mode. The latter mode experienced difficulties at I24 in the high radiation environment.
- Real-time commanding is being done to investigate the NIMS grating behavior. Data returned from I24 indicate that the grating experienced a problem that progressively got worse during the encounter. NIMS memory loads are being checked for fidelity and then attempts will be made during the PCT calibration on Friday to move the grating to a new position. On Saturday, the instrument may be powered off, its memory reloaded, and the grating motion tested by an optical calibration.
- Playback of I24 data is proceeding nominally. We are currently playing back SSI data from the closest approach track. Because of the wide variety of known and potential problems facing playback, SPOT is holding an unusually large amount of margin (15.5 MBTG). Bits that were initially allocated to returning the MWG's recording of the Io torus passage and for PPR BPT observations have been re-distributed as (1) 13 days of RTS for the MWG in the dusk sector near apojoive, (2) additional playback BTG to NIMS and SSI, and (3) SPOT margin.
- 10-22-99: (M. Segura) The command conference for the power cycle, reload, and opcal has occurred and all were approved. The op-cal/e-cal will occur at 297/04:48 SCET ~ between 12 midnight and 1 am PDT Saturday/ Sunday.

I24 Playback Events Timeline (08-31-99 to 11-24-99)

Due to I25 workload, the anomaly investigation activities will go on hiatus until Wednesday next week. SSI is reworking every observation in the sequence except small satellites which means rework of some magnitude for us (yet to be determined). We have some adjustments to make including changing the LPU records for Europa to MPW. (This was announced at 2:00 this afternoon.)

I'll be around to monitor for the instrument activities this weekend so that we can provide Erickson with an update (via e-mail) of the results. He is aware that the grating offset command yielded no change.

- 10-26-99: (J. Gross) As of 6 AM Tuesday morning, we were in Segment 11 at Track 1, Tinc 3227, playing back SSI Io Stereo. We are running about 1.5 days ahead, due to continued NIMS over-compression. To date we have returned 71.43 MB of data and have 5.16 MB of losses. We are currently about 37% of the way thru playback.
- 10-28-99: (J. Gross) I'd like to hear from each team when they think they will need another I24 PB update. Currently Segment 14 is the latest Segment on-board. Segment 15 begins with ISPROMTH01 (284/04:42) and is scheduled to go active next Thursday afternoon. That means that if you want to update Segment 15, we need to have it on board before then. We have no uplink passes available next Wednesday, so that means we'd have to uplink it Tuesday, which means an update to Segment 15 would have to be delivered on Monday, Nov 1 @ 3 PM.
- 10-29-99: Due to a shortage of timely uplink passes next week, an early playback table update was approved, with files due Monday. We are able to enter or modify commands in segment 15 and beyond. In this update I entered nine new sets of playback singles, all to fill gaps in data returned earlier. The gaps are in 24INPROMTH02, 24INREGION01, and 24INREGION02. In addition two sets of SSI ridealong singles from last week were deleted, as Frank pointed out that during the recording of those data the chopper was not at reference but at 63 Hz. The Project has approved a fourth pass over the tape in order to squeeze out the last little dregs of useful SSI data before playback terminates. It is conceivable that we may want to place more gap fill singles in the 4th pass, if gaps appear in our current gap fills (some of which are substantial). As of now we have about 5.6 Mbits of unused playback allocation (wish I had it in some earlier orbits). We will hold on to this, as there is no interest in trading bits in this orbit for scarcer bits in I25. These bits will serve as insurance for us and will at the same time help SSI to accomplish their goals, as there will be considerable inefficiency in the 4th pass. Our unused capability will offset some of this inefficiency.



I24 Playback Events Timeline (08-31-99 to 11-24-99)

- 11-04-99: (J. Gross) Next week's update will begin with Segment 19. That's the last segment in Pass 3. It begins at 284/10:45:56.733, which is the beginning of INREGION02. Anything in REGION02 or later can be affected for Pass 3. Also, this delivery is where I must have everyone's Pass 4 plan. There is theoretically an opportunity to do a final PBT update on Wed Nov 17. At that time there will be one week remaining in playback. Whether or not the teams will actually want/need to use that update port is TBD.
- 11-11-99: Our pass 3 gap-fills came down intact. In particular there are no gaps in the 3-Rim 24INREGION01 gap fill. Thus there is only one new set of singles in the table delivered today. This fills a small gap in our ridealong data (with SSI) on 24ISGLOCOL01, which will come down near the end of playback.
- 11-12-99: (J. Gross) As of 6 AM Friday morning, we were in Segment 18 at Track 1 Tinc 2920, playing back SSI Io Stereo. We were running less than a day ahead of the old schedule at that time. To date we have returned 145 MB and lost 10 MB. We are approximately 75% thru playback.
- 11-16-99: (J. Gross) As of 4 PM Tuesday, we were in Segment 20, Track 3, Tinc 4079, playing back SSI Io Zamama 01. We were running about one day ahead of the I24PFH schedule, for unknown reasons. To date we have returned about 171 MB and have losses of about 8.5 MB.
- 11-19-99: (W. Sible) The Galileo spacecraft is operating normally. The primary activity over the past week has been the playback of Io 24 recorded data. Playback is 92% complete, and is on schedule. Playback will complete on 11/23. We are still on schedule to modify the Command and Data Subsystem (CDS) to work around the bad memory location. The patch to change the PPR (Photo Polarimeter/Radiometer instrument) buffer use is now fully tested, and scheduled for uplink on 11/19/99.
- 11-23-99: Playback terminated as planned.
- 11-24-99: (T. V. Johnson) It has come to my attention that some of you are being asked questions about whether we have been completely open about difficulties and data losses during I24. Immediately following the encounter we put out a press release on the success of the encounter, but noted some of the problems we encountered and what we knew about them at that time. This was followed by the first I24 image press release which also described some of the problems with the instruments, including NIMS and the AI8 imaging mode. Since then we (you) have been very busy trying to understand the problems, revise I25 in response to those problems, and, of course, analyze the great data we got. We certainly want to avoid even the appearance of not being forthcoming about our problems. Therefore I am writing this to give you a brief update on where I think we are and how we did at I24, as objectively as I can.

## I24 Playback Events Timeline (08-31-99 to 11-24-99)

There were four main areas of science loss during I24:

- 1.) MWG: loss of the inbound torus recording due to spacecraft safing. This was an important but secondary objective. The primary near encounter MWG data are apparently great.
- 2.) PPR: loss of BPT (due to memory location). This eliminated many PPR observations including most global and regional maps. Ride-along observations on specific targets produced excellent data however.
- 3.) NIMS: grating inoperative. With the grating stopped NIMS operates in "fixed map" mode, producing 14 spectral channel maps for composition and thermal mapping. Major loss is the ability to search for new compositional components on the surface.  
[UVS grating has also been inoperative for the last two orbits. This is not a major impact to Io science in I24 or I25 but will impact auroral and plasma torus science in the GMM if we cannot get the grating working again.]
- 4.) SSI: AI8 anomaly. This is the most complex of the I24 problems, and we still don't fully understand it or its impact on the data. This affected 122 of the 156 images taken (the remaining 34 are actually better than expected due to less severe degradation by radiation noise than our worst-case models). Some of the affected AI8 images are usable - in fact most of the new images released at the 19 Nov. Space Science Update were reconstructed AI8 images - but many (the SSI team estimates ~90) are probably unusable. A brief description of the problem as we understand it currently was made available to the press at the Update and is posted on our Web site. To put the I24 data and problems in perspective you should keep several points in mind:
  - o The spacecraft is in good shape and several key elements for dealing with the radiation environment worked well - BURP and Single Star ID.
  - o All the experiments got excellent data and the science teams are extremely happy with the results.
  - o None of the problems resulted from bad design, sequence errors or sloppy work. The natural environment of Jupiter, which we are in the process of exploring, is the culprit. Everyone knowledgeable about Galileo expected some problems at Io at this stage of the mission. The spacecraft and its instruments are in fact doing far better than many of its designers dared to hope (wish I'd bet a few more bags of potato chips in the right places). If you want to play the Project Scientist's Percentage Game, I would estimate that, given significant hits in each major area (MWG and Remote Sensing), we got about 50% of what we tried for (what, you were expecting 70% maybe?). I think that's pretty darned good given the circumstances.

I24 Playback Events Timeline (08-31-99 to 11-24-99)

- o Painful as some these problems are to us, we are actually learning things from them that may help in the design of future missions to the system. Previous spacecraft (Pioneer, Voyager and Ulysses) were designed with large margins to survive brief flybys of Jupiter. Galileo is the first spacecraft where we can observe the effects of long term radiation dosage on our parts and radiation hard systems designs, far beyond the original design specifications. This in fact is one of the technical justifications for continued operation in GMM.

## NIMS Anomaly Report - I24 Sequence

The NIMS grating became stuck prior to the I24 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.

There was a single NIMS processor halt detected during the I24 Encounter.

The spacecraft safed due to CDS memory corruption. The error was resolved and a new sequence uploaded in time to save the I24 Io flyby.

### Stuck Grating

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.

## NIMS Anomaly Report - I24 Sequence

### Response to Stuck Grating Anomaly (I24)

When it was determined that the grating appeared to be stuck, the cause of this sticking was not known (and is still not clearly understood). Several attempts were made to try to 'unstick' the grating during I24 Cruise based on various models of how it could be stuck.

The first thing done (IAP ref 99S313) was to have CDS MRO the NIMS grating step position engineering data to ground that had been written to CDS RAM during the I24 Encounter (This procedure was developed in C21 to use the NIMS grating position engineering values to confirm the grating step size inflation). The MRO returned a value of 00x for all grating positions. This implied that the grating was not moving and that it is at an unusual location (00x).

The next step (IAP ref 99S315) was to command the NIMS grating offset to 7, instead of the nominal value of 4, in the middle of the PCT calibration to see if there was any effect. There was no noticeable change in the NIMS data after the grating offset change. The command to change the grating offset from 4 to 7 did not move the grating.

The third step (IAP ref 99S318) was to power cycle the NIMS instrument, reload the phase 2 software, change instrument mode to long map, perform MRO readout of the grating position engineering, perform 2 Opicals and 1 Ecal, again MRO to readout the grating position engineering then turn off the chopper. The MROs returned 00x again. The power cycle of the instrument did not 'free up' the stuck grating. The Opical calibration data did not 'see' the Opical lamp at .9 microns, which was interpreted to mean that the grating was not moving. The Ecal returned nominal values.

The fourth step (IAP ref 99S324 and 99S325) was an attempt to force the grating out of the stuck position by running the instrument in band edge mode (mode 8) for about 12 hours. The band edge mode that was commanded jumped between grating positions 11 and 23 every minor frame. After running in this mode for 6 minutes, the grating position engineering was MRO'd and an Opical performed. Eleven hours later the instrument was put into safe mode and the chopper turned off. The MRO returned 00x for the grating position and the Opical did not show anything different.

More drastic experiments were performed in I25 to free the stuck grating, to no avail.

## NIMS Anomaly Report - I24 Sequence

### Processor Halts

NIMS suffered a single processor halt in the outbound segment of I24 between planned NIMS observations. The NIMS observations after the halt were protected by a software reload that was executed before the start of the next observation. But the NIMS data in the ride-along observation 24INSTEREO01 was corrupted by the halt. This ride-along observation was not protected by a software reload since it was not originally planned for data return. The halt was inferred from an unusual NIMS hardware status word in the engineering data and from analysis of the returned data.

### Timing:

SCLK	Comments
5207881	HWSTAT Engr word: 11x (GS4, chopper ref) - nominal
5208008	Good SCLK
5208138	NIMS reload
5208142:00	Start 24INPELEPM01 (GS4)
5208146:80	End 24INPELEPM01 -- observation apparently OK
5208176	HWSTAT Engr word: 00x (GS2, 63hz chopper) (Uncommanded state - interpreted to be a sign that ) (something unusual had happened to NIMS)
5208212:13	Start 24INSTEREO01 (GS4, SSI ridealong)
5208213:63	End 24INSTEREO01 -- decompression erratic, 1/3 bad
5208219	HWSTAT Engr word: 00x (GS2, 63hz chopper)
5208241	HWSTAT Engr word: 00x (GS2, 63hz chopper)
5208294	NIMS reload
5208300	Start 24INREGION02 (GS2)
5208303	Good SCLK
5208316:17	End 24INREGION02 -- observation apparently OK
5208339	HWSTAT Engr word: 01x (GS2, chopper ref)

### Spacecraft Anomaly

A CDS memory chip error caused the spacecraft to safe during the inbound portion of the I24 encounter. The spacecraft was returned to normal operations, and a revised encounter sequence was transmitted to the spacecraft to avoid the use of the suspect memory area. This was accomplished in time to resume normal encounter operations before the Io flyby. All observations for Io close approach were made as planned, but some pre-encounter PPR observations and fields and particles Io torus recording were not accomplished due to the memory anomaly.

The CDS memory corruption occurred in the circular buffer which stores the PPR Burst to Tape data and the NIMS LPU and LNR data on the record side of things (data is moved from instrument to buffer and then on to tape) and all SSI data is placed in that buffer area on the playback side (data is moved from tape to buffer for editing and then telemetered to ground). This memory error proved to be a permanent memory failure. A patch to the SSI playback portion of the failure was tested and sent up to the spacecraft in time for I24 SSI data return. Coding of a patch to the PPR and NIMS portion of the memory failure was put off to a later time.

## NIMS Archived EDRs and CUBEs

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

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

Data Format

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

Data Types

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

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

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

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

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



Data Labels

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

Data Access

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

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

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

## Understanding the NIMS Mask

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

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

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

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

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

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

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