

NIMS GUIDE TO THE I25 ORBIT

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I25 Encounter starts 11/24/99,

I25 Playback starts 11/28/99

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 I25 Orbit for the NIMS Team. The aim of this guide is to provide detailed information on the various NIMS I25 observations and calibrations. Also included in this document is background information on the I25 orbit. This guide was produced before the start of the I25 orbit. After analysis of the NIMS I25 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 I25 orbit. Chapter 2 gives an overview of the I25 orbit and summarizes the NIMS science objectives for the I25 orbit using tables, spreadsheets and timelines. Chapter 3 contains diagrams of various aspects of spacecraft geometry for the I25 orbit. Chapter 4 summarizes the NIMS I25 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 I25 orbit.

For more information on the I25 orbit, please refer to the Galileo Orbit Planning guide and the Galileo Orbit Activity Plan for the I25 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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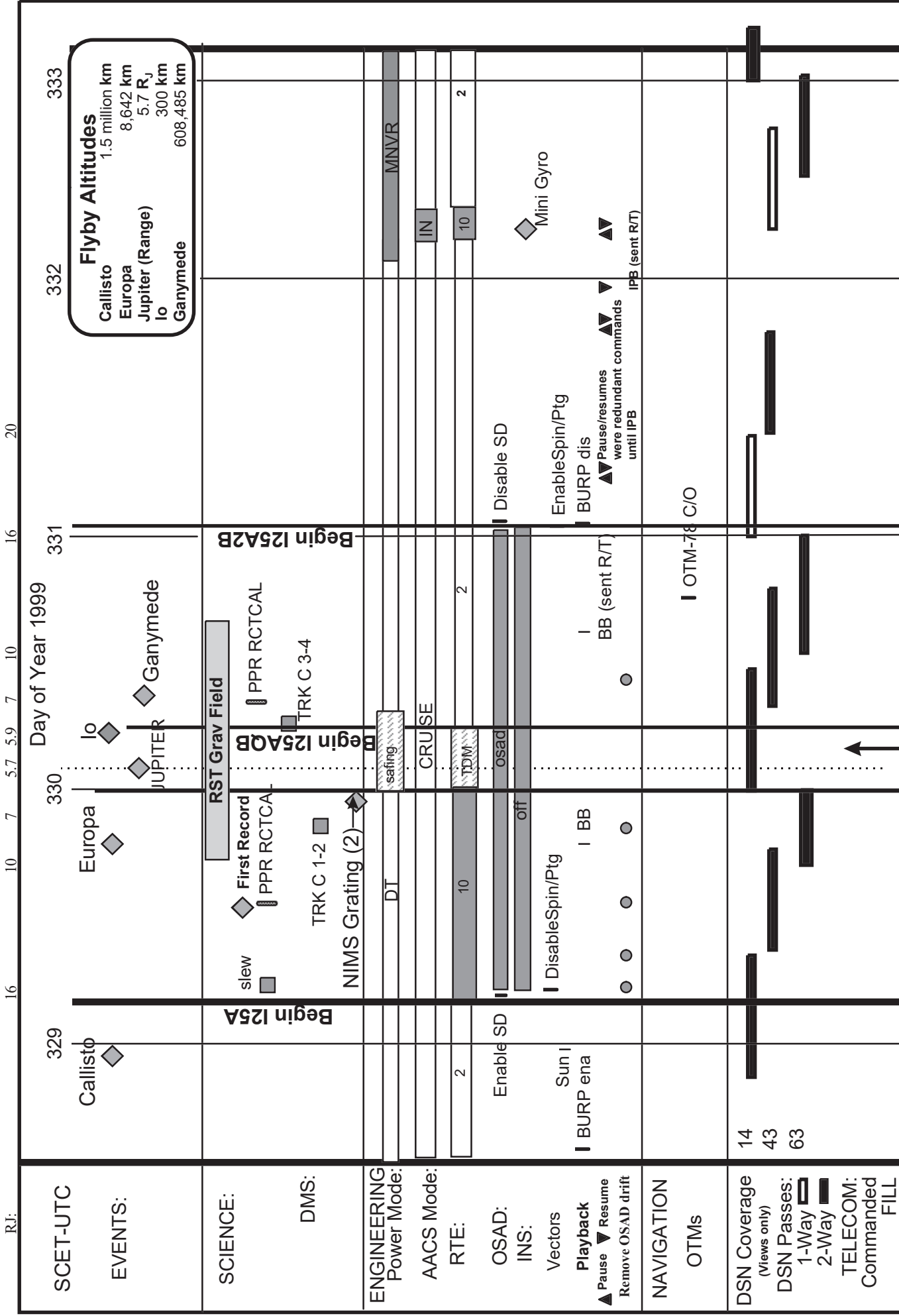
Introduction

This I25 orbit is the twenty-fifth of twenty-five orbits in Galileo's Tour of the Jovian system and the fourteenth orbit in the Galileo Europa Mission (GEM). I25 is the second Io Flyby of GEM. This orbit has a targetted satellite flyby of Io.

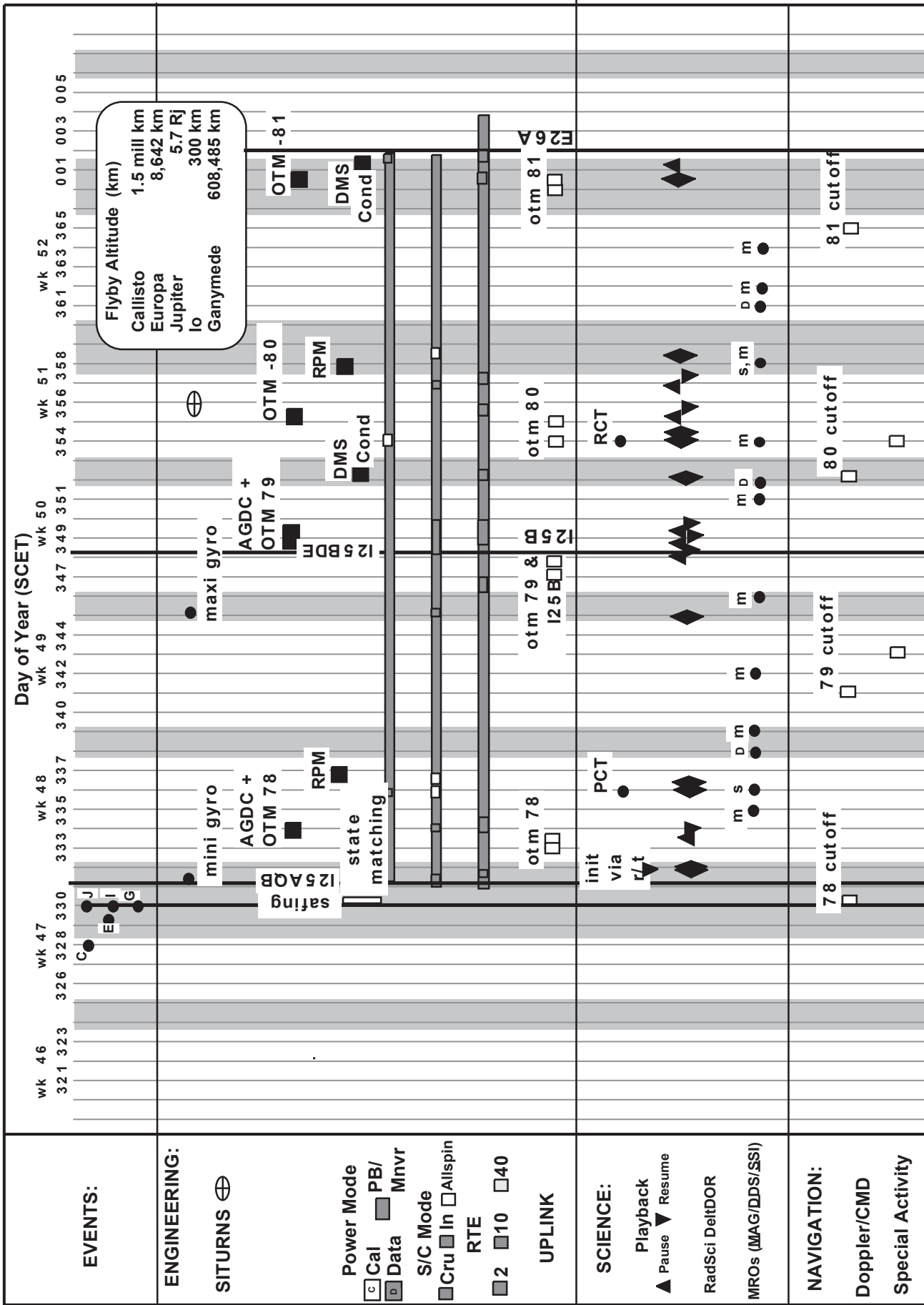
There are 12 autonomous reloads of the NIMS RAM code from CDS planned during the I25A encounter period, one just before each science observation. These reloads are in response to the on-going flight-anomalies where the NIMS RAM code takes some bit hits and halts the instrument during when the spacecraft is close to Jupiter. NIMS personnel will monitor the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

The I25 orbit is divided into 2 sequence loads: one Encounter Load (I25A) and one Orbital Cruise Load (I25B). The I25A load begins on D329 (11/25/99) and ends on D348 (12/14/99). This load contains the flyby of Io. The Cruise Load I25B runs from D348 to D001. Playback of the recorded data takes place during the Cruise phase, I25B. A high-level overview timeline of the I25 orbit can be found on the following two pages.

I25A Sequence Overview



I25B Overview



Note: I25A S/C activities were interrupted by safing at ~99-330/00:02 SCET due to a CDS memory protection error.

SST-PDF 03/17/00

Introduction

The following table lists the major events during I25, including NIMS Real Time observations, in UTC.

11/25/99	99-329/04:00:00	I25 Encounter Start
11/25/99	99-329/16:23:59	NIMS RAM Reload 01
11/25/99	99-329/16:28:52	E25 Europa Closest Approach
11/25/99	99-329/17:09:22	NIMS RAM Reload 02
11/25/99	99-329/19:16:46	NIMS RAM Reload 03
11/25/99	99-329/19:40:01	NIMS RAM Reload 04
11/26/99	99-330/00:02:00	S/C Safed
11/26/99	99-330/02:09:58	PJ-25 Jupiter Closest Approach
11/26/99	99-330/04:06:37	I25 Io Closest Approach
11/26/99	99-330/04:28:00	I25 Recovery Sequence Online
11/26/99	99-330/04:46:18	NIMS RAM Reload 09
11/26/99	99-330/04:53:39	NIMS RAM Reload 10
11/26/99	99-330/05:01:45	NIMS RAM Reload 11
11/26/99	99-330/05:07:49	NIMS RAM Reload 12
11/26/99	99-330/16:00:00	S/C Safed Again
11/27/99	99-331/01:38:40	Start I25 Playback
12/02/99	99-336/04:28:59	NIMS R/T PCT CAL (lost)
12/15/99	99-349/21:32:40	NIMS Optics Heaters Cycled
12/20/99	99-354/06:34:11	NIMS R/T RCT CAL
12/31/99	99-365/23:55:21	End I25 Playback

Chapter 2 - Orbit Overview

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Introduction to Chapter 2

This chapter gives an overview of the NIMS observations in the I25 Orbit.

The text on page 3 summarizes the NIMS science objectives for I25. The NIMS calibrations are discussed on page 3. Early data return and I25 playback are also discussed on page 3.

The I25 Integrated Io Observation Plan is presented on pages 4 through 6.

The table on page 7 is a time-ordered listing of the NIMS Oapels for I25.

The plot on page 8 shows the geometry of the NIMS I25 observations using a north trajectory pole view projection. The plot on page 9 shows the geometry of the NIMS I25 observations during the Io Flyby using a north trajectory pole view projection. The plot on page 10 shows the geometry of the NIMS I25 calibrations.

The spreadsheet on page 11 summarizes the various inputs for the NIMS I25 Observations. The spreadsheet on pages 12 and 13 summarizes the resource usage for the NIMS I25 observations.

The table on page 14 lists various NIMS I25 observing parameters: target latitude/longitude, range, cone angle, incidence angle (light), emission angle (view) and phase angle.

The timeline on pages 15 through 17 shows the placement of the I25 observations for all instruments during the I25 Encounter Period.

The tapemap on page 18 shows the placement of the I25 observations on the spacecraft's tape recorder.

The timeline on pages 19 through 24 shows the preliminary I25 playback schedule.

The NIMS I25 mosaic designs are summarized on page 25 and 26 in time-order.

NIMS I25 SCIENCE OVERVIEW

Io Science

The I25 Io sequence design is very similar to the I24 Io design. The I25 closest approach period contains very few 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 of 26 or 52 seconds. The I25 observations have been very tightly integrated in time and tape space as well.

25INTIERMS01 - high resolution nightside obs. of Tiermes hot spot.
25INSOPOLE01 - dayside 26 sec. tag-along obs. of South pole material.
25INPRMETH01 - 2 Rim limb-scan of Prometheus' eruption column.
25INSOPOLE02 - dayside 26 sec. tag-along obs. of South pole material.
25INEMAKNG01 - dayside 52 sec. tag-along obs. of Emakong Patera caldera.
25INITUPAN01 - dayside 26 sec. tag-along obs. of Tupan hot spot.
25INSAPPNG02 - dayside 26 sec. tag-along obs. of a Sapping region.
25INITUPAN02 - 9 Rim observation of the Tupan hot spot region.
25INEMAKNG02 - dayside 52 sec. tag-along obs. of Emakong Patera caldera.
25INGIANTS01 - dayside 104 sec. tag-along obs. of giant calderas.
25INCULANN01 - dayside 52 sec. tag-along obs. of Culann hot spot.
25ININTERM01 - dayside 52 sec. tag-along obs. of Gish Bar.
25INREGION01 - dayside 45 min. two swath regional map centered at 0 deg latitude, 133 deg W. longitude.

Europa Science

I25 is the first opportunity to observe Europa's Jupiter-facing hemisphere at high resolution. The loss of LPU mode and the stuck grating forced changes to the original Europa observation designs. There are 4 NIMS Europa observations in I25:

25ENNOPOLE01 - high resolution mosaic of north polar region.
25ENSUBJUP01 - mosaic of the equatorial sub-Jupiter region.
25ENEQUATR01 - single-swath east-west equatorial map.
25ENGLOBAL01 - three swath global map of the sub-Jupiter hemisphere.

Calibration

There are three NIMS calibration observations planned for I25: one PCT cal, one RCT cal and one OPCAL.

Early Data Return

There are three realtime observations in I25: One PCT calibration, one RCT calibration and one OPCAL.

I25 Playback

I25 playback is split into two passes through the tape. Some I25 data will not be recorded over in E26 and will be played back during E26 cruise.

I25 TAPE AND BTG PLAN

I. I25 TAPE PLAN OVERVIEW

Start on track 1 for Europa closest approach.
Approximately -7 hrs to Io C/A (+3 hrs from Europa C/A), change to track 2 for MWG recording and PPR Io.
-56 minutes to C/A, change to track 3 for Io closest approach.
+30 minutes after C/A, change to track 4.

II. TAPE ALLOCATIONS IN IO REMOTE SENSING GROUP:

We agreed to the following allocations:

Track 1: All Europa

Track 2: MWG and PPR (plus SSI small satellites)

Track 3:

SSI: 0.68 track
NIMS: 0.21 track
MWG: 0.11 track
PPR: ridealong

Track 4:

SSI: 0.5 track
NIMS: 0.5 track
PPR: ridealong

III. BTG ALLOCATIONS

Original OPG allocations:

MWG: 41 Mbits
NIMS: 23 Mbits
SSI Io: 44 Mbits
Europa: 12 Mbits
PPR: 2 Mbits
UVS: 1 Mbit
Reserve: 7 Mbits

I25 DETAILED IO OBSERVATION PLAN

Track 1: All Europa, details by Europa group

Track 2:

day/hr:mn observations

 329/22 to 330/01 MWG high-rate recording, inner Io torus region
 PPR Io Global mosaic.
 330/02 to 330/03 PPR Io Regional hot spot map
 330/03 to 330/03:16 PPR high-resolution Pele mosaic.

Track 3:

day/hr:mn	Min from Io C/A	Target	Target Lat/Lon	S/C Lat/Lon	Range	notes
330/03:46	-22 to -20	tape track turnaround				
56	-8 to -1	Tiermes P.?	+23, 351	-60, 320	600	NIMS, 7 minutes, nightside
4:00	0	S. Pole	-80, 90	-80, 85	300	1x8 AI8 and 1 IM8/240, NIMS 52 s
02	+2	Sapping	-53, 122.5	-61, 109	487	1x10 AI8 and 1 IM8/240, NIMS 52 s
04	+4	Prom column	-2, 155	-40, 118	1300	2 AI8 frames, 26 m/pixel, NIMS 2 minutes
08	+8	SP context	-80, 90	-25, 122	2386	1x6, 48 m/pixel, NIMS 26 s
10	+10	Emakong01	-2.8, 122.7	-20, 123	3187	1x8 AI8 and 1 IM8/240, NIMS 52 s
12	+12	Tupan P.	-18.8, 141.1	-16, 124	4016	1x4 AI8 and 1 IM8/240, NIMS 26 s
14	+14	Sap context	-53, 122.5	-13, 125	4863	1x6 AI8, 100 m/pixel, NIMS 26 s
16	+16	Shamshu P.	-9, 65	-11, 126	5721	1x6 AI8, 114 m/pixel, NIMS 26 s?
18	+18	Tupan P.	-18.8, 141.1	-8, 126	6587	NIMS mosaic, 9.4 minutes

Comments:

S. Pole target--terra incognito. Added later context mosaic--seems essential. We want to be ~10 degrees from the terminator; layout otherwise arbitrary.

Sapping target and context: targetting tweaks by Jeff Moore. We may well move this one around (+/- 5 degrees lat/long) after seeing C21 images. How to orient strip is also uncertain. Suggest Kari do a placeholder design that's easy for now.

Prometheus plume - clear-filter only, work around NIMS design.

I25 DETAILED IO OBSERVATION PLAN

Emakong 01-02 stereo. Laszlo will tweak targetting. Plan E-W trend, cover thick (?) flows running west from caldera.

Tupan - Kari's design looks fine, add IM8/240 frame.

Shamshu - Is slew over and back a problem? Could be spectacular images-oblique view of rugged topography near terminator. NIMS hot spot right on terminator.
Rosaly: are you sure NIMS wants to skip this?

Track 4:

day/hr:mn	Min from Io C/A	Target	Target Lat/Lon	S/C Lat/Lon	Range	notes
330/04:30-32	+30-32	tape track turnaround (3-->4)				
34	+34	Emakong02	-2.8, 122.7	-2, 130	13631	1x3 IM8/240, NIMS 52 s
40	+40	giant calderas	+50, 125	-1, 130	16294	2x4 AI8, 326 m/pixel, NIMS 104 s
46	+46	Culann	-20, 160	0, 132	18962	2x2x3-color AI8, NIMS 52 s
54	+52	Bosphorus R.	-3, 120	1, 133	21600	1x4 AI8, NIMS?
52	+56	Term01	20, 68	1, 133	23434	1x10 AI8, NIMS 52 s
62	+62	Culaan	-20, 160	1, 133	25000	NIMS regional mosaic, 50 minutes

Emakong02 -- by using the top 240 lines in IM8 we better match the coverage and resolution of Emakong01, and this mode provides a safety net for radiation noise as the very top lines are nearly noise-free.

Giant calderas - There are 2 giant calderas, one at +48/125 and another (triple structure) at +60/120.

Culann -- use violet, green, red.

Bosphorus -- regional context, was 1x2x3 color in I24.

Term01-- From Zal (+40) on south along terminator. Coordinate with I24 + I27 terminator mapping (I25 terminator ~ 10 deg east of I24 terminator at comparable range; I27 another 10 deg. east).

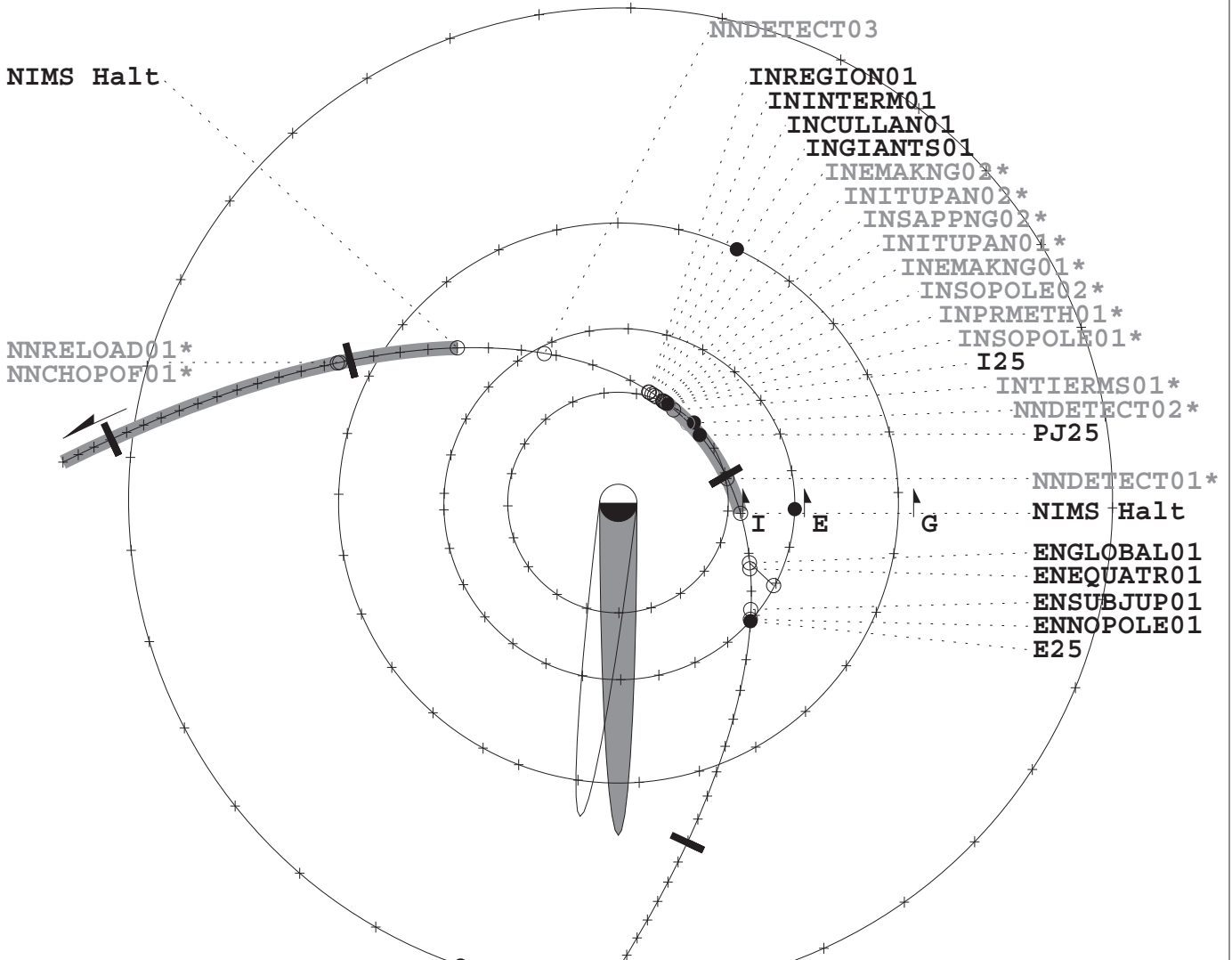
I25 Time-Ordered Listing

OAPEL	Start (UTC)	End (UTC)	Duration
25NNNOPOLE01-	99-329/16:31:54	99-329/16:34:56	000/00:03:02
25ENNOPOLE01-	99-329/16:34:56	99-329/16:50:06	000/00:15:10
25NNSUBJUP01-	99-329/17:04:15	99-329/17:07:17	000/00:03:02
25ENSUBJUP01-	99-329/17:07:17	99-329/17:28:31	000/00:21:14
25NNEQUATR01-	99-329/19:17:43	99-329/19:20:45	000/00:03:02
25ENEQUATR01-	99-329/19:20:45	99-329/19:38:57	000/00:18:12
25NNGLOBAL01-	99-329/19:38:57	99-329/19:39:58	000/00:01:00
25ENGLOBAL01-	99-329/19:39:58	99-329/20:24:27	000/00:44:29
25NNTIERMS01-	99-330/03:41:15	99-330/03:44:17	000/00:03:02
25INTIERMS01-	99-330/03:45:18	99-330/03:57:26	000/00:12:08
25NNSOPOLE01-	99-330/04:04:31	99-330/04:07:33	000/00:03:01
25INSOPOLE01-	99-330/04:07:33	99-330/04:08:33	000/00:01:00
25NNPRMETH01-	99-330/04:08:33	99-330/04:10:35	000/00:02:01
25INPRMETH01-	99-330/04:10:35	99-330/04:12:36	000/00:02:01
25INSOPOLE02-	99-330/04:13:37	99-330/04:15:38	000/00:02:01
25INEMAKNG01-	99-330/04:16:39	99-330/04:17:39	000/00:01:00
25INITUPAN01-	99-330/04:19:41	99-330/04:20:41	000/00:01:00
25INSAPPNG02-	99-330/04:21:42	99-330/04:22:43	000/00:01:00
25NNITUPAN02-	99-330/04:22:43	99-330/04:23:43	000/00:01:00
25INITUPAN02-	99-330/04:23:43	99-330/04:34:51	000/00:11:07
25INEMAKNG02-	99-330/04:43:57	99-330/04:44:57	000/00:01:00
25NNGIANTS01-	99-330/04:46:59	99-330/04:50:01	000/00:03:02
25INGIANTS01-	99-330/04:50:01	99-330/04:51:45	000/00:01:44
25NNCULANN01-	99-330/04:55:04	99-330/04:58:06	000/00:03:02
25INCULANN01-	99-330/04:58:06	99-330/05:00:07	000/00:02:01
25NNINTERM01-	99-330/05:01:08	99-330/05:04:10	000/00:03:02
25ININTERM01-	99-330/05:07:12	99-330/05:09:13	000/00:02:01
25INREGION01-	99-330/05:09:13	99-330/06:03:49	000/00:54:36
25NNRELOAD01-	99-331/00:52:13	99-331/01:02:20	000/00:10:06
25NNCHOPOF01-	99-331/01:04:21	99-331/01:14:28	000/00:10:06
25NNPCTRLT01-	99-335/22:00:27	99-336/05:50:37	000/07:50:10
25NNRCTRLT01-	99-353/17:59:37	99-354/07:15:22	000/13:15:44

NIMS I25 OBSERVATIONS

Bold - Returned
 Gray - Not Returned
 * - Processor Halted

S/C ~~Safed~~



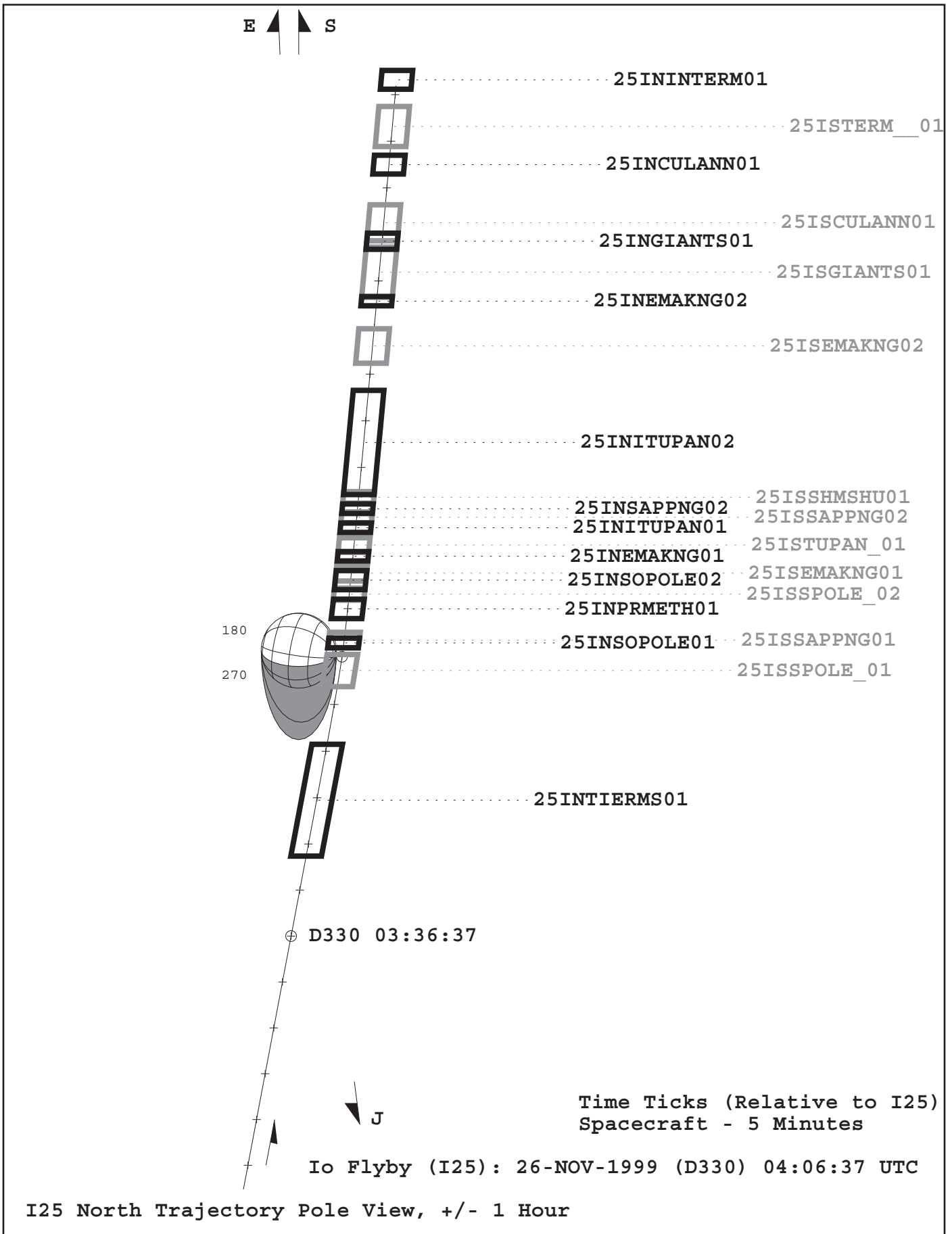
Time Ticks (Relative to PJ25)

- Io - 2 Hrs
- Europa - 3 Hrs
- Ganymede - 6 Hrs
- Callisto - 12 Hrs
- Spacecraft - 2 Hrs

Io Flyby (I25): 26-NOV-1999 (D330) 04:06:37 UTC
 Perijove (PJ25): 26-NOV-1999 (D330) 02:09:58 UTC

I25 North Trajectory Pole View

NIMS & SSI I25 IO FLYBY OBSERVATIONS

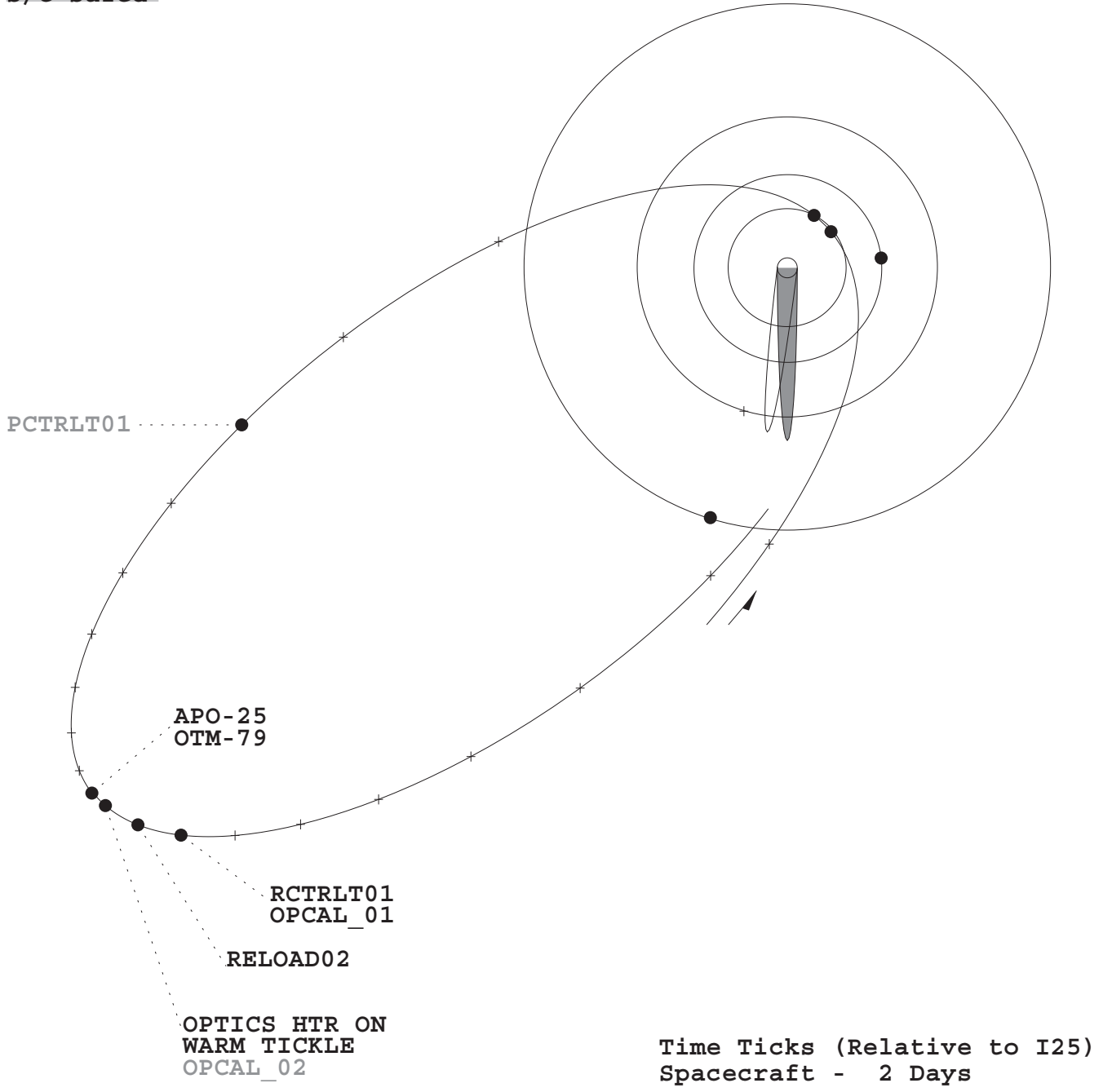


NIMS I25 CALIBRATIONS

Bold - Returned
 Gray - Not Returned
 * - Processor Halted

S/C Safed

S ▲ E



Time Ticks (Relative to I25)
 Spacecraft - 2 Days

Io Flyby (I25): 26-NOV-1999 (D330) 04:06:37 UTC
 Perijove (PJ25): 26-NOV-1999 (D330) 02:09:58 UTC

I25 North Trajectory Pole View

I25 NIMS INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
25NNNPOLE01-	NIMS Software Reload								
25ENNOPOLE01-	Europa North Polar Meridional Obs.	I25ELM442	I25ELM360	LM	4	0	4	MPW	
25NNSUBJUP01-	NIMS Software Reload								
25ENSUBJUP01-	Europa Subjupiter Point Regional Obs.	I25ELM442	I25ELM228C	LM	3	0	4	MPW	
25NNEQUATR01-	NIMS Software Reload								
25ENEQUATR01-	Europa Equatorial Band	I25ELM442	I25ELM360	LM	3,4	0	4	MPW	
25NNGLOBAL01-	NIMS Software Reload								
25ENGLOBAL01-	Europa Jupiter-Facing Hemisphere Global	I25ELM442	I25ELM228C	LM	3	0	4	MPW	
25NNTIERS01-	NIMS Software Reload								
25INTIERS01-	Io Tiers Observation	I25ILM442	I25ILM360	LM	4	0	4	MPW	
25NNSPOLE01-	NIMS Software Reload								
25INSPOLE01-	Io South Pole Obs.	I25ILM442	I25ILM360	XS	4	0	4	MPW	
25NNPRMETH01-	NIMS Software Reload								
25INPRMETH01-	Io Prometheus Obs	I25ILM442	I25ILM360	LM	4	0	4	MPW	
25INSPOLE02-	Io South Pole Obs.	I25ILM442	I25ILM360	LM	4	0	4	MPW	
25INEMAKNG01-	Io Emakong Obs.	I25ILM442	I25ILM360	LM	2	0	4	MPW	
25INITUPAN01-	Io Tupan Observation	I25ILM442	I25ILM360	LM	2	0	4	MPW	
25INSAPPNG02-	NIMS Io Sapping Material	I25ILM442	I25ILM360	LM	3	0	4	MPW	
25NNITUPAN02-	NIMS Software Reload								
25INITUPAN02-	Io Tupan Observation	I25ILM442	I25ILM360	LM	2	0	4	MPW	
25INEMAKNG02-	Io Emakong Obs.	I25ILM442	I25ILM360	LM	2	0	4	MPW	
25NNGIANTS01-	NIMS Software Reload								
25INGIANTS01-	Io Giant Calderas Obs.	I25ILM442	I25ILM360	LM	3	0	4	MPW	
25NNCULANN01-	NIMS Software Reload								
25INCULANN01-	Io Culann Obs	I25ILM442	I25ILM360	LM	2	0	4	MPW	
25NNTRMAP01-	NIMS Software Reload								
25INTERM01-	Io Obs. Near Terminator	I25ILM442	I25ILM360	LM	3	0	4	MPW	
25NNREGION01-	NIMS Software Reload								
25INREGION01-	NIMS Io Regional Observation	I25ILM442	I25ILM360	LM	2	0	4	MPW	
25NNRELOAD01-	NIMS Software Reload								
25NNCHOP0F01-	NIMS Chopper Off								
25NNPCTRLT01-	PCT Calibration	I25PCT252	R/T	LM	4	0	4	R/T	
25NNRCTL01-	RCT Calibration	I25RCT252	R/T	LM	1	0	4	R/T	
25NNROPAL01-	NIMS OPCAL	I25OPCAL48	R/T	LM	4	0	4	R/T	

I25 RESOURCES

Activity ID	Mode	Record Format	Obs.		Obs. Cost (ticks)	Number Returned	Obs Record (sec.)	Obs PB (sec.)	Selected		Bits to		Mode Cycle time (sec)
			Cost (tracks)	(tracks)					sBOT (MBITS)	Tape BOT (Mbit)			
25ENNOPOLE01-	LM	MPW	0.1000	583	360	660.00	660.00	7.60	7.60	7.60	7.60	8.667	
25ENSUBJUP01-	LM	MPW	0.0291	169	228	190.00	190.00	2.19	2.19	2.19	2.19	8.667	
25ENEQUATR01-	LM	MPW	0.1196	697	360	790.00	790.00	9.10	9.10	9.10	9.10	8.667	
25ENGLOBAL01-	LM	MPW	0.0763	445	228	503.00	120.00	1.38	1.38	5.79	5.79	8.667	
25INTTIRMS01-	LM	MPW	0.0638	372	360	420.00	420.00	4.84	4.84	4.84	4.84	8.667	
25INSOPOLE01-	XS	MPW	0.0044	25	17	26.00	26.00	0.30	0.30	0.30	0.30	8.667	
25INPRMETH01-	LM	MPW	0.0187	109	360	121.33	121.33	1.40	1.40	1.40	1.40	8.667	
25INSOPOLE02-	LM	MPW	0.0044	25	360	26.00	26.00	0.30	0.30	0.30	0.30	8.667	
25INEMAKNG01-	LM	MPW	0.0083	48	360	52.00	52.00	0.60	0.60	0.60	0.60	8.667	
25INITUPAN01-	LM	MPW	0.0044	25	360	26.00	26.00	0.30	0.30	0.30	0.30	8.667	
25INSAPPNG02-	LM	MPW	0.0044	25	360	26.00	26.00	0.30	0.30	0.30	0.30	8.667	
25INITUPAN02-	LM	MPW	0.0867	505	360	572.00	572.00	6.59	6.59	6.59	6.59	8.667	
25INEMAKNG02-	LM	MPW	0.0083	48	360	52.00	52.00	0.60	0.60	0.60	0.60	8.667	
25INGIANTS01-	LM	MPW	0.0161	94	360	104.00	104.00	1.20	1.20	1.20	1.20	8.667	
25INCULANN01-	LM	MPW	0.0083	48	360	52.00	52.00	0.60	0.60	0.60	0.60	8.667	
25INTERMAP01-	LM	MPW	0.0083	48	360	52.00	52.00	0.60	0.60	0.60	0.60	8.667	
25INREGION01-	LM	MPW	0.4080	2377	360	2,702.00	1200.00	13.82	13.82	31.13	31.13	8.667	
Resource Totals			0.9687	5645									

I25 RESOURCES

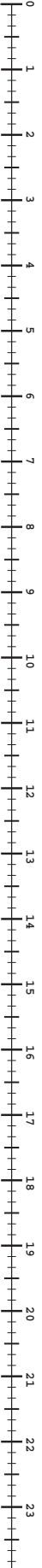
Activity ID	AACS Mbits	Comp	Thold	RT	Total BTG Mbits (w/4% ahead)	Data Reduction Factor (sBOT/BTG)	Pass
	c 2.5						
25ENNOPOLE01-	0.04	1.20			4.7518	1.60	2,3
25ENSUBJUP01-	0.01	1.20			0.8664	2.53	2,3
25ENEQUATR01-	0.05	1.20			5.6878	1.60	2,3
25ENGLOBAL01-	0.01	1.30			0.5051	2.74	2
25INTIERMS01-	0.02	1.20			3.0239	1.60	1,2
25INSOPOLE01-	0.00	1.20			0.0088	33.88	1
25INPRMETH01-	0.01	1.20			0.8735	1.60	1
25INSOPOLE02-	0.00	1.20			0.1872	1.60	1
25INEMAKNG01-	0.00	1.20			0.3744	1.60	1
25INITUPAN01-	0.00	1.20			0.1872	1.60	1
25INSAPPNG02-	0.00	1.20			0.1872	1.60	1
25INITUPAN02-	0.03	1.20			4.1182	1.60	1,2
25INEMAKNG02-	0.00	1.20			0.3744	1.60	1
25INGIANTS01-	0.01	1.20			0.7488	1.60	1
25INCULANN01-	0.00	1.20			0.3744	1.60	1
25INTERMAP01-	0.00	1.20			0.3744	1.60	1
25INREGION01-	0.07	1.33			7.7952	1.77	1
Resource Totals					30.4386		

NIMS I25 OBSERVING GEOMETRY

OAPEL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
25ENNOPOLE01	+72 to +80	45 to 62	11 to 17K	142	70 to 77	37 to 51	34 to 40
25ENSUBJUP01	-5 to +5	353 to 7	31 to 40K	137	45 to 61	15 to 30	36
25ENEQUATR01	-3 to +3	330 to 90	122 to 132K	131	0 to 94	3 to 69	42
25ENGLOBAL01	-90 to +90	0 to 40	137 to 160K	131	14 to 117	3 to 90	42
25INTIERMS01	+17 to +36	283 to 351	4 to 9K	42	126 to 156	69 to 157	129
25INSOPOLE01	-81 to -78	90	.5 to 1.1K	123	76 to 89	51 to 64	69
25INPRMETH01	+3	157	3K	85 to 99	2 to 21	75 to 107	73 to ---
25INSPOLE02	-82 to -78	90	4K	142	82 to 89	74 to 81	30
25INEMAKNG01	-4 to -3	121	4K	133	34 to 38	20 to 26	40
25INITUPAN01	-18 to -17	142	5K	133	19 to 26	21 to 23	38
25INSAPPNG02	-54 to -52	119	7K	144	61 to 64	50 to 52	28
25INITUPAN02	-20 to -16	137 to 143	10K	141	24 to 29	18 to 21	31
25INEMAKNG02	-8 to -2	117 to 118	16K	146	37 to 42	11 to 16	26
25INGIANTS01	+55 to +70	110 to 125	19K	144	63	66	28
25INCULANN01	-25 to -15	160 to 164	22K	144	17 to 25	32 to 37	29
25ININTERM01	+10 to +20	90	28K	149	71 to 84	50 to 66	24
25INREGION01	-15 to +15	106 to 168	28 to 51K	147	1 to 64	2 to 41	24 to 28

125 ENCOUNTER
Plot Time: 99-329/00:00:00.000 to 99-330/00:00:00.000
Date of Plot: 24-May-100 11:11:37

GEM: 125



NIMS Observations

PPR Observations

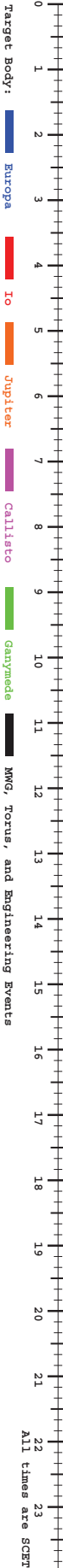
SSI Observations

UVS/EUV Observations

RS

MWG Observations

Geometric Events



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

25NPPRON_01
25NPRCTCAL01

25EPDRKMAP01

25EPH2012001

25ESNRTHPL01-
25ESDARKBP01-
25ESMOTTER01-

25EPDGTM_01

25EPH2040_02

25ESGLOBAL01-
25ESCOLORS01-
25ESPLAINS01-

25ESGLOBAL01-

25ESCOLORS02-

25IPGLOBAL01

25EUNPOLE_01+
25EUSUBJUP01+

25EUEQUATR01+
25EUGLOBAL01+

25IOGRVFLD01

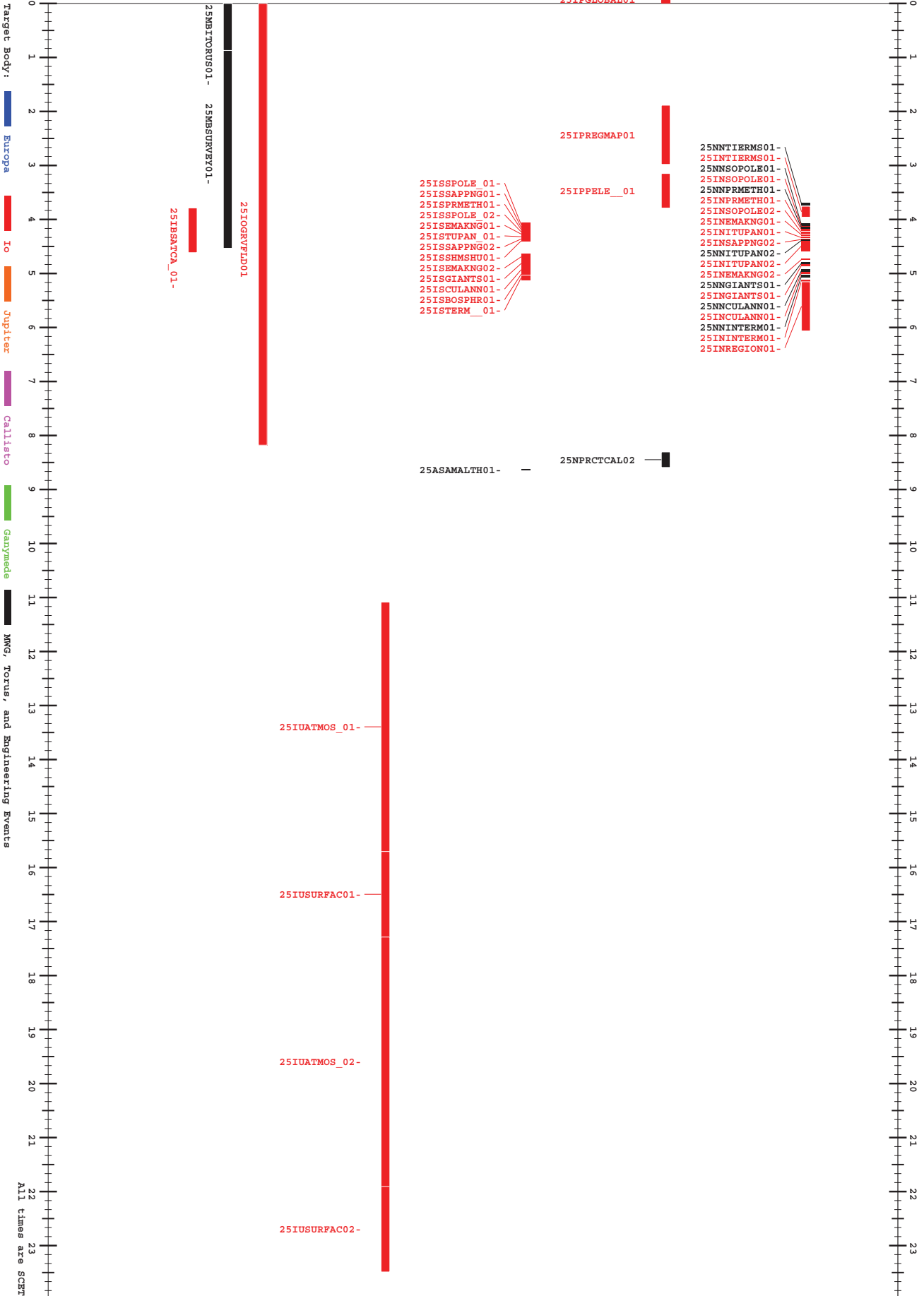
25MBSURVEY01-
25MBITORUS01-

All times are SGET

Geometric Events MWG Observations RS UVS/EUV Observations SSI Observations PPR Observations NIMS Observations

125 ENCOUNTER
Plot Time: 99-330/00:00:00.000 to 99-331/00:00:00.000
Date of Plot: 24-May-100 11:11:37

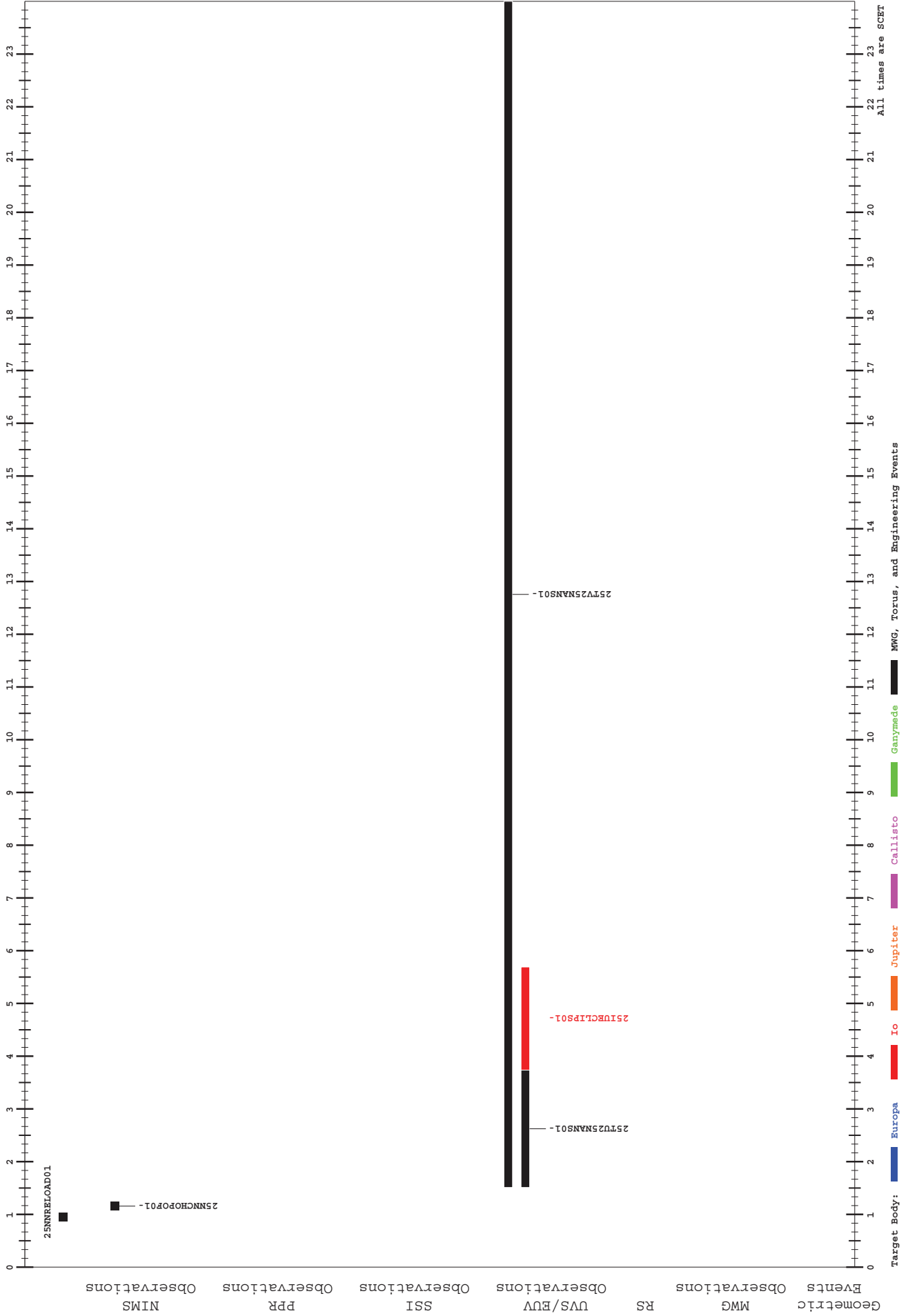
GEM: 125



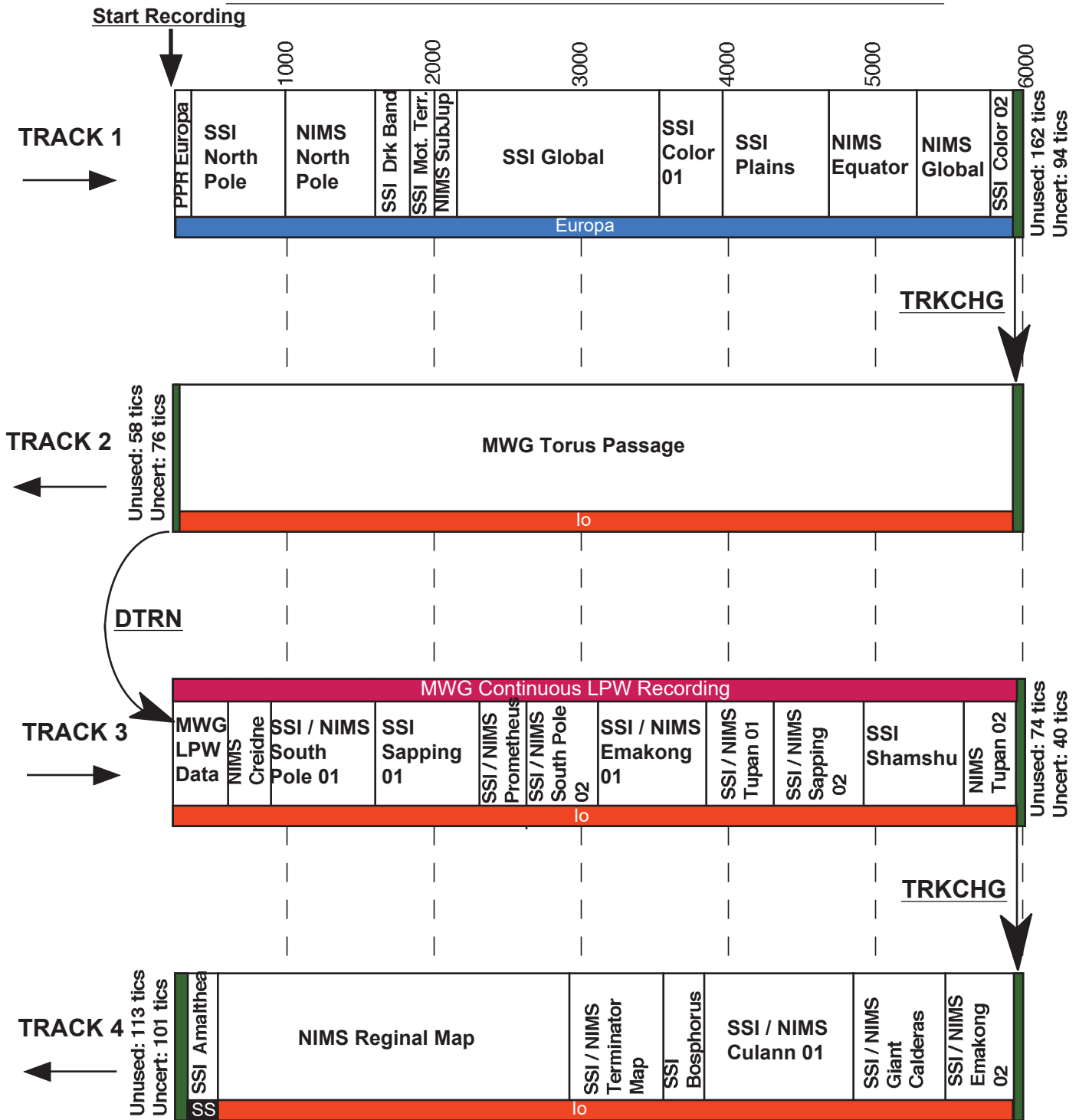
All times are SCET

GEM: I25

I25 ENCOUNTER
Plot Time: 99-331/00:00:00.000 to 99-332/00:00:00.000
Date of Plot: 24-May-100 11:11:38



I25 ENCOUNTER HIGH-LEVEL TAPEMAP

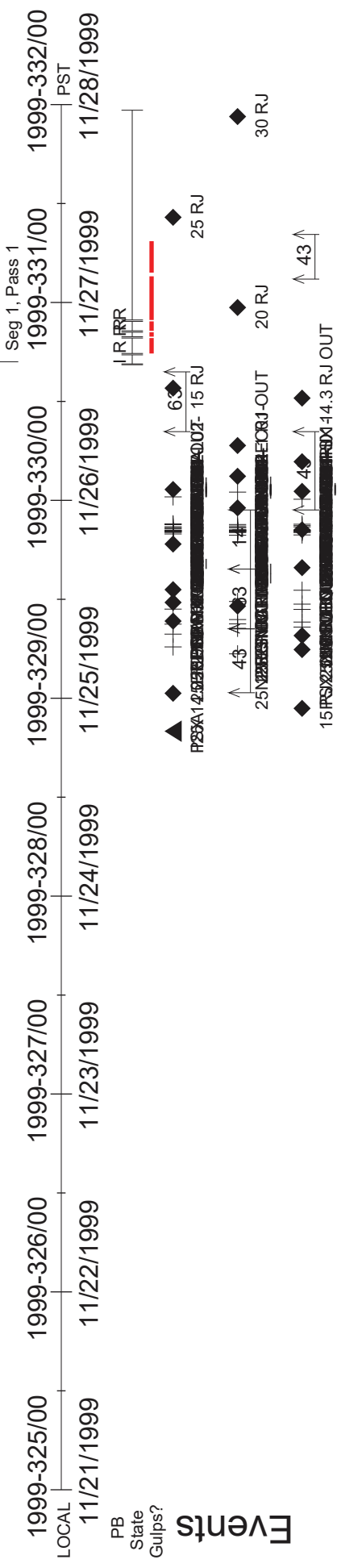


J. Gross, 7/26/99

I25PDB

5856/4
 25ISEMAKNG02-
 5496/4
 25INEMAKNG02-
 5385/4
 25ISGIANTS01-

Playback / Date Returned



I25PDB

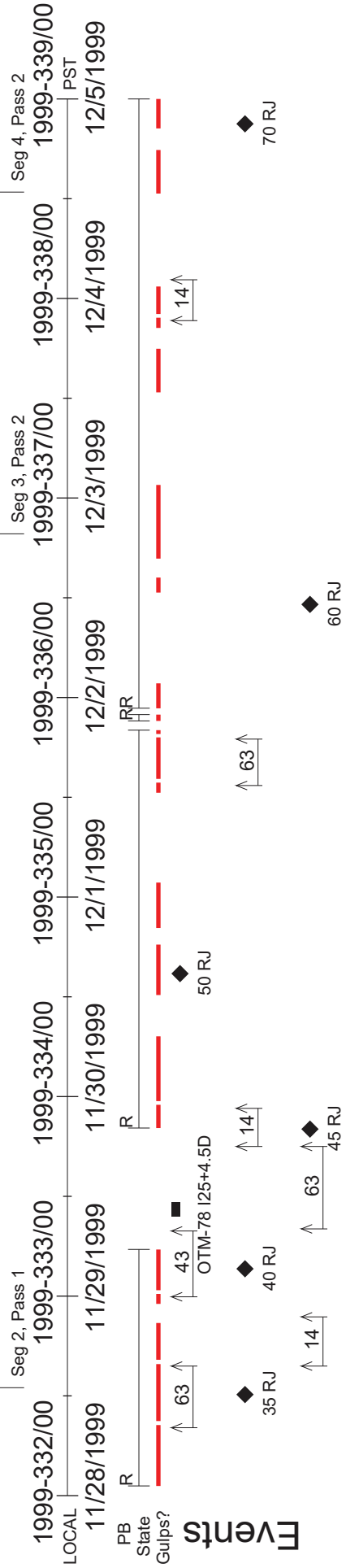
2163/1 2205/1
 25EPDGTM_01-
 2271/1
 25ESGLOBAL01-

432/4 378/4
 25ASAMALITH01-
 366/4 363/4
 25NPRCTCAL02-
 266/1 328/1
 25EPDRKMAP01-
 328/1 354/1
 25EPH2O12001-
 420/1 1012/1
 25ESNRTHPL01-
 1025/1 1605/1
 25NNNOPOLE01-
 1672/1 1837/1
 25ESDARKBP01-
 1915/1 1982/1
 25ESMOTTER01-
 1995/1 2162/1
 25NNSUBJUP01-

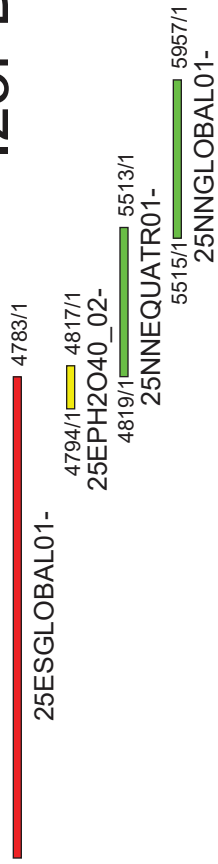
5003/4
 25ISGIANTS01-
 4991/4 4900/4
 25INGIANTS01-
 4878/4 3620/4
 25ISCUANNO1-
 3616/4 3570/4
 25INCULANNO1-
 3548/4 2925/4
 25ISTERM_01-
 2921/4 2873/4
 25INTERMAP01-
 2873/4 497/4
 25INREGION01-

Playback / Date Returned

2 - 20

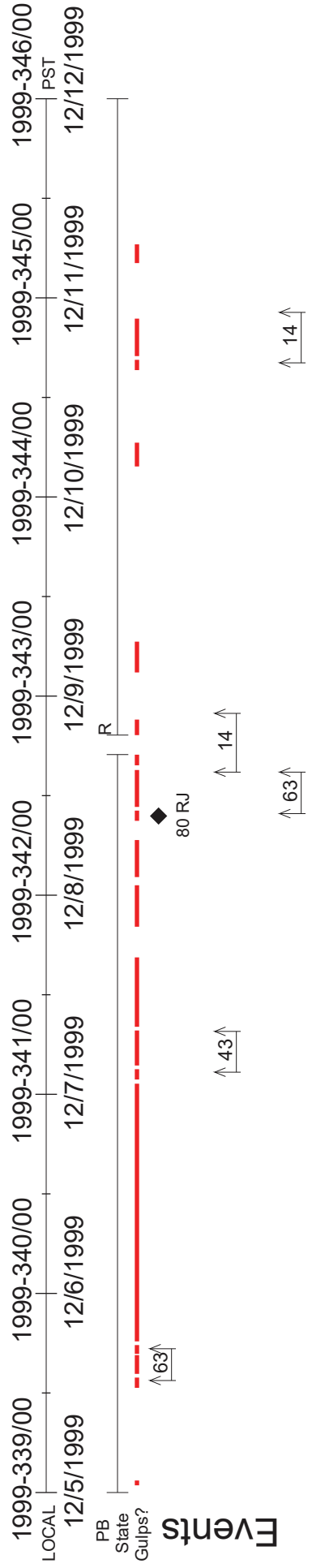


I25PDB



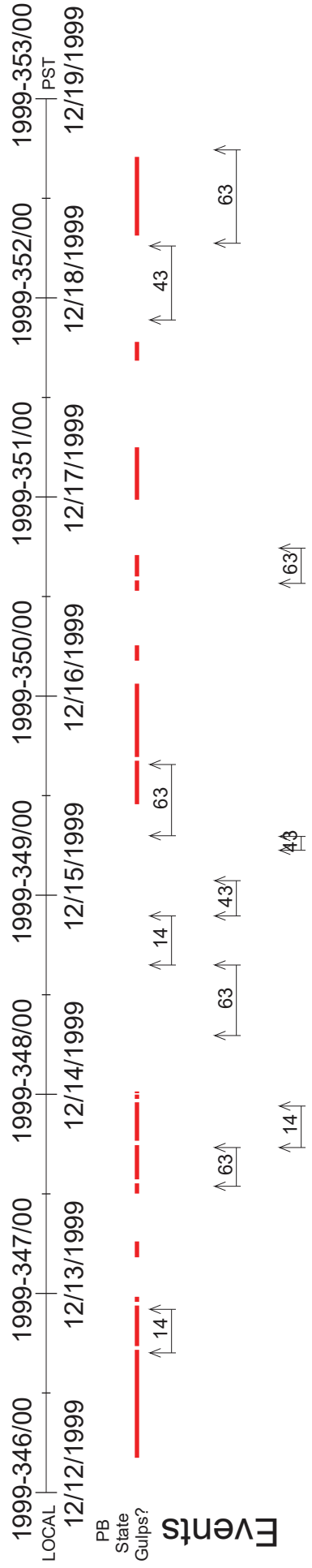
Playback / Date Returned

2-21



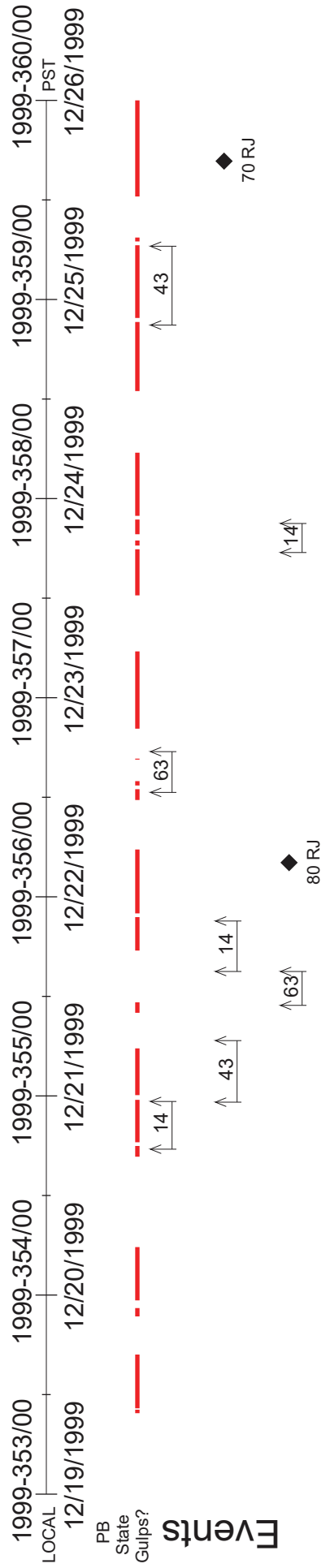
I25PDB

Playback / Date Returned



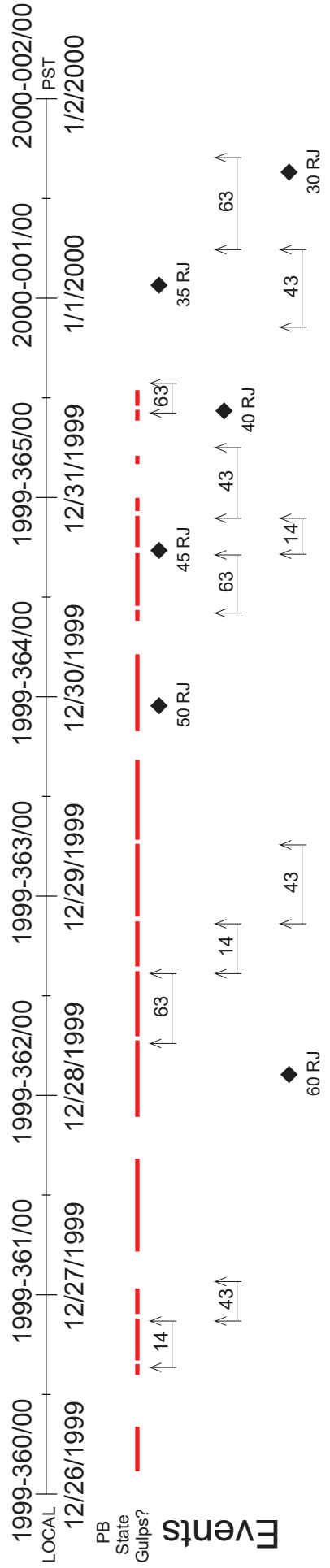
I25PDB

Playback / Date Returned

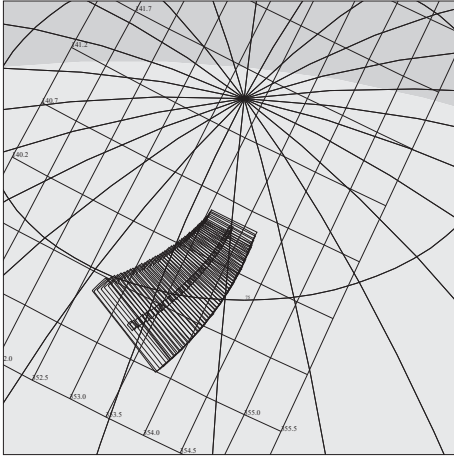


I25PDB

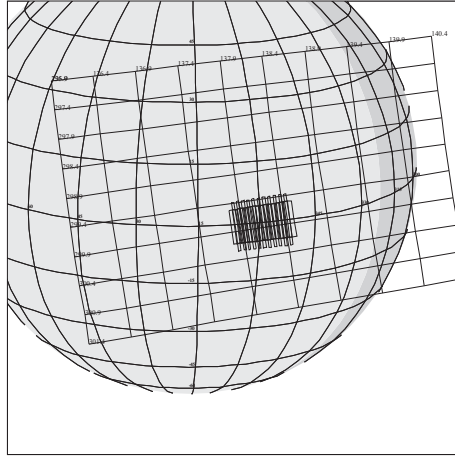
Playback / Date Returned



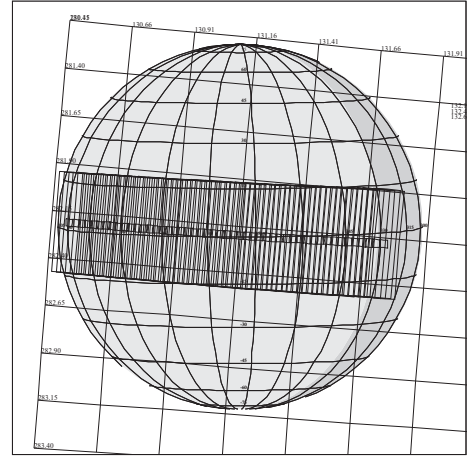
I25 NIMS A



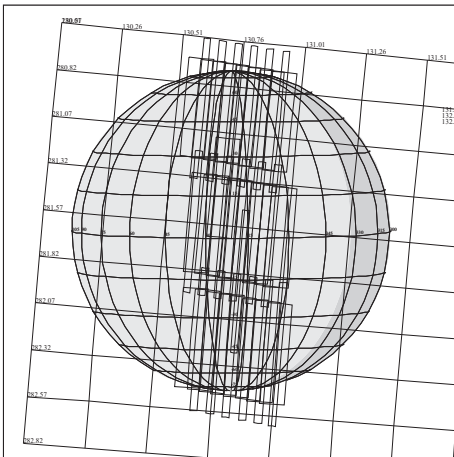
25ENNOPOLE01
99-329/16:34:56



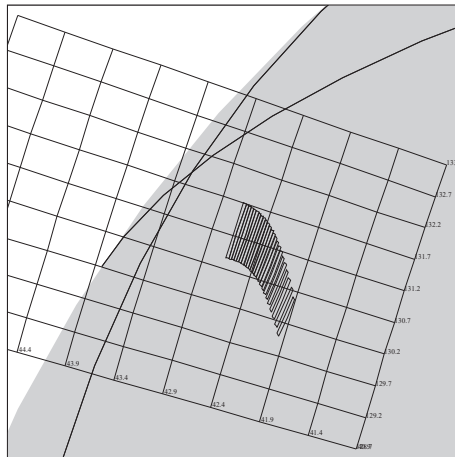
25ENSUBJUP01
99-329/17:07:17



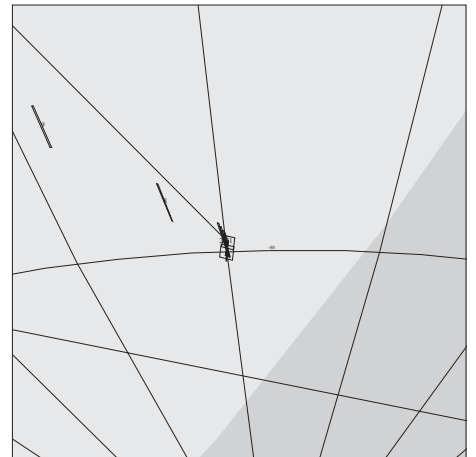
25ENEQUATR01
99-329/19:20:45



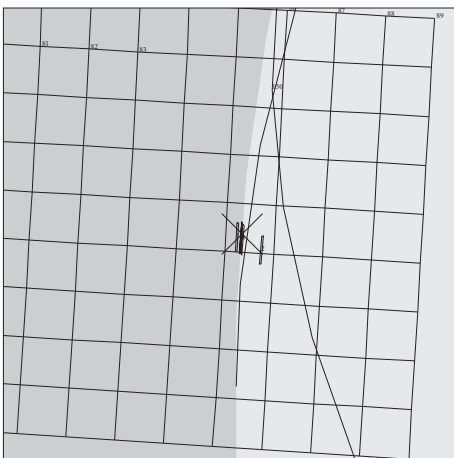
25ENGLOBAL01
99-329/19:39:58



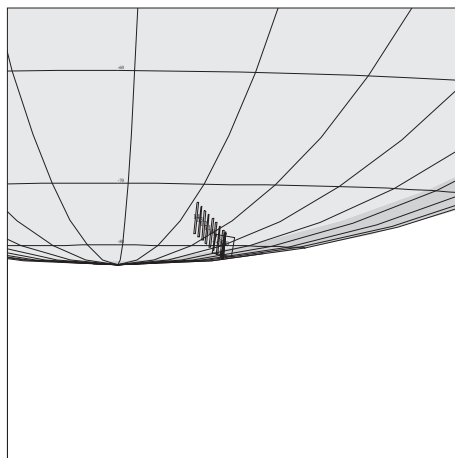
25INTIERMS01
99-330/03:45:18



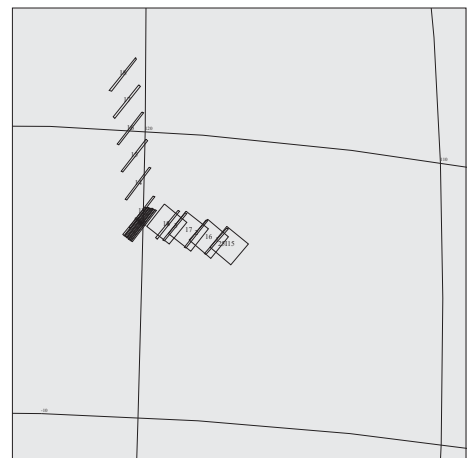
25INSOPOLE01
99-330/04:07:33



25INPRMETH01
99-330/04:10:35

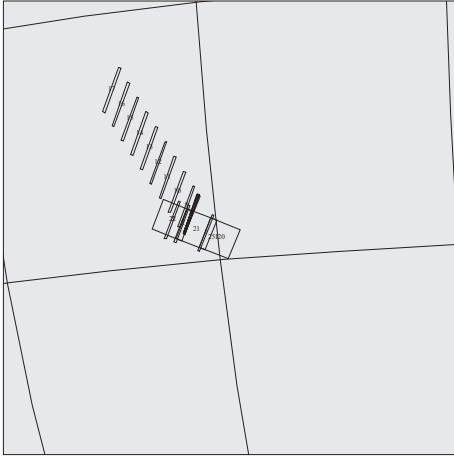


25INSOPOLE02
99-330/04:13:37

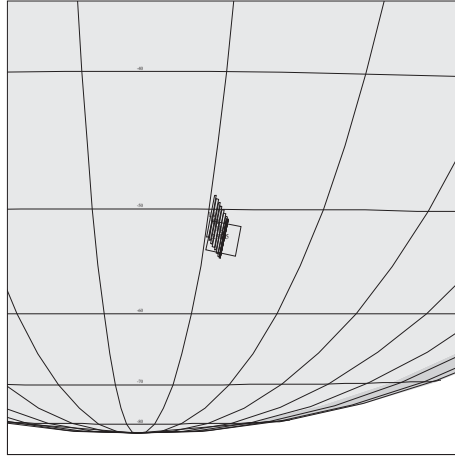


25INEMAKNG01
99-330/04:16:39

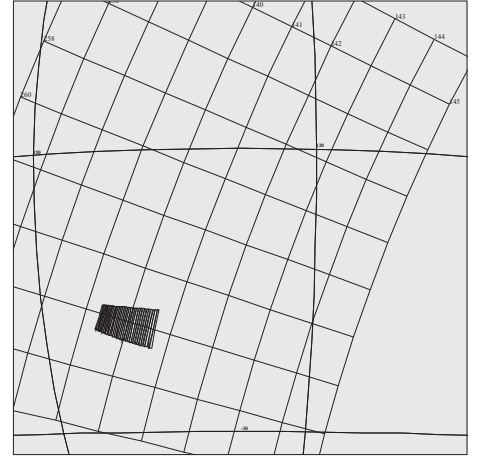
I25 NIMS B



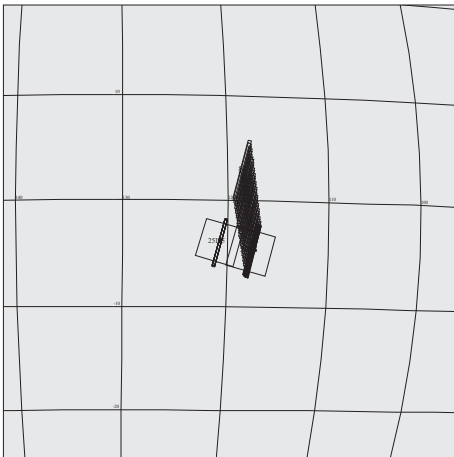
25INITUPAN01
99-330/04:19:41



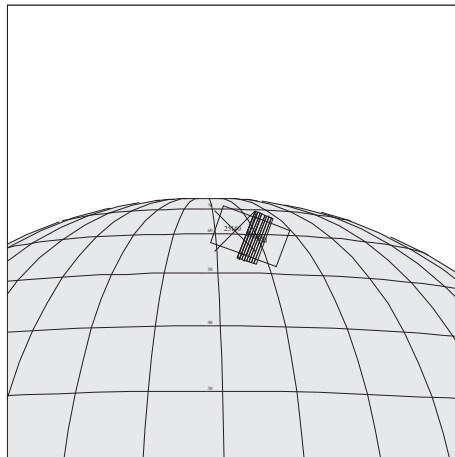
25INSAPPNG02
99-330/04:21:42



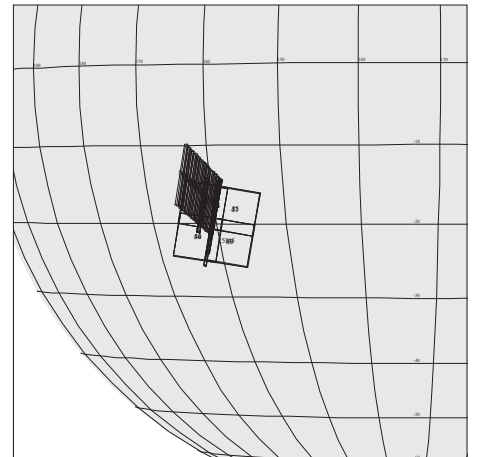
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99-330/04:23:43



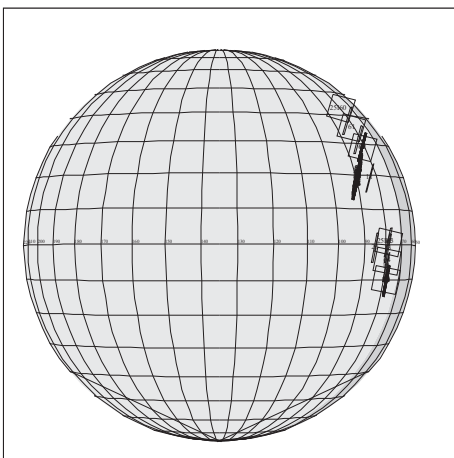
25INEMAKNG02
99-330/04:43:57



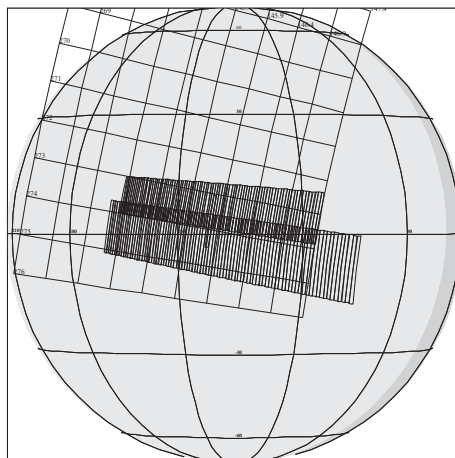
25INGIANTS01
99-330/04:50:01



25INCULANN01
99-330/04:58:06



25ININTERM01
99-330/05:07:12



25INREGION01
99-330/05:09:13

Chapter 3 - Orbit Geometries

Contents

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3.5	I25 North Trajectory Pole View (+/- 1 day) ...	6
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3.7	Io North Trajectory Pole View (+/- 6 hours) ...	8
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Introduction to Chapter 3

This chapter contains diagrams of various aspects of geometry for the I25 Orbit.

The figure on page 3 is a North Trajectory Pole View of the I25 Orbit from apoapsis to apoapsis.

The figure on page 4 is a North Trajectory Pole View of the I25 Orbit from +/- 5 days of Io closest approach.

The figure on page 5 is a North Trajectory Pole View of the I25 Orbit from +/- 2 days of Io closest approach.

The figure on page 6 is a North Trajectory Pole View of the I25 Orbit from +/- 1 day of Io closest approach.

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

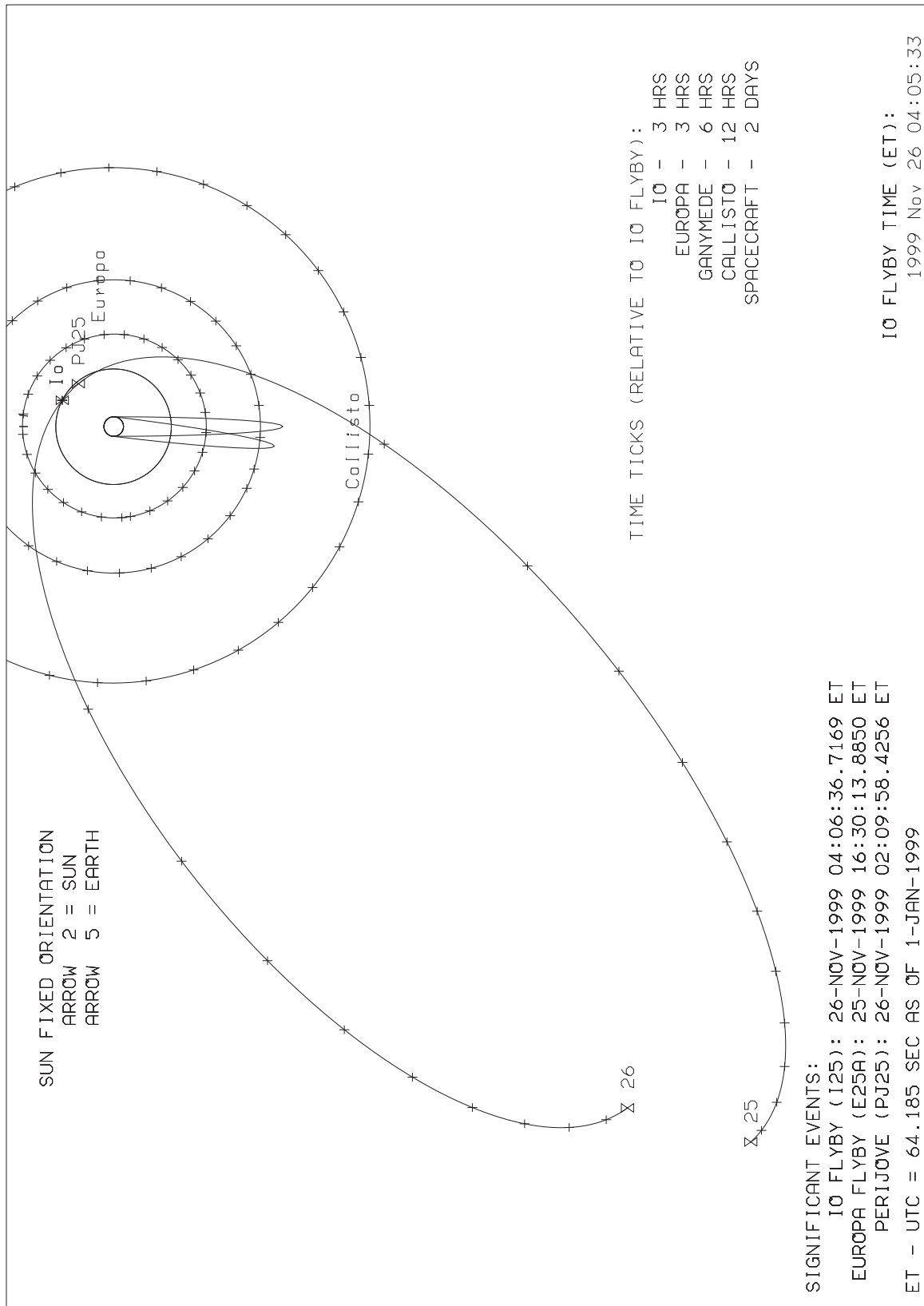
The figure on page 8 is a North Trajectory Pole View of the I25 Orbit from +/- 6 hours of Io closest approach.

The figure on page 9 is a North Trajectory Pole View of the I25 Orbit from +/- 1 hour of Io closest approach.

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

The figure on page 11 is a North Trajectory Pole View of the I25 Orbit from +/- 1 hour of Europa closest approach.

Jupiter 25: North Traj Pole View (Io25 Apo to Apo)



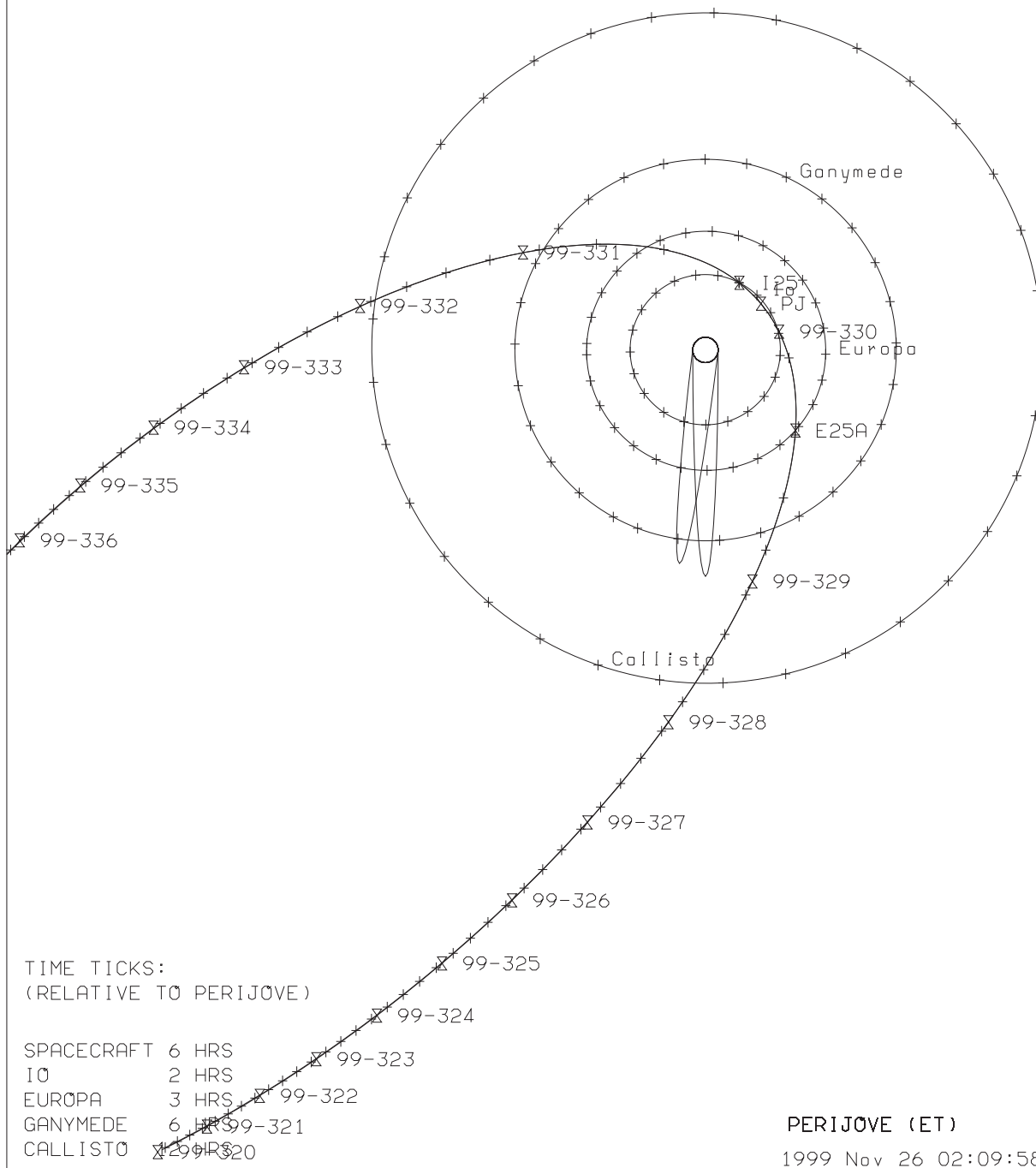
NAV Feb 4, 1999

JUPITER 25: N. TRAJ. POLE VIEW (+/- 5 DAYS)

SUN FIXED ORIENTATION

ARROW 2 = SUN
 ARROW 5 = EARTH

I25 C/A TIME (ET):
 1999 Nov 26 04:06:37
 E25A C/A TIME (ET):
 1999 Nov 25 16:30:14



TIME TICKS:
 (RELATIVE TO PERIJOVE)

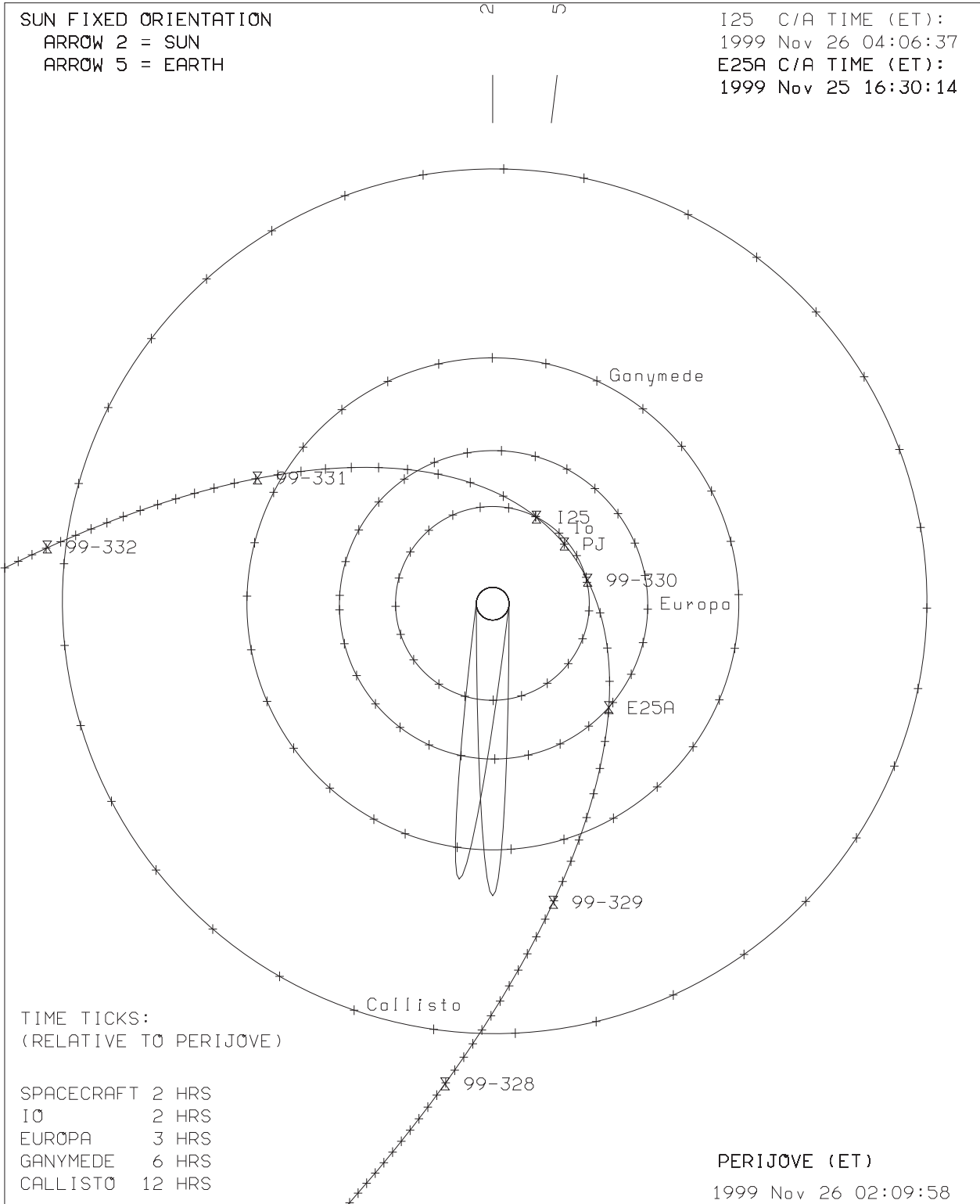
SPACECRAFT	6 HRS	99-323
IO	2 HRS	99-322
EUROPA	3 HRS	99-321
GANYMEDE	6 HRS	99-320
CALLISTO	12 HRS	99-319

PERIJOVE (ET)
 1999 Nov 26 02:09:58

GEM-990114

NAV Feb 4, 1999

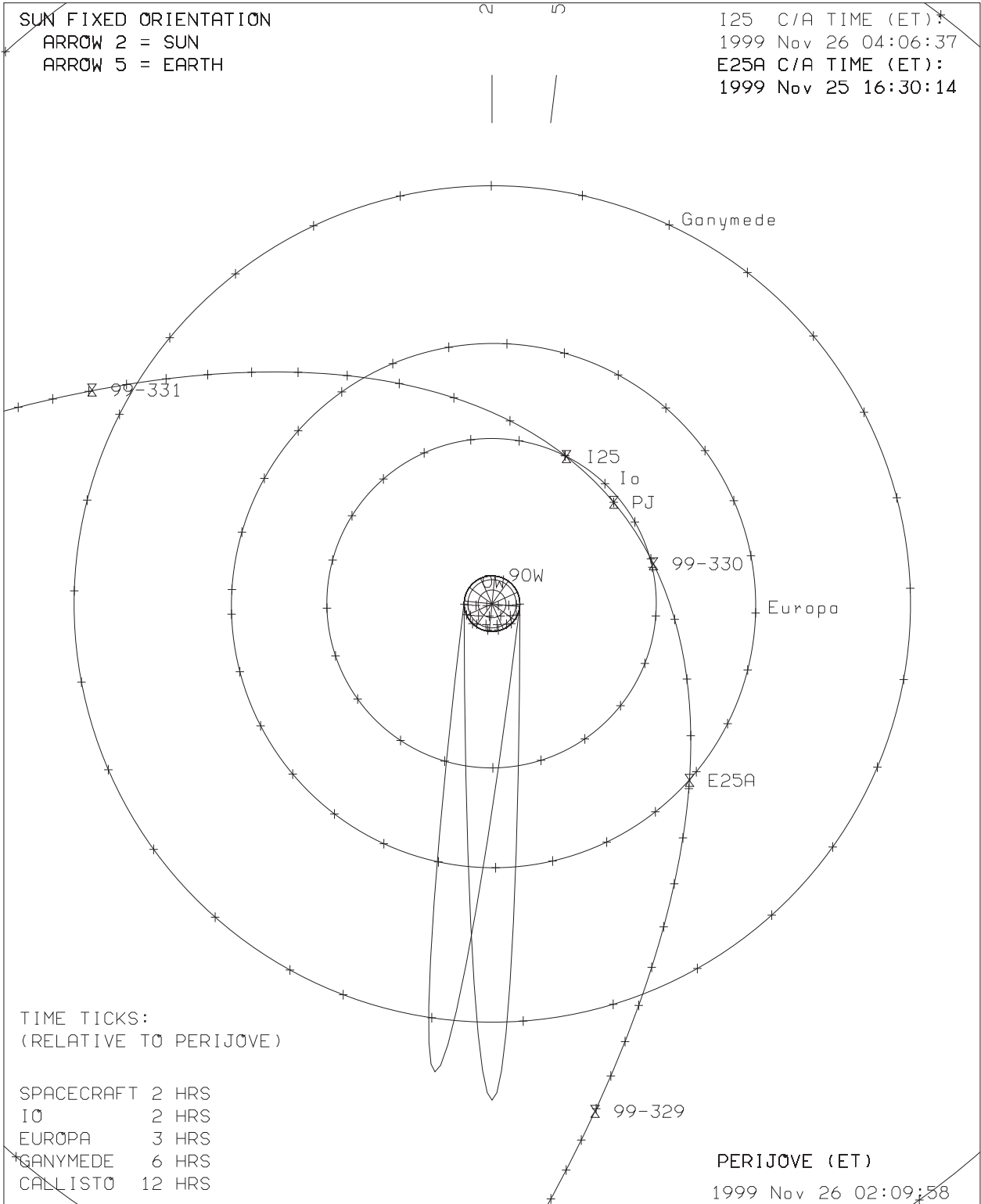
JUPITER 25: N. TRAJ. POLE VIEW (+/- 2 DAYS)



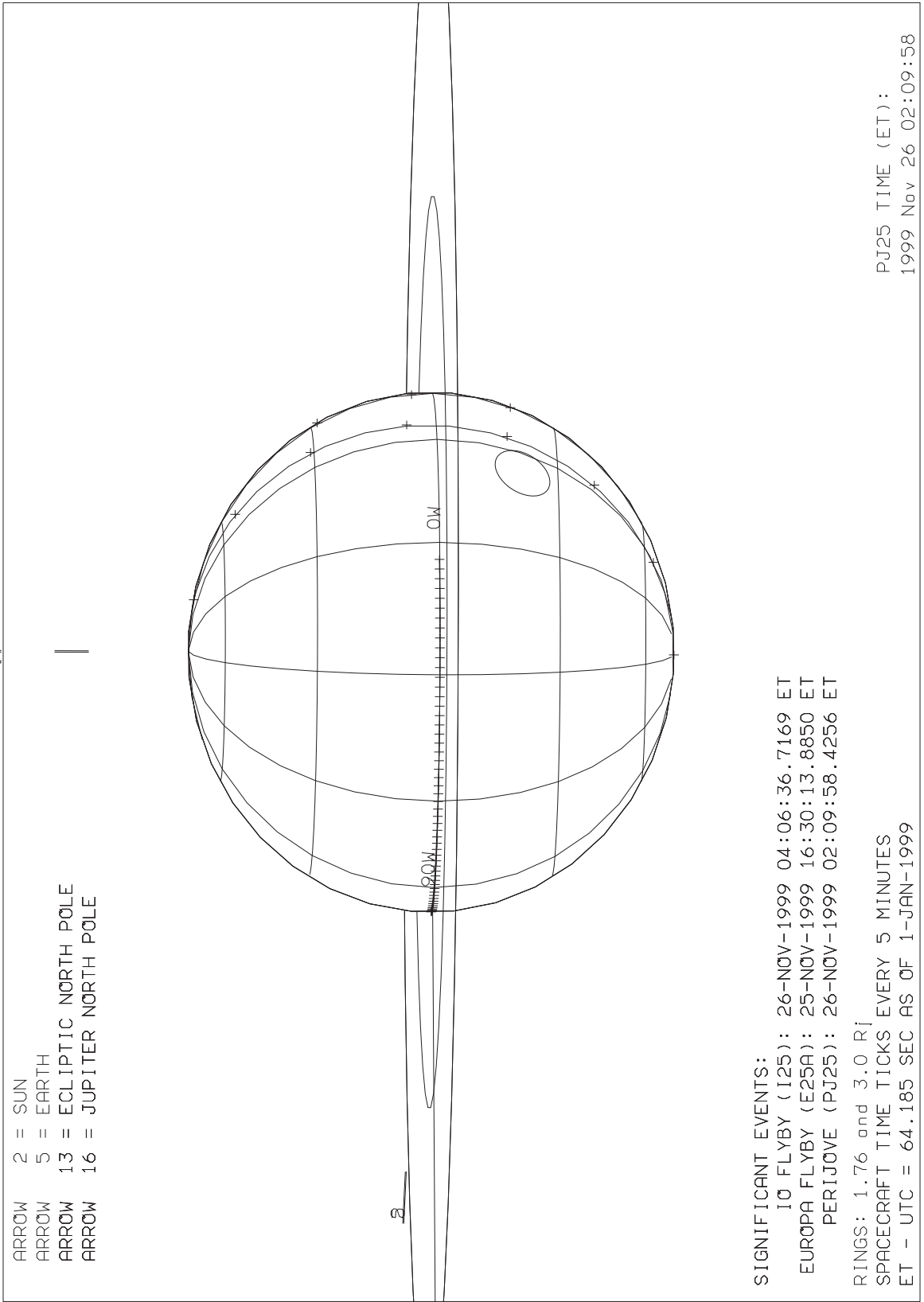
GEM-990114

NAV Feb 4, 1999

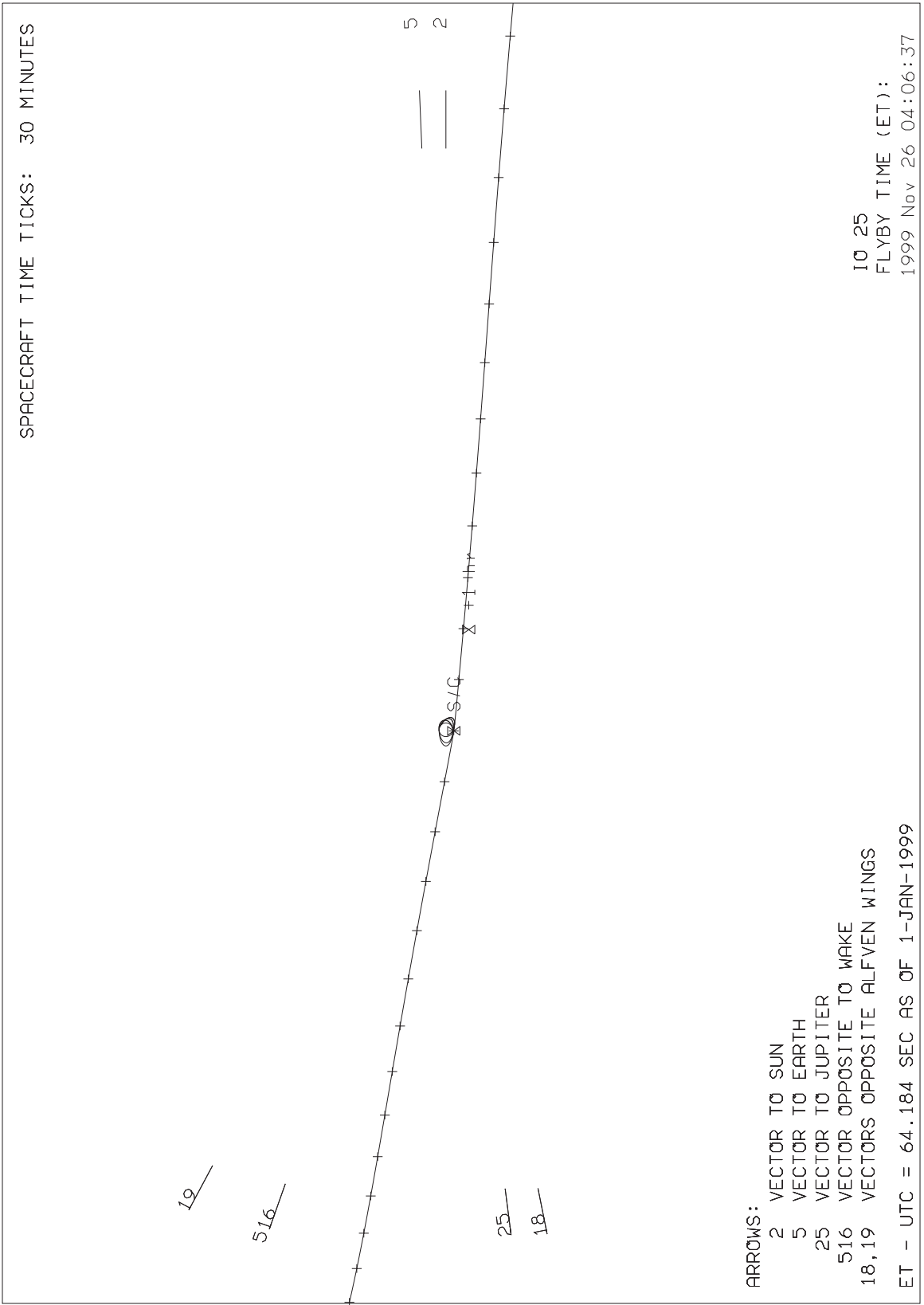
JUPITER 25: N. TRAJ. POLE VIEW (+/- 1 DAY)



JUPITER 25: GROUNDTRACK AT CLOSEST APPROACH



10 25: N. TRAJ POLE VIEW (+/- 6 HRS)



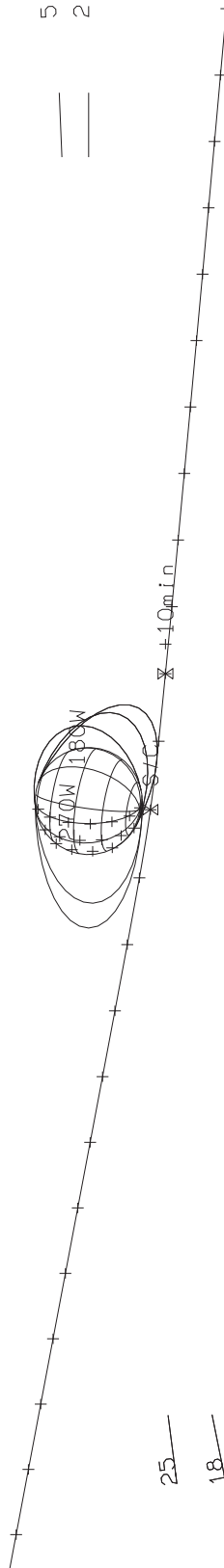
ARROWS:
 2 VECTOR TO SUN
 5 VECTOR TO EARTH
 25 VECTOR TO JUPITER
 516 VECTOR OPPOSITE TO WAKE
 18,19 VECTORS OPPOSITE ALFVEN WINGS
 ET - UTC = 64.184 SEC AS OF 1-JAN-1999

I0 25: N. TRAJ POLE VIEW (+/- 1 HR)

SPACECRAFT TIME TICKS: 5 MINUTES

19

516



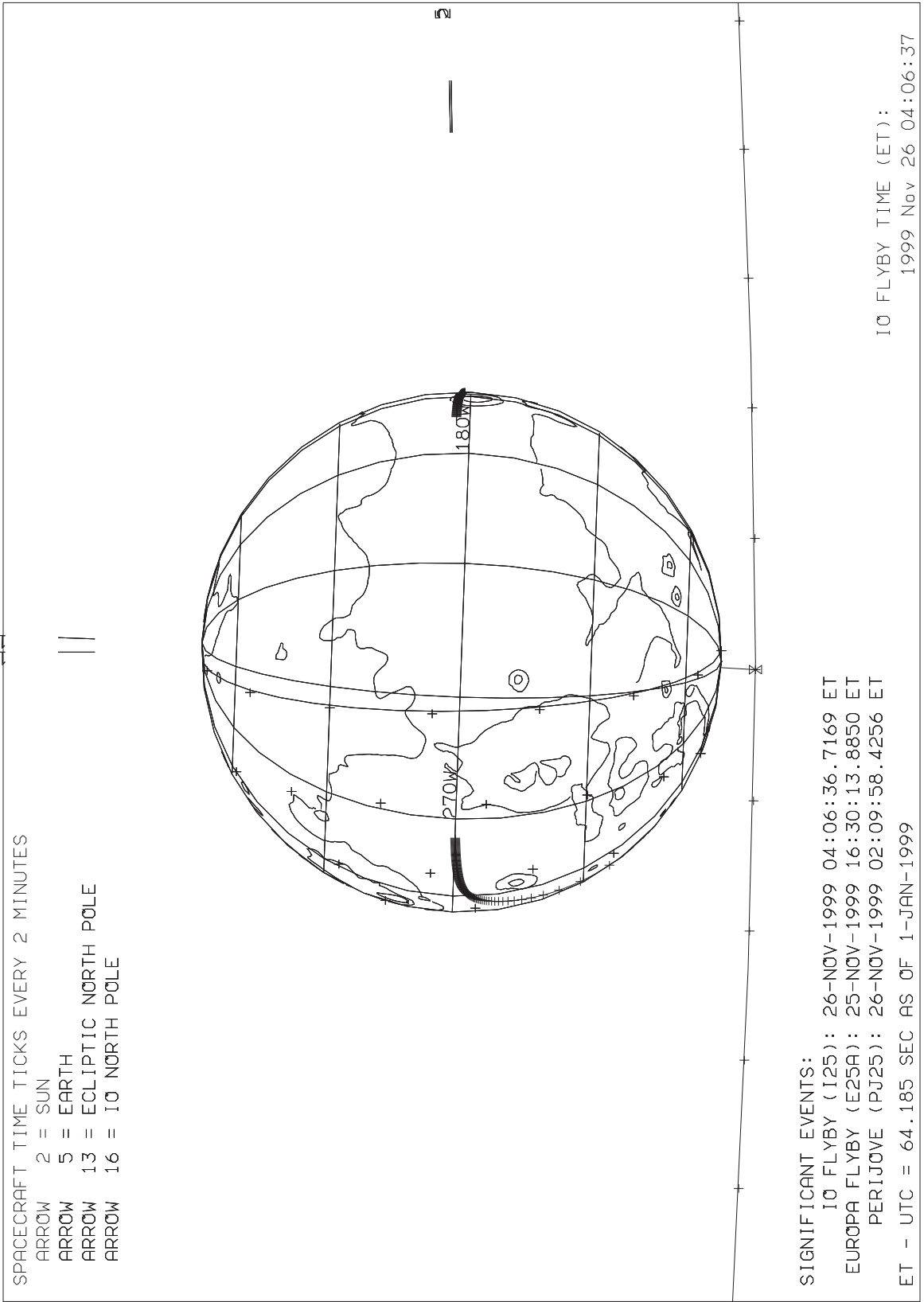
ARROWS:

- 2 VECTOR TO SUN
 - 5 VECTOR TO EARTH
 - 25 VECTOR TO JUPITER
 - 516 VECTOR OPPOSITE TO WAKE
 - 18,19 VECTORS OPPOSITE ALFVEN WINGS
- ET - UTC = 64.184 SEC AS OF 1-JAN-1999

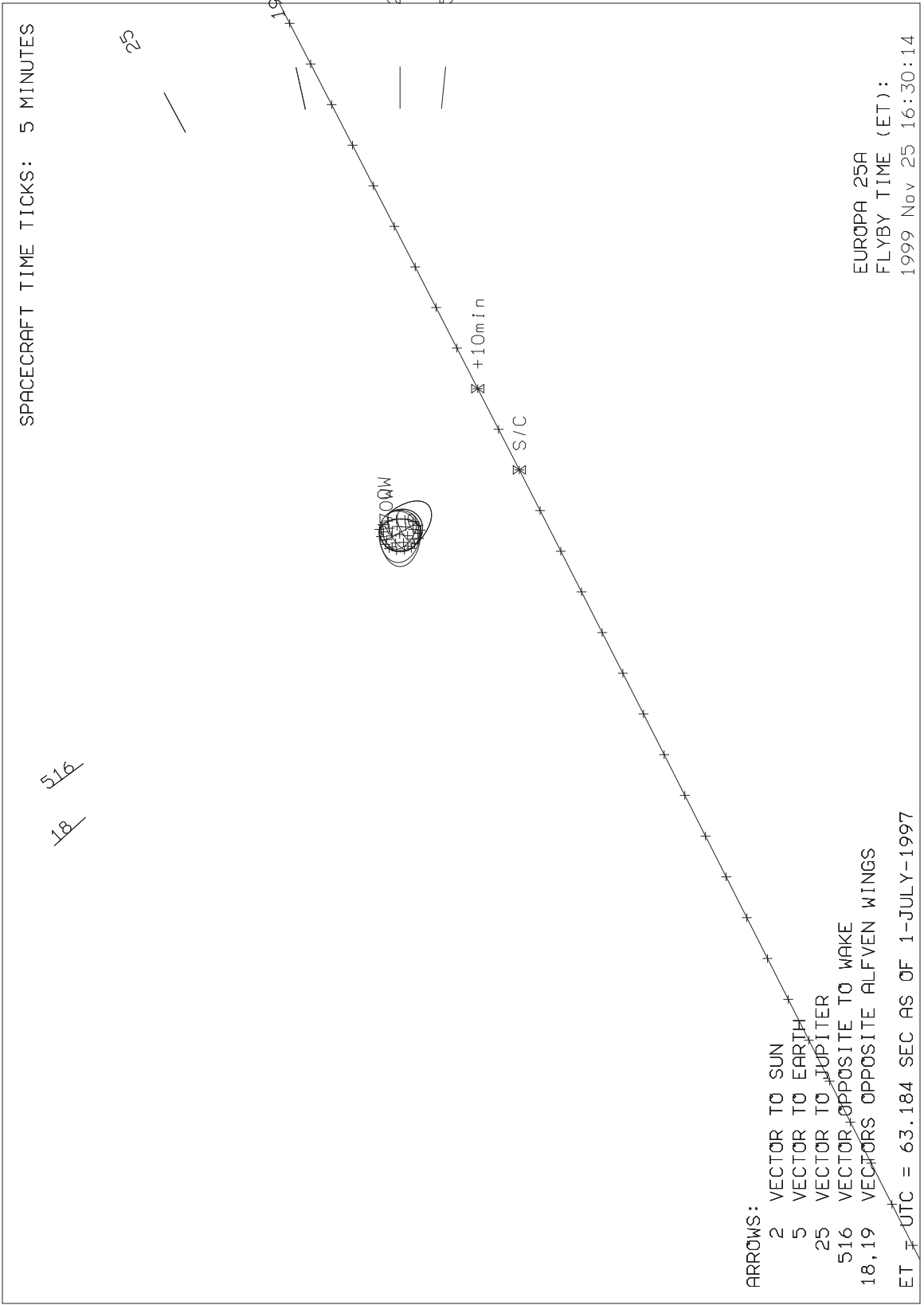
I0 25
FLYBY TIME (ET):
1999 Nov 26 04:06:37

NAV 2/9/99

I0 25: GROUNDTRACK AT CLOSEST APPROACH



EUROPA 25A: N. TRAJ POLE VIEW (+/- 1 HR)



Chapter 4 - NIMS Observation Summaries

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4.3	NIMS Individual Obstab Summaries	43-71
4.4	NIMS OBSTAB (Returned)	72-77

Introduction to Chapter 4

This chapter summarizes the NIMS I25 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 I25 Sequence. The information in this summary is derived from the I25 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 I25 data. It is also derived from the I25 SEFs and PBTs. Each Obstab entry is 512 bytes long but is presented here as 4 lines of 128 characters per entry.

Sequence:		I25ADF Safing		Created: 11/16/99		Begin: 99-329/04:00:00		Finish: 99-348/08:00:00			
Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
1	99	329	03:59:59.800		DMS: : READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	200	4	0	5,271,986:38:0	
2	99	329	04:00:00.000	20A3FF	40T2R Initial Condition	PCT Heater 2 OFF	200	4	0	5,271,986:38:3	
3	99	329	04:00:00.000	20A3FE	40T1PR Initial Condition	PCT Heater 1 OFF (primary relay)	200	4	0	5,271,986:38:3	
4	99	329	04:00:00.000	20A3FD	40HRPR Initial Condition	PCT Heater OFF (primary relay)	200	4	0	5,271,986:38:3	
5	99	329	04:00:00.000	20A3EW	37A Initial Condition	NIMS Power ON	200	4	0	5,271,986:38:3	
6	99	329	04:00:00.000	20A3EX	37HR Initial Condition	Replacement Heaters OFF	200	4	0	5,271,986:38:3	
7	99	329	04:00:00.000	20A3EY	37C1PR Initial Condition	Optics Heater 1 OFF (primary relay)	200	4	0	5,271,986:38:3	
8	99	329	04:00:00.000	20A3EZ	37C2PR Initial Condition	Optics Heater 2 OFF (primary relay)	200	4	0	5,271,986:38:3	
9	99	329	04:00:00.000	20A3FA	37F1PR Initial Condition	Radiator Flash Heater OFF (primary relay)	200	4	0	5,271,986:38:3	
10	99	329	04:00:00.000	20A3FB	37F2PR Initial Condition	Shield Flash Heater OFF (primary relay)	200	4	0	5,271,986:38:3	
11	99	329	04:00:33.800	432JA6B	6RTDS2 NIMDSL,AACNCG,RT	NIMS R/T DESELECT	200	4	0	5,271,986:89:0	
12	99	329	04:00:34.466	432JA431A6A	6RCDSL DDSNCG,PLSDSL,EP	Record Deselect (DDS o	200	4	0	5,271,986:90:0	
13	99	329	04:00:35.133	432JA6D	6RTSL2 NIMNCG,AACSEL,RT	AACS SELECT	200	4	0	5,271,987:00:0	
14	99	329	04:00:35.133	432JA6C	6RTSL1	R/T Select of DDS and	200	4	0	5,271,987:00:0	
15	99	329	04:02:01.133	488AA6A	6TMSED NORM,EH5	Sci, Eng, and D/L Chan	200	4	0	5,271,988:38:0	
16	99	329	04:02:30.466	200A6A	6HICON		200	4	0	5,271,988:82:0	
17	99	329	04:09:33.133		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	200	4	0	5,271,995:79:0	
18	99	329	04:09:33.133	465KA6A	6DMSC P7,1	DMS Control Tape P/B 7.68kpbs	200	4	0	5,271,995:79:0	
19	99	329	04:09:39.800		DMS: : *RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	200	4	0	5,271,995:89:0	
20	99	329	04:09:41.200		DMS: : *P SLEW	P7, TRACK 1, FWD, TIC * 202.24 +/-	200	4	0	5,271,996:00:1	
21	99	329	04:09:41.200		DMS: : *AT SPD	P7, TRACK 1, FWD, TIC 202.24 +/-	200	4	0	5,271,996:00:1	
22	99	329	04:14:10.466	465KA6B	6DMSC RDY,1	DMS Control Tape stop	200	4	0	5,272,000:40:0	
23	99	329	04:14:10.466		DMS: : *RUNDOWN	P7, TRACK 1, FWD, TIC * 265.35 +/-	200	4	0	5,272,000:40:0	
24	99	329	04:14:11.666		DMS: : *READY	RDY, TRACK 1, FWD, TIC * 265.41 +/-	200	4	0	5,272,016:08:0	
25	99	329	04:29:59.800	20TO4A	7SAFE STOP	S/P NO MOVEMENT	200	4	0	5,272,016:08:0	
26	99	329	04:30:49.800	20TO4B	7SLEW DIS,POS,0.0	Stator movement	200	4	0	5,272,016:83:0	
27	99	329	04:30:55.800	20TO4E	7STAR 1,1610,278,815,3	Star catalog update	200	4	0	5,272,017:01:0	
28	99	329	04:30:57.800	20TO4F	7STAR 2,9000,2,664,14,	Star catalog update	200	4	0	5,272,017:04:0	
29	99	329	04:30:59.800	20TO4G	7STAR 3,1610,278,815,3	Star catalog update	200	4	0	5,272,017:07:0	
30	99	329	04:31:01.800	20TO4H	7STAR 4,9000,2,664,14,	Star catalog update	200	4	0	5,272,017:10:0	
31	99	329	04:31:03.800	20TO4I	7STAR 5,1610,278,815,3	Star catalog update	200	4	0	5,272,017:13:0	
32	99	329	04:31:05.800	20TO4J	7STAR 6,9000,2,664,14,	Star catalog update	200	4	0	5,272,017:16:0	
33	99	329	04:35:02.466	432OD431A6A	6RCDSL DDSNCG,PLSNCG,EP	Record Deselect (DDS o	200	4	0	5,272,021:07:0	
34	99	329	04:35:03.133	432OD6A	6RTSL1	R/T Select of DDS and	200	4	0	5,272,021:08:0	
35	99	329	05:01:03.800	20RA6B	6RTSL1	R/T Select of DDS and	200	4	0	5,272,046:74:0	
36	99	329	08:36:00.466	480SA6A	6MROH 44,23E8,0,A10	read from LLM2A44,23E8,0,A1	200	4	0	5,272,259:36:0	
37	99	329	08:37:20.466	480SA6B	6MROH 45,23E8,0,B10	read from LLM2B45,23E8,0,B1	200	4	0	5,272,260:65:0	
38	99	329	09:03:52.466	488AA6B	6TMSED FILL,EH5	Sci, Eng, and D/L Chan	200	4	0	5,272,286:87:0	
39	99	329	09:42:58.466	488AA6C	6TMSED NORM,EH5	Sci, Eng, and D/L Chan	200	4	0	5,272,325:57:0	
40	99	329	10:01:03.800	20RM6B	6RTSL1	R/T Select of DDS and	200	4	0	5,272,343:47:0	
41	99	329	12:01:03.800	20RB6B	6RTSL1	R/T Select of DDS and	200	4	0	5,272,462:18:0	
42	99	329	13:15:41.133	192GA4A	7CONE 9,0,0,0	Check S/P Position	200	4	0	5,272,536:00:0	
43	99	329	13:22:45.800	176GA6A	6TMREC BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	200	4	0	5,272,543:00:0	
44	99	329	13:25:00.466	176GA6B	6TMREC NRC	NO RECORD Record Mode Change	200	4	0	5,272,545:20:0	
45	99	329	13:25:02.466		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 265.41 +/-	200	4	0	5,272,545:23:0	
46	99	329	13:25:02.466	50ZZ6XX	6DMSC R7,0	DMS Control Tape runup 7.68kpbs	200	4	0	5,272,545:23:0	
47	99	329	13:25:09.133		DMS: : *RUNUP	R7, TRACK 1, FWD, TIC 265.41 +/-	200	4	0	5,272,545:33:0	
48	99	329	13:25:10.533		DMS: : *AT SPD	R7, TRACK 1, FWD, TIC * 265.53 +/-	200	4	0	5,272,545:35:1	
49	99	329	13:25:12.466		DMS: : *RECORD	R7, TRACK 1, FWD, TIC * 265.99 +/-	200	4	0	5,272,545:38:0	
50	99	329	13:25:23.800		DMS: : *RUNDOWN	R7, TRACK 1, FWD, TIC * 268.64 +/-	200	4	0	5,272,545:55:0	
51	99	329	13:25:23.800	50ZZ6RD	6DMSC RDY,0	DMS Control Tape stop	200	4	0	5,272,545:55:0	
52	99	329	13:25:25.000		DMS: : *READY	RDY, TRACK 1, FWD, TIC * 268.70 +/-	200	4	0	5,272,545:56:8	
53	99	329	13:27:49.133	192GA4B	7CONE 9,0,90,0	Check S/P Position	200	4	0	5,272,548:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
54	99	329	14:01:03.800	20RN6B	6RTSL1	R/T Select of DDS and	200	4	0	5.272,580:80:0	
55	99	329	14:09:15.800	165GB4A	7SCAN NORM,257.794998,	Check S/P Position	200	4	0	5.272,588:90:0	
56	99	329	14:13:19.133	176GB6A	6TMREC BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	200	4	0	5.272,593:00:0	
57	99	329	14:14:10.466	117GB	CSMOS GS	***** GROUP START CSMOS	200	4	0	5.272,593:77:0	
58	99	329	14:14:18.466	165GB4B	7VECT	Inert vect update UTC	200	4	0	5.272,593:89:0	
59	99	329	14:14:19.800	117GB105A106A4A	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,594:00:0	
60	99	329	14:15:47.800	117GB105A106A4B	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,595:41:0	
61	99	329	14:15:57.800	117GB105A106A4C	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,595:56:0	
62	99	329	14:17:25.800	117GB105A106A4D	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,597:06:0	
63	99	329	14:17:35.800	117GB105A106A4E	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,597:21:0	
64	99	329	14:19:03.800	117GB105A106A4F	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,598:62:0	
65	99	329	14:19:13.800	117GB105A106A4G	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,598:77:0	
66	99	329	14:20:41.800	117GB105A106A4H	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,600:27:0	
67	99	329	14:20:51.800	117GB105A106A4I	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,600:42:0	
68	99	329	14:22:19.800	117GB105A106A4J	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,601:83:0	
69	99	329	14:22:29.800	117GB105A106A4K	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,602:07:0	
70	99	329	14:23:57.800	117GB105A106A4L	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,603:48:0	
71	99	329	14:24:07.800	117GB105A106A4M	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,603:63:0	
72	99	329	14:25:35.800	117GB105A106A4N	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,605:13:0	
73	99	329	14:25:45.800	117GB105A106A4O	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,605:28:0	
74	99	329	14:25:53.800	DMS: :E4-DELAY		RDY, TRACK 1, FWD, TIC 268.70 +/-	200	4	0	5.272,605:40:0	
75	99	329	14:25:53.800	6DMSC R7.0		DMS Control Tape runup 7.68kps	200	4	0	5.272,605:40:0	
76	99	329	14:26:00.466	DMS: :RUNUP		R7, TRACK 1, FWD, TIC 268.70 +/-	200	4	0	5.272,605:50:0	
77	99	329	14:26:01.866	DMS: :AT_SPD		R7, TRACK 1, FWD, TIC * 268.82 +/-	200	4	0	5.272,605:52:1	
78	99	329	14:26:19.133	DMS: :RECORD		R7, TRACK 1, FWD, TIC * 272.87 +/-	200	4	0	5.272,605:78:0	
79	99	329	14:26:41.800	DMS: :RUNDOWN		R7, TRACK 1, FWD, TIC * 278.18 +/-	200	4	0	5.272,606:21:0	
80	99	329	14:26:41.800	6DMSC RDY.0		DMS Control Tape stop	200	4	0	5.272,606:21:0	
81	99	329	14:26:43.000	DMS: :READY		RDY, TRACK 1, FWD, TIC * 278.24 +/-	200	4	0	5.272,606:22:8	
82	99	329	14:27:13.800	117GB105A106A4P	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,606:69:0	
83	99	329	14:27:23.800	117GB105A106A4Q	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,606:84:0	
84	99	329	14:28:51.800	117GB105A106A4R	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,608:34:0	
85	99	329	14:29:01.800	117GB105A106A4S	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,608:49:0	
86	99	329	14:30:29.800	117GB105A106A4T	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,609:90:0	
87	99	329	14:30:39.800	117GB105A106A4U	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,610:14:0	
88	99	329	14:32:07.800	117GB105A106A4V	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,611:55:0	
89	99	329	14:32:17.800	117GB105A106A4W	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,611:70:0	
90	99	329	14:33:45.800	117GB105A106A4X	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,613:20:0	
91	99	329	14:33:55.800	117GB105A106A4Y	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,613:35:0	
92	99	329	14:35:23.800	117GB105A106A4Z	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,614:76:0	
93	99	329	14:35:33.800	117GB105A106A4AA	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,615:00:0	
94	99	329	14:37:01.800	117GB105A106A4AB	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,616:41:0	
95	99	329	14:37:11.800	117GB105A106A4AC	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,616:56:0	
96	99	329	14:38:39.800	117GB105A106A4AD	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,618:06:0	
97	99	329	14:38:49.800	117GB105A106A4AE	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,618:21:0	
98	99	329	14:38:55.800	DMS: :E4-DELAY		RDY, TRACK 1, FWD, TIC 278.24 +/-	200	4	0	5.272,618:30:0	
99	99	329	14:38:55.800	6DMSC R7.0		DMS Control Tape runup 7.68kps	200	4	0	5.272,618:30:0	
100	99	329	14:39:02.466	DMS: :RUNUP		R7, TRACK 1, FWD, TIC 278.24 +/-	200	4	0	5.272,618:40:0	
101	99	329	14:39:03.866	DMS: :AT_SPD		R7, TRACK 1, FWD, TIC * 278.36 +/-	200	4	0	5.272,618:42:1	
102	99	329	14:39:21.133	DMS: :RECORD		R7, TRACK 1, FWD, TIC * 282.41 +/-	200	4	0	5.272,618:68:0	
103	99	329	14:39:43.800	DMS: :RUNDOWN		R7, TRACK 1, FWD, TIC * 287.72 +/-	200	4	0	5.272,619:11:0	
104	99	329	14:39:43.800	6DMSC RDY.0		DMS Control Tape stop	200	4	0	5.272,619:11:0	
105	99	329	14:39:45.000	DMS: :READY		RDY, TRACK 1, FWD, TIC * 287.78 +/-	200	4	0	5.272,619:12:8	
106	99	329	14:40:17.800	117GB105A106A4AF	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,619:62:0	
107	99	329	14:40:27.800	117GB105A106A4AG	7STRP -0.050042,0.0,0,	Slew =-0.61	200	4	0	5.272,619:77:0	
108	99	329	14:41:55.800	117GB105A106A4AH	7STRP 0.050242,0.00106	Slew =12.01	200	4	0	5.272,621:27:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
109	99	329	14:42:05.800	117GB105A106A4AI	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,621:42:0	
110	99	329	14:43:33.800	117GB105A106A4AJ	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,622:83:0	
111	99	329	14:43:43.800	117GB105A106A4AK	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,623:07:0	
112	99	329	14:44:09.133	488AB6A	6TMSED	NORM,EH4	Sci, Eng, and D/L Chan	200	4	0	5.272,623:45:0	
113	99	329	14:45:11.800	117GB105A106A4AL	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,624:48:0	
114	99	329	14:45:21.800	117GB105A106A4AM	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,624:63:0	
115	99	329	14:46:49.800	117GB105A106A4AN	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,626:13:0	
116	99	329	14:46:59.800	117GB105A106A4AO	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,626:28:0	
117	99	329	14:48:27.800	117GB105A106A4AP	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,627:69:0	
118	99	329	14:48:37.800	117GB105A106A4AQ	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,627:84:0	
119	99	329	14:50:05.800	117GB105A106A4AR	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,629:34:0	
120	99	329	14:50:15.800	117GB105A106A4AS	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,629:49:0	
121	99	329	14:51:43.800	117GB105A106A4AT	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,630:90:0	
122	99	329	14:51:53.800	117GB105A106A4AU	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,631:14:0	
123	99	329	14:51:57.800		DMS:	:E4-DELAY	RDY, TRACK 1, FWD, TIC 287.78 +/-	200	4	0	5.272,631:20:0	
124	99	329	14:51:57.800	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	200	4	0	5.272,631:20:0	
125	99	329	14:52:04.466		DMS:	:R7,0	RDY, TRACK 1, FWD, TIC 287.78 +/-	200	4	0	5.272,631:30:0	
126	99	329	14:52:05.866		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC * 287.90 +/-	200	4	0	5.272,631:32:1	
127	99	329	14:52:23.133		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC * 291.95 +/-	200	4	0	5.272,631:58:0	
128	99	329	14:52:45.800		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC * 297.26 +/-	200	4	0	5.272,632:01:0	
129	99	329	14:52:45.800	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5.272,632:01:0	
130	99	329	14:52:47.000		DMS:	:*READY	RDY, TRACK 1, FWD, TIC * 297.32 +/-	200	4	0	5.272,632:02:8	
131	99	329	14:53:21.800	117GB105A106A4AV	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,632:55:0	
132	99	329	14:53:31.800	117GB105A106A4AW	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,632:70:0	
133	99	329	14:54:59.800	117GB105A106A4AX	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,634:20:0	
134	99	329	14:55:09.800	117GB105A106A4AY	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,634:35:0	
135	99	329	14:56:37.800	117GB105A106A4AZ	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,635:76:0	
136	99	329	14:56:47.800	117GB105A106A4BA	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,636:00:0	
137	99	329	14:58:15.800	165GB4C	7VECT		Inert vect update UTC	200	4	0	5.272,637:41:0	
138	99	329	14:58:15.800	117GB105A106A4BB	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,637:41:0	
139	99	329	14:58:25.800	117GB105A106A4BC	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,637:56:0	
140	99	329	14:59:53.800	117GB105A106A4BD	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,639:06:0	
141	99	329	14:59:59.800	481UA4A	7VECT		Inert vect update UTC	200	4	0	5.272,639:15:0	
142	99	329	15:00:03.800	117GB105A106A4BE	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,639:21:0	
143	99	329	15:01:31.800	117GB105A106A4BF	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,640:62:0	
144	99	329	15:01:41.800	117GB105A106A4BG	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,640:77:0	
145	99	329	15:03:09.800	117GB105A106A4BH	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,642:27:0	
146	99	329	15:03:19.800	117GB105A106A4BI	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,642:42:0	
147	99	329	15:04:47.800	117GB105A106A4BJ	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,643:83:0	
148	99	329	15:04:57.800	117GB105A106A4BK	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,644:07:0	
149	99	329	15:05:00.466		DMS:	:E4-DELAY	RDY, TRACK 1, FWD, TIC 297.32 +/-	200	4	0	5.272,644:11:0	
150	99	329	15:05:00.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	200	4	0	5.272,644:11:0	
151	99	329	15:05:07.133		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 297.32 +/-	200	4	0	5.272,644:21:0	
152	99	329	15:05:08.533		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC * 297.44 +/-	200	4	0	5.272,644:23:1	
153	99	329	15:05:25.133		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC * 301.33 +/-	200	4	0	5.272,644:48:0	
154	99	329	15:05:47.800		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC * 306.64 +/-	200	4	0	5.272,644:82:0	
155	99	329	15:05:47.800	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5.272,644:82:0	
156	99	329	15:05:49.000		DMS:	:*READY	RDY, TRACK 1, FWD, TIC * 306.70 +/-	200	4	0	5.272,644:83:8	
157	99	329	15:06:25.800	117GB105A106A4BL	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,645:48:0	
158	99	329	15:06:35.800	117GB105A106A4BM	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,645:63:0	
159	99	329	15:08:03.800	117GB105A106A4BN	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,647:13:0	
160	99	329	15:08:13.800	117GB105A106A4BO	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,647:28:0	
161	99	329	15:09:41.800	117GB105A106A4BP	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,648:69:0	
162	99	329	15:09:51.800	117GB105A106A4BQ	7STRP	-0.050042,0.0,0.0,	Slew =0.61	200	4	0	5.272,648:84:0	
163	99	329	15:11:19.800	117GB105A106A4BR	7STRP	0.050242,0.00106	Slew =12.01	200	4	0	5.272,650:34:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	99	329	15:11:29.800	117GB105A106A4BS	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,650:49:0	
165	99	329	15:12:57.800	117GB105A106A4BT	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,651:90:0	
166	99	329	15:13:07.800	117GB105A106A4BU	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,652:14:0	
167	99	329	15:14:35.800	117GB105A106A4BV	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,653:55:0	
168	99	329	15:14:45.800	117GB105A106A4BW	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,653:70:0	
169	99	329	15:16:13.800	117GB105A106A4BX	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,655:20:0	
170	99	329	15:16:23.800	117GB105A106A4BY	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,655:35:0	
171	99	329	15:17:51.800	117GB105A106A4BZ	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,656:76:0	
172	99	329	15:18:01.800	117GB105A106A4CA	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,657:00:0	
173	99	329	15:18:02.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	200	4	0	5.272,657:01:0	
174	99	329	15:18:02.466		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 306.70 +/-	200	4	0	5.272,657:01:0	
175	99	329	15:18:09.133		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 306.70 +/-	200	4	0	5.272,657:11:0	
176	99	329	15:18:10.533		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC *306.82 +/-	200	4	0	5.272,657:13:1	
177	99	329	15:18:27.800		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *310.87 +/-	200	4	0	5.272,657:39:0	
178	99	329	15:18:50.466		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *316.18 +/-	200	4	0	5.272,657:73:0	
179	99	329	15:18:50.466	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5.272,657:73:0	
180	99	329	15:18:51.666		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *316.24 +/-	200	4	0	5.272,657:74:8	
181	99	329	15:19:29.800	117GB105A106A4CB	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,658:41:0	
182	99	329	15:19:39.800	117GB105A106A4CC	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,658:56:0	
183	99	329	15:21:07.800	117GB105A106A4CD	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,660:06:0	
184	99	329	15:21:17.800	117GB105A106A4CE	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,660:21:0	
185	99	329	15:22:45.800	117GB105A106A4CF	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,661:62:0	
186	99	329	15:22:55.800	117GB105A106A4CG	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,661:77:0	
187	99	329	15:24:23.800	117GB105A106A4CH	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,663:27:0	
188	99	329	15:24:33.800	117GB105A106A4CI	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,663:42:0	
189	99	329	15:26:01.800	117GB105A106A4CJ	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,664:83:0	
190	99	329	15:26:11.800	117GB105A106A4CK	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,665:07:0	
191	99	329	15:27:39.800	117GB105A106A4CL	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,666:48:0	
192	99	329	15:27:49.800	117GB105A106A4CM	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,666:63:0	
193	99	329	15:29:17.800	117GB105A106A4CN	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,668:13:0	
194	99	329	15:29:27.800	117GB105A106A4CO	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,668:28:0	
195	99	329	15:30:55.800	117GB105A106A4CP	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,669:69:0	
196	99	329	15:31:04.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	200	4	0	5.272,669:82:0	
197	99	329	15:31:04.466		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 316.24 +/-	200	4	0	5.272,669:82:0	
198	99	329	15:31:05.800	117GB105A106A4CQ	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,669:84:0	
199	99	329	15:31:11.133		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 316.24 +/-	200	4	0	5.272,670:03:0	
200	99	329	15:31:12.533		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC *316.36 +/-	200	4	0	5.272,670:01:0	
201	99	329	15:31:29.800		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *320.41 +/-	200	4	0	5.272,670:29:0	
202	99	329	15:31:52.466		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *325.72 +/-	200	4	0	5.272,670:63:0	
203	99	329	15:31:52.466	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5.272,670:63:0	
204	99	329	15:31:53.666		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *325.78 +/-	200	4	0	5.272,670:64:8	
205	99	329	15:32:33.800	117GB105A106A4CR	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,671:34:0	
206	99	329	15:32:43.800	117GB105A106A4CS	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,671:49:0	
207	99	329	15:34:11.800	117GB105A106A4CT	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,672:90:0	
208	99	329	15:34:21.800	117GB105A106A4CU	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,673:14:0	
209	99	329	15:35:49.800	117GB105A106A4CV	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,674:55:0	
210	99	329	15:35:59.800	117GB105A106A4CW	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,674:70:0	
211	99	329	15:37:27.800	117GB105A106A4CX	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,676:20:0	
212	99	329	15:37:37.800	117GB105A106A4CY	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,676:35:0	
213	99	329	15:39:05.800	117GB105A106A4CZ	7STRP	0.050242,0,00106	Slew =12.01	200	4	0	5.272,677:76:0	
214	99	329	15:39:15.800	117GB105A106A4DA	7STRP	-0.050042,0,0,0,	Slew =-0.61	200	4	0	5.272,678:00:0	
215	99	329	15:40:43.800	117GB11A	CSMOS	GE	***** GROUP END CSMOS	200	4	0	5.272,679:41:0	
216	99	329	15:42:47.800	176GB6B	6TMREC	NRC	NO RECORD Record Mode Change	200	4	0	5.272,681:45:0	
217	99	329	15:42:49.800	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	200	4	0	5.272,681:48:0	
218	99	329	15:42:49.800		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 325.78 +/-	200	4	0	5.272,681:48:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	99	329	15:42:56.466		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 325.78 +/-	200	4	0	5,272,681:58:0	
220	99	329	15:42:57.866		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC * 325.90 +/-	200	4	0	5,272,681:60:1	
221	99	329	15:42:59.800		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC * 326.35 +/-	200	4	0	5,272,681:63:0	
222	99	329	15:43:17.800	165GI4A	7SCAN	NORM,261.210999,	Check S/P Position	200	4	0	5,272,681:90:0	
223	99	329	15:43:20.466		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC * 331.20 +/-	200	4	0	5,272,682:03:0	
224	99	329	15:43:20.466	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5,272,682:03:0	
225	99	329	15:43:21.666		DMS:	:*READY	RDY, TRACK 1, FWD, TIC * 331.26 +/-	200	4	0	5,272,682:04:8	
226	99	329	15:46:20.466	176GI6A	6TMREC	BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	200	4	0	5,272,685:00:0	
227	99	329	15:47:11.800	117GI	CSMOS	GS	***** GROUP START CSMOS	200	4	0	5,272,685:77:0	
228	99	329	15:47:19.800	165GI4B	7VECT		Inert vect update UTC	200	4	0	5,272,686:00:0	
229	99	329	15:47:21.133	117GI105A106A4A	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,687:74:0	
230	99	329	15:49:11.133	117GI105A106A4B	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,687:74:0	
231	99	329	15:49:19.133	117GI105A106A4C	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,687:86:0	
232	99	329	15:51:09.133	117GI105A106A4D	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,689:69:0	
233	99	329	15:51:17.133	117GI105A106A4E	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,689:81:0	
234	99	329	15:53:07.133	117GI105A106A4F	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,691:64:0	
235	99	329	15:53:15.133	117GI105A106A4G	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,691:76:0	
236	99	329	15:55:05.133	117GI105A106A4H	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,693:59:0	
237	99	329	15:55:13.133	117GI105A106A4I	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,693:71:0	
238	99	329	15:57:03.133	117GI105A106A4J	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,695:54:0	
239	99	329	15:57:11.133	117GI105A106A4K	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,695:66:0	
240	99	329	15:59:01.133	117GI105A106A4L	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,697:49:0	
241	99	329	15:59:09.133	117GI105A106A4M	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,697:61:0	
242	99	329	16:00:59.133	117GI105A106A4N	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,699:44:0	
243	99	329	16:01:03.800	20RC6B	6RTSL1		R/T Select of DDS and	200	4	0	5,272,699:51:0	
244	99	329	16:01:07.133	117GI105A106A4O	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,699:56:0	
245	99	329	16:02:57.133	117GI105A106A4P	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,701:39:0	
246	99	329	16:03:05.133	117GI105A106A4Q	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,701:51:0	
247	99	329	16:03:33.133	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	200	4	0	5,272,702:02:0	
248	99	329	16:03:33.133		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 331.26 +/-	200	4	0	5,272,702:02:0	
249	99	329	16:03:39.800		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 331.26 +/-	200	4	0	5,272,702:12:0	
250	99	329	16:03:41.200		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC * 331.38 +/-	200	4	0	5,272,702:14:1	
251	99	329	16:04:08.466		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC * 337.77 +/-	200	4	0	5,272,702:55:0	
252	99	329	16:04:31.133	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5,272,702:89:0	
253	99	329	16:04:31.133		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC * 343.08 +/-	200	4	0	5,272,702:89:0	
254	99	329	16:04:32.333		DMS:	:*READY	RDY, TRACK 1, FWD, TIC * 343.14 +/-	200	4	0	5,272,702:90:8	
255	99	329	16:04:55.133	117GI105A106A4R	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,703:34:0	
256	99	329	16:05:03.133	117GI105A106A4S	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,703:46:0	
257	99	329	16:06:53.133	117GI105A106A4T	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,705:29:0	
258	99	329	16:07:01.133	117GI105A106A4U	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,705:41:0	
259	99	329	16:08:51.133	117GI105A106A4V	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,707:24:0	
260	99	329	16:08:59.133	117GI105A106A4W	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,707:36:0	
261	99	329	16:10:49.133	117GI105A106A4X	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,709:19:0	
262	99	329	16:10:57.133	117GI105A106A4Y	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,709:31:0	
263	99	329	16:12:47.133	117GI105A106A4Z	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,711:14:0	
264	99	329	16:12:55.133	117GI105A106A4A	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,711:26:0	
265	99	329	16:14:45.133	117GI105A106A4AB	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,713:09:0	
266	99	329	16:14:53.133	117GI105A106A4AC	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,713:21:0	
267	99	329	16:16:43.133	117GI105A106A4AD	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,715:04:0	
268	99	329	16:16:51.133	117GI105A106A4AE	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,715:16:0	
269	99	329	16:18:41.133	117GI105A106A4AF	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,716:90:0	
270	99	329	16:18:49.133	117GI105A106A4AG	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,717:11:0	
271	99	329	16:20:39.133	117GI105A106A4AH	7STRP	0.016101,-0.0036	Slew =12.01	200	4	0	5,272,718:85:0	
272	99	329	16:20:47.133	117GI105A106A4AI	7STRP	-0.016802,0.0,0.0,	Slew =-0.16	200	4	0	5,272,719:06:0	
273	99	329	16:21:24.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	200	4	0	5,272,719:62:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	99	329	16:21:24.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 343.14 +/-	200	4	0	5,272,719:62:0	
275	99	329	16:21:31.133		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 343.14 +/-	200	4	0	5,272,719:72:0	
276	99	329	16:21:32.533		DMS:	: *AT SPD	R7, TRACK 1, FWD, TIC * 343.26 +/-	200	4	0	5,272,719:74:1	
277	99	329	16:21:59.133		DMS:	: *RECORD	R7, TRACK 1, FWD, TIC * 349.50 +/-	200	4	0	5,272,720:23:0	
278	99	329	16:22:21.800	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5,272,720:57:0	
279	99	329	16:22:21.800		DMS:	: *RUNDOWN	R7, TRACK 1, FWD, TIC * 354.81 +/-	200	4	0	5,272,720:57:0	
280	99	329	16:22:23.000		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 354.87 +/-	200	4	0	5,272,720:58:8	
281	99	329	16:22:37.133	117G11A	CSMOS	GE	***** GROUP END CSMOS	200	4	0	5,272,720:80:0	
282	99	329	16:23:14.466	176G16B	6TMREC	NRC	NO RECORD Record Mode Change	200	4	0	5,272,721:45:0	
283	99	329	16:23:16.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 354.87 +/-	200	4	0	5,272,721:48:0	
284	99	329	16:23:16.466	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	200	4	0	5,272,721:48:0	
285	99	329	16:23:23.133		DMS:	: *RUNUP	R7, TRACK 1, FWD, TIC 354.87 +/-	200	4	0	5,272,721:58:0	
286	99	329	16:23:24.533		DMS:	: *AT SPD	R7, TRACK 1, FWD, TIC * 354.99 +/-	200	4	0	5,272,721:60:1	
287	99	329	16:23:26.466		DMS:	: *RECORD	R7, TRACK 1, FWD, TIC * 355.44 +/-	200	4	0	5,272,721:63:0	
288	99	329	16:23:36.466		DMS:	: *RUNDOWN	R7, TRACK 1, FWD, TIC * 357.79 +/-	200	4	0	5,272,721:78:0	
289	99	329	16:23:36.466	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	200	4	0	5,272,721:78:0	
290	99	329	16:23:37.666		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 357.85 +/-	200	4	0	5,272,721:79:8	
291	99	329	16:23:59.800	20EA5A	37PL		Program Load (halts microprocessor & unwri	260	4	0	5,272,722:22:0	
292	99	329	16:24:01.133	20EA5B	37MRL		Memory Realocate (software operates from R	260	4	0	5,272,722:24:0	
293	99	329	16:24:03.133	20EA6A	6MCOPI	NIMS	NIMS,1000,LLM1A,7300,77F7	260	4	0	5,272,722:27:0	
294	99	329	16:24:13.133	20EA6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	260	4	0	5,272,722:42:0	
295	99	329	16:24:26.466	20EA5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	5,272,722:62:0	
296	99	329	16:24:29.800	20EA5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,272,722:67:0	
297	99	329	16:24:45.133	165JA4A	7SCAN	NORM,24.015,-54,	Check S/P Position	260	4	0	5,272,722:90:0	
298	99	329	16:25:01.133	20EA4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,272,723:23:0	
299	99	329	16:26:06.466	488AB6B	6TMSED	FILL,EH4	Sci, Eng, and D/L Chan	2R0	4	0	5,272,724:30:0	
300	99	329	16:26:42.466	125EA	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	5,272,724:84:0	
301	99	329	16:26:42.466	125EA4A	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R0	4	0	5,272,724:84:0	
302	99	329	16:27:43.133	125EA11A	NIMSINIT	GE	##### GROUP END INIT	4R0	4	0	5,272,725:84:0	
303	99	329	16:27:43.133	125EA4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	4R0	4	0	5,272,725:84:0	
304	99	329	16:28:38.466	175JA422A6A	6DMSC	R806,1	DMS Control	4R0	4	0	5,272,726:76:0	
305	99	329	16:28:38.466		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 357.85 +/-	4R0	4	0	5,272,726:76:0	
306	99	329	16:28:40.466	118JA	SMOS	GS		4R0	4	0	5,272,726:79:0	
307	99	329	16:28:43.800	127EA	NIMSTAB	GS	%%%%GROUP START TAB	4R0	4	0	5,272,726:84:0	
308	99	329	16:28:43.800	127EA4A	37IOP	3,0	Long Map, Grating Start Position =00	4R3	4	0	5,272,726:84:0	
309	99	329	16:28:44.466	127EA4B	37ETB	04,C,4,35,FF,FF	Loads wavelength edit table	4R3	4	0	5,272,726:85:0	
310	99	329	16:28:45.133		DMS:	: *RUNUP	R806, TRACK 1, FWD, TIC 357.85 +/-	4R3	4	0	5,272,726:86:0	
311	99	329	16:28:47.133	165JA4B	7VECT		Inert vect update UTC	4R3	4	0	5,272,726:89:0	
312	99	329	16:28:49.800	175JA176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	4R3	4	0	5,272,727:02:0	
313	99	329	16:28:50.400		DMS:	: *RECORD	R806, TRACK 1, FWD, TIC * 423.85 +/-	4R3	4	0	5,272,727:02:9	
314	99	329	16:28:50.400		DMS:	: *AT SPD	R806, TRACK 1, FWD, TIC 423.85 +/-	4R3	4	0	5,272,727:02:9	
315	99	329	16:28:50.466	118JA110A11A4A	7STRP	0,0,0,0069,26,0,	Slew =2.01	4R3	4	0	5,272,727:03:0	
316	99	329	16:28:52.466	127EA11A	NIMSTAB	GE	%%%%GROUP END TAB	4R3	4	0	5,272,727:06:0	
317	99	329	16:29:07.800	118JA11A	SMOS	GE		4R3	4	0	5,272,727:29:0	
318	99	329	16:29:14.466	175JA422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,272,727:39:0	
319	99	329	16:29:14.466		DMS:	: *RUNDOWN	R806, TRACK 1, FWD, TIC *1016.11 +/-	4R3	4	0	5,272,727:39:0	
320	99	329	16:29:17.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *1027.61 +/-	4R3	4	0	5,272,727:43:1	
321	99	329	16:31:54.466	25NNNOPOLE01-		-----START-----		4R3	4	0	:	
322	99	329	16:34:51.800	165EA4A	7SCAN	NORM,52.064,-23,	Check S/P Position	4R3	4	0	5,272,732:90:0	
323	99	329	16:34:56.466	25NNNOPOLE01-		-----STOP-----		4R3	4	0	:	
324	99	329	16:34:56.466	25NNNOPOLE01-		-----START-----		4R3	4	0	:	
325	99	329	16:38:41.800	175EA422A6A	6DMSC	R28,1	DMS Control	4R3	4	0	5,272,736:71:0	
326	99	329	16:38:41.800		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 1027.61 +/-	4R3	4	0	5,272,736:71:0	
327	99	329	16:38:45.800	117EA	CSMOS	GS	***** GROUP START CSMOS	4R3	4	0	5,272,736:77:0	
328	99	329	16:38:48.466		DMS:	: *RUNUP	R28, TRACK 1, FWD, TIC 1027.61 +/-	4R3	4	0	5,272,736:81:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	99	329	16:38:51.800	175EA176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	4R3	4	0	5,272,736:86:0	
330	99	329	16:38:52.466	25ENNOPOLE01-	NIMPBK	301EA	EUROPA NO POLE OBSERVATION	4R3	4	0	:	
331	99	329	16:38:52.466		DMS:	:*AT_SPD	R28, TRACK 1, FWD, TIC 1029.11 +/-	4R3	4	0	5,272,736:87:0	
332	99	329	16:38:52.466		DMS:	:*RECORD	R28, TRACK 1, FWD, TIC *1029.11 +/-	4R3	4	0	5,272,736:87:0	
333	99	329	16:38:53.800	165EA4B	7VECT		Inert vect update UTC	4R3	4	0	5,272,736:89:0	
334	99	329	16:38:55.133	117EA105A106A4A	7STRP	-0.013001,0.0,0.0,	Slew =-0.02	4R3	4	0	5,272,737:00:0	
335	99	329	16:44:24.466	25ENNOPOLE01-	NIMPBK	301EE	EUROPA NO POLE OBSERVATION	4R3	4	0	:	
336	99	329	16:44:33.133	25ENNOPOLE01-	DESELC	300EA	EUROPA NO POLE OBSERVATION	4R3	4	0	:	
337	99	329	16:49:51.800	25ENNOPOLE01-	DESELC	300EE	EUROPA NO POLE OBSERVATION	4R3	4	0	:	
338	99	329	16:49:52.466	175EA422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,272,747:76:0	
339	99	329	16:49:52.466		DMS:	:*RUNDOWN	R28, TRACK 1, FWD, TIC *1609.19 +/-	4R3	4	0	5,272,747:76:0	
340	99	329	16:49:53.666		DMS:	:*READY	R28, TRACK 1, FWD, TIC *1609.49 +/-	4R3	4	0	5,272,747:77:8	
341	99	329	16:49:59.133	117EA11A	CSMOS	GE	***** GROUP END CSMOS	4R3	4	0	5,272,747:86:0	
342	99	329	16:50:06.466	25ENNOPOLE01-		-----STOP-----		4R3	4	0	:	
343	99	329	16:50:59.800	480SC6A	6MROH	44.23E8,0,A10	read from LLM2A44.23E8,0,A1	4R3	4	0	5,272,748:86:0	
344	99	329	16:52:19.800	480SC6B	6MROH	45.23E8,0,B10	read from LLM2B45.23E8,0,B1	4R3	4	0	5,272,750:24:0	
345	99	329	16:55:05.133	165JB4A	7SCAN	NORM,63.128,2.09	Check S/P Position	4R3	4	0	5,272,752:90:0	
346	99	329	16:58:58.466	175JB422A6A	6DMSC	R806,1	DMS Control	4R3	4	0	5,272,756:76:0	
347	99	329	16:58:58.466		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 1609.49 +/-	4R3	4	0	5,272,756:76:0	
348	99	329	16:59:05.133		DMS:	:*RUNUP	R806, TRACK 1, FWD, TIC 1609.49 +/-	4R3	4	0	5,272,756:86:0	
349	99	329	16:59:07.133	165JB4B	7VECT		Inert vect update UTC	4R3	4	0	5,272,756:89:0	
350	99	329	16:59:09.800	175JB176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	4R3	4	0	5,272,757:02:0	
351	99	329	16:59:10.400		DMS:	:*RECORD	R806, TRACK 1, FWD, TIC *1675.49 +/-	4R3	4	0	5,272,757:02:9	
352	99	329	16:59:10.400		DMS:	:*AT_SPD	R806, TRACK 1, FWD, TIC 1675.49 +/-	4R3	4	0	5,272,757:02:9	
353	99	329	16:59:17.133		DMS:	:*RUNDOWN	R806, TRACK 1, FWD, TIC *1841.19 +/-	4R3	4	0	5,272,757:13:0	
354	99	329	16:59:17.133	175JB422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,272,757:13:0	
355	99	329	16:59:19.866		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *1852.69 +/- 1	4R3	4	0	5,272,757:17:1	
356	99	329	17:00:08.466	165JC4A	7SCAN	NORM,62.484,0.89	Check S/P Position	4R3	4	0	5,272,757:90:0	
357	99	329	17:00:59.800		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 1852.69 +/- 1	4R3	4	0	5,272,758:76:0	
358	99	329	17:00:59.800	175JC422A6A	6DMSC	R806,1	DMS Control	4R3	4	0	5,272,758:76:0	
359	99	329	17:01:06.466		DMS:	:*RUNUP	R806, TRACK 1, FWD, TIC 1852.69 +/- 1	4R3	4	0	5,272,758:86:0	
360	99	329	17:01:08.466	165JC4B	7VECT		Inert vect update UTC	4R3	4	0	5,272,758:89:0	
361	99	329	17:01:11.133	175JC176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	4R3	4	0	5,272,759:02:0	
362	99	329	17:01:11.733		DMS:	:*RECORD	R806, TRACK 1, FWD, TIC *1918.69 +/- 1	4R3	4	0	5,272,759:02:9	
363	99	329	17:01:11.733		DMS:	:*AT_SPD	R806, TRACK 1, FWD, TIC 1918.69 +/- 1	4R3	4	0	5,272,759:02:9	
364	99	329	17:01:14.466	175JC422A6B	6DMSC	RDY,0	DMS Control Tape stop	4R3	4	0	5,272,759:07:0	
365	99	329	17:01:14.466		DMS:	:*RUNDOWN	R806, TRACK 1, FWD, TIC *1985.96 +/- 1	4R3	4	0	5,272,759:07:0	
366	99	329	17:01:17.200		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *1997.46 +/- 1	4R3	4	0	5,272,759:11:1	
367	99	329	17:04:15.799	25NNSUBJUP01-		-----START-----		4R3	4	0	:	
368	99	329	17:04:57.133	488AB6C	6TMSED	FILL,EH5	Sci, Eng, and D/L Chan	4R3	4	0	5,272,762:68:0	
369	99	329	17:07:17.799	25ENSUBJUP01-		-----START-----		4R3	4	0	:	
370	99	329	17:07:17.799	25NNSUBJUP01-		-----STOP-----		4R3	4	0	:	
371	99	329	17:09:22.466	20EB5A	37PL		Program Load (halts microprocessor & unwri	4R3	4	0	5,272,767:11:0	
372	99	329	17:09:25.800	20EB5B	37MRL		Memory Relocate (software operates from R	4R3	4	0	5,272,767:16:0	
373	99	329	17:09:29.133	20EB6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	4R3	4	0	5,272,767:21:0	
374	99	329	17:09:39.133	20EB6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	4R3	4	0	5,272,767:36:0	
375	99	329	17:09:49.133	20EB5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	5,272,767:51:0	
376	99	329	17:09:52.466	20EB5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,272,767:56:0	
377	99	329	17:10:08.466	20EB4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,272,767:80:0	
378	99	329	17:11:11.800	125EB	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	5,272,768:84:0	
379	99	329	17:11:11.800	125EB4A	37IST	0,2,0,OFF,0,1,2	Gain State 3	3R0	4	0	5,272,768:84:0	
380	99	329	17:11:15.800	165EB4A	7SCAN	NORM,67.204,7.93	Check S/P Position	3R0	4	0	5,272,768:90:0	
381	99	329	17:11:35.800	488AB6D	6TMSED	NORM,EH5	Sci, Eng, and D/L Chan	3R0	4	0	5,272,769:29:0	
382	99	329	17:12:12.466	125EB11A	NIMSINIT	GE	##### GROUP END INIT	3R0	4	0	5,272,769:84:0	
383	99	329	17:12:12.466	125EB4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	3R0	4	0	5,272,769:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	99	329	17:14:13.800	127EB4A	37IOP	3,0	Long Map, Grating Start Position =00	3R3	4	0	5,272,771:84:0	
385	99	329	17:14:13.800	127EB	NIMSTAB	GS	%%%GROUP START TAB	3R3	4	0	5,272,771:84:0	
386	99	329	17:14:14.466	127EB4B	37ETB	04,C,4.35,FF,FF	Loads wavelength edit table	3R3	4	0	5,272,771:85:0	
387	99	329	17:14:22.466	127EB11A	NIMSTAB	GE	%%%%GROUP END TAB	3R3	4	0	5,272,772:06:0	
388	99	329	17:15:05.800		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 1997.46 +/- 1	3R3	4	0	5,272,772:71:0	
389	99	329	17:15:05.800	175EB422A6A	6DMSC	R28,1	DMS Control	3R3	4	0	5,272,772:71:0	
390	99	329	17:15:09.800	117EB	CSMOS	GS	**** GROUP START CSMOS	3R3	4	0	5,272,772:77:0	
391	99	329	17:15:12.466		DMS:	:*RUNUP	R28, TRACK 1, FWD, TIC 1997.46 +/- 1	3R3	4	0	5,272,772:81:0	
392	99	329	17:15:15.800	175EB176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	3R3	4	0	5,272,772:86:0	
393	99	329	17:15:16.466		DMS:	:*AT SPD	R28, TRACK 1, FWD, TIC 1998.96 +/- 1	3R3	4	0	5,272,772:87:0	
394	99	329	17:15:16.466		DMS:	:*RECORD	R28, TRACK 1, FWD, TIC *1998.96 +/- 1	3R3	4	0	5,272,772:87:0	
395	99	329	17:15:16.466	25ENSUBJUP01-	NIMPBK	301EB	EUROPA SUBJUP OBSERVATION	3R3	4	0	:	
396	99	329	17:15:17.800	165EB4B	7VECT		Inert vect update UTC	3R3	4	0	5,272,772:89:0	
397	99	329	17:15:19.133	117EB105A106A4A	7STRP	0.0111,0.0,0.0,0.0	Slew = 0.06	3R3	4	0	5,272,773:00:0	
398	99	329	17:16:43.133	25ENSUBJUP01-	NIMPBK	301EF	EUROPA SUBJUP OBSERVATION	3R3	4	0	:	
399	99	329	17:16:51.800	25ENSUBJUP01-	DESELC	300EB	EUROPA SUBJUP OBSERVATION	3R3	4	0	:	
400	99	329	17:18:25.800	25ENSUBJUP01-	DESELC	300EF	EUROPA SUBJUP OBSERVATION	3R3	4	0	:	
401	99	329	17:18:26.466	175EB422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5,272,776:08:0	
402	99	329	17:18:26.466		DMS:	:*RUNDOWN	R28, TRACK 1, FWD, TIC *2165.95 +/- 1	3R3	4	0	5,272,776:08:0	
403	99	329	17:18:27.666		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *2166.25 +/- 1	3R3	4	0	5,272,776:09:8	
404	99	329	17:18:29.133	117EB11A	CSMOS	GE	**** GROUP END CSMOS	3R3	4	0	5,272,776:12:0	
405	99	329	17:28:31.799	25ENSUBJUP01-			****STOP****	3R3	4	0	:	
406	99	329	17:29:27.800	165GC4A	7SCAN	NORM,70.136,15.3	Check S/P Position	3R3	4	0	5,272,786:90:0	
407	99	329	17:32:30.466	176GC6A	6TMREC	BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	3R3	4	0	5,272,790:00:0	
408	99	329	17:33:21.800	117GC	CSMOS	GS	**** GROUP START CSMOS	3R3	4	0	5,272,790:77:0	
409	99	329	17:33:29.800	165GC4B	7VECT		Inert vect update UTC	3R3	4	0	5,272,790:89:0	
410	99	329	17:33:31.133	117GC105A106A4A	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,791:00:0	
411	99	329	17:34:39.133	117GC105A106A4B	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,792:11:0	
412	99	329	17:34:49.800	117GC105A106A4C	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,792:27:0	
413	99	329	17:35:57.800	117GC105A106A4D	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,793:38:0	
414	99	329	17:36:08.466	117GC105A106A4E	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,793:54:0	
415	99	329	17:37:16.466	117GC105A106A4F	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,794:65:0	
416	99	329	17:37:27.133	117GC105A106A4G	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,794:81:0	
417	99	329	17:38:35.133	117GC105A106A4H	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,796:01:0	
418	99	329	17:38:45.800	117GC105A106A4I	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,796:17:0	
419	99	329	17:39:53.800	117GC105A106A4J	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,797:28:0	
420	99	329	17:40:04.466	117GC105A106A4K	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,797:44:0	
421	99	329	17:41:12.466	117GC105A106A4L	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,798:55:0	
422	99	329	17:41:23.133	117GC105A106A4M	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,798:71:0	
423	99	329	17:42:31.133	117GC105A106A4N	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,799:82:0	
424	99	329	17:42:41.800	117GC105A106A4O	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,800:07:0	
425	99	329	17:43:49.800	117GC105A106A4P	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,801:18:0	
426	99	329	17:44:00.466	117GC105A106A4Q	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,801:34:0	
427	99	329	17:45:05.133		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 2166.25 +/- 1	3R3	4	0	5,272,802:40:0	
428	99	329	17:45:05.133	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	3R3	4	0	5,272,802:45:0	
429	99	329	17:45:08.466	117GC105A106A4R	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,802:45:0	
430	99	329	17:45:11.800		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 2166.25 +/- 1	3R3	4	0	5,272,802:50:0	
431	99	329	17:45:13.200		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC *2166.37 +/- 1	3R3	4	0	5,272,802:52:1	
432	99	329	17:45:19.133	117GC105A106A4S	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,802:61:0	
433	99	329	17:45:30.466		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *2170.42 +/- 1	3R3	4	0	5,272,802:78:0	
434	99	329	17:45:53.133	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5,272,803:21:0	
435	99	329	17:45:53.133		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *2175.73 +/- 1	3R3	4	0	5,272,803:21:0	
436	99	329	17:45:54.333		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *2175.79 +/- 1	3R3	4	0	5,272,803:22:8	
437	99	329	17:46:27.133	117GC105A106A4T	7STRP	-0.038018,0.0011	Slew = 0.90	3R3	4	0	5,272,803:72:0	
438	99	329	17:46:37.800	117GC105A106A4U	7STRP	0.038018,0.0,0.0	Slew = 0.61	3R3	4	0	5,272,803:88:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	99	329	17:47:45.800	117GC105A106A4V	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.805:08:0	
440	99	329	17:47:56.466	117GC105A106A4W	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.805:24:0	
441	99	329	17:49:04.466	117GC105A106A4X	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.806:35:0	
442	99	329	17:49:15.133	117GC105A106A4Y	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.806:51:0	
443	99	329	17:50:23.133	117GC105A106A4Z	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.807:62:0	
444	99	329	17:50:33.800	117GC105A106A4AA	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.807:78:0	
445	99	329	17:51:41.800	117GC105A106A4AB	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.808:89:0	
446	99	329	17:51:52.466	117GC105A106A4AC	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.809:14:0	
447	99	329	17:53:00.466	117GC105A106A4AD	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.810:25:0	
448	99	329	17:53:11.133	117GC105A106A4AE	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.810:41:0	
449	99	329	17:54:19.133	117GC105A106A4AF	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.811:52:0	
450	99	329	17:54:29.800	117GC105A106A4AG	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.811:68:0	
451	99	329	17:55:37.800	117GC105A106A4AH	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.812:79:0	
452	99	329	17:55:48.466	117GC105A106A4AI	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.813:04:0	
453	99	329	17:56:56.466	117GC105A106A4AJ	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.814:15:0	
454	99	329	17:57:07.133	117GC105A106A4AK	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.814:31:0	
455	99	329	17:58:07.133	DMS:	: *E4-DELAY		RDY, TRACK 1, FWD, TIC 2175.79 +/- 1	3R3	4	0	5.272.815:30:0	
456	99	329	17:58:07.133	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	3R3	4	0	5.272.815:30:0	
457	99	329	17:58:13.800	DMS:	: *RUNUP		R7, TRACK 1, FWD, TIC 2175.79 +/- 1	3R3	4	0	5.272.815:40:0	
458	99	329	17:58:15.133	117GC105A106A4AL	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.815:42:0	
459	99	329	17:58:15.200	DMS:	: *AT_SPD		R7, TRACK 1, FWD, TIC *2175.91 +/- 1	3R3	4	0	5.272.815:42:1	
460	99	329	17:58:25.800	117GC105A106A4AM	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.815:58:0	
461	99	329	17:58:32.466	DMS:	: *RECORD		R7, TRACK 1, FWD, TIC *2179.96 +/- 1	3R3	4	0	5.272.815:68:0	
462	99	329	17:58:55.133	DMS:	: *RUNDOWN		R7, TRACK 1, FWD, TIC *2185.27 +/- 1	3R3	4	0	5.272.816:11:0	
463	99	329	17:58:55.133	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5.272.816:11:0	
464	99	329	17:58:56.333	DMS:	: *READY		RDY, TRACK 1, FWD, TIC *2185.33 +/- 1	3R3	4	0	5.272.816:12:8	
465	99	329	17:59:33.800	117GC105A106A4AN	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.816:69:0	
466	99	329	17:59:44.466	117GC105A106A4AO	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.816:85:0	
467	99	329	18:00:52.466	117GC105A106A4AP	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.818:05:0	
468	99	329	18:01:03.133	117GC105A106A4AQ	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.818:21:0	
469	99	329	18:01:03.800	20RO6B	6RTSL1		R/T Select of DDS and	3R3	4	0	5.272.818:22:0	
470	99	329	18:02:11.133	117GC105A106A4AR	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.819:32:0	
471	99	329	18:02:21.800	117GC105A106A4AS	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.819:48:0	
472	99	329	18:03:29.800	117GC105A106A4AT	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.820:59:0	
473	99	329	18:03:40.466	117GC105A106A4AU	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.820:75:0	
474	99	329	18:04:48.466	117GC105A106A4AV	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.821:86:0	
475	99	329	18:04:59.133	117GC105A106A4AW	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.822:11:0	
476	99	329	18:06:07.133	117GC105A106A4AX	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.823:22:0	
477	99	329	18:06:17.800	117GC105A106A4AY	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.823:38:0	
478	99	329	18:07:25.800	117GC105A106A4AZ	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.824:49:0	
479	99	329	18:07:36.466	117GC105A106A4BA	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.824:65:0	
480	99	329	18:08:44.466	117GC105A106A4BB	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.825:76:0	
481	99	329	18:08:55.133	117GC105A106A4BC	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.826:01:0	
482	99	329	18:10:03.133	117GC105A106A4BD	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.827:12:0	
483	99	329	18:10:13.800	117GC105A106A4BE	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.827:28:0	
484	99	329	18:11:09.133	DMS:	: *E4-DELAY		RDY, TRACK 1, FWD, TIC 2185.33 +/- 1	3R3	4	0	5.272.828:20:0	
485	99	329	18:11:09.133	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	3R3	4	0	5.272.828:20:0	
486	99	329	18:11:15.800	DMS:	: *RUNUP		R7, TRACK 1, FWD, TIC 2185.33 +/- 1	3R3	4	0	5.272.828:30:0	
487	99	329	18:11:17.200	DMS:	: *AT_SPD		R7, TRACK 1, FWD, TIC *2185.45 +/- 1	3R3	4	0	5.272.828:32:1	
488	99	329	18:11:21.800	117GC105A106A4BF	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272.828:39:0	
489	99	329	18:11:32.466	117GC105A106A4BG	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272.828:55:0	
490	99	329	18:11:34.466	DMS:	: *RECORD		R7, TRACK 1, FWD, TIC *2189.50 +/- 1	3R3	4	0	5.272.828:58:0	
491	99	329	18:11:57.133	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5.272.829:01:0	
492	99	329	18:11:57.133	DMS:	: *RUNDOWN		R7, TRACK 1, FWD, TIC *2194.81 +/- 1	3R3	4	0	5.272.829:01:0	
493	99	329	18:11:58.333	DMS:	: *READY		RDY, TRACK 1, FWD, TIC *2194.87 +/- 1	3R3	4	0	5.272.829:02:8	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	99	329	18:12:40.466	117GC105A106A4BH	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,829:66:0	
495	99	329	18:12:51.133	117GC105A106A4BI	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,829:82:0	
496	99	329	18:13:59.133	117GC105A106A4BJ	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,831:02:0	
497	99	329	18:14:09.800	117GC105A106A4BK	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,831:18:0	
498	99	329	18:15:17.800	117GC105A106A4BL	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,832:29:0	
499	99	329	18:15:28.466	117GC105A106A4BM	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,832:45:0	
500	99	329	18:16:36.466	117GC105A106A4BN	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,833:56:0	
501	99	329	18:16:47.133	117GC105A106A4BO	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,833:72:0	
502	99	329	18:17:55.133	117GC105A106A4BP	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,834:83:0	
503	99	329	18:18:05.800	117GC105A106A4BQ	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,835:08:0	
504	99	329	18:19:13.800	117GC105A106A4BR	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,836:19:0	
505	99	329	18:19:24.466	117GC105A106A4BS	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,836:35:0	
506	99	329	18:20:32.466	117GC105A106A4BT	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,837:46:0	
507	99	329	18:20:43.133	117GC105A106A4BU	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,837:62:0	
508	99	329	18:21:51.133	117GC105A106A4BV	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,838:73:0	
509	99	329	18:22:01.800	117GC105A106A4BW	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,838:89:0	
510	99	329	18:23:09.800	117GC105A106A4BX	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,840:09:0	
511	99	329	18:23:20.466	117GC105A106A4BY	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,840:25:0	
512	99	329	18:24:11.800	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	3R3	4	0	5.272,841:11:0	
513	99	329	18:24:11.800		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 2194.87 +/- 1	3R3	4	0	5.272,841:11:0	
514	99	329	18:24:18.466		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 2194.87 +/- 1	3R3	4	0	5.272,841:21:0	
515	99	329	18:24:19.866		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC *2194.99 +/- 1	3R3	4	0	5.272,841:23:1	
516	99	329	18:24:28.466	117GC105A106A4BZ	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,841:36:0	
517	99	329	18:24:36.466		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *2198.88 +/- 1	3R3	4	0	5.272,841:48:0	
518	99	329	18:24:39.133	117GC105A106A4CA	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,841:52:0	
519	99	329	18:24:59.133	50ZZ6RD	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5.272,841:82:0	
520	99	329	18:24:59.133		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *2204.19 +/- 1	3R3	4	0	5.272,841:82:0	
521	99	329	18:25:00.333		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *2204.25 +/- 1	3R3	4	0	5.272,841:83:8	
522	99	329	18:25:47.133	117GC105A106A4CB	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,842:63:0	
523	99	329	18:25:57.800	117GC105A106A4CC	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,842:79:0	
524	99	329	18:27:05.800	117GC105A106A4CD	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,843:90:0	
525	99	329	18:27:16.466	117GC105A106A4CE	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,844:15:0	
526	99	329	18:28:24.466	117GC105A106A4CF	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,845:26:0	
527	99	329	18:28:35.133	117GC105A106A4CG	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,845:42:0	
528	99	329	18:29:43.133	117GC105A106A4CH	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,846:53:0	
529	99	329	18:29:53.800	117GC105A106A4CI	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,846:69:0	
530	99	329	18:31:01.800	117GC105A106A4CJ	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,847:80:0	
531	99	329	18:31:12.466	117GC105A106A4CK	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,848:05:0	
532	99	329	18:32:20.466	117GC105A106A4CL	7STRP	-0.038018,0.0011	Slew =0.90	3R3	4	0	5.272,849:16:0	
533	99	329	18:32:31.133	117GC105A106A4CM	7STRP	0.038018,0.0000	Slew =0.61	3R3	4	0	5.272,849:32:0	
534	99	329	18:33:39.133	117GC11A	CSMOS	GE	**** GROUP END CSMOS	3R3	4	0	5.272,850:43:0	
535	99	329	18:34:41.133	176GC6B	6TMREC	NRC	NO RECORD Record Mode Change	3R3	4	0	5.272,851:45:0	
536	99	329	18:34:43.133		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 2204.25 +/- 1	3R3	4	0	5.272,851:48:0	
537	99	329	18:34:43.133	50ZZ6XX	6DMSC	R7,0	DMS Control Tape runup 7.68kps	3R3	4	0	5.272,851:48:0	
538	99	329	18:34:49.800		DMS:	:*RUNUP	R7, TRACK 1, FWD, TIC 2204.25 +/- 1	3R3	4	0	5.272,851:58:0	
539	99	329	18:34:51.200		DMS:	:*AT SPD	R7, TRACK 1, FWD, TIC *2204.37 +/- 1	3R3	4	0	5.272,851:60:1	
540	99	329	18:34:53.133		DMS:	:*RECORD	R7, TRACK 1, FWD, TIC *2204.82 +/- 1	3R3	4	0	5.272,851:63:0	
541	99	329	18:35:12.466	50ZZ6RE	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5.272,852:01:0	
542	99	329	18:35:12.466		DMS:	:*RUNDOWN	R7, TRACK 1, FWD, TIC *2209.36 +/- 1	3R3	4	0	5.272,852:01:0	
543	99	329	18:35:13.666		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *2209.42 +/- 1	3R3	4	0	5.272,852:02:8	
544	99	329	18:42:15.800	165JD4A	7SCAN	NORM,72.679999,2	Check S/P Position	3R3	4	0	5.272,858:90:0	
545	99	329	18:46:09.133		DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 2209.42 +/- 1	3R3	4	0	5.272,862:76:0	
546	99	329	18:46:09.133	175JD422A6A	6DMSC	R806,1	DMS Control	3R3	4	0	5.272,862:76:0	
547	99	329	18:46:11.133	118JD	SMOS	GS		3R3	4	0	5.272,862:79:0	
548	99	329	18:46:15.800		DMS:	:*RUNUP	R806, TRACK 1, FWD, TIC 2209.42 +/- 1	3R3	4	0	5.272,862:86:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
549	99	329	18:46:17.800	165JD4B	7VECT	Inert vect update UTC	3R3	4	0	5,272,862	89:0
550	99	329	18:46:20.466	175JD176A6A	6TMREC IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	3R3	4	0	5,272,863	02:0
551	99	329	18:46:21.066		DMS: : *AT SPD	R806, TRACK 1, FWD, TIC 2275.42 +/- 1	3R3	4	0	5,272,863	02:9
552	99	329	18:46:21.066		DMS: : *RECORD	R806, TRACK 1, FWD, TIC 2275.42 +/- 1	3R3	4	0	5,272,863	02:9
553	99	329	18:46:21.133	118JD110A111A4A	7STRP 0.0,0.0073,26.0,	Slew =2.01	3R3	4	0	5,272,863	03:0
554	99	329	18:46:29.800	118JD110A111B4A	7STRP 0.00666,-0.01460	Slew =6.01	3R3	4	0	5,272,863	16:0
555	99	329	18:46:38.466	118JD110A111B4B	7STRP 0.0,0.0073,26.0,	Slew =2.01	3R3	4	0	5,272,863	29:0
556	99	329	18:47:04.466	118JD110A111C4A	7STRP 0.00666,-0.02190	Slew =6.01	3R3	4	0	5,272,863	68:0
557	99	329	18:47:13.133	118JD110A111C4B	7STRP 0.0,0.0073,26.0,	Slew =2.01	3R3	4	0	5,272,863	81:0
558	99	329	18:47:39.133	118JD110A111D4A	7STRP 0.00666,-0.01200	Slew =6.01	3R3	4	0	5,272,864	29:0
559	99	329	18:47:47.800	118JD110A111D4B	7STRP 0.0,0.0073,26.0,	Slew =2.01	3R3	4	0	5,272,864	42:0
560	99	329	18:47:56.466	118JD11A	SMOS GE		3R3	4	0	5,272,864	55:0
561	99	329	18:48:03.133		DMS: : *RUNDOWN	R806, TRACK 1, FWD, TIC *4787.21 +/- 1	3R3	4	0	5,272,864	65:0
562	99	329	18:48:03.133	175JD422A6B	6DMSC RDY,0	DMS Control Tape stop	3R3	4	0	5,272,864	65:0
563	99	329	18:48:05.866		DMS: : *READY	RDY, TRACK 1, FWD, TIC *4798.71 +/- 1	3R3	4	0	5,272,864	69:1
564	99	329	18:48:19.800	165GH4A	7SCAN NORM,71.388,20.3	Check S/P Position	3R3	4	0	5,272,864	90:0
565	99	329	18:48:20.466	176GH6A	6TMREC BPT	7.68 KBPS PPR BURST TO TAPE Record Mode C	3R3	4	0	5,272,865	00:0
566	99	329	18:49:11.800	117GH	CSMOS GS	***** GROUP START CSMOS	3R3	4	0	5,272,865	77:0
567	99	329	18:49:21.133	117GH105A106A4A	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,866	00:0
568	99	329	18:52:08.466	117GH105A106A4B	7STRP 0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,868	69:0
569	99	329	18:52:17.133	117GH105A106A4C	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,868	82:0
570	99	329	18:55:04.466	117GH105A106A4D	7STRP 0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,871	60:0
571	99	329	18:55:13.133	117GH105A106A4E	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,871	73:0
572	99	329	18:58:00.466	117GH105A106A4F	7STRP 0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,874	51:0
573	99	329	18:58:09.133	117GH105A106A4G	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,874	64:0
574	99	329	19:00:55.133		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 4798.71 +/- 1	3R3	4	0	5,272,877	40:0
575	99	329	19:00:55.133	50ZZ6XX	6DMSC R7,0	DMS Control Tape runup 7.68kps	3R3	4	0	5,272,877	40:0
576	99	329	19:00:56.466	117GH105A106A4H	7STRP 0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,877	42:0
577	99	329	19:01:01.800		DMS: : *RUNUP	R7, TRACK 1, FWD, TIC 4798.71 +/- 1	3R3	4	0	5,272,877	50:0
578	99	329	19:01:03.200		DMS: : *AT SPD	R7, TRACK 1, FWD, TIC *4798.83 +/- 1	3R3	4	0	5,272,877	52:1
579	99	329	19:01:05.133	117GH105A106A4I	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,877	55:0
580	99	329	19:01:20.466		DMS: : *RECORD	R7, TRACK 1, FWD, TIC *4802.88 +/- 1	3R3	4	0	5,272,877	78:0
581	99	329	19:01:43.133	50ZZ6RD	6DMSC RDY,0	DMS Control Tape stop	3R3	4	0	5,272,878	21:0
582	99	329	19:01:43.133		DMS: : *RUNDOWN	R7, TRACK 1, FWD, TIC *4808.19 +/- 1	3R3	4	0	5,272,878	21:0
583	99	329	19:01:44.333		DMS: : *READY	RDY, TRACK 1, FWD, TIC *4808.25 +/- 1	3R3	4	0	5,272,878	22:8
584	99	329	19:03:52.466	117GH105A106A4J	7STRP -0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,880	33:0
585	99	329	19:04:01.133	117GH105A106A4K	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,880	46:0
586	99	329	19:06:48.466	117GH105A106A4L	7STRP 0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,883	24:0
587	99	329	19:06:57.133	117GH105A106A4M	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,883	37:0
588	99	329	19:09:44.466	117GH105A106A4N	7STRP 0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,886	15:0
589	99	329	19:09:53.133	117GH105A106A4O	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,886	28:0
590	99	329	19:12:40.466	117GH105A106A4P	7STRP 0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,889	06:0
591	99	329	19:12:49.133	117GH105A106A4Q	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,889	19:0
592	99	329	19:13:57.133		DMS: : *E4-DELAY	RDY, TRACK 1, FWD, TIC 4808.25 +/- 1	3R3	4	0	5,272,890	30:0
593	99	329	19:13:57.133	50ZZ6XX	6DMSC R7,0	DMS Control Tape runup 7.68kps	3R3	4	0	5,272,890	30:0
594	99	329	19:14:03.800		DMS: : *RUNUP	R7, TRACK 1, FWD, TIC 4808.25 +/- 1	3R3	4	0	5,272,890	40:0
595	99	329	19:14:05.200		DMS: : *AT SPD	R7, TRACK 1, FWD, TIC *4808.37 +/- 1	3R3	4	0	5,272,890	42:1
596	99	329	19:14:22.466		DMS: : *RECORD	R7, TRACK 1, FWD, TIC *4812.42 +/- 1	3R3	4	0	5,272,890	68:0
597	99	329	19:14:45.133	50ZZ6RE	6DMSC RDY,0	DMS Control Tape stop	3R3	4	0	5,272,891	11:0
598	99	329	19:14:45.133		DMS: : *RUNDOWN	R7, TRACK 1, FWD, TIC *4817.73 +/- 1	3R3	4	0	5,272,891	11:0
599	99	329	19:14:46.333		DMS: : *READY	RDY, TRACK 1, FWD, TIC *4817.79 +/- 1	3R3	4	0	5,272,891	12:8
600	99	329	19:15:36.466	117GH105A106A4R	7STRP 0.024975,-0.0006	Slew =12.01	3R3	4	0	5,272,892	10:0
601	99	329	19:15:45.133	117GH105A106A4S	7STRP -0.026006,0.0,0,	Slew =0.16	3R3	4	0	5,272,892	10:0
602	99	329	19:16:46.466	20EC5A	37PL	Program Load (halts microprocessor & unwri	3R3	4	0	5,272,893	11:0
603	99	329	19:16:49.800	20EC5B	37MRL	Memory Realocate (software operates from R	3R3	4	0	5,272,893	16:0

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
604	99	329	19:16:53.133	20EC6A	6MCPY NIMS	NIMS,1000,LLM1A,7300,77F7	3R3	4	0	5,272,893:21:0	
605	99	329	19:17:03.133	20EC6B	6MCPY NIMS	NIMS,1598,LLM1A,77F8,781D	3R3	4	0	5,272,893:36:0	
606	99	329	19:17:13.133	20EC5C	37IRT	Instrument Reset (goes into POR state)	260	4	0	5,272,893:51:0	
607	99	329	19:17:16.466	20EC5D	37MN	Memory Normal (software operates from ROM)	260	4	0	5,272,893:56:0	
608	99	329	19:17:32.466	20EC4A	37IST	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,272,893:80:0	
609	99	329	19:17:43.799	25NNEQUATR01-	-----START-----		2R0	4	0	:	:
610	99	329	19:18:32.466	117GH105A106B4A	7STRP	Slew =12.01	2R0	4	0	5,272,894:79:0	
611	99	329	19:18:35.800	125EC4A	37IST	Gain State 3	3R0	4	0	5,272,894:84:0	
612	99	329	19:18:35.800	125EC	NIMSINIT GS	##### GROUP START INIT	3R0	4	0	5,272,894:84:0	
613	99	329	19:18:42.466	117GH105A106B4B	7STRP	Slew =0.16	3R0	4	0	5,272,895:03:0	
614	99	329	19:19:36.466	125EC11A	NIMSINIT GE	##### GROUP END INIT	3R0	4	0	5,272,895:84:0	
615	99	329	19:19:36.466	125EC4A	37MB	Selects mirror (spatial) edit table	3R0	4	0	5,272,895:84:0	
616	99	329	19:19:39.800	117GH11A	CSMOS GE	***** GROUP END CSMOS	3R0	4	0	5,272,895:89:0	
617	99	329	19:20:11.133	176GH6B	6TMREC	NO RECORD Record Mode Change	3R0	4	0	5,272,896:45:0	
618	99	329	19:20:13.133	50ZZ6XX	6DMSC	DMS Control Tape runup 7.68kps	3R0	4	0	5,272,896:48:0	
619	99	329	19:20:13.133		DMS:	:*E4-DELAY	3R0	4	0	5,272,896:48:0	
620	99	329	19:20:19.800		DMS:	:*RUNUP	3R0	4	0	5,272,896:58:0	
621	99	329	19:20:21.200		DMS:	:*AT SPD	3R0	4	0	5,272,896:60:1	
622	99	329	19:20:23.133		DMS:	:*RECORD	3R0	4	0	5,272,896:63:0	
623	99	329	19:20:38.466		DMS:	:*RUNDOWN	3R0	4	0	5,272,896:86:0	
624	99	329	19:20:38.466	50ZZ6RD	6DMSC	DMS Control Tape stop	3R0	4	0	5,272,896:86:0	
625	99	329	19:20:39.666		DMS:	:*READY	3R0	4	0	5,272,896:87:8	
626	99	329	19:20:41.133	165EC4A	7SCAN	NORM,73.441,21.1	3R0	4	0	5,272,896:90:0	
627	99	329	19:20:45.799	25NNEQUATR01-	-----START-----		3R0	4	0	:	:
628	99	329	19:20:45.799	25NNEQUATR01-	-----STOP-----		3R0	4	0	:	:
629	99	329	19:21:37.800	127EC4A	37IOP	Long Map, Grating Start Position =00	3R3	4	0	5,272,897:84:0	
630	99	329	19:21:37.800	127EC	NIMSTAB GS	%%%% GROUP START TAB	3R3	4	0	5,272,897:84:0	
631	99	329	19:21:38.466	127EC4B	37ETB	04,C4,35,FF,FF	3R3	4	0	5,272,897:85:0	
632	99	329	19:21:46.466	127EC11A	NIMSTAB GE	Loads wavelength edit table	3R3	4	0	5,272,898:06:0	
633	99	329	19:24:35.133	117EC	CSMOS GS	%%%% GROUP END TAB	3R3	4	0	5,272,900:77:0	
634	99	329	19:24:44.466	117EC105A106A4A	7STRP	***** GROUP START CSMOS	3R3	4	0	5,272,901:00:0	
635	99	329	19:25:31.800	175EC422A6A	6DMSC	Slew =0.02	3R3	4	0	5,272,901:71:0	
636	99	329	19:25:31.800		DMS:	DMS Control	3R3	4	0	5,272,901:71:0	
637	99	329	19:25:38.466		DMS:	:*E4-DELAY	3R3	4	0	5,272,901:71:0	
638	99	329	19:25:41.800	175EC176A6A	6TMREC	R28, TRACK 1, FWD, TIC 4822.02 +/- 1	3R3	4	0	5,272,901:81:0	
639	99	329	19:25:42.466		DMS:	:*AT SPD	3R3	4	0	5,272,901:86:0	
640	99	329	19:25:42.466		DMS:	:*RECORD	3R3	4	0	5,272,901:87:0	
641	99	329	19:25:42.466	25NNEQUATR01-	NIMPBK	R28, TRACK 1, FWD, TIC 4823.52 +/- 1	3R3	4	0	5,272,901:87:0	
642	99	329	19:32:10.466	25NNEQUATR01-	NIMPBK	EUROPA EQUATR OBSERVATION	3R3	4	0	:	:
643	99	329	19:32:19.133	25NNEQUATR01-	DESELC	EUROPA EQUATR OBSERVATION	3R3	4	0	:	:
644	99	329	19:35:47.133	125FC	NIMSINIT GS	EUROPA EQUATR OBSERVATION	3R3	4	0	:	:
645	99	329	19:35:47.133	125FC4A	37IST	Gain State 4	4R3	4	0	5,272,911:84:0	
646	99	329	19:36:47.800	125FC4B	37MB	Selects mirror (spatial) edit table	4R3	4	0	5,272,912:84:0	
647	99	329	19:36:47.800	125FC11A	NIMSINIT GE	##### GROUP END INIT	4R3	4	0	5,272,912:84:0	
648	99	329	19:38:51.800	25NNEQUATR01-	DESELC	EUROPA EQUATR OBSERVATION	4R3	4	0	:	:
649	99	329	19:38:52.466		DMS:	:*RUNDOWN	4R3	4	0	5,272,914:89:0	
650	99	329	19:38:52.466	175EC422A6B	6DMSC	DMS Control Tape stop	4R3	4	0	5,272,914:89:0	
651	99	329	19:38:53.666		DMS:	:*READY	4R3	4	0	5,272,914:90:8	
652	99	329	19:38:53.800	117EC11A	CSMOS GE	***** GROUP END CSMOS	4R3	4	0	5,272,915:00:0	
653	99	329	19:38:57.799	25NNEQUATR01-	-----STOP-----		4R3	4	0	:	:
654	99	329	19:38:57.799	25NNGLOBAL01-	-----START-----		4R3	4	0	:	:
655	99	329	19:39:58.466	25ENGLOBAL01-	-----START-----		4R3	4	0	:	:
656	99	329	19:39:58.466	25NNGLOBAL01-	-----STOP-----		4R3	4	0	:	:
657	99	329	19:40:01.800	20ED5A	37PL	Program Load (halts microprocessor & unwri	4R3	4	0	5,272,916:11:0	
658	99	329	19:40:05.133	20ED5B	37MRL	Memory Realocate (software operates from R	4R3	4	0	5,272,916:16:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	99	329	19:40:08.466	20ED6A	6MCPY	NIMS	NIMS,1000,LLM1A,7300,77F7	4R3	4	0	5,272,916:21:0	
660	99	329	19:40:18.466	20ED6B	6MCPY	NIMS	NIMS,1598,LLM1A,77F8,781D	4R3	4	0	5,272,916:36:0	
661	99	329	19:40:28.466	20ED5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	5,272,916:51:0	
662	99	329	19:40:31.800	20ED5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,272,916:56:0	
663	99	329	19:40:47.800	20ED4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,272,916:80:0	
664	99	329	19:40:54.466	165ED4A	7SCAN	NORM,73.110999,2	Check S/P Position	2R0	4	0	5,272,916:90:0	
665	99	329	19:41:51.133	125ED	NIMSINIT	GS	##### GROUP START INIT	2R0	4	0	5,272,917:84:0	
666	99	329	19:41:51.133	125ED4A	37IST	0,2,0,OFF,0,1,2	Gain State 3	3R0	4	0	5,272,917:84:0	
667	99	329	19:42:51.800	125ED11A	NIMSINIT	GE	##### GROUP END INIT	3R0	4	0	5,272,918:84:0	
668	99	329	19:42:51.800	125ED4B	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	3R0	4	0	5,272,918:84:0	
669	99	329	19:43:52.466	127ED4A	37IOP	3,0	Long Map, Grating Start Position =00	3R3	4	0	5,272,919:84:0	
670	99	329	19:43:52.466	127ED	NIMSTAB	GS	%%%%%%%% GROUP START TAB	3R3	4	0	5,272,919:84:0	
671	99	329	19:43:53.133	127ED4B	37ETB	04,C,4,35,FF,FF	Loads wavelength edit table	3R3	4	0	5,272,919:85:0	
672	99	329	19:44:01.133	127ED11A	NIMSTAB	GE	%%%%%%%% GROUP END TAB	3R3	4	0	5,272,920:06:0	
673	99	329	19:44:44.466	175ED42A6A	DMS:	:*E4-DELAY	RDY, TRACK 1, FWD, TIC 55:18.15 +/- 2	3R3	4	0	5,272,920:71:0	
674	99	329	19:44:48.466	117ED	CSMOS	GS	DMS Control	3R3	4	0	5,272,920:77:0	
676	99	329	19:44:51.133		DMS:	:*RUNUP	***** GROUP START CSMOS	3R3	4	0	5,272,920:81:0	
677	99	329	19:44:54.466	175ED176A6A	6TMREC	MPW	R28, TRACK 1, FWD, TIC 55:18.15 +/- 2	3R3	4	0	5,272,920:86:0	
678	99	329	19:44:55.133	25ENGLOBAL01-	NIMPBK	301ED	EUROPA GLOBAL OBSERVATION	3R3	4	0	:	
680	99	329	19:44:55.133		DMS:	:*AT SPD	R28, TRACK 1, FWD, TIC *55:19.65 +/- 2	3R3	4	0	5,272,920:87:0	
681	99	329	19:44:57.800	117ED105A106A4A	7STRP	0.0057,0,0,0,0,0	Slew =,0.06	3R3	4	0	5,272,921:00:0	
682	99	329	19:46:36.466	117ED105A106A4B	7STRP	-0.0057,0.0075,0	Slew =12.01	3R3	4	0	5,272,922:57:0	
683	99	329	19:46:47.133	117ED105A106A4C	7STRP	0.0057,0,0,0,0,0	Slew =,0.06	3R3	4	0	5,272,922:73:0	
684	99	329	19:46:55.133	25ENGLOBAL01-	DESEL	300ED	EUROPA GLOBAL OBSERVATION	3R3	4	0	:	
685	99	329	19:48:25.800	117ED105A106A4D	7STRP	-0.0057,0.0075,0	Slew =12.01	3R3	4	0	5,272,924:39:0	
686	99	329	19:48:36.466	117ED105A106A4E	7STRP	0.0057,0,0,0,0,0	Slew =,0.06	3R3	4	0	5,272,924:55:0	
687	99	329	19:50:15.133	117ED11A	CSMOS	GE	***** GROUP END CSMOS	3R3	4	0	5,272,926:21:0	
688	99	329	19:53:18.466	175ED42A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5,272,929:23:0	
689	99	329	19:53:18.466		DMS:	:*RUNDOWN	R28, TRACK 1, FWD, TIC *5962.04 +/- 2	3R3	4	0	5,272,929:23:0	
690	99	329	19:53:19.666		DMS:	:*READY	RDY, TRACK 1, FWD, TIC *5962.34 +/- 2	3R3	4	0	5,272,929:24:8	
691	99	329	20:01:03.800	20RD6B	6RTSL1		R/T Select of DDS and	3R3	4	0	5,272,936:84:0	
692	99	329	20:24:27.799	25ENGLOBAL01-			-----STOP-----	3R3	4	0	:	
693	99	329	20:30:27.800	465KB6A	6DMSC	RDY,2	DMS Control Tape stop	3R3	4	0	5,272,966:00:0	
694	99	329	20:30:27.800		DMS:	:*READY	RDY, TRACK *2, *REV, TIC 5962.34 +/- 2	3R3	4	0	5,272,966:00:0	
695	99	329	20:36:59.800	480SF6A	6MROH	44,23E8,0,A10	read from LLM2A44,23E8,0,A1	3R3	4	0	5,272,972:42:0	
696	99	329	20:38:19.800	480SF6B	6MROH	45,23E8,0,B10	read from LLM2B45,23E8,0,B1	3R3	4	0	5,272,973:71:0	
697	99	329	21:06:23.133	175MA422A6A	6DMSC	R7,0	DMS Control Tape runup 7.68kps	3R3	4	0	5,273,001:48:0	
698	99	329	21:06:23.133		DMS:	:*US-RUNUP	P7, TRACK *1, *FWD, TIC 5962.34 +/- 2	3R3	4	0	5,273,001:48:0	
699	99	329	21:06:24.533		DMS:	:*US_AT_SP	P7, TRACK 1, FWD, TIC *5962.46 +/- 2	3R3	4	0	5,273,001:50:1	
700	99	329	21:06:29.800		DMS:	:*US_RD	P7, TRACK 1, FWD, TIC *5963.69 +/- 2	3R3	4	0	5,273,001:58:0	
701	99	329	21:06:31.000		DMS:	:*RUNUP	R7, TRACK *2, *REV, TIC *5963.75 +/- 2	3R3	4	0	5,273,001:59:8	
702	99	329	21:06:31.800	175MA176A6A	6TMREC	LPW	7.68 KBPS LOW RATE SCI PWS RECORD Record	3R3	4	0	5,273,001:61:0	
703	99	329	21:06:32.400		DMS:	:*RECORD	R7, TRACK 2, REV, TIC *5963.63 +/- 2	3R3	4	0	5,273,001:61:9	
704	99	329	21:06:32.400		DMS:	:*AT SPD	Record Select (DDS onl)	3R3	4	0	5,273,001:87:0	
705	99	329	21:06:49.133	282NA431A6A	6RCSEL	DDSNCG,PLSSEL,EP	Record Select (DDS onl)	3R3	4	0	5,273,002:00:0	
706	99	329	21:06:51.800	431OA6A	6RCSEL	DDSNCG,PLSNCG,EP	Record Select (DDS onl)	3R3	4	0	5,273,002:00:0	
707	99	329	22:01:03.800	20RP6B	6RTSL1		R/T Select of DDS and	3R3	4	0	5,273,055:55:0	
708	99	329	22:44:09.133	488AC6A	6TMSED	NORM,EH4	Sci, Eng, and D/L Chan	3R3	4	0	5,273,098:20:0	
709	99	329	22:47:57.800	165GD4A	7SCAN	NORM,233.434999,	Check S/P Position	3R3	4	0	5,273,101:90:0	
710	99	329	22:53:53.133	117GD	CSMOS	GS	***** GROUP START CSMOS	3R3	4	0	5,273,107:77:0	
711	99	329	22:54:02.466	117GD105A106A4A	7STRP	-0.035515,0,0,0,0	Slew =,0.16	3R3	4	0	5,273,108:00:0	
712	99	329	22:57:50.466	117GD105A106A4B	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,111:69:0	
713	99	329	22:57:59.800	117GD105A106A4C	7STRP	-0.035515,0,0,0,0	Slew =,0.16	3R3	4	0	5,273,111:83:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
714	99	329	23:01:47.800	117GD105A106A4D	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,115:61:0	
715	99	329	23:01:57.133	117GD105A106A4E	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,115:75:0	
716	99	329	23:05:45.133	117GD105A106A4F	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,119:53:0	
717	99	329	23:05:54.466	117GD105A106A4G	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,119:67:0	
718	99	329	23:09:42.466	117GD105A106A4H	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,123:45:0	
719	99	329	23:09:51.800	117GD105A106A4I	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,123:59:0	
720	99	329	23:13:39.800	117GD105A106A4J	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,127:37:0	
721	99	329	23:13:49.133	117GD105A106A4K	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,127:51:0	
722	99	329	23:17:37.133	117GD105A106A4L	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,131:29:0	
723	99	329	23:17:46.466	117GD105A106A4M	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,131:43:0	
724	99	329	23:21:34.466	117GD105A106A4N	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,135:21:0	
725	99	329	23:21:43.800	117GD105A106A4O	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,135:35:0	
726	99	329	23:25:31.800	117GD105A106A4P	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,139:13:0	
727	99	329	23:25:41.133	117GD105A106A4Q	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,139:27:0	
728	99	329	23:29:29.133	117GD105A106A4R	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,143:05:0	
729	99	329	23:29:38.466	117GD105A106A4S	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,143:19:0	
730	99	329	23:33:26.466	117GD105A106A4T	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,146:88:0	
731	99	329	23:33:35.800	117GD105A106A4U	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,147:11:0	
732	99	329	23:37:23.800	117GD105A106A4V	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,150:80:0	
733	99	329	23:37:33.133	117GD105A106A4W	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,151:03:0	
734	99	329	23:41:21.133	117GD105A106A4X	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,154:72:0	
735	99	329	23:41:30.466	117GD105A106A4Y	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,154:86:0	
736	99	329	23:41:45.133	488AC6B	6TMSED	NORM,MEH5	Sci, Eng, and D/L Chan	3R3	4	0	5,273,155:17:0	
737	99	329	23:45:18.466	117GD105A106A4Z	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,158:64:0	
738	99	329	23:45:27.800	117GD105A106A4AA	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,158:78:0	
739	99	329	23:49:15.800	117GD105A106A4AB	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,162:56:0	
740	99	329	23:49:25.133	117GD105A106A4AC	7STRP	-0.035515,0.0,0,0	Slew =0.16	3R3	4	0	5,273,162:70:0	
741	99	329	23:52:55.800	20FA5A	37PL		Program Load (halts microprocessor & unwri	3R3	4	0	5,273,166:22:0	
742	99	329	23:52:57.133	20FA5B	37MRL		Memory Realocate (software operates from R	3R3	4	0	5,273,166:24:0	
743	99	329	23:53:02.466	20FA6A	6MCOPI	NIMS	NIMS,1000,LLM1A,7300,77F7	3R3	4	0	5,273,166:32:0	
744	99	329	23:53:12.466	20FA6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	3R3	4	0	5,273,166:47:0	
745	99	329	23:53:13.133	117GD105A106A4AD	7STRP	0.036116,-0.0007	Slew =12.01	3R3	4	0	5,273,166:48:0	
746	99	329	23:53:15.800	20FA5C	37IRT		Instrument Reset (goes into POR state)	260	4	0	5,273,166:52:0	
747	99	329	23:53:22.466	117GD105A106A4AE	7STRP	-0.035515,0.0,0,0	Slew =0.16	260	4	0	5,273,166:62:0	
748	99	329	23:53:22.466	20FA5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,273,166:62:0	
749	99	329	23:53:29.800	20FA4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,273,166:73:0	
750	99	329	23:54:30.466	20FA4B	37IST	0,2,0,OFF,0,1,0	Gain State 2	2R0	4	0	5,273,167:73:0	
751	99	329	23:55:31.133	20FA4C	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	2R0	4	0	5,273,168:73:0	
752	99	329	23:56:31.800	20FA4D	37IOP	3,0	Long Map, Grating Start Position =00	2R3	4	0	5,273,169:73:0	
753	99	329	23:56:32.466	20FA4E	37ETB	4,C,4,35,FF,FF	Loads wavelength edit table	2R3	4	0	5,273,169:74:0	
754	99	329	23:57:10.466	117GD105A106A4AF	7STRP	0.036116,-0.0007	Slew =12.01	2R3	4	0	5,273,170:40:0	
755	99	329	23:57:19.800	117GD105A106A4AG	7STRP	-0.035515,0.0,0,0	Slew =0.16	2R3	4	0	5,273,170:54:0	
756	99	329	23:59:49.800	20FF6A	6MCOPI	B1A1A,6800,NIMS,	B1A1A,6800,NIMS,150F,1517	2R3	4	0	5,273,173:06:0	
757	99	329	23:59:58.466	20FF6B	6MCOPI	B1A1A,6809,NIMS,	B1A1A,6809,NIMS,150F,1517	2R3	4	0	5,273,173:19:0	
758	99	330	00:00:51.133	20FF6C	6MCOPI	B1A1A,6812,NIMS,	B1A1A,6812,NIMS,150F,1517	2R3	4	0	5,273,174:07:0	
759	99	330	00:00:59.800	20FF6D	6MCOPI	B1A1A,681B,NIMS,	B1A1A,681B,NIMS,150F,1517	2R3	4	0	5,273,174:20:0	
760	99	330	00:01:03.800	20RE6B	6RTSL1		R/T Select of DDS and	2R3	4	0	5,273,174:26:0	
761	99	330	00:01:07.800	117GD105A106A4AH	7STRP	0.036116,-0.0007	Slew =12.01	2R3	4	0	5,273,174:32:0	
762	99	330	00:01:17.133	117GD105A106A4AI	7STRP	-0.035515,0.0,0,0	Slew =0.16	2R3	4	0	5,273,174:46:0	
763	99	330	00:01:52.466	20FF6E	6MCOPI	B1A1A,6824,NIMS,	B1A1A,6824,NIMS,150F,1517	2R3	4	0	5,273,175:08:0	
764												
765							SAFING					

Sequence:	I25AQB	Created: 11/25/99	Begin: 99-330/04:11:00	Finish: 99-331/01:15:00											
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI			
1	99	330	04:10:59.733		DMS:	: READY	RDY, TRACK 1, FWD, TIC 202.12 +/-				5,273,421:43:0				
2	99	330	04:11:00.000	20A3EY	37C1PR	Initial Condition	Optics Heater 1 OFF (primary relay)				5,273,421:43:4				
3	99	330	04:11:00.000	20A3FA	37F1PR	Initial Condition	Radiator Flash Heater OFF (primary relay)				5,273,421:43:4				
4	99	330	04:11:00.000	20A3EW	37AR	Initial Condition	NIMS Power OFF				5,273,421:43:4				
5	99	330	04:11:00.000	20A3EX	37HR	Initial Condition	Replacement Heaters OFF				5,273,421:43:4				
6	99	330	04:11:00.000	20A3EZ	37C2PR	Initial Condition	Optics Heater 2 OFF (primary relay)				5,273,421:43:4				
7	99	330	04:11:00.000	20A3FF	40T2R	Initial Condition	PCT Heater 2 OFF				5,273,421:43:4				
8	99	330	04:11:00.000	20A3FE	40T1PR	Initial Condition	PCT Heater 1 OFF (primary relay)				5,273,421:43:4				
9	99	330	04:11:00.000	20A3FD	40HRPR	Initial Condition	PCT Heater OFF (primary relay)				5,273,421:43:4				
10	99	330	04:11:00.000	20A3FB	37F2PR	Initial Condition	Shield Flash Heater OFF (primary relay)				5,273,421:43:4				
11	99	330	04:12:36.399	25INPRMETH01-		-----STOP-----					:	:			
12	99	330	04:13:30.400	20OA6A	6HICON						5,273,423:87:0				
13	99	330	04:13:37.066	25INSOPOLE02-		-----START-----					:	:			
14	99	330	04:15:33.066	432JA6B	6RTDS2	NIMDSL, AACNCG, RT	NIMS R/T Deselect				5,273,425:89:0				
15	99	330	04:15:33.733	432JA431A6A	6RCDSL	DDSDSL, PLSDSL, EP	Record Deselect (DDS o				5,273,425:90:0				
16	99	330	04:15:34.400	432JA6C	6RTSL1		R/T Select of DDS and				5,273,426:00:0				
17	99	330	04:15:34.400	432JA6D	6RTSL2	NIMNCG, AACSEL, RT	AACS SELECT				5,273,426:00:0				
18	99	330	04:15:38.399	25INSOPOLE02-		-----STOP-----					:	:			
19	99	330	04:16:39.066	25INEMAKNG01-		-----START-----					:	:			
20	99	330	04:17:39.733	25INEMAKNG01-		-----STOP-----					:	:			
21	99	330	04:19:41.066	25INITUPAN01-		-----START-----					:	:			
22	99	330	04:20:41.733	25INITUPAN01-		-----STOP-----					:	:			
23	99	330	04:21:42.399	25INSAPPNG02-		-----START-----					:	:			
24	99	330	04:22:43.066	25INSAPPNG02-		-----STOP-----					:	:			
25	99	330	04:22:43.066	25NNITUPAN02-		-----START-----					:	:			
26	99	330	04:23:43.733	25INITUPAN02-		-----STOP-----					:	:			
27	99	330	04:23:43.733	25NNITUPAN02-		-----STOP-----					:	:			
28	99	330	04:31:19.066	20ZS6A	6CKSUM	MAG.4040,46F0					5,273,441:52:0				
29	99	330	04:31:59.066	20ZS6B	6MROH		12 read from LLM1A12,2282,0,A1				5,273,442:21:0				
30	99	330	04:31:59.066	20ZS6B	6MROH		read from LLM1A12,2282,0,A1				5,273,442:21:0				
31	99	330	04:32:09.733	20ZU3Q	37HR		1 Replacement Heaters OFF				5,273,442:37:0				
32	99	330	04:32:11.733	20ZU3S	37HR		2 Replacement Heaters OFF				5,273,442:40:0				
33	99	330	04:32:37.733	20ZU3R	37A		1 NIMS Power ON Phase 0	260	4	0	5,273,442:79:0				
34	99	330	04:32:39.733	20ZU3T	37A		2 NIMS Power ON Phase 0	260	4	0	5,273,442:82:0				
35	99	330	04:34:39.066	20ZU4A	371ST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,273,444:79:0				
36	99	330	04:34:51.066	25INITUPAN02-		-----STOP-----					2R0	4	0	:	:
37	99	330	04:36:50.400	432OB431A6A	6RCDSL	DDSNCG, PLSNCG, EP	Record Deselect (DDS o				2R0	4	0	5,273,447:03:0	
38	99	330	04:36:51.066	432OB6A	6RTSL1		R/T Select of DDS and				2R0	4	0	5,273,447:04:0	
39	99	330	04:37:33.733	20RM6B	6RTSL1		R/T Select of DDS and				2R0	4	0	5,273,447:68:0	
40	99	330	04:37:48.400	165IH4A	7SCAN	NORM.54.522,25.1	Check S/P Position				2R0	4	0	5,273,447:90:0	
41	99	330	04:37:49.066		DMS:	: READY	RDY, TRACK *, REV, TIC 202.12 +/-				2R0	4	0	5,273,448:00:0	
42	99	330	04:37:49.066	465KE6A	6DMSC	RDY, 4	DMS Control Tape stop				2R0	4	0	5,273,448:00:0	
43	99	330	04:37:59.733	41SX99A	POWER	PWR MODE change	Change to Data Taking Mode				2R0	4	0	5,273,448:16:0	
44	99	330	04:38:03.733	41SX3A	40T1PR		1 PCT Heater 1 OFF (primary relay)				2R0	4	0	5,273,448:22:0	
45	99	330	04:38:13.733	41SX3B	40T1PR		2 PCT Heater 1 OFF (primary relay)				2R0	4	0	5,273,448:37:0	
46	99	330	04:38:23.733	41SX3C	40T2R		1 PCT Heater 2 OFF				2R0	4	0	5,273,448:52:0	
47	99	330	04:38:33.733	41SX3D	40T2R		2 PCT Heater 2 OFF				2R0	4	0	5,273,448:67:0	
48	99	330	04:39:39.066	175I422A6A	6DMSC	R806.0	DMS Control Tape runup 806.4kb				2R0	4	0	5,273,449:74:0	
49	99	330	04:39:39.066		DMS:	: *US-RUNUP	P7, TRACK *, FWD, TIC 202.12 +/-				2R0	4	0	5,273,449:74:0	
50	99	330	04:39:40.466		DMS:	: *US AT_SP	P7, TRACK 1, FWD, TIC * 202.24 +/-				2R0	4	0	5,273,449:76:1	
51	99	330	04:39:45.733		DMS:	: *US RD	P7, TRACK 1, FWD, TIC * 203.48 +/-				2R0	4	0	5,273,449:84:0	
52	99	330	04:39:46.933		DMS:	: *RUNUP	R806, TRACK *, REV, TIC * 203.54 +/-				2R0	4	0	5,273,449:85:8	
53	99	330	04:39:49.066	165IH4B	7VECT		Inert vect update UTC				2R0	4	0	5,273,449:89:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
54	99	330	04:39:51.733	175I1176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R0	4	0	5,273,450:02.0	
55	99	330	04:39:52.200		DMS:	: *AT SPD	R806, TRACK 4, REV, TIC 137.54 +/-	2R0	4	0	5,273,450:02.7	
56	99	330	04:39:52.200		DMS:	: *RECORD	R806, TRACK 4, REV, TIC *137.54 +/-	2R0	4	0	5,273,450:02.7	
57	99	330	04:39:57.733		DMS:	: *RUNDOWN	R806, TRACK 4, REV, TIC * 1.37 +/-	2R0	4	0	5,273,450:11.0	
58	99	330	04:39:57.733	175I1422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0	5,273,450:11.0	
59	99	330	04:40:00.466		DMS:	: *READY	RDY, TRACK 4, REV, TIC * -10.13 +/-	2R0	4	0	5,273,450:15.1	
60	99	330	04:41:05.733	175I1422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	2R0	4	0	5,273,451:22.0	
61	99	330	04:41:08.400	116IH4A	7STRP	0.0065,0.0,0.0,0.0	Slew =0.5.0	2R0	4	0	5,273,451:26.0	
62	99	330	04:41:18.400	175I176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	2R0	4	0	5,273,451:41.0	
63	99	330	04:41:24.400	175I1422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0	5,273,451:50.0	
64	99	330	04:42:31.733	175DJ422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	2R0	4	0	5,273,452:60.0	
65	99	330	04:42:43.066	175DJ176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	2R0	4	0	5,273,452:77.0	
66	99	330	04:43:35.733	175DJ422A6B	6DMSC	RDY,0	DMS Control Tape stop	2R0	4	0	5,273,453:65.0	
67	99	330	04:43:57.066	25INEMAKNG02-		-----START-----		2R0	4	0	: : :	
68	99	330	04:44:53.066	165I14A	7SCAN	NORM,54.127,29.0	Check S/P Position	2R0	4	0	5,273,454:90.0	
69	99	330	04:44:57.733	25INEMAKNG02-		-----STOP-----		2R0	4	0	: : :	
70	99	330	04:46:18.400	20DK5A	37PL		Program Load (halts microprocessor & unwri	4	0	5,273,456:36.0		
71	99	330	04:46:21.733	20DK5B	37MRL		Memory Realocate (software operates from R	4	0	5,273,456:41.0		
72	99	330	04:46:25.066	20DK6A	6MCOPI	NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	5,273,456:46.0		
73	99	330	04:46:35.066	20DK6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	5,273,456:61.0		
74	99	330	04:46:43.733	175I1422A6A	6DMSC	R806,0	DMS Control Tape runup 806.4kb	4	0	5,273,456:74.0		
75	99	330	04:46:45.066	20DK5C	37IRT		Instrument Reset (goes into POR state)	4	0	5,273,456:76.0		
76	99	330	04:46:47.066	118IJ	SMOS	GS		4	0	5,273,456:79.0		
77	99	330	04:46:48.400	20DK5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,273,456:81.0	
78	99	330	04:46:53.733	165I14B	7VECT		Inert vect update UTC	260	4	0	5,273,456:89.0	
79	99	330	04:46:56.400	175I176A6A	6TMREC	IM8	806.4 KBPS IMAGE RECORD Record Mode Chang	260	4	0	5,273,457:02.0	
80	99	330	04:46:57.066	118IJ110A11A4A	7STRP	0.0065,0.0,0.26,0,	Slew =-.2.01	260	4	0	5,273,457:03.0	
81	99	330	04:46:59.066	25NNGIANTS01-		-----START-----		260	4	0	: : :	
82	99	330	04:47:05.733	118IJ11A	SMOS	GE		260	4	0	5,273,457:16.0	
83	99	330	04:47:12.400	175I1422A6B	6DMSC	RDY,0	DMS Control Tape stop	260	4	0	5,273,457:26.0	
84	99	330	04:47:15.733	20DK4A	37IST	1,2,0,OFF,0,1,2	Chopper ON, Sync, Chopper (Ref)Gain State	3R0	4	0	5,273,457:31.0	
85	99	330	04:47:46.400	117DZ	CSMOS	GS	***** GROUP START CSMOS	3R0	4	0	5,273,457:77.0	
86	99	330	04:47:55.733	117DZ105A106A4A	7STRP	-0.0041,0.0,0.0,0,	Slew =,0.03	3R0	4	0	5,273,458:00.0	
87	99	330	04:48:16.400	20DK4B	37IOP	3,0	Long Map, Grating Start Position =00	3R3	4	0	5,273,458:31.0	
88	99	330	04:48:17.066	20DK4C	37ETB	4,C,4,35,FF,FF	Loads wavelength edit table	3R3	4	0	5,273,458:32.0	
89	99	330	04:48:18.400	175DK422A6A	6DMSC	R28,0	DMS Control Tape runup 28.8kbp	3R3	4	0	5,273,458:34.0	
90	99	330	04:48:29.733	175DK176A6A	6TMREC	MPW	28.8 KBPS PWS + NIMS RECORD Record Mode C	3R3	4	0	5,273,458:51.0	
91	99	330	04:48:30.400	25INGIANTS01-	NIMPBK	301DO	IO GIANT CALDERA OBSERVATION	3R3	4	0	: : :	
92	99	330	04:50:01.066	25INGIANTS01-		-----START-----		3R3	4	0	: : :	
93	99	330	04:50:01.066	25INGIANTS01-		-----STOP-----		3R3	4	0	: : :	
94	99	330	04:50:11.733	25INGIANTS01-	DESEL	300DO	IO GIANT CALDERA OBSERVATION	3R3	4	0	: : :	
95	99	330	04:50:14.400	175DK422A6B	6DMSC	RDY,0	DMS Control Tape stop	3R3	4	0	5,273,460:26.0	
96	99	330	04:50:15.733	117DZ11A	CSMOS	GE	***** GROUP END CSMOS	3R3	4	0	5,273,460:28.0	
97	99	330	04:50:57.066	165IK4A	7SCAN	NORM,58.373,21.9	Check S/P Position	3R3	4	0	5,273,460:90.0	
98	99	330	04:51:45.066	25INGIANTS01-		-----STOP-----		3R3	4	0	: : :	
99	99	330	04:52:49.066	175IN422A6A	6DMSC	R403,0	DMS Control Tape runup 403.2kb	3R3	4	0	5,273,462:76.0	
100	99	330	04:52:51.066	118IK	SMOS	GS		3R3	4	0	5,273,462:79.0	
101	99	330	04:52:57.733	165IK4B	7VECT		Inert vect update UTC	3R3	4	0	5,273,462:89.0	
102	99	330	04:53:00.400	175IN176A6A	6TMREC	IM4	403.2 KBPS IMAGE RECORD Record Mode Chang	3R3	4	0	5,273,463:02.0	
103	99	330	04:53:01.066	118IK110A111A4A	7STRP	-0.0061,0.0,0.26,0	Slew =-,3.01	3R3	4	0	5,273,463:03.0	
104	99	330	04:53:09.733	118IK110A111B4A	7STRP	0.0061,-0.0061,0	Slew =-,3.01	3R3	4	0	5,273,463:16.0	
105	99	330	04:53:18.400	118IK110A111B4B	7STRP	-0.0061,0.0,0.26,0	Slew =-,3.01	3R3	4	0	5,273,463:29.0	
106	99	330	04:53:27.066	118IK110A111A4B	7STRP	0.0061,0.0061,0,	Slew =-,3.01	3R3	4	0	5,273,463:42.0	
107	99	330	04:53:35.733	118IK110A111A4C	7STRP	-0.0061,0.0,0.26,0	Slew =-,3.01	3R3	4	0	5,273,463:55.0	
108	99	330	04:53:39.733	20DL5A	37PL		Program Load (halts microprocessor & unwri	4	0	5,273,463:61.0		

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
219	99	331	01:15:00.000	20A3FA	37F1PR	Final Condition	Radiator Flash Heater OFF (primary relay)	2R3	4	0	5,274,671:53:4	
220	99	331	01:15:00.000	20A3EZ	37C2PR	Final Condition	Optics Heater 2 OFF (primary relay)	2R3	4	0	5,274,671:53:4	
221	99	331	01:15:00.000	20A3FB	37F2PR	Final Condition	Shield Flash Heater OFF (primary relay)	2R3	4	0	5,274,671:53:4	
222	99	331	01:15:00.000	20A3FD	40HRPR	Final Condition	RCT Heater OFF (primary relay)	2R3	4	0	5,274,671:53:4	
223	99	331	01:15:00.000	20A3FE	40T1PR	Final Condition	PCT Heater 1 OFF (primary relay)	2R3	4	0	5,274,671:53:4	
224	99	331	01:15:00.000	20A3FF	40T2R	Final Condition	PCT Heater 2 OFF	2R3	4	0	5,274,671:53:4	
225	99	331	01:15:00.000	20A3EY	37C1PR	Final Condition	Optics Heater 1 OFF (primary relay)	2R3	4	0	5,274,671:53:4	
226	99	331	01:15:00.000	20A3EX	37HR	Final Condition	Replacement Heaters OFF	2R3	4	0	5,274,671:53:4	
227	99	331	01:15:00.000	20A3EW	37A	Final Condition	NIMS Power ON	2R3	4	0	5,274,671:53:4	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	99	335	22:00:31.466	41FB3A	40T1PR		1 PCT Heater 1 OFF (primary relay)	200	4	0	5,281,600:12:0	
165	99	335	22:00:41.466	41FB3B	40T1PR		2 PCT Heater 1 OFF (primary relay)	200	4	0	5,281,600:27:0	
166	99	335	22:00:51.466	41FB3C	40T2R		1 PCT Heater 2 OFF	200	4	0	5,281,600:42:0	
167	99	335	22:01:01.466	41FB3D	40T2R		2 PCT Heater 2 OFF	200	4	0	5,281,600:57:0	
168	99	335	22:12:41.466	488AX6C	6TMSED	NORM,AL6	Sci. Eng. and D/L Chan	200	4	0	5,281,612:15:0	
169	99	335	22:52:24.800	488AX6D	6TMSED	NORM,AL5	Sci. Eng. and D/L Chan	200	4	0	5,281,710:72:0	
170	99	336	01:43:20.800	488AX6E	6TMSED	NORM,AL4	Sci. Eng. and D/L Chan	200	4	0	5,281,820:46:0	
171	99	336	02:13:12.800	488AY6A	6TMSED	NORM,AL6	Sci. Eng. and D/L Chan	200	4	0	5,281,850:04:0	
172	99	336	02:30:16.800	488AY6B	6TMSED	NORM,AL7	Sci. Eng. and D/L Chan	200	4	0	5,281,866:84:0	
173	99	336	03:12:16.800	488AY6C	6TMSED	FILL,AL7	Sci. Eng. and D/L Chan	200	4	0	5,281,908:42:0	
174	99	336	03:36:50.133	488AY6D	6TMSED	NORM,AL7	Sci. Eng. and D/L Chan	200	4	0	5,281,932:68:0	
175	99	336	04:04:23.466	176FB6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,281,960:00:0	
176	99	336	04:07:32.133	444FB43A4A	7SAFE	UNSTOW	SIP TO 153 deg cone	200	4	0	5,281,963:10:0	
177	99	336	04:11:32.133	444FB43A4B	7MODE	SPNL	AACS ALL-SPIN LOW	200	4	0	5,281,967:06:0	
178	99	336	04:20:32.133	444FB43A4C	7CLK	17.45:0.0	Check SIP Position	200	4	0	5,281,975:88:0	
179	99	336	04:23:31.466	125FB	NIMSINIT	GS	##### GROUP START INIT	200	4	0	5,281,978:84:0	
180	99	336	04:23:31.466	125FB4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)Gain State	260	4	0	5,281,979:84:0	
181	99	336	04:24:32.133	125FB4B	37IST	1,2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (Ref)Gain State	4R0	4	0	5,281,979:84:0	
182	99	336	04:25:32.800	125FB11A	NIMSINIT	GE	##### GROUP END INIT	4R0	4	0	5,281,980:84:0	
183	99	336	04:25:32.800	125FB4C	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	4R3	4	0	5,281,980:84:0	
184	99	336	04:26:34.800	127FB4A	37IOP	3,0	Long Map, Grating Start Position =0	4R3	4	0	5,281,983:84:0	
185	99	336	04:28:34.800	127FB	NIMSTAB	GS	##### GROUP START TAB	4R3	4	0	5,281,983:84:0	
186	99	336	04:28:35.466	127FB4B	37ETB	0A,CA,19,FF,C0,1	Loads wavelength edit table	4R3	4	0	5,281,983:85:0	
187	99	336	04:28:43.466	127FB11A	NIMSTAB	GE	##### GROUP END TAB	4R3	4	0	5,281,984:06:0	
188	99	336	04:28:59.466	432FB6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	4R3	4	0	5,281,984:30:0	
189	99	336	04:30:59.466	432FC6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	4R3	4	0	5,281,986:28:0	
190	99	336	04:31:41.466	192FC4A	7CONE	17.0,54.88	Check SIP Position	4R3	4	0	5,281,987:00:0	
191	99	336	04:31:42.133	192FC4B	7CLK	17.0,244.07	Check SIP Position	4R3	4	0	5,281,987:01:0	
192	99	336	04:35:03.466	432FD6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS R/T SELECT	4R3	4	0	5,281,990:30:0	
193	99	336	04:45:08.800	432FE6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS R/T DESELECT	4R3	4	0	5,282,000:28:0	
194	99	336	04:45:46.133	127FE	NIMSTAB	GS	##### GROUP START TAB	4R3	4	0	5,282,000:84:0	
195	99	336	04:45:46.133	127FE4A	37IOP	0,0	Safe, Grating Start Position =0	4R0	4	0	5,282,000:84:0	
196	99	336	04:45:46.800	127FE4B	37ETB	04,C4,02,00,00	Loads wavelength edit table	4R0	4	0	5,282,000:85:0	
197	99	336	04:45:54.800	20FE4A	7SAFE	UNSTOW	SIP TO 153 deg cone	4R0	4	0	5,282,001:06:0	
198	99	336	04:45:54.800	127FE11A	NIMSTAB	GE	##### GROUP END TAB	4R0	4	0	5,282,001:06:0	
199	99	336	04:47:47.466	125FE4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	5,282,002:84:0	
200	99	336	04:47:47.466	125FE	NIMSINIT	GS	##### GROUP START INIT	460	4	0	5,282,002:84:0	
201	99	336	04:48:48.133	125FE4B	37IST	1,1,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	5,282,003:84:0	
202	99	336	04:49:48.800	125FE11A	NIMSINIT	GE	##### GROUP END INIT	400	4	0	5,282,004:84:0	
203	99	336	04:49:48.800	125FE4C	37MB	0,0,0,0,0,0	Selects mirror (spatial) edit table	400	4	0	5,282,004:84:0	
204	99	336	04:51:00.800	444FF43A4A	7SAFE	UNSTOW	SIP TO 153 deg cone	400	4	0	5,282,006:10:0	
205	99	336	04:55:00.800	444FF43A4B	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,282,010:06:0	
206	99	336	05:05:07.466	41FG99A	POWER	PWR MODE change	Change to Manuever/Playback Mode	400	4	0	5,282,020:06:0	
207	99	336	05:07:01.466	41FG3G	40T1P		1 PCT Heater 1 ON (primary relay)	400	4	0	5,282,021:86:0	
208	99	336	05:07:11.466	41FG3H	40T1P		2 PCT Heater 1 ON (primary relay)	400	4	0	5,282,022:10:0	
209	99	336	05:07:21.466	41FG3I	40T2		1 PCT Heater 2 ON	400	4	0	5,282,022:25:0	
210	99	336	05:07:31.466	41FG3J	40T2		2 PCT Heater 2 ON	400	4	0	5,282,022:40:0	
211	99	336	05:09:14.133	20FI4A	7SAFE	STOP	SIP NO MOVEMENT	400	4	0	5,282,024:12:0	
212	99	336	05:10:04.133	20FI4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	5,282,024:87:0	
213	99	336	05:11:07.466	176FH6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,282,026:00:0	
214	99	336	05:33:44.800	488AY6E	6TMSED	NORM,AL6	Sci. Eng. and D/L Chan	400	4	0	5,282,048:34:0	
215	99	336	05:50:37.466	25NNPCRLT01-	-----STOP-----			400	4	0	;	
216	99	336	05:56:37.466	176UW6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,282,071:00:0	
217	99	336	06:02:00.133	20UQ4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	5,282,076:29:0	
218	99	336	06:03:00.133	20UQ4D	7MODE	SPNL	AACS ALL-SPIN LOW	400	4	0	5,282,077:28:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
219	99	336	06:05:00.133	20UQ4E	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,282,079:26:0	
220	99	336	06:10:30.133	20UQ4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	400	4	0	5,282,084:66:0	
221	99	336	06:10:30.800	20UQ4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	400	4	0	5,282,084:67:0	
222	99	336	06:10:50.800	20UQ4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	400	4	0	5,282,085:06:0	
223	99	336	06:10:51.466	20UQ4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	400	4	0	5,282,085:07:0	
224	99	336	06:11:11.466	20UQ4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	5,282,085:37:0	
225	99	336	06:11:12.133	20UQ4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	5,282,085:38:0	
226	99	336	06:11:22.133	20UQ4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	5,282,085:53:0	
227	99	336	06:11:22.800	20UQ4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	5,282,085:54:0	
228	99	336	06:11:32.800	20UQ4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	400	4	0	5,282,085:69:0	
229	99	336	06:11:33.466	20UQ4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	400	4	0	5,282,085:70:0	
230	99	336	06:13:20.133	20UQ4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	400	4	0	5,282,087:48:0	
231	99	336	06:13:20.800	20UQ4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	400	4	0	5,282,087:49:0	
232	99	336	06:13:40.800	20UQ4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	400	4	0	5,282,087:79:0	
233	99	336	06:13:41.466	20UQ4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	400	4	0	5,282,087:80:0	
234	99	336	06:14:01.466	20UQ4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	5,282,088:19:0	
235	99	336	06:14:02.133	20UQ4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	5,282,088:20:0	
236	99	336	06:14:12.133	20UQ4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	5,282,088:35:0	
237	99	336	06:14:12.800	20UQ4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	5,282,088:36:0	
238	99	336	06:14:22.800	20UQ4AW	7VENT	1.211,1.333,9	ALERT -- Thruster fire	400	4	0	5,282,088:51:0	
239	99	336	06:14:23.466	20UQ4AX	7VENT	1.211,0.666,11	ALERT -- Thruster fire	400	4	0	5,282,088:52:0	
240	99	336	06:15:20.133	20UQ4Z	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,282,089:46:0	
241	99	336	06:40:04.133	20UJ4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,282,113:88:0	
242	99	336	06:40:54.133	20UJ4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	5,282,114:72:0	
243	99	336	06:42:07.466	176UX6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,282,116:00:0	
244	99	336	09:09:12.800	488AZ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,282,261:43:0	
245	99	336	09:42:17.466	488AZ6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,282,294:17:0	
246	99	336	09:43:20.800	488AZ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,282,295:21:0	
247	99	336	09:51:52.800	488AZ6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,282,303:61:0	
248	99	336	20:37:32.066	488BA6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,282,942:21:0	
249	99	336	22:25:41.400	488BA6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,283,049:18:0	
250	99	337	00:42:31.400	488BA6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,283,184:48:0	
251	99	337	03:00:08.733	488BB6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,283,320:58:0	
252	99	337	04:57:28.733	488BB6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,283,436:62:0	
253	99	337	09:02:48.733	488BC6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,283,679:29:0	
254	99	337	09:34:15.400	488BC6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,283,710:38:0	
255	99	337	09:41:12.733	488BC6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,283,717:27:0	
256	99	337	20:42:25.400	488BD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,284,371:22:0	
257	99	338	01:02:48.733	488BD6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,284,628:70:0	
258	99	338	01:57:08.066	488BD6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,284,682:45:0	
259	99	338	01:58:16.733	488BD6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,284,683:57:0	
260	99	338	02:06:48.733	488BD6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,284,692:06:0	
261	99	338	04:27:23.333	488BE6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,284,831:09:0	
262	99	338	05:41:07.333	488BE6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,284,904:02:0	
263	99	338	06:07:57.333	488BE6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,284,930:51:0	
264	99	338	08:03:04.666	488BE6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,285,044:38:0	
265	99	338	09:17:44.666	488BE6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,285,118:24:0	
266	99	338	09:26:22.000	488BF6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,285,126:72:0	
267	99	338	09:34:48.666	488BF6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,285,135:13:0	
268	99	338	20:37:18.000	488BG6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,285,790:32:0	
269	99	339	00:58:32.666	488BG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,286,048:66:0	
270	99	339	01:51:36.000	488BG6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,286,101:18:0	
271	99	339	01:51:52.666	488BG6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,286,101:43:0	
272	99	339	02:00:24.666	488BG6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,286,109:83:0	
273	99	339	04:27:16.000	488BH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,286,255:14:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
274	99	339	08:52:08.666	488BH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,286,517:11:0	
275	99	339	09:27:05.333	488BH6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,286,551:62:0	
276	99	339	09:28:24.666	488BH6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,286,552:90:0	
277	99	339	09:36:56.666	488BH6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,286,561:39:0	
278	99	339	20:37:11.266	488BI6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,287,214:38:0	
279	99	339	21:51:18.600	488BI6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,287,287:66:0	
280	99	339	22:18:07.933	488BI6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,287,314:23:0	
281	99	339	23:03:20.600	488BI6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,287,358:88:0	
282	99	340	00:33:56.600	488BI6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,287,448:52:0	
283	99	340	00:43:03.933	488BJ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,287,457:54:0	
284	99	340	00:56:24.600	488BJ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,287,470:72:0	
285	99	340	01:46:20.600	488BJ6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,287,520:16:0	
286	99	340	02:13:09.933	488BJ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,287,546:64:0	
287	99	340	08:26:32.600	488BK6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,287,915:89:0	
288	99	340	12:46:48.600	488BK6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,288,173:35:0	
289	99	340	14:27:04.600	488BL6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,288,272:50:0	
290	99	340	14:42:00.600	488BL6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,288,287:29:0	
291	99	340	15:01:12.600	488BL6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,288,306:28:0	
292	99	340	15:46:00.600	488BL6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,288,350:56:0	
293	99	341	08:37:12.533	488BM6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,289,350:64:0	
294	99	341	09:16:43.200	488BM6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,289,389:71:0	
295	99	341	09:17:44.533	488BM6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,289,390:72:0	
296	99	341	09:26:16.533	488BM6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,289,399:21:0	
297	99	341	09:47:00.533	488BM6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,289,419:67:0	
298	99	341	11:01:29.866	488BN6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,289,493:37:0	
299	99	341	11:28:19.200	488BN6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,289,519:85:0	
300	99	341	12:27:36.533	488BN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,289,578:52:0	
301	99	341	14:18:32.533	488BN6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,289,688:26:0	
302	99	341	14:54:48.533	488BN6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,289,724:14:0	
303	99	341	15:39:36.533	488BO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,289,768:42:0	
304	99	341	15:41:30.533	488BO6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,289,770:31:0	
305	99	341	16:08:20.533	488BO6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,289,796:80:0	
306	99	341	23:59:59.866	481UD4A	7VECT		Inert vect update UTC	400	4	0	5,290,263:32:0	
307	99	342	00:30:06.533	488BP6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,290,293:12:0	
308	99	342	04:11:55.133	488BP6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,290,512:46:0	
309	99	342	08:32:56.466	488BQ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,290,770:60:0	
310	99	342	09:11:53.133	488BQ6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,290,809:16:0	
311	99	342	09:13:28.466	488BQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,290,810:68:0	
312	99	342	09:22:00.466	488BQ6D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,290,819:17:0	
313	99	342	10:10:59.800	488BQ6E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,290,867:58:0	
314	99	342	12:31:52.466	488BR6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,291,006:88:0	
315	99	342	14:16:24.466	488BR6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,291,110:32:0	
316	99	342	14:37:44.466	488BR6C	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,291,131:41:0	
317	99	342	14:38:48.466	488BR6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,291,132:46:0	
318	99	342	14:59:04.466	488BR6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,291,152:50:0	
319	99	342	16:57:44.466	488BS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,291,269:83:0	
320	99	342	17:56:08.466	488BS6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,291,327:61:0	
321	99	342	18:11:38.466	488BS6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,291,343:00:0	
322	99	342	18:38:28.466	488BS6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,291,369:49:0	
323	99	342	21:52:56.466	488BS6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,291,561:79:0	
324	99	342	22:20:40.466	488BT6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,291,589:27:0	
325	99	342	23:05:17.800	488BT6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,291,633:39:0	
326	99	342	23:39:23.800	488BT6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,291,667:14:0	
327	99	342	23:50:16.466	488BT6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,291,677:83:0	
328	99	343	00:52:59.800	488BT6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,291,739:86:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	GRIM	MF I
329	99	343	00:56:05.133	176UC6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,291,743:00:0	
330	99	343	01:23:29.800	20SN4I	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,291,770:10:0	
331	99	343	01:38:29.800	20SN4K	7SLEW	INIT_POS,17.45	Stator movement	400	4	0	5,291,784:86:0	
332	99	343	01:50:29.800	20SN4L	7SLEW	DIS_POS,0.0	Stator movement	400	4	0	5,291,796:74:0	
333	99	343	01:57:29.800	20SN4M	7SLEW	INIT_NEG,17.45	Stator movement	400	4	0	5,291,803:67:0	
334	99	343	02:09:29.800	20SN4N	7SLEW	DIS_POS,0.0	Stator movement	400	4	0	5,291,815:55:0	
335	99	343	02:16:29.800	20SN4O	7SLEW	INIT_POS,4.36	Stator movement	400	4	0	5,291,822:48:0	
336	99	343	02:28:29.800	20SN4P	7SLEW	DIS_POS,0.0	Stator movement	400	4	0	5,291,834:36:0	
337	99	343	02:35:29.800	20SN4Q	7SLEW	INIT_NEG,4.36	Stator movement	400	4	0	5,291,841:29:0	
338	99	343	02:47:29.800	20SN4R	7SLEW	DIS_POS,0.0	Stator movement	400	4	0	5,291,853:17:0	
339	99	343	02:59:29.800	20SN4AH	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,291,865:05:0	
340	99	343	03:14:59.800	488BU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,291,880:35:0	
341	99	343	03:15:03.800	20UC4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,291,880:41:0	
342	99	343	03:15:53.800	20UC4B	7SLEW	DIS_POS,0.0	Stator movement	400	4	0	5,291,881:25:0	
343	99	343	03:17:38.466	176UD6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,291,883:00:0	
344	99	343	05:09:58.466	488BU6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,291,994:09:0	
345	99	343	05:14:32.466	488BU6C	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,291,998:56:0	
346	99	343	10:50:53.066	488BV6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,292,331:24:0	
347	99	343	12:27:36.400	488BV6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,292,426:84:0	
348	99	343	14:12:08.400	488BV6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,292,530:28:0	
349	99	343	14:31:20.400	488BV6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,292,549:27:0	
350	99	343	14:33:41.733	488BV6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,292,551:57:0	
351	99	343	14:52:40.400	488BW6A	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,292,570:36:0	
352	99	344	11:40:45.733	488BX6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,293,804:70:0	
353	99	344	12:16:56.400	488BX6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,293,840:50:0	
354	99	344	14:07:52.400	488BX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,293,950:24:0	
355	99	344	14:27:04.400	488BX6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,293,969:23:0	
356	99	344	14:32:42.400	488BX6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,293,974:75:0	
357	99	344	14:37:44.400	488BY6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	5,293,979:73:0	
358	99	344	14:52:40.400	488BY6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,293,994:52:0	
359	99	344	23:17:29.666	488BZ6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,294,493:77:0	
360	99	344	23:50:16.333	488BZ6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,294,526:24:0	
361	99	345	00:31:54.333	488BZ6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,294,567:40:0	
362	99	345	00:58:44.333	488BZ6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,294,593:89:0	
363	99	345	05:29:44.333	488CA6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,294,862:00:0	
364	99	345	05:35:52.333	488CA6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,294,868:06:0	
365	99	345	12:06:16.333	488CB6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,295,254:16:0	
366	99	345	12:11:32.333	488CB6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,295,259:35:0	
367	99	345	14:01:28.333	488CB6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,295,368:10:0	
368	99	345	14:22:48.333	488CB6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,295,389:19:0	
369	99	345	14:26:57.000	488CB6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,295,393:28:0	
370	99	345	14:31:20.333	488CC6A	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	5,295,397:59:0	
371	99	345	14:46:16.333	488CC6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,295,412:38:0	
372	99	346	12:11:24.933	488CD6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,296,683:40:0	
373	99	346	13:57:12.266	488CD6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,296,788:06:0	
374	99	346	14:16:24.266	488CD6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,296,807:05:0	
375	99	346	14:35:36.266	488CD6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,296,826:04:0	
376	99	346	15:35:20.266	488CD6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,296,885:11:0	
377	99	347	01:12:08.933	488CE6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,297,455:54:0	
378	99	347	01:38:58.266	488CE6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,297,482:11:0	
379	99	347	06:32:10.933	488CE6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,297,772:10:0	
380	99	347	06:59:00.266	488CE6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,297,798:58:0	
381	99	347	07:14:00.266	488CF6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,297,813:43:0	
382	99	347	07:35:35.600	488CF6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,297,834:75:0	
383	99	347	07:37:28.266	488CF6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,297,836:62:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	99	347	12:21:18.200	488CF6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,298,117:36:0	
385	99	347	13:52:56.200	488CG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,298,208:02:0	
386	99	347	14:15:46.866	488CG6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,298,230:56:0	
387	99	347	14:16:24.200	488CG6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,298,231:21:0	
388	99	347	14:24:56.200	488CG6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,298,239:61:0	
389	99	347	20:02:08.866	488CH6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,298,573:16:0	
390	99	347	21:15:51.533	488CH6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,298,646:07:0	
391	99	347	21:44:57.533	488CH6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,298,674:78:0	
392	99	348	00:30:48.200	488CH6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,298,838:80:0	
393	99	348	00:50:00.200	488CH6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,298,857:79:0	
394	99	348	01:52:16.866	488C16A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,298,919:42:0	
395	99	348	02:24:06.200	488C16B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,298,950:85:0	
396	99	348	07:02:17.533	488C16C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,299,226:06:0	
397	99	348	07:22:32.200	488C16D	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,299,246:08:0	
398	99	348	07:27:02.200	488C16E	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,299,250:49:0	
399	99	348	07:57:50.200	176SF6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,299,281:00:0	
400	99	348	08:00:00.000	20A3EX	37HR	Final Condition	Replacement Heaters OFF	400	4	0	5,299,283:12:7	
401	99	348	08:00:00.000	20A3EW	37A	Final Condition	NIMS Power ON	400	4	0	5,299,283:12:7	
402	99	348	08:00:00.000	20A3EY	37C1PR	Final Condition	Optics Heater 1 OFF (primary relay)	400	4	0	5,299,283:12:7	
403	99	348	08:00:00.000	20A3EZ	37C2PR	Final Condition	Optics Heater 2 OFF (primary relay)	400	4	0	5,299,283:12:7	
404	99	348	08:00:00.000	20A3FA	37F1PR	Final Condition	Radiator Flash Heater OFF (primary relay)	400	4	0	5,299,283:12:7	
405	99	348	08:00:00.000	20A3FB	37F2PR	Final Condition	Shield Flash Heater OFF (primary relay)	400	4	0	5,299,283:12:7	
406	99	348	08:00:00.000	20A3FD	40HRPR	Final Condition	PCT Heater OFF (primary relay)	400	4	0	5,299,283:12:7	
407	99	348	08:00:00.000	20A3FE	40T1P	Final Condition	PCT Heater 1 ON (primary relay)	400	4	0	5,299,283:12:7	
408	99	348	08:00:00.000	20A3FF	40T2	Final Condition	PCT Heater 2 ON	400	4	0	5,299,283:12:7	
409	99	348	08:00:00.200		DMS:	: READY	RDY, TRACK 4, REV, TIC -10.13 +/-	400	4	0	5,299,283:13:0	

Sequence: :5BDE + NIMROD + IAPS			Created: 12/8/99			Begin: 99-348/08:00:00			Finish: 00-00/23:30:00			
Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
1	99	348	08:00:00.000	20A3FF	40T2	CMD,40T2,20A3FF,	PCT Heater 2 ON	400	4	0	5,299,283:12:7	
2	99	348	08:00:00.000	20A3EW	37A	CMD,37A,20A3EW,,	NIMS Power ON	400	4	0	5,299,283:12:7	
3	99	348	08:00:00.000	20A3EX	37HR	CMD,37HR,20A3EX,	Replacement Heaters OFF	400	4	0	5,299,283:12:7	
4	99	348	08:00:00.000	20A3EY	37C1PR	CMD,37C1PR,20A3E	Optics Heater 1 OFF (primary relay)	400	4	0	5,299,283:12:7	
5	99	348	08:00:00.000	20A3EZ	37C2PR	CMD,37C2PR,20A3E	Optics Heater 2 OFF (primary relay)	400	4	0	5,299,283:12:7	
6	99	348	08:00:00.000	20A3FA	37F1PR	CMD,37F1PR,20A3F	Radiator Flash Heater OFF (primary relay)	400	4	0	5,299,283:12:7	
7	99	348	08:00:00.000	20A3FB	37F2PR	CMD,37F2PR,20A3F	Shield Flash Heater OFF (primary relay)	400	4	0	5,299,283:12:7	
8	99	348	08:00:00.000	20A3FD	40HRPR	CMD,40HRPR,20A3F	PCT Heater OFF (primary relay)	400	4	0	5,299,283:12:7	
9	99	348	08:00:00.000	20A3FE	40T1P	CMD,40T1P,20A3FE	PCT Heater 1 ON (primary relay)	400	4	0	5,299,283:12:7	
10	99	348	08:00:00.200		DMS:	: READY	RDY, TRACK 2, REV, TIC 365.79 +/- 8	400	4	0	5,299,283:13:0	
11	99	348	08:00:56.200	488AA6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,299,284:06:0	
12	99	348	08:01:51.533	432NA6B	6RTDS2	NIMDSL,AACDSL,RT	NIMS RT DESELECTAACS DESELECT	400	4	0	5,299,284:89:0	
13	99	348	08:05:04.200	20WA4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,299,288:14:0	
14	99	348	08:05:54.200	20WA4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,299,288:89:0	
15	99	348	08:07:56.866	176SE6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,299,291:00:0	
16	99	348	08:20:26.866	488AA6B	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	400	4	0	5,299,303:33:0	
17	99	348	08:22:16.200	488AA6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,299,305:15:0	
18	99	348	09:26:48.866	176QC6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,299,369:00:0	
19	99	348	09:31:20.200	20UL4B	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,299,373:43:0	
20	99	348	09:50:20.200	20UL4D	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,299,392:24:0	
21	99	348	12:16:10.200	488AA6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,299,536:45:0	
22	99	348	12:37:00.200	20UL4F	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,299,557:09:0	
23	99	348	12:38:00.200	488AA6E	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	400	4	0	5,299,558:08:0	
24	99	348	12:49:00.200	20BA4AA	7STAT	10.00,320.3613,-	Stator inertial point	400	4	0	5,299,568:88:0	
25	99	348	12:49:12.200	20BA6AA	6MROH	7,6744,0,A10	read from AACSA7,6744,0,A10	400	4	0	5,299,569:15:0	
26	99	348	12:55:00.200	474BA416A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,299,574:82:0	
27	99	348	12:57:00.200	474BA416A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,299,576:80:0	
28	99	348	12:57:20.200	20BA4AD	7STAT	17.45,320.3613,-	Stator inertial point	400	4	0	5,299,577:19:0	
29	99	348	13:01:14.200	474BA416A4E	7BURN	320.361298,-76.8	ALERT -- Thruster fire	400	4	0	5,299,581:06:0	
30	99	348	13:46:32.200	488AB6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,299,625:79:0	
31	99	348	13:53:30.200	20BA4AF	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,299,632:69:0	
32	99	348	13:59:22.200	20BA4AG	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,299,638:51:0	
33	99	348	14:05:44.200	488AB6B	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	5,299,644:78:0	
34	99	348	14:06:14.200	20BE6A	6TMSED	NORM,BA4	Sci, Eng, and D/L Chan	400	4	0	5,299,645:32:0	
35	99	348	14:21:38.200	20BA4AK	7STAT	10.00,320.3613,-	Stator inertial point	400	4	0	5,299,660:53:0	
36	99	348	14:21:50.200	20BA6AB	6MROH	7,6744,0,A40	read from AACSA7,6744,0,A40	400	4	0	5,299,660:71:0	
37	99	348	14:27:38.200	20BA4AM	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,299,666:47:0	
38	99	348	14:29:38.200	474BA416A4I	7BURN	0.361298,-76.876	ALERT -- Thruster fire	400	4	0	5,299,668:45:0	
39	99	348	14:54:48.200	488AB6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,299,693:35:0	
40	99	348	15:25:57.533	488AB6D	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	400	4	0	5,299,724:18:0	
41	99	348	15:55:03.533	488AB6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,299,752:89:0	
42	99	348	16:00:54.200	20BA4AO	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,299,758:69:0	
43	99	348	16:05:46.200	20BA4AP	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,299,763:52:0	
44	99	348	17:13:02.200	20BA4AV	7STAT	10.00,320.3613,-	Stator inertial point	400	4	0	5,299,830:09:0	
45	99	348	17:13:14.200	20BA6AC	6MROH	7,6744,0,A10	read from AACSA7,6744,0,A10	400	4	0	5,299,830:27:0	
46	99	348	17:19:02.200	20BA4AX	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,299,836:03:0	
47	99	348	17:21:02.200	474BA416A4O	7BURN	0.361298,-76.876	ALERT -- Thruster fire	400	4	0	5,299,838:01:0	
48	99	348	18:52:18.133	20BA4AZ	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,299,928:25:0	
49	99	348	18:57:10.133	20BA4BA	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,299,933:08:0	
50	99	348	20:04:26.133	20BA4BG	7STAT	10.00,320.3613,-	Stator inertial point	400	4	0	5,299,999:56:0	
51	99	348	20:04:38.133	20BA6AD	6MROH	7,6744,0,A10	read from AACSA7,6744,0,A10	400	4	0	5,299,999:74:0	
52	99	348	20:10:26.133	20BA4BI	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,300,005:50:0	
53	99	348	20:12:26.133	474BA416A4U	7BURN	0.361298,-76.876	ALERT -- Thruster fire	400	4	0	5,300,007:48:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
54	99	348	21:43:42.133	20BA4BK	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,300,097:72:0	
55	99	348	21:48:34.133	20BA4BL	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,300,102:55:0	
56	99	348	22:55:50.133	20BA4BR	7STAT	10.00,320.3613,-	Stator inertial point	400	4	0	5,300,169:12:0	
57	99	348	22:56:02.133	20BA4AE	6MROH	7,6744,0,A10	read from AACS7,6744,0,A10	400	4	0	5,300,169:30:0	
58	99	348	23:01:50.133	20BA4BT	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,300,175:06:0	
59	99	348	23:03:50.133	474BA416A4AA	7BURN	0.361298,-76.876	ALERT -- Thruster fire	400	4	0	5,300,177:04:0	
60	99	348	23:50:59.466	488AC6A	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	400	4	0	5,300,223:62:0	
61	99	349	00:11:36.133	488AC6B	6TMSED	FILL,AH6	Sci, Eng, and D/L Chan	400	4	0	5,300,244:06:0	
62	99	349	00:21:48.133	488AC6C	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	400	4	0	5,300,254:14:0	
63	99	349	00:21:49.466	20BE6B	6TMSED	NORM,BA6	Sci, Eng, and D/L Chan	400	4	0	5,300,254:16:0	
64	99	349	00:35:06.133	20BA4BV	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,300,267:28:0	
65	99	349	00:39:58.133	20BA4BW	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,300,272:11:0	
66	99	349	01:47:14.133	20BA4CC	7STAT	10.00,320.3613,-	Stator inertial point	400	4	0	5,300,338:59:0	
67	99	349	01:47:26.133	20BA4AF	6MROH	7,6744,0,A40	read from AACS7,6744,0,A40	400	4	0	5,300,338:77:0	
68	99	349	01:53:14.133	20BA4CE	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,300,344:53:0	
69	99	349	01:55:14.133	474BA416A4AG	7BURN	0.361298,-76.876	ALERT -- Thruster fire	400	4	0	5,300,346:51:0	
70	99	349	03:26:30.133	20BA4CG	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,300,436:75:0	
71	99	349	03:31:22.133	20BA4CH	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,300,441:58:0	
72	99	349	04:38:38.133	20BC4CN	7STAT	10.00,320.3613,-	Stator inertial point	400	4	0	5,300,508:15:0	
73	99	349	04:38:50.133	20BC4AG	6MROH	7,6744,0,A40	read from AACS7,6744,0,A40	400	4	0	5,300,508:33:0	
74	99	349	04:42:32.133	488AC6D	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	5,300,512:02:0	
75	99	349	04:44:38.133	20BC4CP	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,300,514:09:0	
76	99	349	04:46:38.133	474BA416A4AM	7BURN	0.361298,-76.876	ALERT -- Thruster fire	400	4	0	5,300,516:07:0	
77	99	349	05:18:48.133	488AC6E	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,300,547:81:0	
78	99	349	05:46:01.466	488AD6A	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	400	4	0	5,300,574:74:0	
79	99	349	06:17:54.133	20BC4CR	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,300,606:31:0	
80	99	349	06:20:07.466	488AD6B	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,300,608:49:0	
81	99	349	06:22:46.133	20BC4CS	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,300,611:14:0	
82	99	349	07:30:02.133	20BC4CY	7STAT	10.00,320.3613,-	Stator inertial point	400	4	0	5,300,677:62:0	
83	99	349	07:30:14.133	20BC4AH	6MROH	7,6744,0,A10	read from AACS7,6744,0,A10	400	4	0	5,300,677:80:0	
84	99	349	07:36:02.133	20BC4DA	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,300,683:56:0	
85	99	349	07:38:02.133	474BA416A4AS	7BURN	0.361298,-76.876	ALERT -- Thruster fire	400	4	0	5,300,685:54:0	
86	99	349	08:13:44.133	488AD6C	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	400	4	0	5,300,720:82:0	
87	99	349	08:14:14.133	20BE6C	6TMSED	NORM,BA6	Sci, Eng, and D/L Chan	400	4	0	5,300,721:36:0	
88	99	349	08:58:38.800	488AD6D	6TMSED	FILL,AH6	Sci, Eng, and D/L Chan	400	4	0	5,300,765:29:0	
89	99	349	09:00:40.133	488AD6E	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	400	4	0	5,300,767:29:0	
90	99	349	09:08:58.800	20BC4DC	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,300,775:49:0	
91	99	349	09:13:50.800	20BC4DD	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,300,780:32:0	
92	99	349	09:20:41.466	20BE6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,300,787:11:0	
93	99	349	10:45:22.800	20BB4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,300,870:80:0	
94	99	349	10:46:12.800	20BB4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,300,871:64:0	
95	99	349	10:47:31.466	176BA6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,300,873:00:0	
96	99	349	12:31:56.800	488AE6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,300,976:25:0	
97	99	349	13:31:36.133	488AE6B	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	400	4	0	5,301,035:25:0	
98	99	349	13:41:12.800	488AE6C	6TMSED	FILL,AH3	Sci, Eng, and D/L Chan	400	4	0	5,301,044:71:0	
99	99	349	14:18:16.800	488AE6D	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	400	4	0	5,301,081:40:0	
100	99	349	14:20:40.133	488AE6E	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	5,301,083:73:0	
101	99	349	15:09:44.133	488AF6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,301,132:30:0	
102	99	349	15:11:04.800	488AF6B	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	400	4	0	5,301,133:60:0	
103	99	349	16:00:10.800	488AF6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,301,182:20:0	
104	99	349	18:46:00.133	488AF6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,301,346:20:0	
105	99	349	18:46:47.466	176QD6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,301,347:00:0	
106	99	349	18:50:00.133	444SA443A4A	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,301,350:16:0	
107	99	349	18:55:04.133	20UE4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,301,355:17:0	
108	99	349	18:55:54.133	20UE4B	7SLEW	DIS,POS,0.0	Stator movement	400	4	0	5,301,356:01:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
109	99	349	18:57:54.800	176SQ6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,301,358:00:0	
110	99	349	21:32:40.000	RNMRD3_RBS		-----START-----		400	4	0	:	
111	99	349	21:33:21.466	20NA3A	40T1PR		1 PCT Heater 1 OFF (primary relay)	400	4	0	5,301,511:67:0	
112	99	349	21:33:21.466	20NA3B	40T1PR		2 PCT Heater 1 OFF (primary relay)	400	4	0	5,301,511:67:0	
113	99	349	21:33:28.133	20NA3C	40T2R		1 PCT Heater 2 OFF	400	4	0	5,301,511:77:0	
114	99	349	21:33:28.133	20NA3D	40T2R		2 PCT Heater 2 OFF	400	4	0	5,301,511:77:0	
115	99	349	21:33:41.466	20NA3G	37C1P		1 Optics Heater 1 ON (primary relay)	400	4	0	5,301,512:06:0	
116	99	349	21:33:41.466	20NA3H	37C1P		2 Optics Heater 1 ON (primary relay)	400	4	0	5,301,512:06:0	
117	99	349	21:34:50.800	20NA4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	5,301,513:19:0	
118	99	349	21:35:51.466	20NA4B	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	4R0	4	0	5,301,514:19:0	
119	99	349	21:36:52.133	20NA4C	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R0	4	0	5,301,515:19:0	
120	99	349	21:38:36.133	20NA4D	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	4R0	4	0	5,301,516:84:0	
121	99	349	21:39:37.466	20NA4E	37ETB	04,C,4,35,FF,FF	Loads wavelength edit table	4R0	4	0	5,301,517:85:0	
122	99	349	21:39:54.133	20NA4F	37IOP	8,11	Band Edge Map, Grating Start Position =11	4R8	4	11	5,301,518:19:0	
123	99	349	21:40:54.800	20NA4G	37MPT	1,139,151	Modify Parameter Table (affects scanning m	4R8	4	11	5,301,519:19:0	
124	99	349	21:43:44.133	20NA6A	6MROH	37,150F,0,A10	read from NIMS37,150F,0,A1	4R8	4	11	5,301,522:00:0	
125	99	349	22:44:24.133	20NA6B	6MROH	37,150F,0,A10	read from NIMS37,150F,0,A1	4R8	4	11	5,301,522:00:0	
126	99	349	22:51:02.133	20NC6B	6TMSED	NORM,BA6	Sci, Eng, and D/L Chan	4R8	4	11	5,301,588:51:0	
127	99	349	23:45:04.133	20NA6C	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	4R8	4	11	5,301,642:00:0	
128	99	350	00:39:20.800	20NC6C	6TMSED	NORM,BA6	Sci, Eng, and D/L Chan	4R8	4	11	5,301,695:62:0	
129	99	350	00:45:44.133	20NA6D	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	4R8	4	11	5,301,702:00:0	
130	99	350	01:46:24.066	20NA6E	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	4R8	4	11	5,301,762:00:0	
131	99	350	02:47:04.066	20NA6F	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	4R8	4	11	5,301,822:00:0	
132	99	350	03:00:00.066	RNMLDA_DAC		-----STOP-----		4R8	4	11	:	
133	99	350	03:00:43.400	RNMLDA_DAC		-----STOP-----		4R8	4	11	:	
134	99	350	03:47:44.066	20NA6G	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	4R8	4	11	5,301,882:00:0	
135	99	350	04:07:00.000	IAP_99S401		-----START-----		4R8	4	11	:	
136	99	350	04:17:04.066	31CA3A	37AR		1 NIMS Power OFF	260	4	0	5,301,911:01:0	
137	99	350	04:17:17.400	31CA3B	37AR		2 NIMS Power OFF	260	4	0	5,301,911:21:0	
138	99	350	04:17:30.733	31CA3C	37H		1 Replacement Heaters ON	5,301,911:41:0				
139	99	350	04:17:44.066	31CA3D	37H		2 Replacement Heaters ON	5,301,911:61:0				
140	99	350	04:18:44.066	31CA3E	37HR		1 Replacement Heaters OFF	5,301,912:60:0				
141	99	350	04:18:57.400	31CA3F	37HR		2 Replacement Heaters OFF	5,301,912:80:0				
142	99	350	04:19:10.733	31CA3G	37A		1 NIMS Power ON	260	4	0	5,301,913:09:0	
143	99	350	04:19:24.066	31CA3H	37A		1 NIMS Power ON	260	4	0	5,301,913:29:0	
144	99	350	04:19:25.000	IAP_99S401		-----STOP-----		260	4	0	:	
145	99	350	04:36:09.400	20NC6D	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	260	4	0	5,301,929:81:0	
146	99	350	04:48:24.066	20NA6H	6MROH	37,150F,0,A10	read from NIMS37,150F,0,A1	260	4	0	5,301,942:00:0	
147	99	350	05:04:22.066	20NC6E	6TMSED	NORM,BA6	Sci, Eng, and D/L Chan	260	4	0	5,301,957:72:0	
148	99	350	05:44:55.000	IAP_99S402		-----START-----		260	4	0	:	
149	99	350	05:44:56.066	20ZA4A	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	260	4	0	5,301,997:83:0	
150	99	350	05:45:56.733	20ZA4B	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,301,998:83:0	
151	99	350	05:46:57.400	20ZA4A	37IOP	8,11	Band Edge Map, Grating Start Position =11	2R8	4	11	5,301,999:83:0	
152	99	350	05:47:58.066	20ZA4A	37MPT	1,139,151	Modify Parameter Table (affects scanning m	2R8	4	11	5,302,000:83:0	
153	99	350	05:47:59.000	IAP_99S402		-----STOP-----		2R8	4	11	:	
154	99	350	05:49:04.066	20NA6I	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	2R8	4	11	5,302,002:00:0	
155	99	350	06:29:30.733	20NA6J	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	2R8	4	11	5,302,042:00:0	
156	99	350	06:49:44.066	20NA6K	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	2R8	4	11	5,302,062:00:0	
157	99	350	07:09:57.400	20NA6L	6MROH	37,150F,0,A40	read from NIMS37,150F,0,A4	2R8	4	11	5,302,082:00:0	
158	99	350	07:20:25.400	20NC6F	6TMSED	NORM,AH7	Sci, Eng, and D/L Chan	2R8	4	11	5,302,092:32:0	
159	99	350	07:30:10.733	20NA6N	6MROH	37,150F,0,A10	read from NIMS37,150F,0,A1	2R8	4	11	5,302,102:00:0	
160	99	350	07:33:20.733	20NB6A	6MROH	37,150F,0,A10	read from NIMS37,150F,0,A1	2R8	4	11	5,302,105:12:0	
161	99	350	07:41:22.066	20NA3J	37C1PR		2 Optics Heater 1 OFF (primary relay)	2R8	4	11	5,302,113:06:0	
162	99	350	07:41:22.066	20NA3I	37C1PR		1 Optics Heater 1 OFF (primary relay)	2R8	4	11	5,302,113:06:0	
163	99	350	07:43:19.400	176NB6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	2R8	4	11	5,302,115:00:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
164	99	350	07:44:28.066	20NB6B	6MROH	37,150F,0,A10	read from NIMS37,150F,0,A1	2R8	4	11	5,302,116:12:0	
165	99	350	07:46:16.733	20NB4A	37IST	0.2,1,OFF,1,0,1	OPCAL	2R8	4	11	5,302,117:84:0	
166	99	350	07:46:18.066	20NB6C	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	2R8	4	11	5,302,117:86:0	
167	99	350	07:48:18.066	20NB4B	37IST	0.2,1,ON,0,1,0	ECALGain State 2	2R8	4	11	5,302,119:84:0	
168	99	350	07:51:21.400	20NB6D	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	2R8	4	11	5,302,122:86:0	
169	99	350	07:53:32.066	20NB6E	6MROH	37,150F,0,A10	read from NIMS37,150F,0,A1	2R8	4	11	5,302,125:12:0	
170	99	350	07:54:22.066	20NB4C	37IST	1.0,0,OFF,0,0,1	Chopper ON, Sync, 63Hz (Ref)	268	4	11	5,302,125:84:0	
171	99	350	07:55:22.733	20NB4D	37IST	1.1,0,OFF,0,0,1	Chopper OFF, N/A, 63Hz (Ref)	208	4	11	5,302,126:84:0	
172	99	350	07:56:23.400	20NB4E	37MB	0.0,0,0,0,0	Selects mirror (spatial) edit table	208	4	11	5,302,127:84:0	
173	99	350	07:57:24.733	20NB4F	37ETB	04,C:4,02,00,00	Loads wavelength edit table	208	4	11	5,302,128:85:0	
174	99	350	07:58:24.733	20NB4G	37IOP	0,0	Safe, Grating Start Position =00	200	4	0	5,302,129:84:0	
175	99	350	08:03:40.733	20NB6F	6MROH	37,150F,0,A10	read from NIMS37,150F,0,A1	200	4	0	5,302,135:12:0	
176	99	350	10:00:41.000	RNMIRD3_RBS		-----STOP-----		200	4	0	:	
177	99	350	12:15:56.066	488A16A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,302,384:56:0	
178	99	350	13:35:52.066	488A16B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,302,463:61:0	
179	99	350	14:01:28.066	488A16C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	5,302,488:90:0	
180	99	350	14:07:03.400	488A16D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	5,302,494:47:0	
181	99	350	14:12:08.066	488A16E	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	200	4	0	5,302,499:49:0	
182	99	350	14:27:04.066	488A16A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	5,302,514:28:0	
183	99	350	20:41:47.400	488AK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,302,884:83:0	
184	99	350	21:56:13.400	488AK6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	5,302,958:48:0	
185	99	350	22:25:19.400	488AK6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,302,987:28:0	
186	99	351	00:15:52.066	488AK6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	5,303,096:58:0	
187	99	351	00:59:53.400	488AK6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	5,303,140:16:0	
188	99	351	01:09:12.066	488AL6A	6TMSED	FILL,AL7	Sci, Eng, and D/L Chan	200	4	0	5,303,149:35:0	
189	99	351	07:39:56.733	488AM6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	200	4	0	5,303,535:76:0	
190	99	351	11:10:48.000	488AM6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,303,744:34:0	
191	99	351	13:31:36.000	488AM6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,303,883:57:0	
192	99	351	13:57:12.000	488AN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	5,303,908:86:0	
193	99	351	13:59:10.000	488AN6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	200	4	0	5,303,910:81:0	
194	99	351	14:05:44.000	488AN6C	6TMSED	FILL,AL1	Sci, Eng, and D/L Chan	200	4	0	5,303,917:35:0	
195	99	351	14:42:00.000	488AN6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	200	4	0	5,303,953:23:0	
196	99	352	00:25:45.333	488AO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	200	4	0	5,304,530:54:0	
197	99	352	02:41:39.333	176VA6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	200	4	0	5,304,665:00:0	
198	99	352	02:47:43.333	465WK6A	6DMST		5000 DMS Slew to TIC	200	4	0	5,304,671:00:0	
199	99	352	02:47:43.333		DMS:	: *SLEW-TIC	P7, TRACK *1, *FWD, TIC 365.79 +/- 8	200	4	0	5,304,671:00:0	
200	99	352	02:47:43.333		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 365.79 +/- 8	200	4	0	5,304,671:00:0	
201	99	352	02:47:50.000		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 365.79 +/- 8	200	4	0	5,304,671:10:0	
202	99	352	02:47:51.400		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC *365.91 +/- 8	200	4	0	5,304,671:12:1	
203	99	352	04:31:52.000	488AO6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	200	4	0	5,304,774:00:0	
204	99	352	05:08:08.000	488AO6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	200	4	0	5,304,809:79:0	
205	99	352	05:41:22.666	488AO6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	200	4	0	5,304,842:68:0	
206	99	352	05:41:29.333	31XN5A	37PL		Program Load (halts microprocessor & unwri	4	0	0	5,304,842:78:0	
207	99	352	05:41:32.000	31XN5B	37MRL		Memory Realocate (software operates from R	4	0	0	5,304,842:82:0	
208	99	352	05:41:34.666	31XN6A	6MCOPI	NIMS	NIMS,1000,LLM1A,7300,77F7	4	0	0	5,304,842:86:0	
209	99	352	05:41:48.000	31XN6B	6MCOPI	NIMS	NIMS,1598,LLM1A,77F8,781D	4	0	0	5,304,843:35:0	
210	99	352	05:42:01.333	31XN5C	37IRT		Instrument Reset (goes into POR state)	4	0	0	5,304,843:35:0	
211	99	352	05:42:04.666	31XN5D	37MN		Memory Normal (software operates from ROM)	260	4	0	5,304,843:40:0	
212	99	352	06:10:28.666	488AO6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	260	4	0	5,304,871:48:0	
213	99	352	08:17:13.466		DMS:	: *READY	P7, TRACK 1, FWD, TIC *4997.94 +/- 8	260	4	0	5,304,996:80:2	
214	99	352	08:17:14.666		DMS:	: *RUNDOWN	RDY, TRACK 1, FWD, TIC *4998.00 +/- 8	260	4	0	5,304,996:82:0	
215	99	352	08:41:24.666	465WL6A	6DMSC	P100.4	DMS Control Tape P/B 100.8kpbs	260	4	0	5,305,020:73:0	
216	99	352	08:41:24.666		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/- 8	260	4	0	5,305,020:73:0	
217	99	352	08:41:26.066		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/- 8	260	4	0	5,305,020:75:1	
218	99	352	08:41:31.333		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/- 8	260	4	0	5,305,020:83:0	

Strip of Sequence 125BDE + NIMROD + IAPS

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Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
219	99	352	08:41:32.533		DMS:	: *RUNUP	P100, TRACK 4, *REV, TIC *4999.41 +/- 8	260	4	0	5,305,020:84:8	
220	99	352	08:41:36.400		DMS:	: *AT SPD	P100, TRACK 4, REV, TIC 4993.91 +/- 8	260	4	0	5,305,020:90:6	
221	99	352	08:41:36.400		DMS:	: *P SLEW	P100, TRACK 4, REV, TIC *4993.91 +/- 8	260	4	0	5,305,020:90:6	
222	99	352	09:07:16.666	465WL6B	6DMSC	RDY,4	DMS Control Tape stop	260	4	0	5,305,046:35:0	
223	99	352	09:07:16.666		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC *255.79 +/- 8	260	4	0	5,305,046:36:8	
224	99	352	09:07:17.866		DMS:	: *READY	RDY, TRACK 4, REV, TIC *254.99 +/- 8	260	4	0	5,305,046:36:8	
225	99	352	11:06:05.333	465WM6A	6DTRN	CMD,6DTRN,465WM6	DMS TRACK TURNAROUND	260	4	0	5,305,163:81:0	
226	99	352	11:06:05.333		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/- 8	260	4	0	5,305,163:81:0	
227	99	352	11:06:05.333		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/- 8	260	4	0	5,305,163:81:0	
228	99	352	11:06:06.733		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *255.11 +/- 8	260	4	0	5,305,163:83:1	
229	99	352	11:06:12.000		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *256.34 +/- 8	260	4	0	5,305,164:00:0	
230	99	352	11:06:13.200		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC *256.40 +/- 8	260	4	0	5,305,164:01:8	
231	99	352	11:06:14.600		DMS:	: *AT SPD	P7, TRACK 4, REV, TIC *256.28 +/- 8	260	4	0	5,305,164:03:9	
232	99	352	11:10:09.333	488AP6A	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	260	4	0	5,305,167:83:0	
233	99	352	11:10:15.266		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC *199.87 +/- 8	260	4	0	5,305,168:00:9	
234	99	352	11:10:16.466		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC *199.81 +/- 8	260	4	0	5,305,168:02:7	
235	99	352	11:10:16.466		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/- 8	260	4	0	5,305,168:02:7	
236	99	352	11:10:17.866		DMS:	: *AT SPD	P7, TRACK 1, FWD, TIC *199.93 +/-	260	4	0	5,305,168:04:8	
237	99	352	11:10:29.866		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC *202.06 +/-	260	4	0	5,305,168:22:8	
238	99	352	11:10:31.066		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *202.12 +/-	260	4	0	5,305,168:24:6	
239	99	352	11:16:08.000	465WN6A	6DMSC	P100,1	DMS Control Tape P/B 100.8kbps	260	4	0	5,305,173:75:0	
240	99	352	11:16:08.000		DMS:	: *E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	260	4	0	5,305,173:75:0	
241	99	352	11:16:14.666		DMS:	: *RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	260	4	0	5,305,173:85:0	
242	99	352	11:16:18.533		DMS:	: *AT SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	260	4	0	5,305,173:90:8	
243	99	352	11:16:18.533		DMS:	: *P SLEW	P100, TRACK 1, FWD, TIC *207.62 +/-	260	4	0	5,305,173:90:8	
244	99	352	11:48:02.000	465WN6B	6DMSC	RDY,1	DMS Control Tape stop	260	4	0	5,305,205:34:0	
245	99	352	11:48:02.000		DMS:	: *RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	260	4	0	5,305,205:34:0	
246	99	352	11:48:03.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	260	4	0	5,305,205:35:8	
247	99	352	12:03:38.000	465WO6A	6DMSC	P100,2	DMS Control Tape P/B 100.8kbps	260	4	0	5,305,220:73:0	
248	99	352	12:03:38.000		DMS:	: *US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	260	4	0	5,305,220:73:0	
249	99	352	12:03:39.400		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	260	4	0	5,305,220:75:1	
250	99	352	12:03:44.666		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	260	4	0	5,305,220:83:0	
251	99	352	12:03:45.866		DMS:	: *RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	260	4	0	5,305,220:84:8	
252	99	352	12:03:49.733		DMS:	: *P SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	260	4	0	5,305,220:90:6	
253	99	352	12:03:49.733		DMS:	: *AT SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	260	4	0	5,305,220:90:6	
254	99	352	12:35:46.000	465WP6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	260	4	0	5,305,252:53:0	
255	99	352	12:35:46.000		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC *164.96 +/-	260	4	0	5,305,252:53:0	
256	99	352	12:35:47.200		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC *164.16 +/-	260	4	0	5,305,252:54:8	
257	99	352	12:35:51.066		DMS:	: *AT SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	260	4	0	5,305,252:60:6	
258	99	352	12:35:51.066		DMS:	: *P SLEW	P100, TRACK 3, FWD, TIC *169.66 +/-	260	4	0	5,305,252:60:6	
259	99	352	13:07:46.666	465WP6B	6DMSC	RDY,3	DMS Control Tape stop	260	4	0	5,305,284:22:0	
260	99	352	13:07:46.666		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC *6062.38 +/-	260	4	0	5,305,284:22:0	
261	99	352	13:07:47.866		DMS:	: *READY	RDY, TRACK 3, FWD, TIC *6063.18 +/-	260	4	0	5,305,284:23:8	
262	99	352	13:16:40.000	488AP6B	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	260	4	0	5,305,293:03:0	
263	99	352	13:22:30.000	465WQ6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	260	4	0	5,305,298:73:0	
264	99	352	13:22:30.000		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	260	4	0	5,305,298:73:0	
265	99	352	13:22:31.400		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC *6063.30 +/-	260	4	0	5,305,298:75:1	
266	99	352	13:22:36.666		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC *6064.53 +/-	260	4	0	5,305,298:83:0	
267	99	352	13:22:37.866		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC *6064.59 +/-	260	4	0	5,305,298:84:8	
268	99	352	13:22:41.733		DMS:	: *P SLEW	P100, TRACK 4, REV, TIC *6059.09 +/-	260	4	0	5,305,298:90:6	
269	99	352	13:22:41.733		DMS:	: *AT SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	260	4	0	5,305,298:90:6	
270	99	352	13:24:29.333	488AP6C	6TMSED	FILL,AH4	Sci, Eng, and D/L Chan	260	4	0	5,305,300:70:0	
271	99	352	13:31:36.000	488AP6D	6TMSED	FILL,AH3	Sci, Eng, and D/L Chan	260	4	0	5,305,307:73:0	
272	99	352	13:44:41.333	488AP6E	6TMSED	NORM,AH3	Sci, Eng, and D/L Chan	260	4	0	5,305,320:68:0	
273	99	352	13:54:37.333		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC *166.38 +/-	260	4	0	5,305,330:52:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MFI
274	99	352	13:54:37.333	465WR6A	6DMSC	P100.3	DMS Control Tape P/B 100.8kpbs	260	4	0	5,305,330:52:0	
275	99	352	13:54:38.533		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	260	4	0	5,305,330:53:8	
276	99	352	13:54:42.400		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	260	4	0	5,305,330:59:6	
277	99	352	13:54:42.400		DMS:	: *AT_SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	260	4	0	5,305,330:59:6	
278	99	352	13:55:04.000	488AQ6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	260	4	0	5,305,331:01:0	
279	99	352	13:55:43.333		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	260	4	0	5,305,331:60:0	
280	99	352	13:55:43.333	465WR6B	6DMSC	RDY.3	DMS Control Tape stop	260	4	0	5,305,331:60:0	
281	99	352	13:55:44.533		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	260	4	0	5,305,331:61:8	
282	99	352	13:56:59.333	488AQ6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	260	4	0	5,305,332:83:0	
283	99	352	14:10:13.333		DMS:	: *READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	260	4	0	5,305,346:00:0	
284	99	352	14:10:13.333	465WS6A	6DMSC	RDY.4	DMS Control Tape stop	260	4	0	5,305,346:00:0	
285	99	352	14:11:07.333		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	260	4	0	5,305,346:81:0	
286	99	352	14:11:07.333	465WT6A	6DTRN	CMD.6DTRN,465WT6	DMS TRACK TURNAROUND	260	4	0	5,305,346:81:0	
287	99	352	14:11:07.333		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	260	4	0	5,305,346:81:0	
288	99	352	14:11:08.733		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	260	4	0	5,305,346:83:1	
289	99	352	14:11:14.000		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	260	4	0	5,305,347:00:0	
290	99	352	14:11:15.200		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	260	4	0	5,305,347:01:8	
291	99	352	14:11:16.600		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	260	4	0	5,305,347:03:9	
292	99	352	14:22:42.400		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	260	4	0	5,305,358:31:6	
293	99	352	14:22:43.600		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	260	4	0	5,305,358:33:4	
294	99	352	14:22:43.600		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	260	4	0	5,305,358:33:4	
295	99	352	14:22:45.000		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	260	4	0	5,305,358:35:5	
296	99	352	14:22:57.000		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	260	4	0	5,305,358:53:5	
297	99	352	14:22:58.200		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	260	4	0	5,305,358:55:3	
298	99	352	14:38:04.000	20VP4A	7SAFE	STOP	S/P NO MOVEMENT	260	4	0	5,305,374:11:0	
299	99	352	14:38:39.333	488AQ6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	260	4	0	5,305,374:11:0	
300	99	352	14:38:54.000	20VP4B	7SLEW	DIS,POS,0.0	Stator movement	260	4	0	5,305,374:33:0	
301	99	352	14:40:33.333	176VB6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	260	4	0	5,305,376:00:0	
302	99	352	15:03:20.000	488AQ6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	260	4	0	5,305,398:48:0	
303	99	352	15:30:31.333	488AQ6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	260	4	0	5,305,425:38:0	
304	99	353	00:00:55.933	488AR6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	260	4	0	5,305,930:20:0	
305	99	353	00:59:39.266	488AR6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	260	4	0	5,305,988:27:0	
306	99	353	01:09:11.933	488AR6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	260	4	0	5,305,997:67:0	
307	99	353	03:05:37.266	20UU6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	260	4	0	5,306,112:80:0	
308	99	353	07:30:15.933	20UU6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	260	4	0	5,306,374:56:0	
309	99	353	17:45:33.266	488AS6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	260	4	0	5,306,983:13:0	
310	99	353	17:59:37.933	41XE99A	POWER	PWR MODE change	Change to Calib/Decon Mode	260	4	0	5,306,997:06:0	
311	99	353	17:59:37.933	25NNRCTRLT01-		-----START-----		260	4	0	:	:
312	99	353	17:59:41.933	41XE31	40T1PR		1 PCT Heater 1 OFF (primary relay)	260	4	0	5,306,997:12:0	
313	99	353	17:59:51.933	41XE3J	40T1PR		2 PCT Heater 1 OFF (primary relay)	260	4	0	5,306,997:27:0	
314	99	353	18:00:01.933	41XE3K	40T2R		1 PCT Heater 2 OFF	260	4	0	5,306,997:42:0	
315	99	353	18:00:11.933	41XE3L	40T2R		2 PCT Heater 2 OFF	260	4	0	5,306,997:57:0	
316	99	353	18:10:41.266	176XU6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	260	4	0	5,307,008:00:0	
317	99	353	18:13:47.266	20XE4A	7SAFE	UNSTOW	S/P TO 153 deg cone	260	4	0	5,307,011:06:0	
318	99	353	18:17:53.933	20DD4A	7SAFE	STOP	S/P NO MOVEMENT	260	4	0	5,307,015:12:0	
319	99	353	18:18:43.933	20DD4B	7SAFE	DIS,POS,0.0	Stator movement	260	4	0	5,307,015:87:0	
320	99	353	18:20:47.933	176XV6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	260	4	0	5,307,018:00:0	
321	99	353	18:21:48.600	185XE10A3A	40HRP		1 RCT Heater ON (primary relay)	260	4	0	5,307,019:00:0	
322	99	353	18:21:53.933	185XE10B3A	40HRP		2 RCT Heater ON (primary relay)	260	4	0	5,307,019:08:0	
323	99	354	23:16:07.933	488AS6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	260	4	0	5,307,310:08:0	
324	99	354	00:35:03.933	488AT6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	260	4	0	5,307,388:14:0	
325	99	354	00:49:31.933	488AT6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	260	4	0	5,307,402:42:0	
326	99	354	00:58:31.933	488AT6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	260	4	0	5,307,411:33:0	
327	99	354	05:25:30.533	488AT6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	260	4	0	5,307,675:37:0	
328	99	354	06:16:35.200	125XE4A	371ST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	260	4	0	5,307,725:84:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
329	99	354	06:16:35.200	125XE	NIMSINIT	GS	##### GROUP START INIT	260	4	0	5,307,725:84:0	
330	99	354	06:17:35.866	125XE4B	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	4	0	5,307,726:84:0	
331	99	354	06:18:36.533	125XE4C	37IST	0,2,0,OFF,0,1,3	Gain State 1	1R0	4	0	5,307,727:84:0	
332	99	354	06:19:37.200	125XE4D	37MB	1B,1B,0,0,0,0	Selects mirror (spatial) edit table	1R0	4	0	5,307,728:84:0	
333	99	354	06:19:37.200	125XE11A	NIMSINIT	GE	##### GROUP END INIT	1R0	4	0	5,307,728:84:0	
334	99	354	06:21:38.533	127XE	NIMSTAB	GS	##### GROUP START TAB	1R0	4	0	5,307,730:84:0	
335	99	354	06:21:38.533	127XE4A	37IOP	3,0	Long Map, Grating Start Position =00	1R3	4	0	5,307,730:84:0	
336	99	354	06:21:39.200	127XE4B	37ETB	0A,CA,18,03,FF,1	Loads wavelength edit table	1R3	4	0	5,307,730:85:0	
337	99	354	06:21:47.200	127XE11A	NIMSTAB	GE	##### GROUP END TAB	1R3	4	0	5,307,731:06:0	
338	99	354	06:25:45.866	176XE6A	6TIMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	1R3	4	0	5,307,735:00:0	
339	99	354	06:27:47.866	20UA4A	7SCAN	NORM,32.29772,11	Check S/P Position	1R3	4	0	5,307,737:01:0	
340	99	354	06:31:49.866	192XE4A	7CONE	17,0,119,7	Check S/P Position	1R3	4	0	5,307,741:00:0	
341	99	354	06:34:11.200	432XE6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	1R3	4	0	5,307,743:30:0	
342	99	354	06:35:10.533	432XF6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	1R3	4	0	5,307,744:28:0	
343	99	354	06:37:53.866	192XE4B	7CONE	17,0,0,0,0	Check S/P Position	1R3	4	0	5,307,747:00:0	
344	99	354	06:40:15.200	432XU6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	1R3	4	0	5,307,749:30:0	
345	99	354	06:42:15.200	432XV6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	1R3	4	0	5,307,751:28:0	
346	99	354	06:43:57.866	192XE4C	7CONE	17,0,119,7	Check S/P Position	1R3	4	0	5,307,753:00:0	
347	99	354	06:45:59.200	185XE10C3A	40HRPR		1 RCT Heater OFF (primary relay)	1R3	4	0	5,307,755:00:0	
348	99	354	06:46:10.533	185XE10D3A	40HRPR		2 RCT Heater OFF (primary relay)	1R3	4	0	5,307,755:08:0	
349	99	354	06:46:19.200	432XW6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	1R3	4	0	5,307,755:30:0	
350	99	354	06:47:18.533	432XY6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	1R3	4	0	5,307,756:28:0	
351	99	354	06:48:56.533	125DC11A	NIMSINIT	GE	##### GROUP END INIT	1R3	4	0	5,307,757:84:0	
352	99	354	06:48:56.533	125DC4A	37IST	0,2,0,OFF,0,1,1	Gain State 4	4R3	4	0	5,307,757:84:0	
353	99	354	06:48:56.533	125DC	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	5,307,757:84:0	
354	99	354	06:49:57.200	127DC	NIMSTAB	GS	##### GROUP START TAB	4R3	4	0	5,307,758:84:0	
355	99	354	06:49:57.200	127DC4A	37IOP	3,0	Long Map, Grating Start Position =00	4R3	4	0	5,307,758:84:0	
356	99	354	06:49:57.866	127DC4B	37ETB	07,C,7,31,80,00,0	Loads wavelength edit table	4R3	4	0	5,307,758:85:0	
357	99	354	06:50:01.866	192XE4D	7CONE	17,0,153,0	Check S/P Position	4R3	4	0	5,307,759:00:0	
358	99	354	06:50:05.866	127DC11A	NIMSTAB	GE	##### GROUP END TAB	4R3	4	0	5,307,759:06:0	
359	99	354	06:50:21.866	432DC6A	6RTSL2	NIMSEL,AACNCG,RT	NIMS RT SELECT	4R3	4	0	5,307,759:30:0	
360	99	354	06:50:57.866	125DD4A	37IST	0,2,1,OFF,1,0,1	OPCAL	4R3	4	0	5,307,759:84:0	
361	99	354	06:50:57.866	125DD11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	5,307,759:84:0	
362	99	354	06:50:57.866	125DD	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	5,307,759:84:0	
363	99	354	06:52:59.200	125DE	NIMSINIT	GS	##### GROUP START INIT	4R3	4	0	5,307,761:84:0	
364	99	354	06:52:59.200	125DE11A	NIMSINIT	GE	##### GROUP END INIT	4R3	4	0	5,307,761:84:0	
365	99	354	06:52:59.200	125DE4A	37IST	0,2,1,OFF,1,0,1	OPCAL	4R3	4	0	5,307,761:84:0	
366	99	354	06:53:22.533	432DE6A	6RTDS2	NIMDSL,AACNCG,RT	NIMS RT DESELECT	4R3	4	0	5,307,762:28:0	
367	99	354	06:57:01.866	127XF	NIMSTAB	GS	##### GROUP START TAB	4R3	4	0	5,307,765:84:0	
368	99	354	06:57:01.866	127XF4A	37IOP	0,0	Safe, Grating Start Position =00	4R0	4	0	5,307,765:84:0	
369	99	354	06:57:02.533	127XF4B	37ETB	04,C,4,02,00,00	Loads wavelength edit table	4R0	4	0	5,307,765:85:0	
370	99	354	06:57:10.533	127XF11A	NIMSTAB	GE	##### GROUP END TAB	4R0	4	0	5,307,766:06:0	
371	99	354	07:00:03.866	125XF4A	37MB	0,0,0,0,0,0,0	Selects mirror (spatial) edit table	4R0	4	0	5,307,768:84:0	
372	99	354	07:00:03.866	125XF	NIMSINIT	GS	##### GROUP START INIT	4R0	4	0	5,307,768:84:0	
373	99	354	07:01:04.533	125XF4B	37IST	1,0,0,OFF,0,0,0	Chopper ON, Sync, 63Hz (Ref)	460	4	0	5,307,769:84:0	
374	99	354	07:02:05.200	125XF11A	NIMSINIT	GE	##### GROUP END INIT	460	4	0	5,307,770:84:0	
375	99	354	07:02:05.200	125XF4C	37IST	1,1,0,OFF,0,0,0	Chopper OFF, N/A, 63Hz (Ref)	400	4	0	5,307,770:84:0	
376	99	354	07:08:17.866	41XU99A	POWER	PWR MODE change	Change to Maneuver/Playback Mode	400	4	0	5,307,777:06:0	
377	99	354	07:10:11.866	41XU3G	40T1P		1 PCT Heater 1 ON (primary relay)	400	4	0	5,307,778:86:0	
378	99	354	07:10:21.866	41XU3H	40T1P		2 PCT Heater 1 ON (primary relay)	400	4	0	5,307,779:10:0	
379	99	354	07:10:31.866	41XU3I	40T2		1 PCT Heater 2 ON	400	4	0	5,307,779:25:0	
380	99	354	07:10:41.866	41XU3J	40T2		2 PCT Heater 2 ON	400	4	0	5,307,779:40:0	
381	99	354	07:15:22.599	25NNRCTRLT01-		-----STOP-----		400	4	0	:	
382	99	354	07:18:28.533	20DG4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,307,787:12:0	
383	99	354	07:19:18.533	20DG4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	5,307,787:87:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
384	99	354	07:21:22.533	176XF6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,307,790:00:0	
385	99	354	07:28:55.866	488AU6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,307,797:43:0	
386	99	354	10:40:55.866	488AU6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,307,987:33:0	
387	99	354	13:16:39.866	488AU6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,308,141:35:0	
388	99	354	13:46:31.866	488AV6A	6TMSED	NORM,AL2	Sci, Eng, and D/L Chan	400	4	0	5,308,170:84:0	
389	99	354	13:46:37.866	488AV6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	5,308,171:02:0	
390	99	354	14:16:23.866	488AV6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,308,200:42:0	
391	99	355	00:40:24.533	488AW6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,308,817:56:0	
392	99	355	01:58:06.533	488AW6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,308,894:42:0	
393	99	355	02:24:56.533	488AW6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,308,921:00:0	
394	99	355	05:05:59.866	488AW6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,309,080:26:0	
395	99	355	07:31:44.533	488AX6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,309,224:39:0	
396	99	355	08:05:50.533	488AX6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,309,258:14:0	
397	99	355	13:01:43.800	488AX6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,309,550:72:0	
398	99	355	13:43:57.133	488AY6A	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,309,592:50:0	
399	99	355	13:46:31.800	488AY6B	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	5,309,595:09:0	
400	99	355	14:01:27.800	488AY6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,309,609:79:0	
401	99	355	18:01:12.466	488AY6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,309,846:89:0	
402	99	355	19:16:48.466	488AY6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,309,921:68:0	
403	99	355	19:42:59.800	488AZ6A	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	400	4	0	5,309,947:59:0	
404	99	355	19:45:54.466	488AZ6B	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,309,950:48:0	
405	99	355	19:46:23.133	176QE6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,309,951:00:0	
406	99	355	23:16:49.800	488AZ6C	6TMSED	FILL,AH5	Sci, Eng, and D/L Chan	400	4	0	5,310,159:12:0	
407	99	355	23:50:55.800	488AZ6D	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,310,192:78:0	
408	99	356	00:32:55.800	488AZ6E	6TMSED	NORM,AH6	Sci, Eng, and D/L Chan	400	4	0	5,310,234:36:0	
409	99	356	01:50:59.800	488BA6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,310,311:55:0	
410	99	356	01:51:23.800	176QB6A	6TMREC	PPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,310,312:00:0	
411	99	356	04:16:55.800	488BA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,310,455:85:0	
412	99	356	04:48:55.800	488BA6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,310,487:53:0	
413	99	356	05:33:14.466	488BA6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,310,531:37:0	
414	99	356	06:00:04.466	488BA6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,310,557:86:0	
415	99	356	07:43:51.800	488BB6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,310,660:54:0	
416	99	356	10:11:03.800	488BB6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,310,806:16:0	
417	99	356	13:05:59.800	488BB6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,310,979:17:0	
418	99	356	13:40:07.800	488BB6D	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,311,012:86:0	
419	99	356	13:42:09.800	488BB6E	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,311,014:87:0	
420	99	356	14:01:27.800	488BC6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,311,034:04:0	
421	99	356	19:40:11.066	488BC6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,311,369:04:0	
422	99	356	20:58:18.400	488BD6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,311,446:28:0	
423	99	356	21:25:08.400	488BD6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,311,472:77:0	
424	99	356	21:31:35.733	488BD6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,311,479:21:0	
425	99	356	21:52:59.733	488BD6D	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,311,500:36:0	
426	99	356	21:56:38.400	176UA6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,311,504:00:0	
427	99	356	22:05:59.733	20SM4C	7STAT	10.00,203.62,-8.	Stator inertial point	400	4	0	5,311,513:23:0	
428	99	356	22:06:11.733	20SM6D	6MROH	7,6744.0,A10	read of AACSA7,6744.0,A10	400	4	0	5,311,513:41:0	
429	99	356	22:25:01.733	490UA412A4B	7MODE	INT	AACS INERTIAL MODE	400	4	0	5,311,532:07:0	
430	99	356	22:29:59.733	490UA412A4D	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,311,536:90:0	
431	99	356	22:30:19.733	20SM4D	7STAT	17.45,203.62,-8.	Stator inertial point	400	4	0	5,311,537:29:0	
432	99	356	22:34:09.733	490UA412A4E	7VECT		Inert vect update JTC	400	4	0	5,311,541:10:0	
433	99	356	22:34:13.733	490UA412A4F	7TURN	2,RTH	ALERT Thruster	400	4	0	5,311,541:16:0	
434	99	356	22:38:01.733	490UA412A406A4A	7STAR	11,610,278.81	Star catalog update	400	4	0	5,311,544:85:0	
435	99	356	22:38:03.733	490UA412A406A4B	7STAR	2,317,120.46	Star catalog update	400	4	0	5,311,544:88:0	
436	99	356	22:38:05.733	490UA412A406A4C	7STAR	3,133,165.16	Star catalog update	400	4	0	5,311,545:00:0	
437	99	356	22:38:07.733	490UA412A406A4D	7STAR	4,0,0,0,0,0	Star catalog update	400	4	0	5,311,545:03:0	
438	99	356	22:38:09.733	490UA412A406A4E	7STAR	5,0,0,0,0,0	Star catalog update	400	4	0	5,311,545:06:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
439	99	356	22:38:11.733	490UA412A06A4F	7STAR	6,0,0,0,0,0	Star catalog update	400	4	0	5,311,545:09:0	
440	99	356	22:48:05.733	20SIM4F	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	5,311,554:81:0	
441	99	356	22:56:09.733	490UA412A4G	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,311,562:79:0	
442	99	357	00:11:35.733	488BD6E	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	5,311,637:43:0	
443	99	357	00:30:03.733	20US4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,311,655:67:0	
444	99	357	00:30:53.733	20US4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	5,311,656:51:0	
445	99	357	00:30:59.733	488BE6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,311,656:60:0	
446	99	357	00:32:21.066	176UB6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,311,658:00:0	
447	99	357	00:39:11.066	488BE6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,311,664:69:0	
448	99	357	00:47:51.733	488BE6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,311,673:31:0	
449	99	357	04:16:02.400	488BE6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,311,879:21:0	
450	99	357	04:27:35.733	488BE6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,311,890:60:0	
451	99	357	06:14:15.733	488BF6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,311,996:14:0	
452	99	357	11:29:59.733	488BF6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,312,308:38:0	
453	99	357	13:16:39.733	488BG6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,312,413:83:0	
454	99	357	13:34:48.400	488BG6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,312,431:78:0	
455	99	357	13:35:51.733	488BG6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,312,432:82:0	
456	99	357	13:44:23.733	488BG6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,312,441:31:0	
457	99	357	20:20:04.400	488BH6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,312,832:61:0	
458	99	357	23:31:03.733	488BH6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,313,021:51:0	
459	99	358	00:28:39.733	488BH6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,313,078:48:0	
460	99	358	00:37:11.733	488BH6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,313,086:88:0	
461	99	358	01:53:27.666	488BH6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,313,162:36:0	
462	99	358	02:20:17.000	488BI6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,313,188:84:0	
463	99	358	02:56:45.666	176UY6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,313,225:00:0	
464	99	358	03:02:00.333	20UR4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	5,313,230:17:0	
465	99	358	03:03:00.333	20UR4D	7MODE	SPNL	AACS ALL-SPIN LOW	400	4	0	5,313,231:16:0	
466	99	358	03:05:00.333	20UR4E	7SAFE	UNSTOW	S/P TO 153 deg cone	400	4	0	5,313,233:14:0	
467	99	358	03:10:30.333	20UR4G	7VENT	0.611,1.333,8	ALERT -- Thruster fire	400	4	0	5,313,238:54:0	
468	99	358	03:10:31.000	20UR4H	7VENT	0.611,10.989,8	ALERT -- Thruster fire	400	4	0	5,313,238:55:0	
469	99	358	03:10:51.000	20UR4I	7VENT	0.611,1.333,6	ALERT -- Thruster fire	400	4	0	5,313,238:85:0	
470	99	358	03:10:51.666	20UR4J	7VENT	0.611,10.989,6	ALERT -- Thruster fire	400	4	0	5,313,238:86:0	
471	99	358	03:11:11.666	20UR4K	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	5,313,239:25:0	
472	99	358	03:11:12.333	20UR4L	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	5,313,239:26:0	
473	99	358	03:11:23.333	20UR4M	7VENT	0.611,1.333,4	ALERT -- Thruster fire	400	4	0	5,313,239:41:0	
474	99	358	03:11:23.000	20UR4N	7VENT	0.611,0.666,5	ALERT -- Thruster fire	400	4	0	5,313,239:42:0	
475	99	358	03:11:33.000	20UR4O	7VENT	1.211,1.333,10	ALERT -- Thruster fire	400	4	0	5,313,239:57:0	
476	99	358	03:11:33.666	20UR4P	7VENT	1.211,0.666,12	ALERT -- Thruster fire	400	4	0	5,313,239:58:0	
477	99	358	03:13:20.333	20UR4S	7VENT	0.611,1.333,7	ALERT -- Thruster fire	400	4	0	5,313,241:36:0	
478	99	358	03:13:21.000	20UR4T	7VENT	0.611,10.989,7	ALERT -- Thruster fire	400	4	0	5,313,241:37:0	
479	99	358	03:13:41.000	20UR4U	7VENT	0.611,1.333,1	ALERT -- Thruster fire	400	4	0	5,313,241:67:0	
480	99	358	03:13:41.666	20UR4V	7VENT	0.611,10.989,1	ALERT -- Thruster fire	400	4	0	5,313,241:68:0	
481	99	358	03:14:01.666	20UR4AC	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	5,313,242:07:0	
482	99	358	03:14:02.333	20UR4AD	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	5,313,242:08:0	
483	99	358	03:14:12.333	20UR4AE	7VENT	0.611,1.333,2	ALERT -- Thruster fire	400	4	0	5,313,242:23:0	
484	99	358	03:14:13.000	20UR4AF	7VENT	0.611,0.666,3	ALERT -- Thruster fire	400	4	0	5,313,242:24:0	
485	99	358	03:14:23.000	20UR4AW	7VENT	1.211,1.333,9	ALERT -- Thruster fire	400	4	0	5,313,242:39:0	
486	99	358	03:14:23.666	20UR4X	7VENT	1.211,0.666,11	ALERT -- Thruster fire	400	4	0	5,313,242:40:0	
487	99	358	03:15:20.333	20UR4Z	7MODE	CRU	AACS CRUISE MODE	400	4	0	5,313,243:34:0	
488	99	358	03:40:54.333	20UY4A	7SAFE	STOP	S/P NO MOVEMENT	400	4	0	5,313,267:76:0	
489	99	358	03:40:54.333	20UY4B	7SLEW	DIS,POS,0,0	Stator movement	400	4	0	5,313,268:60:0	
490	99	358	03:42:15.666	176UZ6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,313,270:00:0	
491	99	358	04:06:15.666	488BI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,313,293:67:0	
492	99	358	04:27:35.666	488BI6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,313,314:76:0	
493	99	358	05:28:28.333	488BI6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,313,375:04:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
494	99	358	05:55:18.333	488B6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,313,401:53:0	
495	99	358	06:18:31.666	488B6A	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,313,424:50:0	
496	99	358	11:21:27.666	488B6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,313,724:14:0	
497	99	358	13:10:15.666	488BK6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,313,831:69:0	
498	99	358	13:31:35.666	488BK6B	6TMSED	NORM,AL3	Sci, Eng, and D/L Chan	400	4	0	5,313,852:78:0	
499	99	358	13:31:55.666	488BK6C	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,313,853:17:0	
500	99	358	13:52:55.666	488BK6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,313,873:87:0	
501	99	358	20:57:37.666	488BL6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,314,293:90:0	
502	99	358	21:08:07.666	488BL6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,314,304:34:0	
503	99	358	21:37:59.666	488BL6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,314,333:83:0	
504	99	359	03:59:51.666	488BM6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,314,711:53:0	
505	99	359	04:27:35.666	488BM6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,314,739:01:0	
506	99	359	05:17:12.333	488BM6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,314,788:07:0	
507	99	359	05:46:18.333	488BM6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,314,816:78:0	
508	99	359	06:44:07.666	488BM6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,314,874:04:0	
509	99	359	10:45:11.600	488BN6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,315,112:42:0	
510	99	359	12:59:35.600	488BN6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,315,245:35:0	
511	99	359	13:48:39.600	488BN6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,315,293:83:0	
512	99	359	14:32:15.600	488BN6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,315,337:03:0	
513	99	359	14:54:47.600	488BN6E	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,315,359:29:0	
514	99	359	14:59:48.266	488BO6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,315,364:25:0	
515	99	359	15:28:01.600	488BO6B	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,315,392:17:0	
516	99	359	20:24:50.266	488BO6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,315,685:67:0	
517	99	360	03:59:51.600	488BP6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,316,135:69:0	
518	99	360	04:23:19.600	488BP6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,316,158:88:0	
519	99	360	06:37:43.600	488BP6C	6TMSED	NORM,AL7	Sci, Eng, and D/L Chan	400	4	0	5,316,291:81:0	
520	99	360	10:45:11.600	488BQ6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,316,536:58:0	
521	99	360	12:59:35.600	488BQ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,316,669:51:0	
522	99	360	13:20:55.600	488BQ6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,316,690:60:0	
523	99	360	13:37:59.600	488BQ6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,316,707:49:0	
524	99	360	14:44:07.600	488BQ6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,316,772:86:0	
525	99	360	16:07:20.266	488BR6A	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,316,855:22:0	
526	99	360	16:09:27.600	488BR6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,316,857:31:0	
527	99	360	22:20:35.533	488BS6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,317,224:36:0	
528	99	360	23:18:15.533	488BS6B	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,317,281:39:0	
529	99	360	23:38:47.533	488BS6C	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,317,301:67:0	
530	99	361	00:05:37.533	488BS6D	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,317,328:25:0	
531	99	361	03:55:35.533	488BS6E	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,317,555:65:0	
532	99	361	04:33:59.533	488BT6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,317,593:63:0	
533	99	361	05:07:26.200	488BT6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,317,626:70:0	
534	99	361	05:41:32.866	488BT6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,317,660:46:0	
535	99	361	08:45:53.533	488BT6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,317,842:75:0	
536	99	361	08:49:59.533	488BT6E	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,317,846:80:0	
537	99	361	13:12:18.200	488BU6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,318,106:28:0	
538	99	361	13:33:43.533	488BU6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,318,127:45:0	
539	99	361	14:52:39.533	488BU6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,318,205:51:0	
540	99	361	22:44:07.533	488BV6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,318,671:77:0	
541	99	362	00:05:11.533	488BV6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,318,752:02:0	
542	99	362	00:23:36.200	488BV6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,318,770:21:0	
543	99	362	00:32:55.533	488BV6D	6TMSED	FILL,AL6	Sci, Eng, and D/L Chan	400	4	0	5,318,779:41:0	
544	99	362	05:24:33.466	488BW6A	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,319,067:80:0	
545	99	362	12:40:23.466	488BX6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,319,498:84:0	
546	99	362	13:14:31.466	488BX6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,319,532:62:0	
547	99	362	14:12:07.466	488BX6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,319,589:59:0	
548	99	362	14:37:35.466	488BX6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,319,614:76:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
549	99	362	15:06:41.466	488BX6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,319,643:56:0	
550	99	362	22:57:38.800	488BY6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,320,109:36:0	
551	99	362	23:31:44.800	488BY6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,320,143:11:0	
552	99	363	03:44:55.466	488BY6C	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,320,393:47:0	
553	99	363	04:38:15.466	488BY6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,320,446:24:0	
554	99	363	04:57:39.466	488BZ6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,320,465:41:0	
555	99	363	05:31:45.466	488BZ6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,320,499:16:0	
556	99	363	12:14:47.400	488CA6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,320,897:71:0	
557	99	363	13:37:59.400	488CA6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,320,980:06:0	
558	99	363	14:17:42.733	488CA6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,321,019:32:0	
559	99	363	14:46:48.733	488CA6D	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,321,048:12:0	
560	99	363	15:37:27.400	488CA6E	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,321,098:20:0	
561	99	363	21:29:27.400	488CB6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,321,446:32:0	
562	99	363	23:45:59.400	488CB6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,321,581:35:0	
563	99	364	01:23:22.066	488CB6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,321,618:32:0	
564	99	364	01:00:00.066	481UE4A	7VECT		Inert vect update UTC	400	4	0	5,321,654:53:0	
565	99	364	03:52:00.733	488CC6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,321,824:64:0	
566	99	364	04:01:59.400	488CC6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,321,834:52:0	
567	99	364	04:42:31.400	488CC6C	6TMSED	NORM,AL6	Sci, Eng, and D/L Chan	400	4	0	5,321,874:60:0	
568	99	364	12:10:31.400	488CD6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,322,317:67:0	
569	99	364	12:59:35.400	488CD6B	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,322,366:24:0	
570	99	364	13:07:06.733	488CD6C	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,322,373:64:0	
571	99	364	13:10:15.400	488CD6D	6TMSED	FILL,AL3	Sci, Eng, and D/L Chan	400	4	0	5,322,376:74:0	
572	99	364	13:20:55.400	488CD6E	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,322,387:33:0	
573	99	364	17:10:10.666	488CE6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,322,614:09:0	
574	99	364	18:27:50.666	488CE6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,322,690:83:0	
575	99	364	18:56:56.666	488CE6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,322,719:63:0	
576	99	364	22:24:55.333	488CE6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,322,925:35:0	
577	99	365	00:13:43.333	488CF6A	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,323,032:90:0	
578	99	365	01:17:52.666	488CF6B	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,323,096:40:0	
579	99	365	02:01:58.666	488CF6C	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,323,140:05:0	
580	99	365	04:29:43.333	488CF6D	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,323,286:16:0	
581	99	365	05:08:07.333	488CF6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,323,324:14:0	
582	99	365	05:47:53.333	488CG6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,323,363:44:0	
583	99	365	06:21:59.333	488CG6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,323,397:19:0	
584	99	365	07:53:00.000	488CG6C	6TMSED	NORM,AH5	Sci, Eng, and D/L Chan	400	4	0	5,323,487:20:0	
585	99	365	07:56:49.333	176QG6A	6TMREC	PPB	PAUSE PLAYBACK (PB CONTROL) Record Mode C	400	4	0	5,323,491:00:0	
586	99	365	11:29:59.333	488CG6D	6TMSED	NORM,AH4	Sci, Eng, and D/L Chan	400	4	0	5,323,701:75:0	
587	99	365	12:01:00.000	488CH6A	6TMSED	NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,323,732:45:0	
588	99	365	12:01:30.666	176QH6A	6TMREC	RPB	RESUME PLAYBACK (PB CONTROL) Record Mode	400	4	0	5,323,733:00:0	
589	99	365	12:05:00.000	41FZ99A	POWER		Change to Data Taking Mode	400	4	0	5,323,736:47:0	
590	99	365	12:05:04.000	41FZ3A	40T1PR		1 PCT Heater 1 OFF (primary relay)	400	4	0	5,323,736:47:0	
591	99	365	12:05:14.000	41FZ3B	40T1PR		2 PCT Heater 1 OFF (primary relay)	400	4	0	5,323,736:62:0	
592	99	365	12:05:24.000	41FZ3C	40T2R		1 PCT Heater 2 OFF	400	4	0	5,323,736:77:0	
593	99	365	12:05:34.000	41FZ3D	40T2R		2 PCT Heater 2 OFF	400	4	0	5,323,737:01:0	
594	99	365	13:02:02.000	488CH6B	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,323,792:78:0	
595	99	365	13:03:51.333	488CH6C	6TMSED	FILL,AL2	Sci, Eng, and D/L Chan	400	4	0	5,323,794:60:0	
596	99	365	13:18:47.333	488CH6D	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,323,809:39:0	
597	99	365	17:15:03.333	488CH6E	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,324,043:09:0	
598	99	365	18:32:56.666	488CI6A	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,324,120:12:0	
599	99	365	19:02:02.666	488CI6B	6TMSED	NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,324,148:83:0	
600	99	365	20:55:25.333	488CI6C	6TMSED	FILL,AL5	Sci, Eng, and D/L Chan	400	4	0	5,324,261:04:0	
601	99	365	20:59:35.333	488CI6D	6TMSED	FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,324,265:15:0	
602	99	365	23:55:21.333	176SB6A	6TMREC	TPB	TERMINATE PLAYBACK (PB CONTROL) Record Mo	400	4	0	5,324,439:00:0	
603	99	365	23:59:23.333	432MC431A6A	6RCDL	DDSDSL,PLSNCG,EP	Record Deselect (DDS o	400	4	0	5,324,442:90:0	

Line	YR	DOY	SCET - GMT	PSID	Command Parameters	Description	GCM	GO	GS	RIM	MF I
604	99	365	23:59:24.000	432MC6A	6RTSL1	R/T Select of DDS and	400	4	0	5,324,443:00:0	
605	0	1	03:41:48.600	488CJ6A	6TMSD NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,324,662:88:0	
606	0	1	04:50:13.266	488CJ6B	6TMSD FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,324,730:57:0	
607	0	1	05:02:43.933	DMS:	:SLEW-TIC	P7, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,324,743:00:0	
608	0	1	05:02:43.933	DMS:	:TURNARND	P7, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,324,743:00:0	
609	0	1	05:02:43.933	DMS:	:E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,324,743:00:0	
610	0	1	05:02:43.933	465WA6A	6DMST	5000 DMS Slew to TIC	400	4	0	5,324,743:00:0	
611	0	1	05:02:50.600	DMS:	:RUNUP	P7, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,324,743:10:0	
612	0	1	05:02:52.000	DMS:	:AT_SPD	P7, TRACK 1, FWD, TIC * 202.24 +/-	400	4	0	5,324,743:12:1	
613	0	1	05:23:52.600	488CJ6C	6TMSD NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,324,763:83:0	
614	0	1	05:27:19.266	488CJ6D	6TMSD NORM,AL5	Sci, Eng, and D/L Chan	400	4	0	5,324,767:29:0	
615	0	1	10:43:52.733	DMS:	:RUNDOWN	P7, TRACK 1, FWD, TIC *4997.94 +/-	400	4	0	5,325,080:36:2	
616	0	1	10:43:53.933	DMS:	:READY	RDY, TRACK 1, FWD, TIC 4998.00 +/-	400	4	0	5,325,080:38:0	
617	0	1	10:56:25.266	465WB6A	6DMSC P100.4	DMS Control Tape P/B 100.8kbps	400	4	0	5,325,092:73:0	
618	0	1	10:56:25.266	DMS:	:US-RUNUP	P7, TRACK 1, FWD, TIC 4998.00 +/-	400	4	0	5,325,092:73:0	
619	0	1	10:56:26.666	DMS:	:US_AT_SP	P7, TRACK 1, FWD, TIC *4998.12 +/-	400	4	0	5,325,092:75:1	
620	0	1	10:56:31.933	DMS:	:US_RD	P7, TRACK 1, FWD, TIC *4999.35 +/-	400	4	0	5,325,092:83:0	
621	0	1	10:56:33.133	DMS:	:RUNUP	P100, TRACK *4, *REV, TIC 4999.41 +/-	400	4	0	5,325,092:84:8	
622	0	1	10:56:37.000	DMS:	:AT_SPD	P100, TRACK 4, REV, TIC 4993.91 +/-	400	4	0	5,325,092:90:6	
623	0	1	10:56:37.000	DMS:	:P_SLEW	P100, TRACK 4, REV, TIC *4993.91 +/-	400	4	0	5,325,092:90:6	
624	0	1	11:08:39.266	488CK6A	6TMSD NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,325,104:82:0	
625	0	1	11:22:17.266	DMS:	:RUNDOWN	P100, TRACK 4, REV, TIC * 255.79 +/-	400	4	0	5,325,118:35:0	
626	0	1	11:22:17.266	465WB6B	6DMSC RDY,4	DMS Control Tape stop	400	4	0	5,325,118:35:0	
627	0	1	11:22:18.466	DMS:	:READY	RDY, TRACK 4, REV, TIC * 254.99 +/-	400	4	0	5,325,118:36:8	
628	0	1	13:21:05.933	465WC6A	6DTRN CMD,6DTRN,465WC6	DMS TRACK TURNAROUND	400	4	0	5,325,235:81:0	
629	0	1	13:21:05.933	DMS:	:US-RUNUP	P7, TRACK *1, *FWD, TIC 254.99 +/-	400	4	0	5,325,235:81:0	
630	0	1	13:21:05.933	DMS:	:DMS-TURN	P7, TRACK 4, REV, TIC 254.99 +/-	400	4	0	5,325,235:81:0	
631	0	1	13:21:07.333	DMS:	:US_AT_SP	P7, TRACK 1, FWD, TIC * 255.11 +/-	400	4	0	5,325,235:83:1	
632	0	1	13:21:12.600	DMS:	:US_RD	P7, TRACK 1, FWD, TIC * 256.34 +/-	400	4	0	5,325,236:00:0	
633	0	1	13:21:13.800	DMS:	:RUNUP	P7, TRACK *4, *REV, TIC * 256.40 +/-	400	4	0	5,325,236:01:8	
634	0	1	13:21:15.200	DMS:	:AT_SPD	P7, TRACK 4, REV, TIC * 256.28 +/-	400	4	0	5,325,236:03:9	
635	0	1	13:25:09.266	488CK6B	6TMSD NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,325,239:82:0	
636	0	1	13:25:15.866	DMS:	:REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	400	4	0	5,325,240:00:9	
637	0	1	13:25:17.066	DMS:	:RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	5,325,240:02:7	
638	0	1	13:25:17.066	DMS:	:TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	400	4	0	5,325,240:02:7	
639	0	1	13:25:18.466	DMS:	:AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	400	4	0	5,325,240:04:8	
640	0	1	13:25:30.466	DMS:	:AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	400	4	0	5,325,240:22:8	
641	0	1	13:25:31.666	DMS:	:READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	400	4	0	5,325,240:24:6	
642	0	1	13:31:08.600	465WD6A	6DMSC P100.1	DMS Control Tape P/B 100.8kbps	400	4	0	5,325,245:75:0	
643	0	1	13:31:08.600	DMS:	:E4-DELAY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,325,245:75:0	
644	0	1	13:31:15.266	DMS:	:RUNUP	P100, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,325,245:85:0	
645	0	1	13:31:19.133	DMS:	:AT_SPD	P100, TRACK 1, FWD, TIC 207.62 +/-	400	4	0	5,325,245:90:8	
646	0	1	13:31:19.133	DMS:	:P_SLEW	P100, TRACK 1, FWD, TIC * 207.62 +/-	400	4	0	5,325,245:90:8	
647	0	1	14:03:02.600	DMS:	:RUNDOWN	P100, TRACK 1, FWD, TIC *6063.01 +/-	400	4	0	5,325,277:34:0	
648	0	1	14:03:02.600	465WD6B	6DMSC RDY,1	DMS Control Tape stop	400	4	0	5,325,277:34:0	
649	0	1	14:03:03.800	DMS:	:READY	RDY, TRACK 1, FWD, TIC *6063.81 +/-	400	4	0	5,325,277:35:8	
650	0	1	14:05:15.266	488CK6C	6TMSD FILL,AL4	Sci, Eng, and D/L Chan	400	4	0	5,325,279:51:0	
651	0	1	14:18:38.600	DMS:	:US-RUNUP	P7, TRACK 1, FWD, TIC 6063.81 +/-	400	4	0	5,325,292:73:0	
652	0	1	14:18:38.600	465WE6A	6DMSC P100.2	DMS Control Tape P/B 100.8kbps	400	4	0	5,325,292:73:0	
653	0	1	14:18:40.000	DMS:	:US_AT_SP	P7, TRACK 1, FWD, TIC *6063.93 +/-	400	4	0	5,325,292:75:1	
654	0	1	14:18:45.266	DMS:	:US_RD	P7, TRACK 1, FWD, TIC *6065.17 +/-	400	4	0	5,325,292:83:0	
655	0	1	14:18:46.466	DMS:	:RUNUP	P100, TRACK *2, *REV, TIC *6065.23 +/-	400	4	0	5,325,292:84:8	
656	0	1	14:18:50.333	DMS:	:P_SLEW	P100, TRACK 2, REV, TIC *6059.73 +/-	400	4	0	5,325,292:90:6	
657	0	1	14:18:50.333	DMS:	:AT_SPD	P100, TRACK 2, REV, TIC 6059.73 +/-	400	4	0	5,325,292:90:6	
658	0	1	14:43:54.600	488CK6D	6TMSD NORM,AL4	Sci, Eng, and D/L Chan	400	4	0	5,325,317:72:0	

Line	YR	DOY	SCET - GMT	PSID	Command	Parameters	Description	GCM	GO	GS	RIM	MF I
659	0	1	14:50:46.600		DMS:	: *RUNDOWN	P100, TRACK 2, REV, TIC * 164.96 +/-	400	4	0	5,325,324:	53:0
660	0	1	14:50:46.600	465WF6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	400	4	0	5,325,324:	53:0
661	0	1	14:50:47.800		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 164.16 +/-	400	4	0	5,325,324:	54:8
662	0	1	14:50:51.666		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 169.66 +/-	400	4	0	5,325,324:	60:6
663	0	1	14:50:51.666		DMS:	: *AT SPD	P100, TRACK 3, FWD, TIC 169.66 +/-	400	4	0	5,325,324:	60:6
664	0	1	15:22:47.266		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 6062.38 +/-	400	4	0	5,325,356:	22:0
665	0	1	15:22:47.266	465WF6B	6DMSC	RDY,3	DMS Control Tape stop	400	4	0	5,325,356:	22:0
666	0	1	15:22:48.466		DMS:	: *READY	RDY, Eng, and D/L Chan	400	4	0	5,325,356:	23:8
667	0	1	15:33:11.266	488CK6E	6TMSD	NORM, AH5	Sci, Eng, and D/L Chan	400	4	0	5,325,366:	48:0
668	0	1	15:37:30.600		DMS:	: *US-RUNUP	P7, TRACK *1, FWD, TIC 6063.18 +/-	400	4	0	5,325,370:	73:0
669	0	1	15:37:30.600	465WG6A	6DMSC	P100,4	DMS Control Tape P/B 100.8kbps	400	4	0	5,325,370:	73:0
670	0	1	15:37:32.000		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 6063.30 +/-	400	4	0	5,325,370:	75:1
671	0	1	15:37:37.266		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 6064.53 +/-	400	4	0	5,325,370:	83:0
672	0	1	15:37:38.466		DMS:	: *RUNUP	P100, TRACK *4, *REV, TIC * 6064.59 +/-	400	4	0	5,325,370:	84:8
673	0	1	15:37:42.333		DMS:	: *P_SLEW	P100, TRACK 4, REV, TIC * 6059.09 +/-	400	4	0	5,325,370:	90:6
674	0	1	15:37:42.333		DMS:	: *AT_SPD	P100, TRACK 4, REV, TIC 6059.09 +/-	400	4	0	5,325,370:	90:6
675	0	1	16:09:37.933		DMS:	: *RUNDOWN	P100, TRACK 4, REV, TIC * 166.38 +/-	400	4	0	5,325,402:	52:0
676	0	1	16:09:37.933	465WH6A	6DMSC	P100,3	DMS Control Tape P/B 100.8kbps	400	4	0	5,325,402:	53:8
677	0	1	16:09:39.133		DMS:	: *RUNUP	P100, TRACK *3, *FWD, TIC * 165.58 +/-	400	4	0	5,325,402:	53:8
678	0	1	16:09:43.000		DMS:	: *AT SPD	P100, TRACK 3, FWD, TIC 171.08 +/-	400	4	0	5,325,402:	59:6
679	0	1	16:09:43.000		DMS:	: *P_SLEW	P100, TRACK 3, FWD, TIC * 171.08 +/-	400	4	0	5,325,402:	59:6
680	0	1	16:10:43.933		DMS:	: *RUNDOWN	P100, TRACK 3, FWD, TIC * 358.52 +/-	400	4	0	5,325,403:	60:0
681	0	1	16:10:43.933	465WH6B	6DMSC	RDY,3	DMS Control Tape stop	400	4	0	5,325,403:	60:0
682	0	1	16:10:45.133		DMS:	: *READY	RDY, TRACK 3, FWD, TIC * 359.32 +/-	400	4	0	5,325,403:	61:8
683	0	1	16:11:59.266	488CL6A	6TMSD	NORM, AL5	Sci, Eng, and D/L Chan	400	4	0	5,325,404:	82:0
684	0	1	16:25:13.933	465WI6A	6DMSC	RDY,4	DMS Control Tape stop	400	4	0	5,325,418:	00:0
685	0	1	16:25:13.933		DMS:	: *READY	RDY, TRACK *4, *REV, TIC 359.32 +/-	400	4	0	5,325,418:	00:0
686	0	1	16:26:07.933	465WJ6A	6DTRN	CMD,6DTRN,465WJ6	DMS TRACK TURNAROUND	400	4	0	5,325,418:	81:0
687	0	1	16:26:07.933		DMS:	: *US-RUNUP	P7, TRACK *1, *FWD, TIC 359.32 +/-	400	4	0	5,325,418:	81:0
688	0	1	16:26:07.933		DMS:	: *DMS-TURN	P7, TRACK 4, REV, TIC 359.32 +/-	400	4	0	5,325,418:	81:0
689	0	1	16:26:09.333		DMS:	: *US_AT_SP	P7, TRACK 1, FWD, TIC * 359.44 +/-	400	4	0	5,325,418:	83:1
690	0	1	16:26:14.600		DMS:	: *US_RD	P7, TRACK 1, FWD, TIC * 360.67 +/-	400	4	0	5,325,419:	00:0
691	0	1	16:26:15.800		DMS:	: *RUNUP	P7, TRACK *4, *REV, TIC * 360.73 +/-	400	4	0	5,325,419:	01:8
692	0	1	16:26:17.200		DMS:	: *AT_SPD	P7, TRACK 4, REV, TIC * 360.61 +/-	400	4	0	5,325,419:	03:9
693	0	1	16:37:43.000		DMS:	: *REVERSE	P7, TRACK 4, REV, TIC * 199.87 +/-	400	4	0	5,325,430:	31:6
694	0	1	16:37:44.200		DMS:	: *TURNARND	P7, TRACK *1, *FWD, TIC * 199.81 +/-	400	4	0	5,325,430:	33:4
695	0	1	16:37:44.200		DMS:	: *RUNUP	P7, TRACK 1, FWD, TIC 199.81 +/-	400	4	0	5,325,430:	33:4
696	0	1	16:37:45.600		DMS:	: *AT_SPD	P7, TRACK 1, FWD, TIC * 199.93 +/-	400	4	0	5,325,430:	35:5
697	0	1	16:37:57.600		DMS:	: *AUTOSTOP	P7, TRACK 1, FWD, TIC * 202.06 +/-	400	4	0	5,325,430:	53:5
698	0	1	16:37:58.800		DMS:	: *READY	RDY, TRACK 1, FWD, TIC * 202.12 +/-	400	4	0	5,325,430:	55:3
699	0	1	21:25:11.266	488CL6B	6TMSD	NORM, AL4	Sci, Eng, and D/L Chan	400	4	0	5,325,714:	60:0
700	0	1	23:29:59.933		DMS:	: *READY	RDY, TRACK 1, FWD, TIC 202.12 +/-	400	4	0	5,325,838:	09:0
701	0	1	23:30:00.000	20A3EW	37A	Final Condition	NIMS Power ON	400	4	0	5,325,838:	09:1
702	0	1	23:30:00.000	20A3EX	37HR	Final Condition	Replacement Heaters OFF	400	4	0	5,325,838:	09:1
703	0	1	23:30:00.000	20A3EY	37C1PR	Final Condition	Optics Heater 1 OFF (primary relay)	400	4	0	5,325,838:	09:1
704	0	1	23:30:00.000	20A3EZ	37C2PR	Final Condition	Optics Heater 2 OFF (primary relay)	400	4	0	5,325,838:	09:1
705	0	1	23:30:00.000	20A3FA	37F1PR	Final Condition	Radiator Flash Heater OFF (primary relay)	400	4	0	5,325,838:	09:1
706	0	1	23:30:00.000	20A3FB	37F2PR	Final Condition	Shield Flash Heater OFF (primary relay)	400	4	0	5,325,838:	09:1
707	0	1	23:30:00.000	20A3FD	40HRPR	Final Condition	RCT Heater OFF (primary relay)	400	4	0	5,325,838:	09:1
708	0	1	23:30:00.000	20A3FE	40T1PR	Final Condition	PCT Heater 1 OFF (primary relay)	400	4	0	5,325,838:	09:1
709	0	1	23:30:00.000	20A3FF	40T2R	Final Condition	PCT Heater 2 OFF	400	4	0	5,325,838:	09:1

25ENNOPOLE01

OAPEL: 25ENNOPOLE01 ALIAS: 25ENNOPOLE01
 EXT: A PSID: EA
 SCLK1: 05272736:87:0 SCLK2: 05272742:52:0
 SCET1: 99-329/16:38:52.466 SCET2: 99-329/16:44:33.133
 TARGET: EUROPA 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: 216 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: 0326216001 03 26 216 001
 WTGRP_SIZ: 26

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	039F8	0,0011,1001,1111,1000
1	039F8	0,0011,1001,1111,1000
2	039F8	0,0011,1001,1111,1000
3	039F8	0,0011,1001,1111,1000
4	039F8	0,0011,1001,1111,1000
5	039F8	0,0011,1001,1111,1000
6	039F8	0,0011,1001,1111,1000
7	039F8	0,0011,1001,1111,1000
8	039F8	0,0011,1001,1111,1000
9	039F8	0,0011,1001,1111,1000
10	039F8	0,0011,1001,1111,1000
11	039F8	0,0011,1001,1111,1000
12	039F8	0,0011,1001,1111,1000
13	039F8	0,0011,1001,1111,1000
14	039F8	0,0011,1001,1111,1000
15	039F8	0,0011,1001,1111,1000
16	039F8	0,0011,1001,1111,1000
17	039F8	0,0011,1001,1111,1000
18	039F8	0,0011,1001,1111,1000
19	039F8	0,0011,1001,1111,1000
20	039F8	0,0011,1001,1111,1000
21	039F8	0,0011,1001,1111,1000
22	039F8	0,0011,1001,1111,1000
23	039F8	0,0011,1001,1111,1000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25ENNOPOLE01

OAPEL: 25ENNOPOLE01 ALIAS: 25ENNOPOLE01
 EXT: B PSID: EA
 SCLK1: 05272736:87:0 SCLK2: 05272742:52:0
 SCET1: 99-329/16:38:52.466 SCET2: 99-329/16:44:33.133
 TARGET: EUROPA 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: 144 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: 0326144001 03 26 144 001
 WTGRP_SIZ: 26

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	18407	1,1000,0100,0000,0111
1	18407	1,1000,0100,0000,0111
2	18407	1,1000,0100,0000,0111
3	18407	1,1000,0100,0000,0111
4	18407	1,1000,0100,0000,0111
5	18407	1,1000,0100,0000,0111
6	18407	1,1000,0100,0000,0111
7	18407	1,1000,0100,0000,0111
8	18407	1,1000,0100,0000,0111
9	18407	1,1000,0100,0000,0111
10	18407	1,1000,0100,0000,0111
11	18407	1,1000,0100,0000,0111
12	18407	1,1000,0100,0000,0111
13	18407	1,1000,0100,0000,0111
14	18407	1,1000,0100,0000,0111
15	18407	1,1000,0100,0000,0111
16	18407	1,1000,0100,0000,0111
17	18407	1,1000,0100,0000,0111
18	18407	1,1000,0100,0000,0111
19	18407	1,1000,0100,0000,0111
20	18407	1,1000,0100,0000,0111
21	18407	1,1000,0100,0000,0111
22	18407	1,1000,0100,0000,0111
23	18407	1,1000,0100,0000,0111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25ENNOPOLE01

```

OAPEL: 25ENNOPOLE01      ALIAS: 25ENNOPOLE01
EXT: I                    PSID: EA
SCLK1: 05272736:87:0     SCLK2: 05272742:52:0
SCET1: 99-329/16:38:52.466 SCET2: 99-329/16:44:33.133
TARGET: EUROPA           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

25ENNOPOLE01

```

OAPEL: 25ENNOPOLE01      ALIAS: 25ENNOPOLE01
EXT: C                    PSID: EA
SCLK1: 05272742:53:0     SCLK2: 05272747:75:0
SCET1: 99-329/16:44:34.000 SCET2: 99-329/16:49:51.800
TARGET: EUROPA           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

25ENSUBJUP01

```

OAPEL: 25ENSUBJUP01      ALIAS: 25ENSUBJUP01
EXT: A                    PSID: EB
SCLK1: 05272772:87:0     SCLK2: 05272776:07:0
SCET1: 99-329/17:15:16.466 SCET2: 99-329/17:18:25.800
TARGET: EUROPA           PARTITION: 1
  
```

```

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

```

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

```

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

25ENEQUATR01

```

OAPEL: 25ENEQUATR01      ALIAS: 25ENEQUATR01
EXT: A                    PSID: EC
SCLK1: 05272901:87:0     SCLK2: 05272908:44:0
SCET1: 99-329/19:25:42.466 SCET2: 99-329/19:32:19.133
TARGET: EUROPA           PARTITION: 1
  
```

```

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

```

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

```

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

```

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

EDIT TABLE

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

25ENGLOBAL01

```

OAPEL: 25ENGLOBAL01      ALIAS: 25ENGLOBAL01
EXT: A                    PSID: ED
SCLK1: 05272920:87:0     SCLK2: 05272924:39:0
SCET1: 99-329/19:44:55.133 SCET2: 99-329/19:48:25.800
TARGET: EUROPA           PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000         RATE_CON2: 65525
NWAVETOT: 216           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: 0326216001      03 26 216 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	039F8	0,0011,1001,1111,1000
1	039F8	0,0011,1001,1111,1000
2	039F8	0,0011,1001,1111,1000
3	039F8	0,0011,1001,1111,1000
4	039F8	0,0011,1001,1111,1000
5	039F8	0,0011,1001,1111,1000
6	039F8	0,0011,1001,1111,1000
7	039F8	0,0011,1001,1111,1000
8	039F8	0,0011,1001,1111,1000
9	039F8	0,0011,1001,1111,1000
10	039F8	0,0011,1001,1111,1000
11	039F8	0,0011,1001,1111,1000
12	039F8	0,0011,1001,1111,1000
13	039F8	0,0011,1001,1111,1000
14	039F8	0,0011,1001,1111,1000
15	039F8	0,0011,1001,1111,1000
16	039F8	0,0011,1001,1111,1000
17	039F8	0,0011,1001,1111,1000
18	039F8	0,0011,1001,1111,1000
19	039F8	0,0011,1001,1111,1000
20	039F8	0,0011,1001,1111,1000
21	039F8	0,0011,1001,1111,1000
22	039F8	0,0011,1001,1111,1000
23	039F8	0,0011,1001,1111,1000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25ENGLOBAL01

```

OAPEL: 25ENGLOBAL01      ALIAS: 25ENGLOBAL01
EXT: B                    PSID: ED
SCLK1: 05272920:87:0     SCLK2: 05272924:39:0
SCET1: 99-329/19:44:55.133 SCET2: 99-329/19:48:25.800
TARGET: EUROPA           PARTITION: 1
  
```

```

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

```

MB_DOWN: 00000           MB_UP: 00000
COMP_FLAG: 1
EST_COMP: 2.0            EST_COMPV: 0.3
RATE_CON1: 00000        RATE_CON2: 65525
NWAVETOT: 144           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: 0326144001      03 26 144 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	18407	1,1000,0100,0000,0111
1	18407	1,1000,0100,0000,0111
2	18407	1,1000,0100,0000,0111
3	18407	1,1000,0100,0000,0111
4	18407	1,1000,0100,0000,0111
5	18407	1,1000,0100,0000,0111
6	18407	1,1000,0100,0000,0111
7	18407	1,1000,0100,0000,0111
8	18407	1,1000,0100,0000,0111
9	18407	1,1000,0100,0000,0111
10	18407	1,1000,0100,0000,0111
11	18407	1,1000,0100,0000,0111
12	18407	1,1000,0100,0000,0111
13	18407	1,1000,0100,0000,0111
14	18407	1,1000,0100,0000,0111
15	18407	1,1000,0100,0000,0111
16	18407	1,1000,0100,0000,0111
17	18407	1,1000,0100,0000,0111
18	18407	1,1000,0100,0000,0111
19	18407	1,1000,0100,0000,0111
20	18407	1,1000,0100,0000,0111
21	18407	1,1000,0100,0000,0111
22	18407	1,1000,0100,0000,0111
23	18407	1,1000,0100,0000,0111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25ENGLOBAL01

```

OAPEL: 25ENGLOBAL01      ALIAS: 25ENGLOBAL01
EXT: D                   PSID: ED
SCLK1: 05272920:87:0    SCLK2: 05272924:39:0
SCET1: 99-329/19:44:55.133 SCET2: 99-329/19:48:25.800
TARGET: EUROPA          PARTITION: 1
  
```

```

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

```

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

```

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

25ENGLOBAL01

```

OAPEL: 25ENGLOBAL01      ALIAS: 25ENGLOBAL01
EXT: C                    PSID: ED
SCLK1: 05272924:45:0     SCLK2: 05272926:28:0
SCET1: 99-329/19:48:30.166 SCET2: 99-329/19:50:19.800
TARGET: EUROPA           PARTITION: 1
  
```

```

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

```

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

```

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

25INGIANTS01

```

OAPEL: 25INGIANTS01      ALIAS: 25INGIANTS01
EXT: A                    PSID: DK
SCLK1: 05273458:52:0     SCLK2: 05273460:21:0
SCET1: 99-330/04:48:30.400 SCET2: 99-330/04:50:11.733
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: 288           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: 0326288001      03 26 288 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	039FF	0,0011,1001,1111,1111
1	039FF	0,0011,1001,1111,1111
2	039FF	0,0011,1001,1111,1111
3	039FF	0,0011,1001,1111,1111
4	039FF	0,0011,1001,1111,1111
5	039FF	0,0011,1001,1111,1111
6	039FF	0,0011,1001,1111,1111
7	039FF	0,0011,1001,1111,1111
8	039FF	0,0011,1001,1111,1111
9	039FF	0,0011,1001,1111,1111
10	039FF	0,0011,1001,1111,1111
11	039FF	0,0011,1001,1111,1111
12	039FF	0,0011,1001,1111,1111
13	039FF	0,0011,1001,1111,1111
14	039FF	0,0011,1001,1111,1111
15	039FF	0,0011,1001,1111,1111
16	039FF	0,0011,1001,1111,1111
17	039FF	0,0011,1001,1111,1111
18	039FF	0,0011,1001,1111,1111
19	039FF	0,0011,1001,1111,1111
20	039FF	0,0011,1001,1111,1111
21	039FF	0,0011,1001,1111,1111
22	039FF	0,0011,1001,1111,1111
23	039FF	0,0011,1001,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25INGIANTS01

```

OAPEL: 25INGIANTS01      ALIAS: 25INGIANTS01
EXT: B                    PSID: DK
SCLK1: 05273458:52:0     SCLK2: 05273460:21:0
SCET1: 99-330/04:48:30.400 SCET2: 99-330/04:50:11.733
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: 72            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: 0326072001      03 26 072 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	18400	1,1000,0100,0000,0000
1	18400	1,1000,0100,0000,0000
2	18400	1,1000,0100,0000,0000
3	18400	1,1000,0100,0000,0000
4	18400	1,1000,0100,0000,0000
5	18400	1,1000,0100,0000,0000
6	18400	1,1000,0100,0000,0000
7	18400	1,1000,0100,0000,0000
8	18400	1,1000,0100,0000,0000
9	18400	1,1000,0100,0000,0000
10	18400	1,1000,0100,0000,0000
11	18400	1,1000,0100,0000,0000
12	18400	1,1000,0100,0000,0000
13	18400	1,1000,0100,0000,0000
14	18400	1,1000,0100,0000,0000
15	18400	1,1000,0100,0000,0000
16	18400	1,1000,0100,0000,0000
17	18400	1,1000,0100,0000,0000
18	18400	1,1000,0100,0000,0000
19	18400	1,1000,0100,0000,0000
20	18400	1,1000,0100,0000,0000
21	18400	1,1000,0100,0000,0000
22	18400	1,1000,0100,0000,0000
23	18400	1,1000,0100,0000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25INGIANTS01

```

OAPEL: 25INGIANTS01      ALIAS: 25INGIANTS01
EXT: C                    PSID: DK
SCLK1: 05273458:52:0     SCLK2: 05273460:21:0
SCET1: 99-330/04:48:30.400 SCET2: 99-330/04:50:11.733
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

25 INCULANN01

```

OAPEL: 25INCULANN01      ALIAS: 25INCULANN01
EXT: A                   PSID: DL
SCLK1: 05273466:00:0    SCLK2: 05273466:74:0
SCET1: 99-330/04:56:01.066 SCET2: 99-330/04:56:50.400
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: 288          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: 0326288001      03 26 288 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	039FF	0,0011,1001,1111,1111
1	039FF	0,0011,1001,1111,1111
2	039FF	0,0011,1001,1111,1111
3	039FF	0,0011,1001,1111,1111
4	039FF	0,0011,1001,1111,1111
5	039FF	0,0011,1001,1111,1111
6	039FF	0,0011,1001,1111,1111
7	039FF	0,0011,1001,1111,1111
8	039FF	0,0011,1001,1111,1111
9	039FF	0,0011,1001,1111,1111
10	039FF	0,0011,1001,1111,1111
11	039FF	0,0011,1001,1111,1111
12	039FF	0,0011,1001,1111,1111
13	039FF	0,0011,1001,1111,1111
14	039FF	0,0011,1001,1111,1111
15	039FF	0,0011,1001,1111,1111
16	039FF	0,0011,1001,1111,1111
17	039FF	0,0011,1001,1111,1111
18	039FF	0,0011,1001,1111,1111
19	039FF	0,0011,1001,1111,1111
20	039FF	0,0011,1001,1111,1111
21	039FF	0,0011,1001,1111,1111
22	039FF	0,0011,1001,1111,1111
23	039FF	0,0011,1001,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25 INCULANN01

```

OAPEL: 25INCULANN01      ALIAS: 25INCULANN01
EXT: B                    PSID: DL
SCLK1: 05273466:00:0    SCLK2: 05273466:74:0
SCET1: 99-330/04:56:01.066 SCET2: 99-330/04:56:50.400
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: 72            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: 0326072001      03 26 072 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	18400	1,1000,0100,0000,0000
1	18400	1,1000,0100,0000,0000
2	18400	1,1000,0100,0000,0000
3	18400	1,1000,0100,0000,0000
4	18400	1,1000,0100,0000,0000
5	18400	1,1000,0100,0000,0000
6	18400	1,1000,0100,0000,0000
7	18400	1,1000,0100,0000,0000
8	18400	1,1000,0100,0000,0000
9	18400	1,1000,0100,0000,0000
10	18400	1,1000,0100,0000,0000
11	18400	1,1000,0100,0000,0000
12	18400	1,1000,0100,0000,0000
13	18400	1,1000,0100,0000,0000
14	18400	1,1000,0100,0000,0000
15	18400	1,1000,0100,0000,0000
16	18400	1,1000,0100,0000,0000
17	18400	1,1000,0100,0000,0000
18	18400	1,1000,0100,0000,0000
19	18400	1,1000,0100,0000,0000
20	18400	1,1000,0100,0000,0000
21	18400	1,1000,0100,0000,0000
22	18400	1,1000,0100,0000,0000
23	18400	1,1000,0100,0000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25 INCULANN01

```

OAPEL: 25INCULANN01      ALIAS: 25INCULANN01
EXT: C                   PSID: DL
SCLK1: 05273466:00:0    SCLK2: 05273466:74:0
SCET1: 99-330/04:56:01.066 SCET2: 99-330/04:56:50.400
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

25INTERMAP01

```

OAPEL: 25INTERMAP01      ALIAS: 25INTERMAP01
EXT: A                    PSID: DM
SCLK1: 05273476:38:0     SCLK2: 05273477:21:0
SCET1: 99-330/05:06:33.733 SCET2: 99-330/05:07:23.066
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: 288           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: 0326288001      03 26 288 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	039FF	0,0011,1001,1111,1111
1	039FF	0,0011,1001,1111,1111
2	039FF	0,0011,1001,1111,1111
3	039FF	0,0011,1001,1111,1111
4	039FF	0,0011,1001,1111,1111
5	039FF	0,0011,1001,1111,1111
6	039FF	0,0011,1001,1111,1111
7	039FF	0,0011,1001,1111,1111
8	039FF	0,0011,1001,1111,1111
9	039FF	0,0011,1001,1111,1111
10	039FF	0,0011,1001,1111,1111
11	039FF	0,0011,1001,1111,1111
12	039FF	0,0011,1001,1111,1111
13	039FF	0,0011,1001,1111,1111
14	039FF	0,0011,1001,1111,1111
15	039FF	0,0011,1001,1111,1111
16	039FF	0,0011,1001,1111,1111
17	039FF	0,0011,1001,1111,1111
18	039FF	0,0011,1001,1111,1111
19	039FF	0,0011,1001,1111,1111
20	039FF	0,0011,1001,1111,1111
21	039FF	0,0011,1001,1111,1111
22	039FF	0,0011,1001,1111,1111
23	039FF	0,0011,1001,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25INTERMAP01

```

OAPEL: 25INTERMAP01      ALIAS: 25INTERMAP01
EXT: B                    PSID: DM
SCLK1: 05273476:38:0     SCLK2: 05273477:21:0
SCET1: 99-330/05:06:33.733 SCET2: 99-330/05:07:23.066
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: 72           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: 0326072001      03 26 072 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	18400	1,1000,0100,0000,0000
1	18400	1,1000,0100,0000,0000
2	18400	1,1000,0100,0000,0000
3	18400	1,1000,0100,0000,0000
4	18400	1,1000,0100,0000,0000
5	18400	1,1000,0100,0000,0000
6	18400	1,1000,0100,0000,0000
7	18400	1,1000,0100,0000,0000
8	18400	1,1000,0100,0000,0000
9	18400	1,1000,0100,0000,0000
10	18400	1,1000,0100,0000,0000
11	18400	1,1000,0100,0000,0000
12	18400	1,1000,0100,0000,0000
13	18400	1,1000,0100,0000,0000
14	18400	1,1000,0100,0000,0000
15	18400	1,1000,0100,0000,0000
16	18400	1,1000,0100,0000,0000
17	18400	1,1000,0100,0000,0000
18	18400	1,1000,0100,0000,0000
19	18400	1,1000,0100,0000,0000
20	18400	1,1000,0100,0000,0000
21	18400	1,1000,0100,0000,0000
22	18400	1,1000,0100,0000,0000
23	18400	1,1000,0100,0000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25INTERMAP01

```

OAPEL: 25INTERMAP01      ALIAS: 25INTERMAP01
EXT: C                    PSID: DM
SCLK1: 05273476:38:0    SCLK2: 05273477:21:0
SCET1: 99-330/05:06:33.733 SCET2: 99-330/05:07:23.066
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

25INREGION01

```

OAPEL: 25INREGION01      ALIAS: 25INREGION01
EXT: A                    PSID: DN
SCLK1: 05273479:88:0     SCLK2: 05273504:78:0
SCET1: 99-330/05:10:09.066 SCET2: 99-330/05:35:19.066
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: 288           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: 0326288001      03 26 288 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	039FF	0,0011,1001,1111,1111
1	039FF	0,0011,1001,1111,1111
2	039FF	0,0011,1001,1111,1111
3	039FF	0,0011,1001,1111,1111
4	039FF	0,0011,1001,1111,1111
5	039FF	0,0011,1001,1111,1111
6	039FF	0,0011,1001,1111,1111
7	039FF	0,0011,1001,1111,1111
8	039FF	0,0011,1001,1111,1111
9	039FF	0,0011,1001,1111,1111
10	039FF	0,0011,1001,1111,1111
11	039FF	0,0011,1001,1111,1111
12	039FF	0,0011,1001,1111,1111
13	039FF	0,0011,1001,1111,1111
14	039FF	0,0011,1001,1111,1111
15	039FF	0,0011,1001,1111,1111
16	039FF	0,0011,1001,1111,1111
17	039FF	0,0011,1001,1111,1111
18	039FF	0,0011,1001,1111,1111
19	039FF	0,0011,1001,1111,1111
20	039FF	0,0011,1001,1111,1111
21	039FF	0,0011,1001,1111,1111
22	039FF	0,0011,1001,1111,1111
23	039FF	0,0011,1001,1111,1111
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25INREGION01

```

OAPEL: 25INREGION01      ALIAS: 25INREGION01
EXT: B                    PSID: DN
SCLK1: 05273479:88:0     SCLK2: 05273504:78:0
SCET1: 99-330/05:10:09.066 SCET2: 99-330/05:35:19.066
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: 72            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: 0326072001      03 26 072 001
WTGRP_SIZ: 26
  
```

EDIT TABLE

GRATING STEP	HEX MASK	DETECTOR MASK
0	18400	1,1000,0100,0000,0000
1	18400	1,1000,0100,0000,0000
2	18400	1,1000,0100,0000,0000
3	18400	1,1000,0100,0000,0000
4	18400	1,1000,0100,0000,0000
5	18400	1,1000,0100,0000,0000
6	18400	1,1000,0100,0000,0000
7	18400	1,1000,0100,0000,0000
8	18400	1,1000,0100,0000,0000
9	18400	1,1000,0100,0000,0000
10	18400	1,1000,0100,0000,0000
11	18400	1,1000,0100,0000,0000
12	18400	1,1000,0100,0000,0000
13	18400	1,1000,0100,0000,0000
14	18400	1,1000,0100,0000,0000
15	18400	1,1000,0100,0000,0000
16	18400	1,1000,0100,0000,0000
17	18400	1,1000,0100,0000,0000
18	18400	1,1000,0100,0000,0000
19	18400	1,1000,0100,0000,0000
20	18400	1,1000,0100,0000,0000
21	18400	1,1000,0100,0000,0000
22	18400	1,1000,0100,0000,0000
23	18400	1,1000,0100,0000,0000
24	00000	0,0000,0000,0000,0000
25	00000	0,0000,0000,0000,0000

25INREGION01

```

OAPEL: 25INREGION01      ALIAS: 25INREGION01
EXT: I                    PSID: DN
SCLK1: 05273479:88:0     SCLK2: 05273504:78:0
SCET1: 99-330/05:10:09.066 SCET2: 99-330/05:35:19.066
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

25INREGION01

```

OAPEL: 25INREGION01      ALIAS: 25INREGION01
EXT: C                    PSID: DN
SCLK1: 05273504:87:0     SCLK2: 05273524:30:0
SCET1: 99-330/05:35:24.733 SCET2: 99-330/05:54:59.733
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

25NNPCTRLT01

```

OAPEL: 25NNPCTRLT01      ALIAS: LSNNPCTRLT01
EXT: R                    PSID: FB
SCLK1: 05281985:00:0     SCLK2: 05281986:12:0
SCET1: 1999-336/04:29:40.033 SCET2: 1999-336/04:30:48.800
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

25NNPCTRLT01

```

OAPEL: 25NNPCTRLT01      ALIAS: LSNNPCTRLT01
EXT: S                    PSID: FB
SCLK1: 05281991:00:0     SCLK2: 05282000:12:0
SCET1: 1999-336/04:35:44.033 SCET2: 1999-336/04:44:58.133
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

25NNRCTRLT01

```

OAPEL: 25NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: R                    PSID: XU
SCLK1: 05307744:00:0     SCLK2: 05307744:12:0
SCET1: 1999-354/06:34:51.833 SCET2: 1999-354/06:34:59.833
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

25NNRCTRLT01

```

OAPEL: 25NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: S                    PSID: XU
SCLK1: 05307750:00:0     SCLK2: 05307751:12:0
SCET1: 1999-354/06:40:55.866 SCET2: 1999-354/06:42:04.533
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

25NNRCTRLT01

```

OAPEL: 25NNRCTRLT01      ALIAS: LSNNRCTRTA01
EXT: T                    PSID: XU
SCLK1: 05307756:00:0     SCLK2: 05307756:12:0
SCET1: 1999-354/06:46:59.866 SCET2: 1999-354/06:47:07.866
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

25NNOPCAL_01

```

OAPEL: 25NNOPCAL_01      ALIAS: LSNNOPCAL_01
EXT: R                    PSID: DC
SCLK1: 05307760:00:0     SCLK2: 05307762:12:0
SCET1: 1999-354/06:51:02.533 SCET2: 1999-354/06:53:11.866
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 I25 OBSTAB

This is a time-ordered ASCII TABLE (listing) of GALILEO NIMS observation parameters for use by downlink data processing of the NIMS I25 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)
GAIN      1 74 - 74  .Gain State (true value)
CHOP      1 75 - 75  .Chopper State (1=Ref,2=63Hz,3=FreeRun,4=Off)
GRAT_OFF  1 76 - 76  .Grating Offset (0-7, default 4)
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)
OPCAL     1 102 - 102 .Optics Calibration active (1=yes)
# REAL_TIME 1 103 - 103 .NIMS in Real-Time Telemetry (1=yes)
# RECORD   1 104 - 104 .NIMS in Record Telemetry (1=yes)
                                     RECORD, REVERSE, RESUME, RUNDOWN <tbd>

* THRESHSEL 1 105 - 105 .Threshold value select (>0 = yes)
<spare>    1 106 - 106 .
# RTISELDN  5 107 - 111 .RTI select, 5 binary bits (for mirror
                                     position blocking, down scan)
# RTISELUP  5 112 - 116 .RTI select, 5 binary bits (for mirror
                                     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)
ESTCOMPV   3 123 - 125 .Rice estimated error in compression ratio (m.n)PBK: CMPR_DVSR <tbd>
# RATECON1  5 126 - 130 .Rate control lower limit
# RATECON2  5 131 - 135 .Rate control upper limit
                                     PBK: | S/W table entry indexed by LOSSY_COMP (1-7)
                                     PBK: | or 0 if LOSSY_COMP = 0 (no rate control)
<spare>    17 136 - 152 .
NWAVERTOT  3 153 - 155 .Total number of wavelengths selected
TLMFMT     3 156 - 158 .Telemetry format (MPW et al, LPU or LNR)
SCET1      21 159 - 179 .Start time of played-back OBS in UTC
SCET2      21 180 - 200 .Stop time of played-back OBS in UTC
<spares>   67 201 - 267 .Start time of played-back OBS in UTC
* THRESH    51 268 - 318 .Threshold values (17 3-digit values, 0-999)
                                     Compute from relevant Wavelength Edit Table group
                                     SEF: 6TMREC command
                                     PBK (except realtime data: SEF)
                                     PBK (except realtime data: SEF)
                                     PBK (except realtime data: SEF)
                                     PBK: S/W table indexed by THRESH_TBL > 0, else 0s
-----

```

```

# WETGID      10 319 - 328      .Wavelength selection group ID (unique)      PBK: WET_GID      (realtime <tbd>)
Rule of formation: mmeelll1nnn where
mm = instrument mode (0-15)
ee = # entries in group
lll = number of wavelengths selected
nnn = sequence number
* WETGRPSIZ      2 329 - 330      .# Wavelength Edit entries (1-26)      PBK: ED_GRP_LEN      (realtime SEF: 37ETB <tbd>)
* WETGRP      182 331 - 512      .Wavelength Edit Table group: WETGRPSIZ      PBK: ED_GRP      (realtime SEF: 37ETB data bytes 2..)

```

entries, each one has 7 characters. The first 2 characters are the repeat count (01-26). The other 5 characters contain 5 hex digits, representing the detector mask in the form BHHH where B is 0 or 1 and H has range 0-15. (These entries are from the 37ETB instrument edit group for realtime data and from the logical AND of corresponding entries in the instrument and playback edit groups for playback data.)

.The TARGET names used are:

```

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

```

(the single letter abbreviation appears as the third character in the OAPEL name).

Chapter 5 - Detailed Observation Designs

Contents

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Introduction to Chapter 5

Detailed Observation Designs

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

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

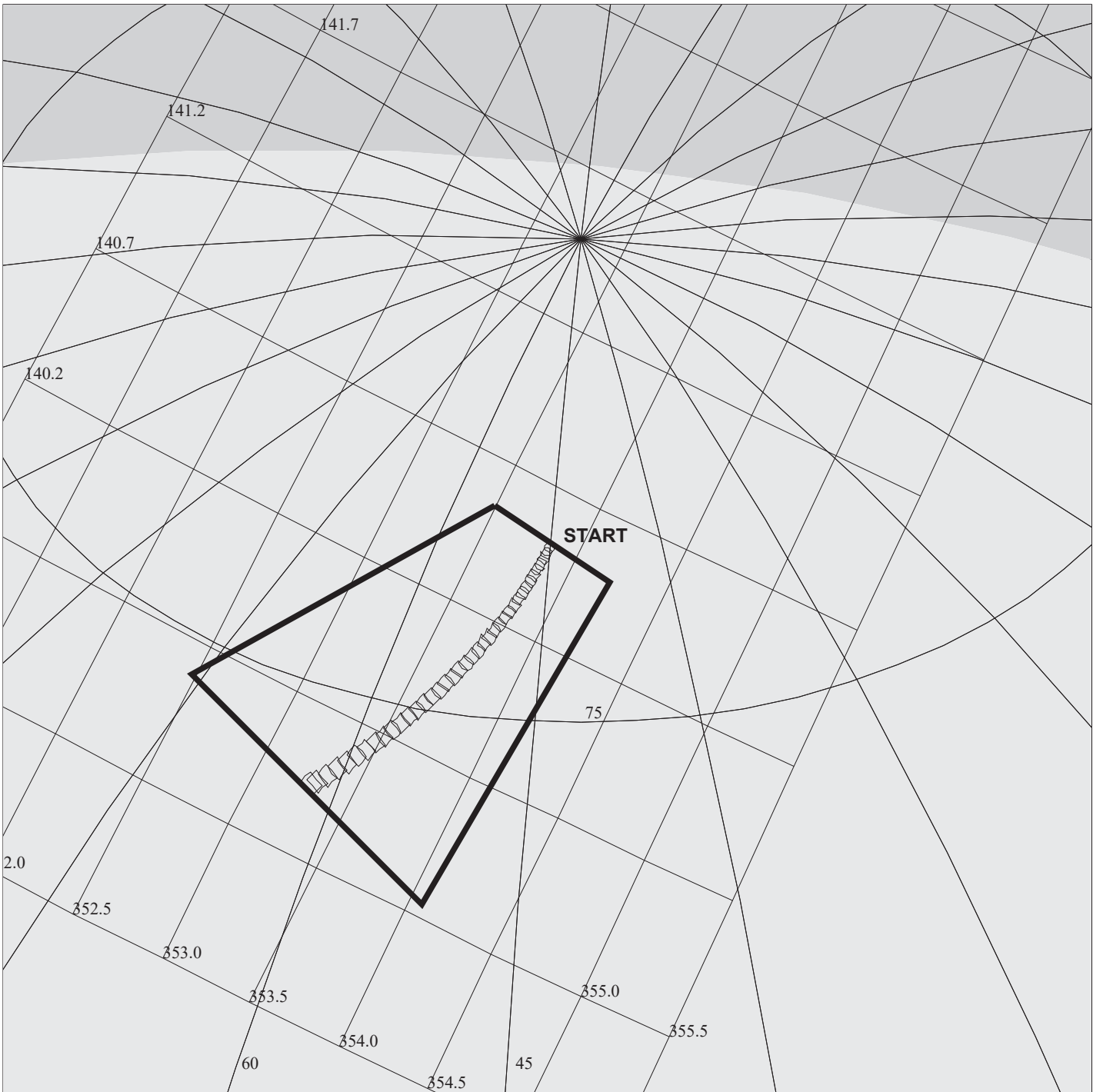
The Pointer plots have the spatial extent of the actual data returned outlined with a thick line. When no data were returned for a particular observation, its Pointer plot has a single slash across the plot with the text "NO DATA RETURNED" printed in the upper left corner of the plot.

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

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

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

NIMS Real-Time Software Reload		ACTIVITY ID: 25NNNOPOLE01-	
		START TIME: 99-329/16:31:54.466	
Activity ID: Orbit 25 Target N Inst N OAPEL RELOAD SeqNo 01 -			
Title	NIMS Real-Time Software Reload		Instrument
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 11/25/99 Week 48
Start	EEE+CDS 00000003:02:0	99-329/16:31:54.466	EEE+000/00:03:02.000
End	EEE+CDS 00000006:00:0	99-329/16:34:56.466	EEE+000/00:06:04.000
Duration	00000003:00:0	000/00:03:02.000	000/00:03:02.000
Top Label	25NNNOPOLE01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	150	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	No
		DMS	No
Observation Objective			
<p>NIMS real-time software reload Each NIMS GEM observation will have an instrument reload before the start of each observation. Each reload has its own OAPEL form, but only this first form is included in the NIMSGUIDE.</p> <p>The NIMS I25 reload OAPELS are: 25NNNOPOLE01, 25NNSUBJUP01, 25NNEQUATR01, 25NNGLOBAL01, 25NNTIERMS01, 25NNSOPOLE01, 25NNPRMETH01, 25NNITUPAN02, 25NNGIANTS01, 25NNCULANN01, 25NNINTERM01, 25NNRELOAD01.</p> <p>25INSOPOLE02, 25INEMAKNG01, 25INITUPAN01, 25INSAPPNG02, 25INEMAKNG02, 25INREGION01, 25INPCTRLT01, 25INRCTRLT01 did not have reloads.</p>			
Design Detail			
<p>Use a standard set of commands to halt the instrument, load the software and reinitialize the instrument.</p> <p>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.</p>			
Galileo Activity Plan Form		05/04/99 14:29:49	rev 6/95



165EA:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/7005 TC= 1(80 45)
 A= 728 pD= 1992 SR=17.450 RA50= 52.06 DEC50=-23.40 cone=140.52 clock=353.84
 117EA:#SB= 1 OR= 0.020 RR=12.000 BM=F RC= 1 BS= 0/7005
 1:#s= 1 Cs= -13.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1992 rD= 40

25ENNOPOLE01

TARGET G3.1 lisac:11/16/1999 18:18:50

FILE:P.25ENNOPOLE01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:EEE 99-329/16:28:52.466 +CDS 10:00:0

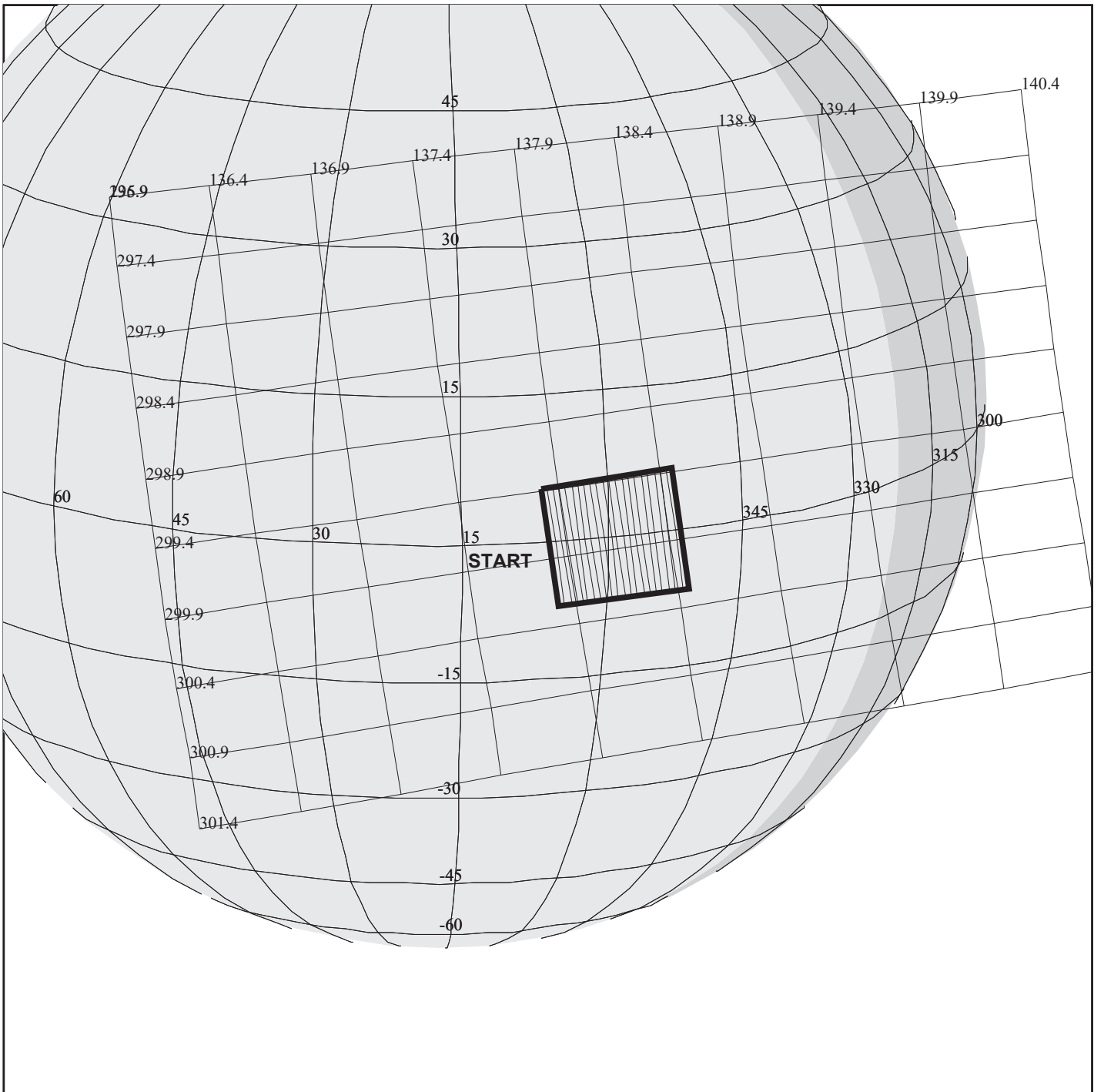
OBSERVATION:25ENNOPOLE01

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 1992 S= 4.000

DESCRIP:EUROPA_N_POLAR_MERIDIONAL

Europa North Pole Meridional Obs.	ACTIVITY ID:	25ENNOPOLE01-			
	START TIME:	99-329/16:34:56.466			
Activity ID: Orbit 25 Target E Inst N OAPEL NOPOLE SeqNo 01 -					
Title	Europa North Pole Meridional Obs.	Instrument	NIMS		
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group	SWG	
Time System	CDS	Load ID	Calendar Date	11/25/99	Week 48
Start	EEE+CDS 00000006:00:0	99-329/16:34:56.466	EEE+000/00:06:04.000		
End	EEE+CDS 00000021:00:0	99-329/16:50:06.466	EEE+000/00:21:14.000		
Duration	00000015:00:0	000/00:15:10.000	000/00:15:10.000		
Top Label	25ENNOPOLE01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No
Observation Objective					
Obtain high spectral resolution data from high northern latitudes on Europa, to look for exotic condensates and to characterize the non-ice constituents of the polar region.					
Data Returned					
Design Detail					
BTG=3.5999 MB, TICS=741, FMT=MPW					
Pure cone-axis slew extending from 80 deg North Latitude southward to ~70 N. Long Map, MPW, Nyquist, range ~9000 km, resolution < 5km/nimsel Cone 111, clock 114, phase ~58 degrees					
Grating Stuck					
Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ELM442, ELM216					
Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ELM442, ELM144					
Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ELM442, ELM360					
Galileo Activity Plan Form			09/28/99	10:48:23	rev 1/99



25ENSUBJUP01

165EB:TT= 0 TMC= 1 C= -5.00 XC= 0.00 BS= 0/3557 TC= (1(0 0)
 A= 728 pD= 910 SR=17.450 RA50= 67.20 DEC50= 7.94 cone=137.85 clock=299.77
 117EB:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/3557
 1:#s= 1 Cs= 11.10 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 570 rD= 2

TARGET G3.1 lisac:11/16/1999 18:18:50

FILE:P.25ENSUBJUP01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:EEE 99-329/16:28:52.466 +CDS 46:00:0

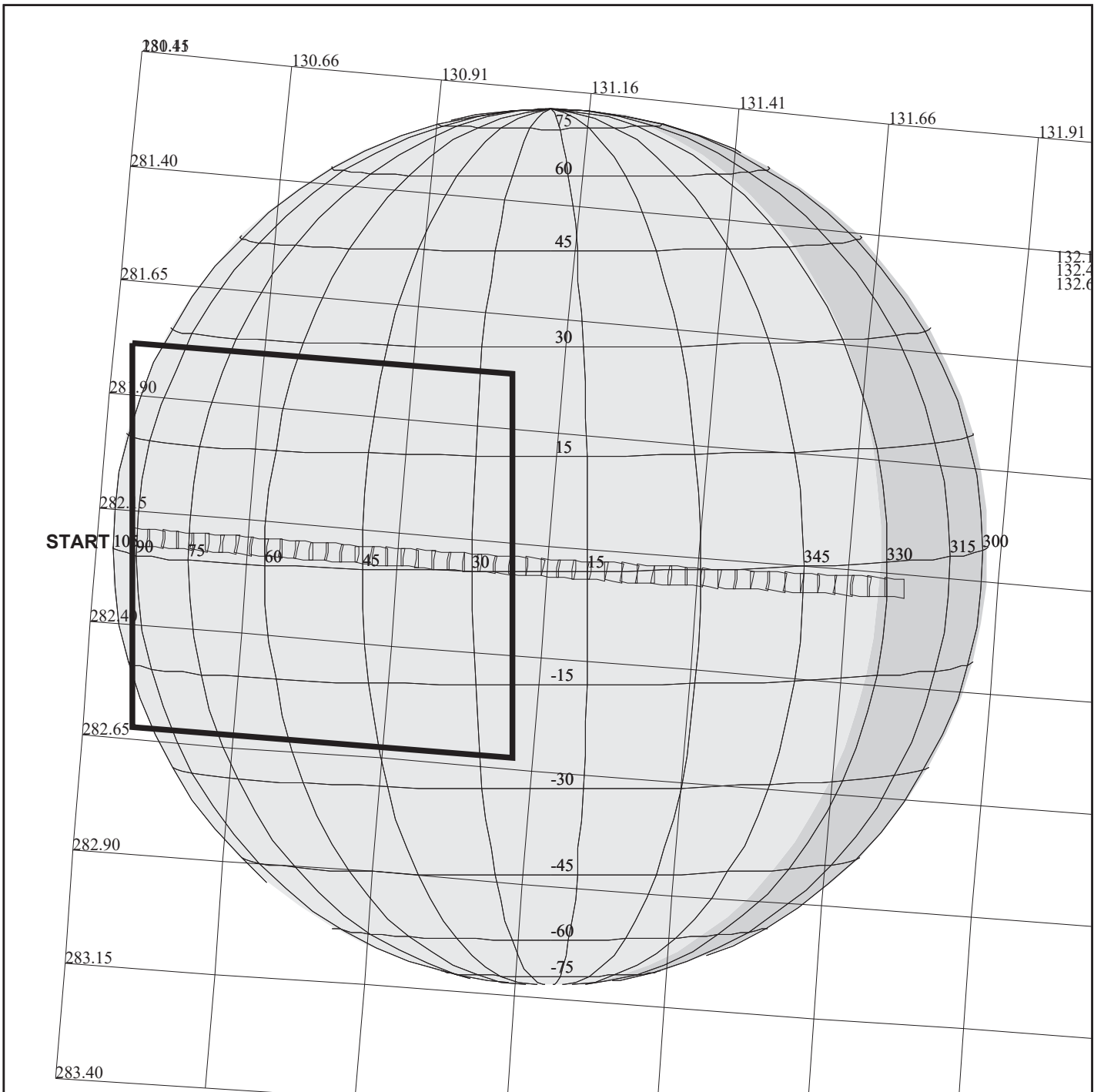
OBSERVATION:25ENSUBJUP01

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 910 S= 1.000

DESCRIP:EUROPA_SUBJUPITER_POINT_REGIONAL

Europa Sub-Jupiter Regional Obs.	ACTIVITY ID:	25ENSUBJUP01-			
	START TIME:	99-329/17:07:17.799			
Activity ID: Orbit 25 Target E Inst N OAPEL SUBJUP SeqNo 01 -					
Title	Europa Sub-Jupiter Regional Obs.	Instrument	NIMS		
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group	SWG	
Time System	CDS	Load ID	Calendar Date	11/25/99	Week 48
Start	EEE+CDS 00000038:00:0	99-329/17:07:17.799	EEE+000/00:38:25.333		
End	EEE+CDS 00000059:00:0	99-329/17:28:31.799	EEE+000/00:59:39.333		
Duration	00000021:00:0	000/00:21:14.000	000/00:21:14.000		
Top Label	25ENSUBJUP01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No
Observation Objective					
<p>To obtain moderately high resolution (~20 km/nimsel) coverage of the equatorial region of Europa near the sub-Jupiter point, a region of (probable) strong tectonic deformation not seen previously by Galileo; to obtain and compare leading and trailing side spectral information (bracketing longitude 0 deg W.)</p>					
Data Returned					
Design Detail					
BTG=2.7359 MB, TICS=283, FMT=MPW					
<p>A single swath covering Longitudes 20 W - 0 - 350 W with center over equator. (latitude coverage approximately 5 deg N to 5 deg S.) Long Map, MPW, Nyquist, range = 30917 Km (start), resolution 15-25 km/nimsel. cone 143.3, clock 136.99, phase 36.6 deg</p>					
Grating Stuck					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM360					
Galileo Activity Plan Form			09/28/99	10:48:23	rev 1/99



165EC:TT= 0 TMC= 1 C= -12.00 XC= 0.00 BS= 0/6853 TC= 1(0 20)
 A= 728 pD= 0 SR=17.450 RA50= 73.44 DEC50= 21.18 cone=130.48 clock=282.21
 117EC:#SB= 1 OR= 0.020 RR=12.000 BM=F RC= 1 BS= 0/6853
 1:#s= 1 Cs= 16.80 XCs= -5.80 Cr= 0.00 XCcr= 0.00 sD= 2548 rD= 40

25ENEQUATR01

TARGET G3.1 lisac:11/16/1999 18:18:50

FILE:P.25ENEQUATR01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:EEE 99-329/16:28:52.466 +CDS 174:00:0

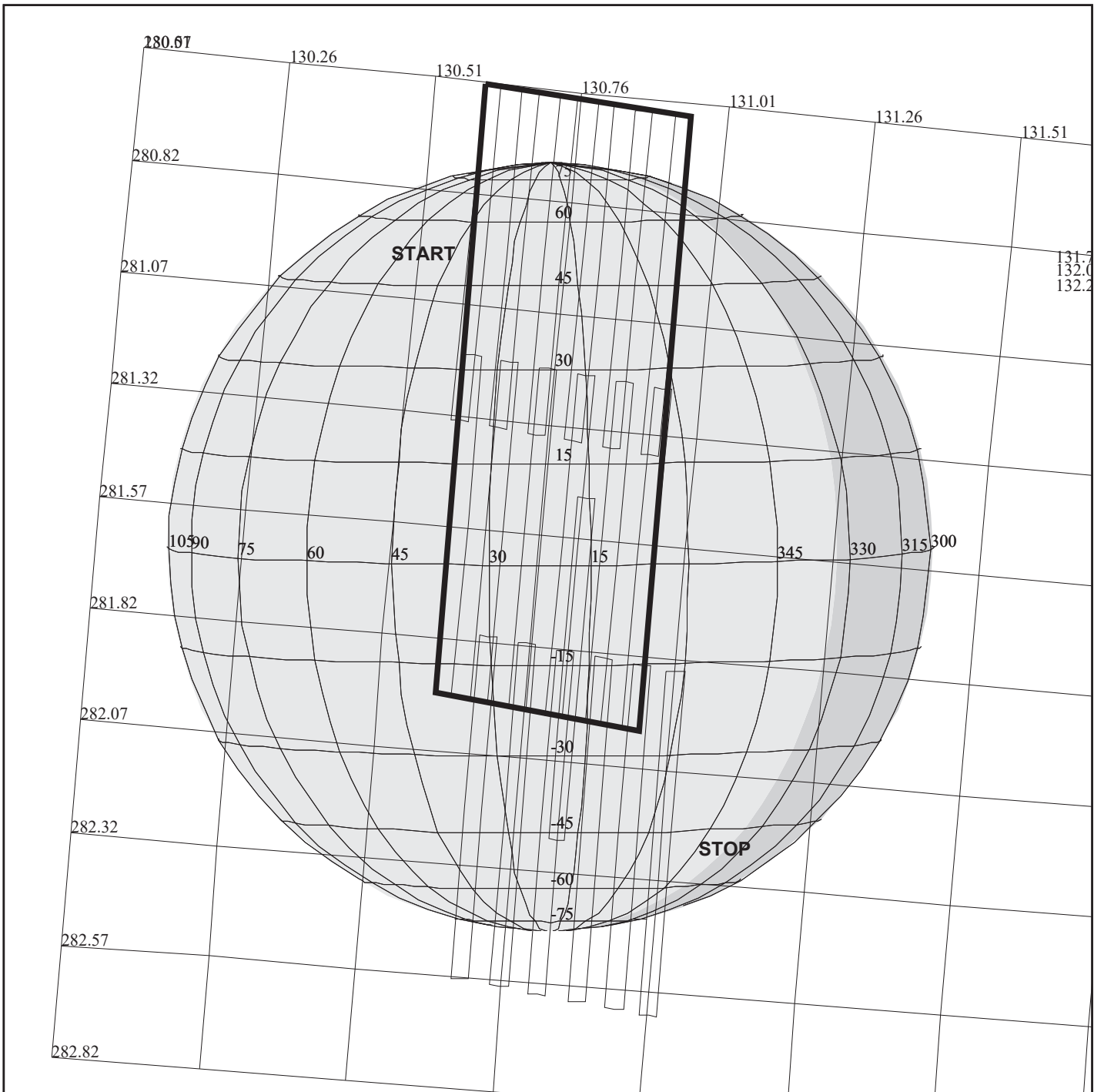
OBSERVATION:25ENEQUATR01

THINNING:NIM 2

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

DESCRIP:EUROPA_SUBJUPITER_POINT_REGIONAL

Europa Equatorial Band		ACTIVITY ID: 25ENEQUATR01-	
		START TIME: 99-329/19:20:45.799	
Activity ID: Orbit 25 Target E Inst N OAPEL EQUATR SeqNo 01 -			
Title	Europa Equatorial Band	Instrument	NIMS
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
Requestor		Instrument	NIMS
		Team	SWG
Time System	CDS	Load ID	Calendar Date 11/25/99 Week 48
Start	EEE+CDS 00000170:00:0	99-329/19:20:45.799	EEE+000/02:51:53.333
End	EEE+CDS 00000188:00:0	99-329/19:38:57.799	EEE+000/03:10:05.333
Duration	00000018:00:0	000/00:18:12.000	000/00:18:12.000
Top Label	25ENEQUATR01-		
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			
<p>To obtain a full spectral resolution data set for a narrow strip along Europa's equator in long spectrometer mode permitting improved signal-to-noise to help with interpretation of I25 global observation. The longitudes seen (90 w - 0 - 320 W) were not observed during the Galileo prime mission.</p> <p>Note: Observation now in Long Map mode.</p>			
Data Returned			
Design Detail			
BTG=2.8799 MB, TICS=539, FMT=MPW			
<p>Single scan over equatorial region covering entire illuminated portion of Europa. 90 deg W to 330 deg W.</p> <p>Long Map, Nyquist, range 124000 km, resolution 62 km/nimsel.</p> <p>cone 138.3, clock 131.4, phase 41.7</p>			
Grating Stuck			
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM360			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



165ED:TT= 0 TMC= 1 C= -3.50 XC= -9.00 BS= 0/0493 TC= 1(0 20)
 A= 728 pD= 0 SR=17.450 RA50= 73.11 DEC50= 22.09 cone=130.60 clock=280.95
 117ED:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/0493
 1:#s= 3 Cs= 5.70 XCs= 0.00 Cr= -5.70 XCr= 7.50 sD= 296 rD= 32

25ENGLOBAL01

TARGET G3.1 lisac:11/16/1999 18:18:50

FILE:P.25ENGLOBAL01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:EEE 99-329/16:28:52.466 +CDS 194:00:0

OBSERVATION:25ENGLOBAL01

THINNING:NIM 2

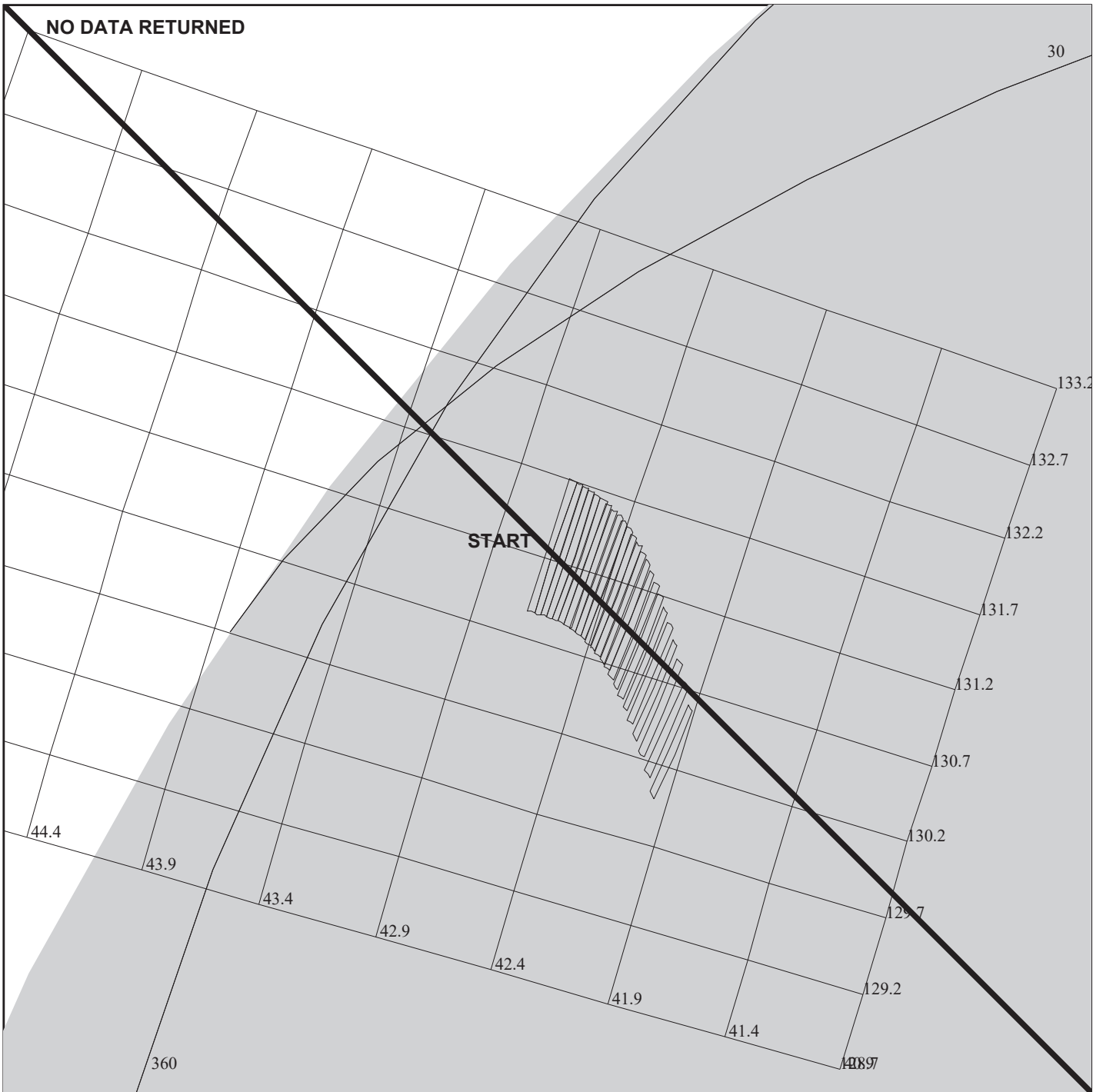
BODY PLOT TIME:TARGET-TIME D= 0 S= 0.700

DESCRIP:EUROPA_JUP_FACE_HEMIS

Europa Jupiter-Facing Hemisphere Global		ACTIVITY ID:	25ENGLOBAL01-		
		START TIME:	99-329/19:39:58.466		
Activity ID: Orbit 25 Target E Inst N OAPEL GLOBAL SeqNo 01 -					
Title	Europa Jupiter-Facing Hemisphere Global Instrument				NIMS
Requestor	NIMS-SWG/M. Segura		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/25/99	Week 48
Start	EEE+CDS	00000189:00:0	99-329/19:39:58.466	EEE+000/03:11:06.000	
End	EEE+CDS	00000233:00:0	99-329/20:24:27.799	EEE+000/03:55:35.333	
Duration		00000044:00:0	000/00:44:29.333	000/00:44:29.333	
Top Label	25ENGLOBAL01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No
Observation Objective					
An excellent opportunity to observe Europa's Jupiter-facing hemisphere (not observed during the Galileo prime mission). This observation will fill a large gap in NIMS Europa longitudinal coverage.					
Data Returned					
Design Detail					
BTG=9.1196 MB, TICS=471, FPT=MPW					
3 scans across illuminated portion of Europa. Long map, Nyquist, range 130000 km, resolution 65 km/nimse1 cone 138, clock 131, phase 42 deg.					
Mosaic modified to cover only center longitudes of illuminated disk.					
Only top 2 of 3 swaths returned.					
Grating Stuck					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM216					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM144					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM360					
Galileo Activity Plan Form			09/28/99	10:48:23	rev 1/99

Grating Step Test #1		ACTIVITY ID: 25NNDETECT01-	
		START TIME: 99-329/23:52:55.800	
Activity ID: Orbit 25 Target N Inst N OAPEL DETECT SeqNo 01 -			
Title	Grating Step Test #1	Instrument	NIMS
Requestor	NIMS-SWG/M. Segura	Team NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date 10/26/99 Week 48
Start	IEE-CDS 00000000:00:0	99-329/23:52:55.800	IEE-000/00:00:00.000
End	IEE-CDS 00000000:00:0	99-330/00:12:14.466	IEE-000/00:00:00.000
Duration	00000000:00:0	000/00:19:19.666	000/00:19:19.666
Top Label	25NNDETECT01-		
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.			
Spacecraft Safed, 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 I25 encounter period.			
This first of three tests captures NIMS Housekeeping about 1 to 2 hours before J25 Perijove.			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99

Grating Step Test #2		ACTIVITY ID: 25NNDETECT02-	
		START TIME: 99-330/02:54:55.733	
Activity ID: Orbit 25 Target N Inst N OAPEL DETECT SeqNo 02 -			
Title	Grating Step Test #2	Instrument	NIMS
Requestor	NIMS-SWG/M. Segura	Team NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date 10/26/99 Week 48
Start	IEE-CDS 00000000:00:0	99-330/02:54:55.733	IEE-000/00:00:00.000
End	IEE-CDS 00000000:00:0	99-330/03:14:14.400	IEE-000/00:00:00.000
Duration	00000000:00:0	000/00:19:19.666	000/00:19:19.666
Top Label	25NNDETECT02-		
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.			
Spacecraft Safed, 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 I25 encounter period.			
This second of three tests captures NIMS Housekeeping about 1 hour before I25 and 1.5 hours after J25 Perijove.			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



25INTIERMS01

TARGET G3.1 lisac:11/16/1999 18:18:50

FILE:P.25INCRIEDN01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 -CDS 16:00:0

OBSERVATION:25INCRIEDN01

165DA:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/7671 TC= 1(23 351)
 A= 182 pD= 1210 SR=17.450 RA50=247.22 DEC50= -0.17 cone= 42.72 clock=131.26
 117DA:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/7671
 1:#s= 1 Cs= -11.90 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1210 rD= 40
 165FA:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 48/9127 TC= 15(66 102)
 A= 334 pD= 0 SR=17.450 RA50=102.00 DEC50= 66.00 cone=100.43 clock=239.04

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 0 S= 6.000

DESCRIP:IO_CREIDNE_OBSERVATION

Io Tierms Observation		ACTIVITY ID: 25INTIERMS01-	
		START TIME: 99-330/03:54:24.400	
Activity ID: Orbit 25 Target I Inst N Oapel TIERMS SeqNo 01 -			
Title	Io Tierms Observation		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE-CDS 00000011:00:0 99-330/03:54:24.400		IEE-000/00:11:07.333
End	IEE-CDS 00000003:00:0 99-330/04:02:29.733		IEE-000/00:03:02.000
Duration	00000008:00:0 000/00:20:13.334		000/00:08:05.333
Top Label	25INTIERMS01-		
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			
<p>Nightside observation to measure thermal emission from Tiermes, a hot spot detected by Voyager, near 23 N. Latitude, 351 W. Longitude.</p> <p>The observation was 25INCRIEDN but the target was changed to accomodate AACs/Scan Platform activity added to the sequence to deal with loss of star scanner at Io closest approach.</p> <p>Spacecraft Safed, No Data Returned</p>			
Design Detail			
<p>BTG=3.0239 MB, TICS=372, FMT=MPW</p> <p>7 Rim obs with 1 Rim allocated for target at 23 N. Latitude, 351 W. Longitude. LM, Nyquist, gain state 4, one scan.</p> <p>Note: scan platform start reposition before end of record, so the last recorded grating cycle or so is smeared.</p> <p>Note: Cone angle 42 degrees - lots of s/c Booms.</p> <p>Grating Stuck</p> <p>Fixed Long Map (XLM), Gain 4, Grating Start 0, MPW, ILM442, ILM360</p>			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



25INSOPOLE01

DESIGN G3.2 kimage:10/28/1999 12:17:11

FILE:P.25ISSPOLE_01

TARGET BODY : IO

MINI:m.25ISSPOLE_01

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 01:00:0

OBSERVATION:25ISSPOLE_01

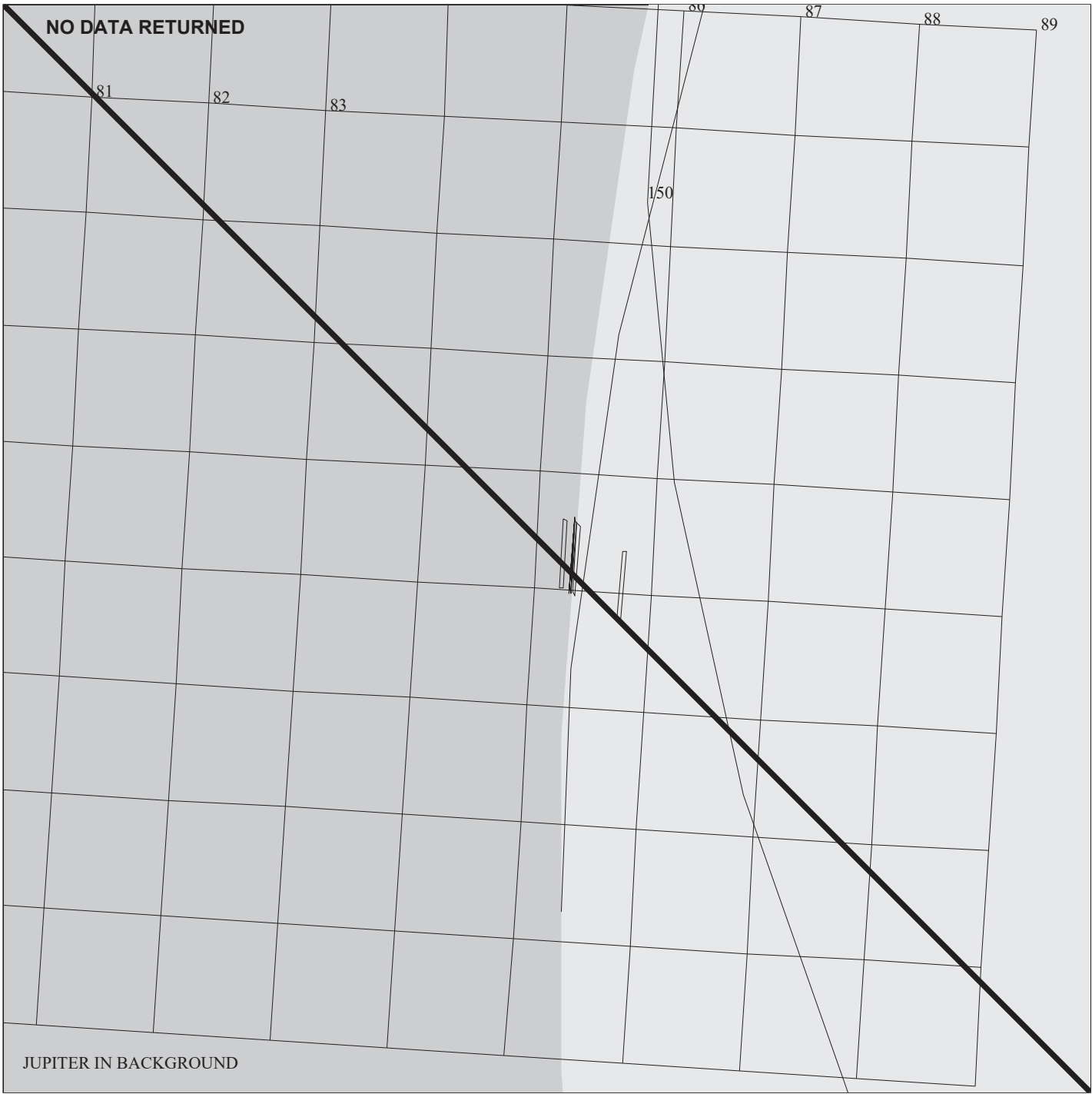
165IA:TT= 0 TMC= 1 C= 0.00 XC= -6.50 BS= 0/0767 TC= 1(-80 90)
 A= 532 pD= 182 SR=17.450 RA50=106.10 DEC50= 54.83 cone= 99.70 clock=250.53
 118IA:#SB= 1 Cs= 0.00 XCs= 6.50 TPP= 26 SR= 3.000 RR= 3.000 BM=F RC= 1 BS= 3/0767
 1:#s= 2 #p= 1 Cr= 0.00 XCr= 0.00
 116DB:OR= 5.000 Cs= 0.00 XCs= -3.25 sD= 26 BS=28/0767 TF=N

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 182 S= 5.500

DESCRIP:south_pole_of_io

Io South Pole Observation		ACTIVITY ID: 25INSOPOLE01-	
		START TIME: 99-330/04:07:33.066	
Activity ID: Orbit 25 Target I Inst N Oapel SOPOLE SeqNo 01 -			
Title	Io Sout Pole Observation		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE+CDS	00000002:00:0	99-330/04:07:33.066 IEE+000/00:02:01.333
End	IEE+CDS	00000003:00:0	99-330/04:08:33.733 IEE+000/00:03:02.000
Duration		00000001:00:0	000/00:01:00.667 000/00:01:00.667
Top Label	25INSOPOLE01-		
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			
To obtain compositional information of material near pole.			
Spacecraft Safed, No Data Returned			
Design Detail			
BTG=0.1872 MB, TICS=25, FMT=MPW			
Joint observation with SSI.			
NIMS targeted to center of SSI mosaic.			
Latitude ~80 degrees south.			
Long Map, gain state 4			
Grating Stuck			
Safe Mode (XLS), Gain 4, Grating Start 0, MPW, ILM17, ILM15			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99



165DC:TT= 0 TMC= 1 C= -4.00 XC= 0.00 BS= 0/1493 TC= 1(1.19 156)
 A= 260 pD= 356 SR=17.450 RA50=147.53 DEC50= 70.49 cone= 85.11 clock=231.63
 117DC:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/1493
 1:#s= 1 Cs= -3.40 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 356 rD= 2

25INPRMETH01

DESIGN G3.2 lisac:10/26/1999 13: 1:50

FILE:P.25INPRMETH01

TARGET BODY : IO

MINI:m.25INPRMETH01

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 05:00:0

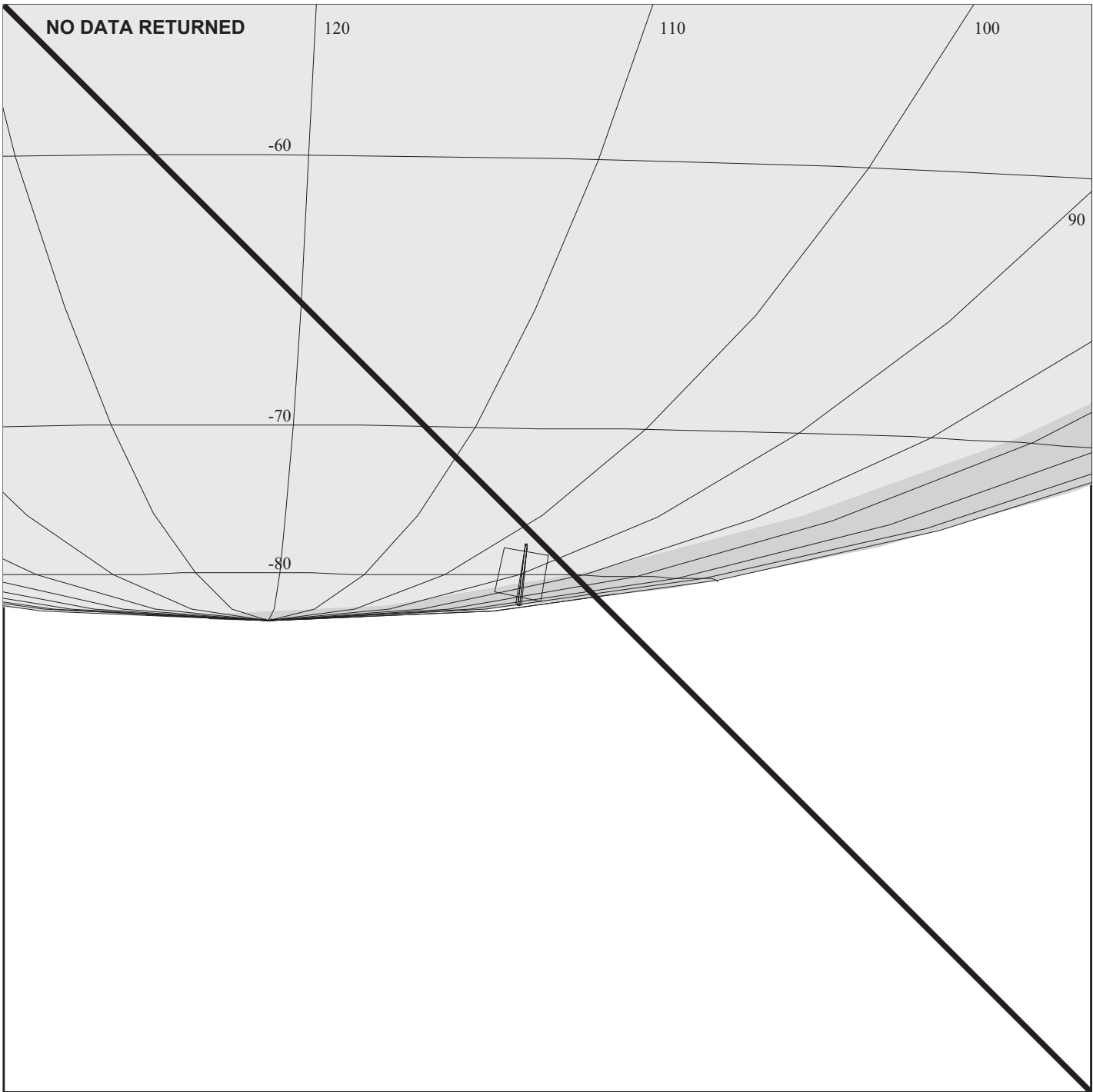
OBSERVATION:25INPRMETH01

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 356 S= 7.000

DESCRIP:NIMS_IO_PROMETHEUS

Io Prometheus Observation		ACTIVITY ID:	25INPRMETH01-		
		START TIME:	99-330/04:10:35.066		
Activity ID: Orbit 25 Target I Inst N Oapel PRMETH SeqNo 01 -					
Title	Io Prometheus Observation		Instrument		NIMS
Requestor	NIMS-SWG/M. Segura		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/26/99	Week 48
Start	IEE+CDS 00000005:00:0		99-330/04:10:35.066	IEE+000/00:05:03.333	
End	IEE+CDS 00000007:00:0		99-330/04:12:36.399	IEE+000/00:07:04.666	
Duration	00000002:00:0		000/00:02:01.333	000/00:02:01.333	
Top Label	25INPRMETH01-				
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					
To obtain temperatures and measure SO2 gas on the Prometheus eruption column.					
Spacecraft Safed, No Data Returned					
Design Detail					
BTG=0.8640 MB, TICS=108, FMT=MPW					
Limb scan extending from surface outwards. Joint observation with SSI. Jupiter is in the background off-limb.					
Long Map, gain state 4.					
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



165IC:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/2041 TC= 1(-79.93 89.91)
 A= 182 pD= 156 SR=17.450 RA50= 59.80 DEC50= 23.75 cone=141.83 clock=273.45

25INSPOLE02

DESIGN G3.2 kimage:10/28/1999 10:18:20

FILE:P.25ISSPOLE_02

TARGET BODY : IO

MINI:m.25ISSPOLE_02

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 08:00:0

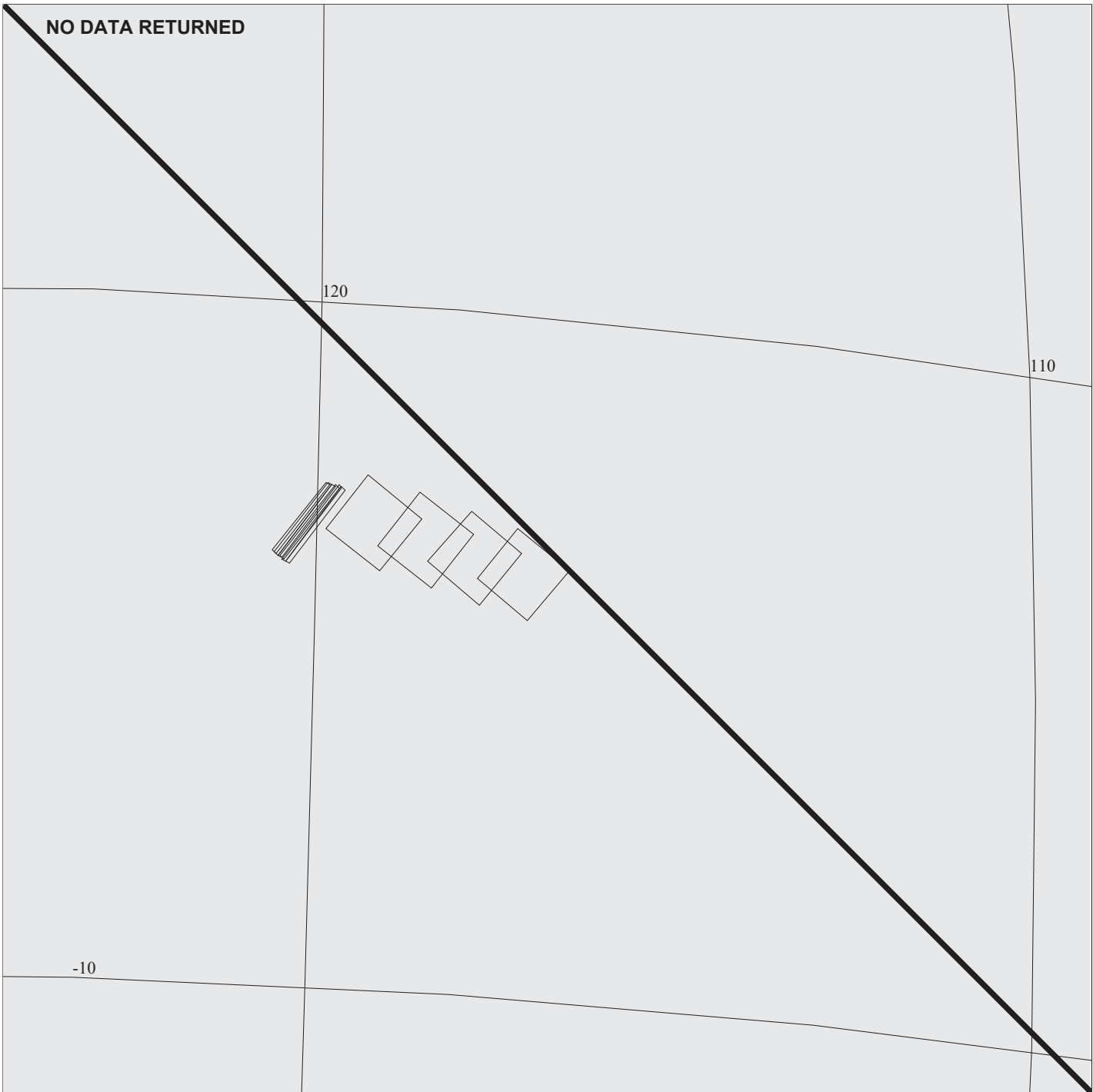
OBSERVATION:25ISSPOLE_02

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 156 S= 4.500

DESCRIP:south_pole_of_io

Io South Pole Observation		ACTIVITY ID: 25INSOPOLE02-	
		START TIME: 99-330/04:13:37.066	
Activity ID: Orbit 25 Target I Inst N Oapel SOPOLE SeqNo 02 -			
Title	Io South Pole Observation		Instrument
Requestor	NIMS-SWG/M. Segura	Team	NIMS Working Group
			NIMS SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE+CDS 00000008:00:0	99-330/04:13:37.066	IEE+000/00:08:05.333
End	IEE+CDS 00000010:00:0	99-330/04:15:38.399	IEE+000/00:10:06.666
Duration	00000002:00:0	000/00:02:01.333	000/00:02:01.333
Top Label	25INSOPOLE02-		
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			
To obtain compositional information of materials in south polar region.			
Spacecraft Safed, No Data Returned			
Design Detail			
BTG=0.1872 MB, TICS=25, FMT=MPW			
Joint observation with SSI.			
NIMS targetted to center of SSI mosaic.			
Latitude ~75 degrees south.			
Long Map, gain state 4			
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



165ID:TT= 0 TMC= 1 C= 46.50 XC= -22.40 BS= 0/2405 TC= 1(-2.8 122.7)
 A= 182 pD= 312 SR=17.450 RA50= 48.20 DEC50= 50.07 cone=131.52 clock=235.16
 118ID:#SB= 1 Cs= -6.50 XCs= 2.50 TPP= 26 SR= 3.000 RR= 3.000 BM=F RC= 1 BS= 3/2405
 1:#s= 4 #p= 1 Cr= 0.00 XCr= 0.00
 116DE:OR= 5.000 Cs= -8.00 XCs= 5.00 sD= 26 BS=49/2405 TF=N

25INEMAKNG01

DESIGN G3.2 kimage:10/28/1999 10:23:27

FILE:P.25ISEMAKNG01

TARGET BODY : IO

MINI:m.25ISEMAKNG01

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 10:00:0

OBSERVATION:25ISEMAKNG01

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 312 S= 5.500

DESCRIP:Io_Emakong01

Io Emakong Observation		ACTIVITY ID: 25INEMAKNG01-	
		START TIME: 99-330/04:16:39.066	
Activity ID: Orbit 25 Target I Inst N Oapel EMAKNG SeqNo 01 -			
Title	Io Emakong Observation		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE+CDS 00000011:00:0	99-330/04:16:39.066	IEE+000/00:11:07.333
End	IEE+CDS 00000012:00:0	99-330/04:17:39.733	IEE+000/00:12:08.000
Duration	00000001:00:0	000/00:01:00.667	000/00:01:00.667
Top Label	25INEMAKNG01-		
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			
To obtain compositional information of material in Emakong Patera Caldera.			
Spacecraft Safed, No Data Returned			
Design Detail			
BTG=0.3744 MB, TICS=48, FMT=MPW			
Joint observation with SSI.			
NIMS targetted west of SSI mosaic.			
Target Longitude 120 W.			
Long Map, gain state 2			
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



25INITUPAN01

DESIGN G3.2 kimage:10/28/1999 12:18:52

FILE:P.25ISTUPAN_01

TARGET BODY : IO

MINI:m.25ISTUPAN_01

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 13:00:0

OBSERVATION:25ISTUPAN_01

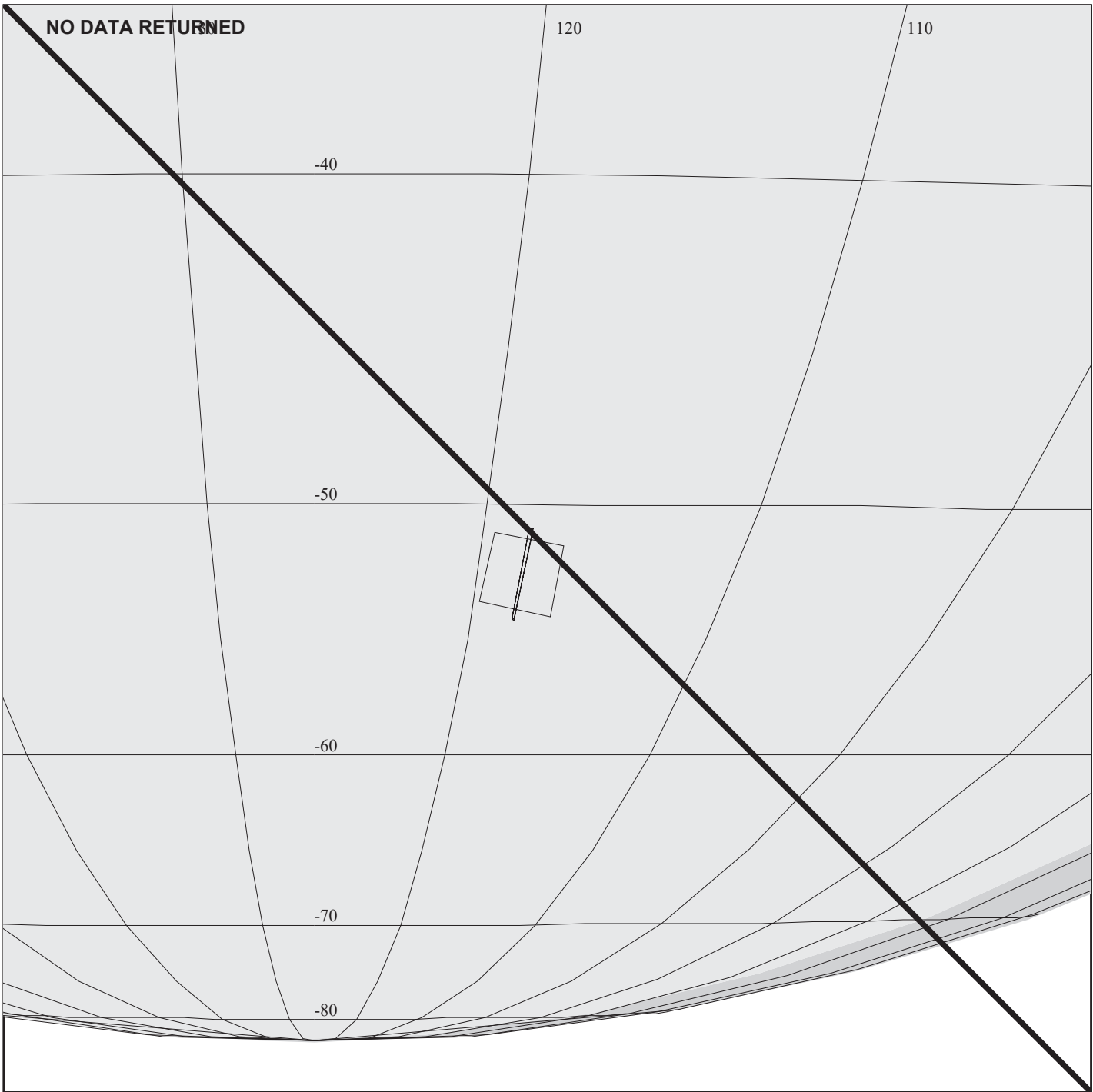
165IE:TT= 0 TMC= 1 C= 7.50 XC= -1.00 BS= 0/2951 TC= 1(-18.8 141.1)
 A= 182 pD= 208 SR=13.300 RA50= 63.16 DEC50= 36.98 cone=133.12 clock=258.04
 118IE:#SB= 1 Cs= -6.50 XCs= 0.00 TPP= 26 SR= 3.000 RR= 3.000 BM=F RC= 1 BS= 3/2951
 1:#s= 3 #p= 1 Cr= 0.00 XCr= 0.00
 116DF:OR= 5.000 Cs= 4.00 XCs= -3.00 sD= 26 BS=41/2951 TF=N

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 208 S= 5.000

DESCRIP:Io_Tupan

Io Tupan Observation		ACTIVITY ID: 25INITUPAN01-	
		START TIME: 99-330/04:19:41.066	
Activity ID: Orbit 25 Target I Inst N Oapel ITUPAN SeqNo 01 -			
Title	Io Tupan Observation		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE+CDS 00000014:00:0		99-330/04:19:41.066 IEE+000/00:14:09.333
End	IEE+CDS 00000015:00:0		99-330/04:20:41.733 IEE+000/00:15:10.000
Duration	00000001:00:0		000/00:01:00.667 000/00:01:00.667
Top Label	25INITUPAN01-		
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			
To obtain compositional information of materials in hot spot Tupan.			
Spacecraft Safed, No Data Returned			
Design Detail			
BTG=0.1872 MB, TICS=25, FMT=MPW			
Joint observation with SSI, target caldera at -18 S, 141 W.			
NIMS targetted to center of SSI mosaic.			
Long Map, gain state 2			
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



165IF:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/3497 TC= 1(-52.5 118.3)
 A= 160 pD= 182 SR=17.450 RA50= 57.24 DEC50= 23.54 cone=144.08 clock=272.22

25INSAPPNG02

DESIGN G3.2 kimage:10/28/1999 10:37:13

FILE:P.25ISSAPPNG02

TARGET BODY : IO

MINI:m.25ISSAPPNG02

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 16:00:0

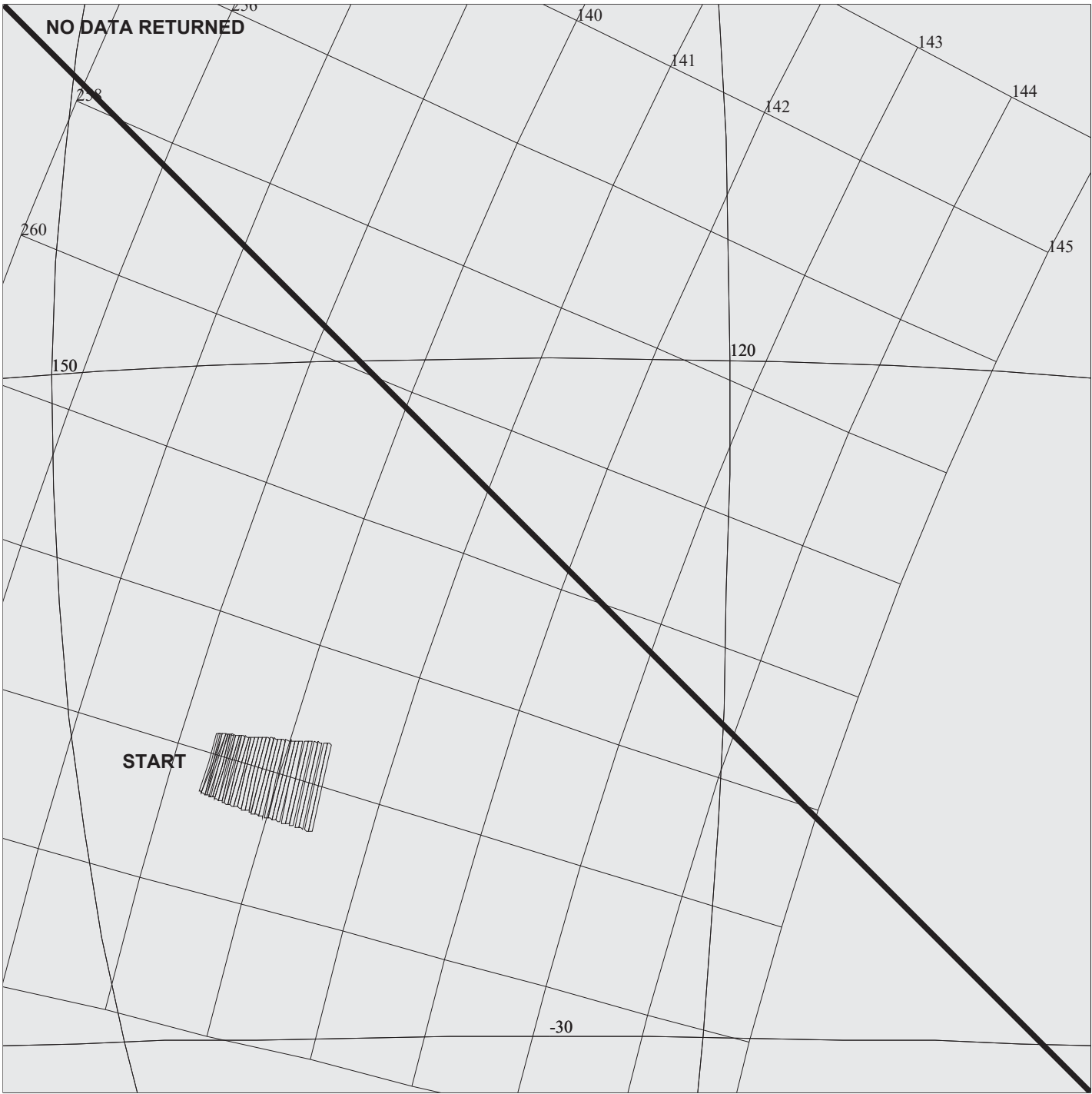
OBSERVATION:25ISSAPPNG02

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 182 S= 4.000

DESCRIP:lo_SAPPNG02

Io Sapping Materials Observation		ACTIVITY ID:	25INSAPPNG02-		
		START TIME:	99-330/04:21:42.399		
Activity ID: Orbit 25 Target I Inst N Oapel SAPPNG SeqNo 02 -					
Title	Io Sapping Materials Observation		Instrument		NIMS
Requestor	NIMS-SWG/M. Segura		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/26/99	Week 48
Start	IEE+CDS 00000016:00:0		99-330/04:21:42.399	IEE+000/00:16:10.666	
End	IEE+CDS 00000017:00:0		99-330/04:22:43.066	IEE+000/00:17:11.333	
Duration	00000001:00:0		000/00:01:00.667	000/00:01:00.667	
Top Label	25INSAPPNG02-				
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					
To obtain compositional information of sapping materials.					
Spacecraft Safed, No Data Returned					
Design Detail					
BTG=0.1872 MB, TICS=25, FMT=MPW					
Joint observation with SSI					
NIMS targetted to center of SSI mosaic, near latitude 55 degrees S.					
Long Map, gain state 3					
Grating Stuck					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM360					
Galileo Activity Plan Form			09/28/99	10:48:23	rev 1/99



165DI:TT= 0 TMC= 1 C= -9.00 XC= 0.00 BS= 0/4405 TC= 1(-18 141)
 A= 182 pD= 1810 SR= 5.850 RA50= 60.11 DEC50= 29.01 cone=139.33 clock=266.14
 117DI:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/4405
 1:#s= 1 Cs= 18.00 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 1810 rD= 40

25INITUPAN02

TARGET G3.1 lisac:10/15/1999 11:16:32

FILE:P.25INITUPAN02

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 21:00:0

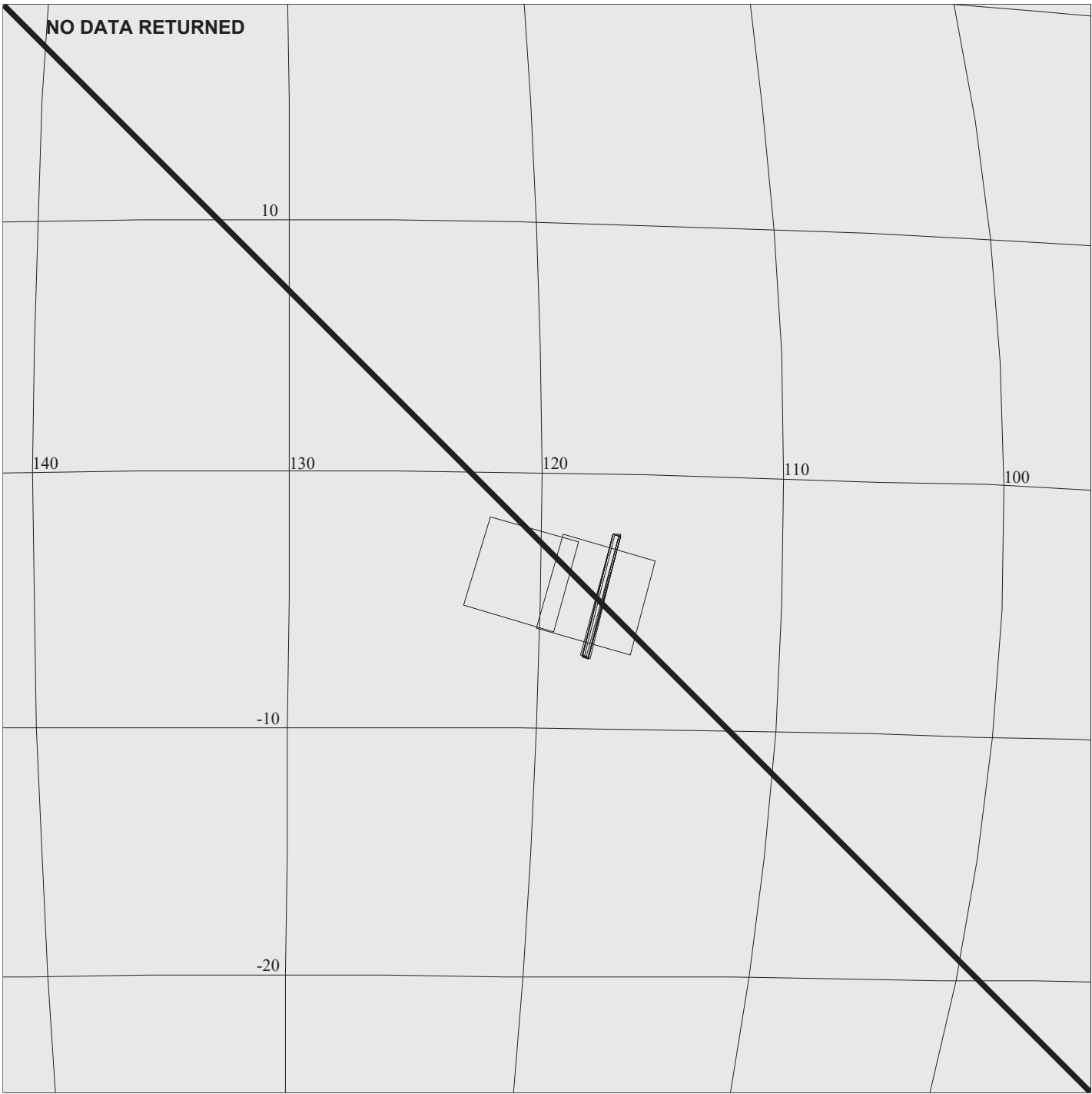
OBSERVATION:25INITUPAN02

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 1810 S= 2.000

DESCRIP:IO_TUPAN_OBSERVATION

Io Tupan Observation		ACTIVITY ID: 25INITUPAN02-	
		START TIME: 99-330/04:23:43.733	
Activity ID: Orbit 25 Target I Inst N Oapel ITUPAN SeqNo 02 -			
Title	Io Tupan Observation		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE+CDS 00000018:00:0	99-330/04:23:43.733	IEE+000/00:18:12.000
End	IEE+CDS 00000029:00:0	99-330/04:34:51.066	IEE+000/00:29:19.333
Duration	00000008:00:0	000/00:11:07.333	000/00:11:07.333
Top Label	25INITUPAN02-		
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			
To investigate the composition of materials in the hot spot Tupan.			
Spacecraft Safed, No Data Returned			
Design Detail			
BTG=3.8879 MB, TICS=477, FMT=MPW			
Single scan mosaic centered at -18 degrees Latitude, 141 degrees W. Longitude. Long Map, Nyquist, gain state 2			
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



165IH:TT= 0 TMC= 1 C= 0.50 XC= 0.90 BS= 0/6773 TC= 1(-3.5 120.89)
 A= 364 pD= 676 SR=17.450 RA50= 54.52 DEC50= 25.19 cone=145.54 clock=267.72
 116IH:OR= 5.000 Cs= 6.50 XCs= 0.00 sD= 26 BS=26/6955 TF=N

25INEMAKNG02

DESIGN G3.2 kimage:10/28/1999 10:46:13

FILE:P.25ISEMAKNG02

TARGET BODY : IO

MINI:m.25ISEMAKNG02

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 34:00:0

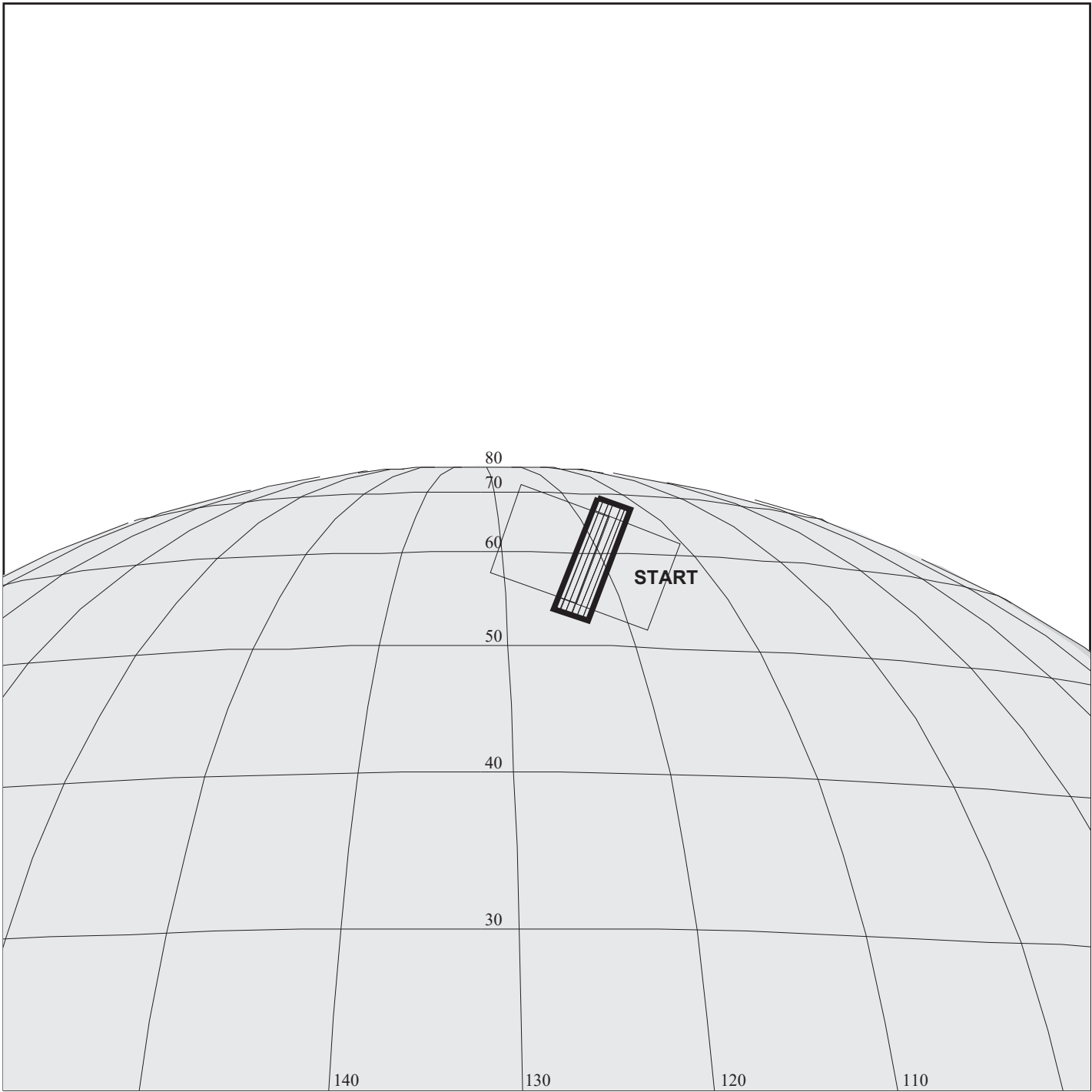
OBSERVATION:25ISEMAKNG02

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 676 S= 2.500

DESCRIP:Io_Emakong02

Io Emakong Observation		ACTIVITY ID: 25INEMAKNG02-	
		START TIME: 99-330/04:43:57.066	
Activity ID: Orbit 25 Target I Inst N Oapel EMAKNG SeqNo 02 -			
Title	Io Emakong Observation		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE+CDS 00000038:00:0		99-330/04:43:57.066 IEE+000/00:38:25.333
End	IEE+CDS 00000039:00:0		99-330/04:44:57.733 IEE+000/00:39:26.000
Duration	00000001:00:0		000/00:01:00.667 000/00:01:00.667
Top Label	25INEMAKNG02-		
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			
To obtain compositional information of materials in Emakong Patera Caldera.			
Spacecraft Safed, No Data Returned			
Design Detail			
BTG=0.3744 MB, TICS=48, FMT=MPW			
Joint observation with SSI.			
Target caldera at longitude 120 W.			
NIMS targetted to center of SSI frame.			
Long Map, gain state 2			
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



25INGIANTS01

DESIGN G3.2 lisac:10/29/1999 10:34:13

FILE:P.25ISGIANTS01

TARGET BODY : IO

MINI:m.25ISGIANTS01

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 41:00:0

OBSERVATION:25ISGIANTS01

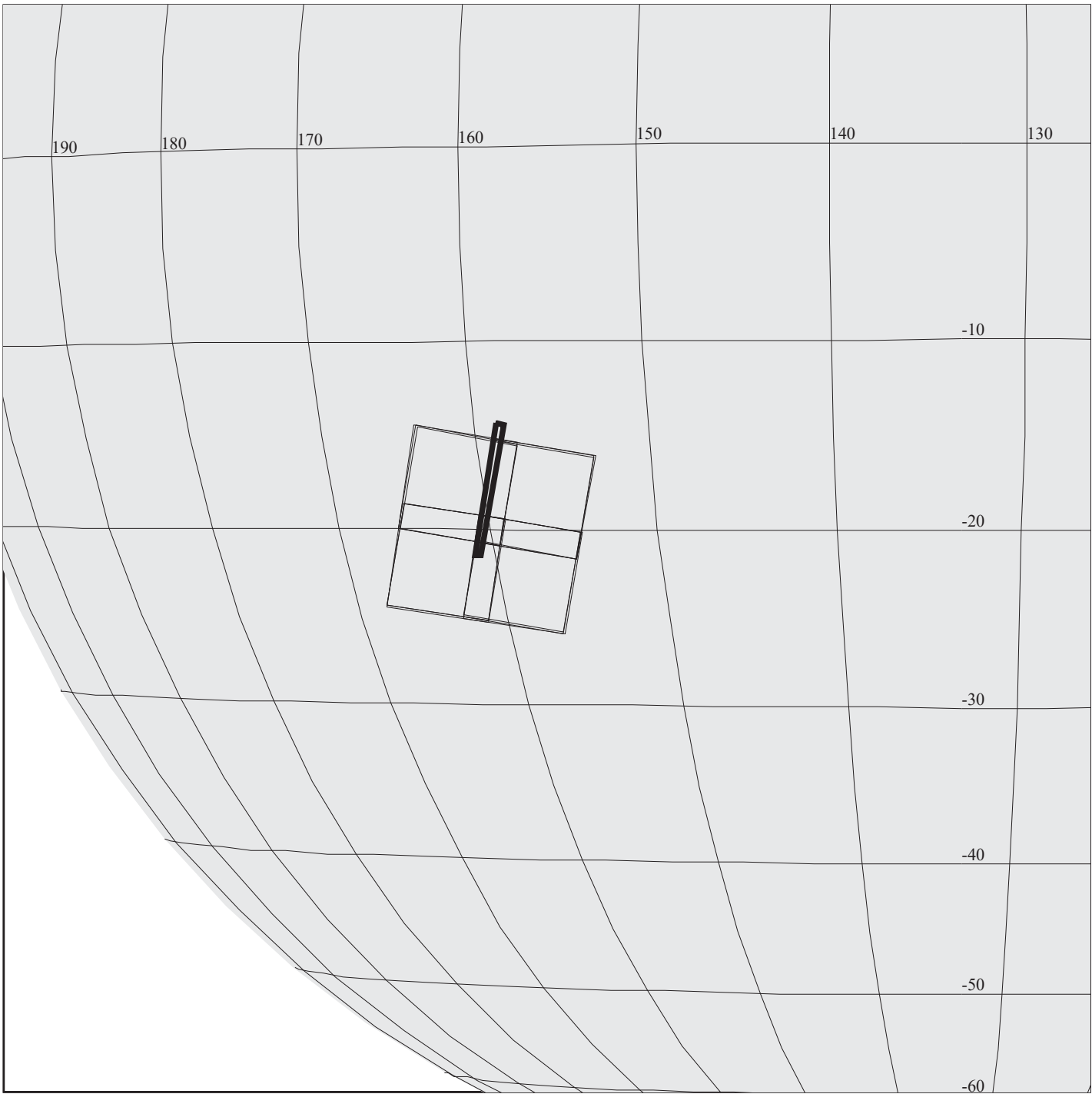
165J:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/8045 TC= 1(61 125)
 A= 364 pD= 598 SR=17.450 RA50= 54.13 DEC50= 29.05 cone=143.79 clock=261.73
 118J:#SB= 1 Cs= 6.50 XCs= 0.00 TPP= 26 SR= 2.000 RR= 3.000 BM=F RC= 1 BS= 3/8045
 1:#s= 2 #p= 1 Cr= 0.00 XCr= 0.00
 117DZ:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/8227
 1:#s= 1 Cs= -4.10 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 420 rD= 2

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 598 S= 2.000

DESCRIP:lo_giant_calderas

Io Giant Calderas Observation		ACTIVITY ID:	25INGIANTS01-		
		START TIME:	99-330/04:50:01.066		
Activity ID: Orbit 25 Target I Inst N Oapel GIANTS SeqNo 01 -					
Title	Io Giant Calderas Observation		Instrument		NIMS
Requestor	NIMS-SWG/M. Segura		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/26/99	Week 48
Start	IEE+CDS 00000044:00:0		99-330/04:50:01.066	IEE+000/00:44:29.333	
End	IEE+CDS 00000045:65:0		99-330/04:51:45.066	IEE+000/00:46:13.333	
Duration	00000001:65:0		000/00:01:44.000	000/00:01:44.000	
Top Label	25INGIANTS01-				
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					
To obtain compositional information of materials of Io's Giant calderas in the Northern Hemisphere.					
Data Returned					
Design Detail					
BTG=0.7488 MB, TICS=94, FMT=MPW					
Joint observation with SSI, target near 60 degrees N. Latitude. NIMS targetted to center of SSI mosaic. Long Map, gain state 3					
Grating STuck					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM288					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM72					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM360					
Galileo Activity Plan Form			09/28/99	10:48:23	rev 1/99



25INCULANN01

DESIGN G3.2 kmage:10/28/1999 10:48:31

FILE:P.25ISCULANN01

TARGET BODY : IO

MINI:m.25ISCULANN01

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 47:00:0

OBSERVATION:25ISCULANN01

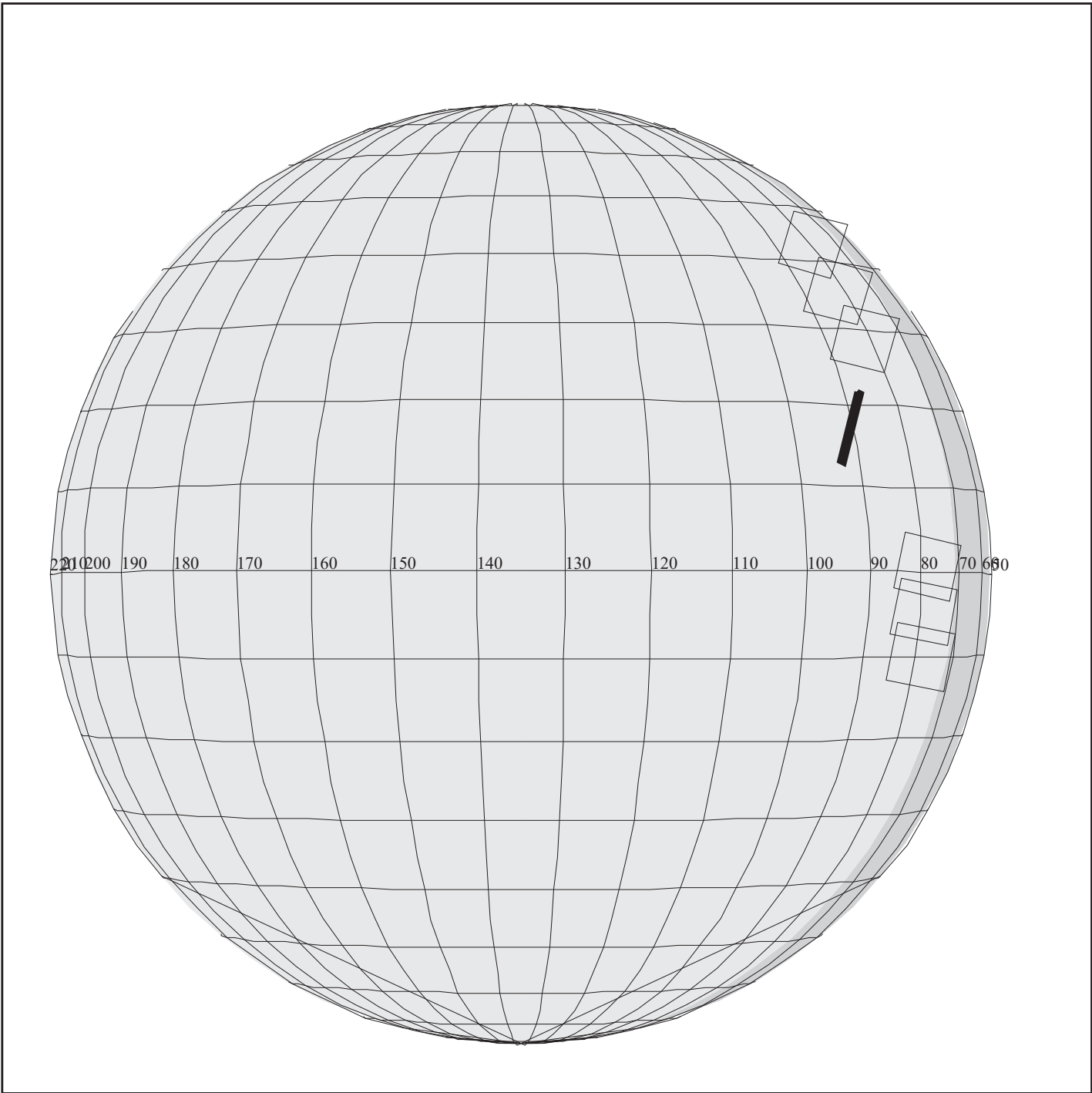
165IK:TT= 0 TMC= 1 C= 3.09 XC= 3.09 BS= 0/9139 TC= 1(-20 160)
 A= 364 pD= 702 SR=12.710 RA50= 58.37 DEC50= 21.97 cone=143.72 clock=275.36
 118IK:#SB= 2 Cs= -6.10 XCs= 0.00 TPP= 26 SR= 3.000 RR= 3.000 BM=F RC= 3 BS= 3/9139
 1:#s= 2 #p= 1 Cr= 6.10 XCr= 6.10
 2:#s= 2 #p= 1 Cr= 6.10 XCr= -6.10
 116DL:OR= 5.000 Cs= 2.50 XCs= 0.00 sD= 26 BS=78/9503 TF=N

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 702 S= 2.000

DESCRIP:Io_Culann

Io Culann Observation		ACTIVITY ID: 25INCULANN01-	
		START TIME: 99-330/04:58:06.399	
Activity ID: Orbit 25 Target I Inst N Oapel CULANN SeqNo 01 -			
Title	Io Culann Observation		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE+CDS 00000052:00:0		99-330/04:58:06.399 IEE+000/00:52:34.666
End	IEE+CDS 00000054:00:0		99-330/05:00:07.733 IEE+000/00:54:36.000
Duration	00000002:00:0		000/00:02:01.334 000/00:02:01.334
Top Label	25INCULANN01-		
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			
To obtain compositional information of deposits in and around the hot spot Culann near -20 deg Latitude, 160 deg W. Longitude.			
Data Returned			
Design Detail			
BTG=0.3744 MB, TICS=48, FMT=MPW			
Joint observation with SSI			
NIMS targetted to center of SSI mosaic near -20 deg Lat, 160 deg W. Long.			
Long Map, gain state 2			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM288			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM72			
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



25ININTERM01

DESIGN G3.2 kmage:10/28/1999 10:49:38

FILE:P.25ISTERM__01

TARGET BODY : IO

MINI:m.25ISTERM__01

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 57:00:0

OBSERVATION:25ISTERM__01

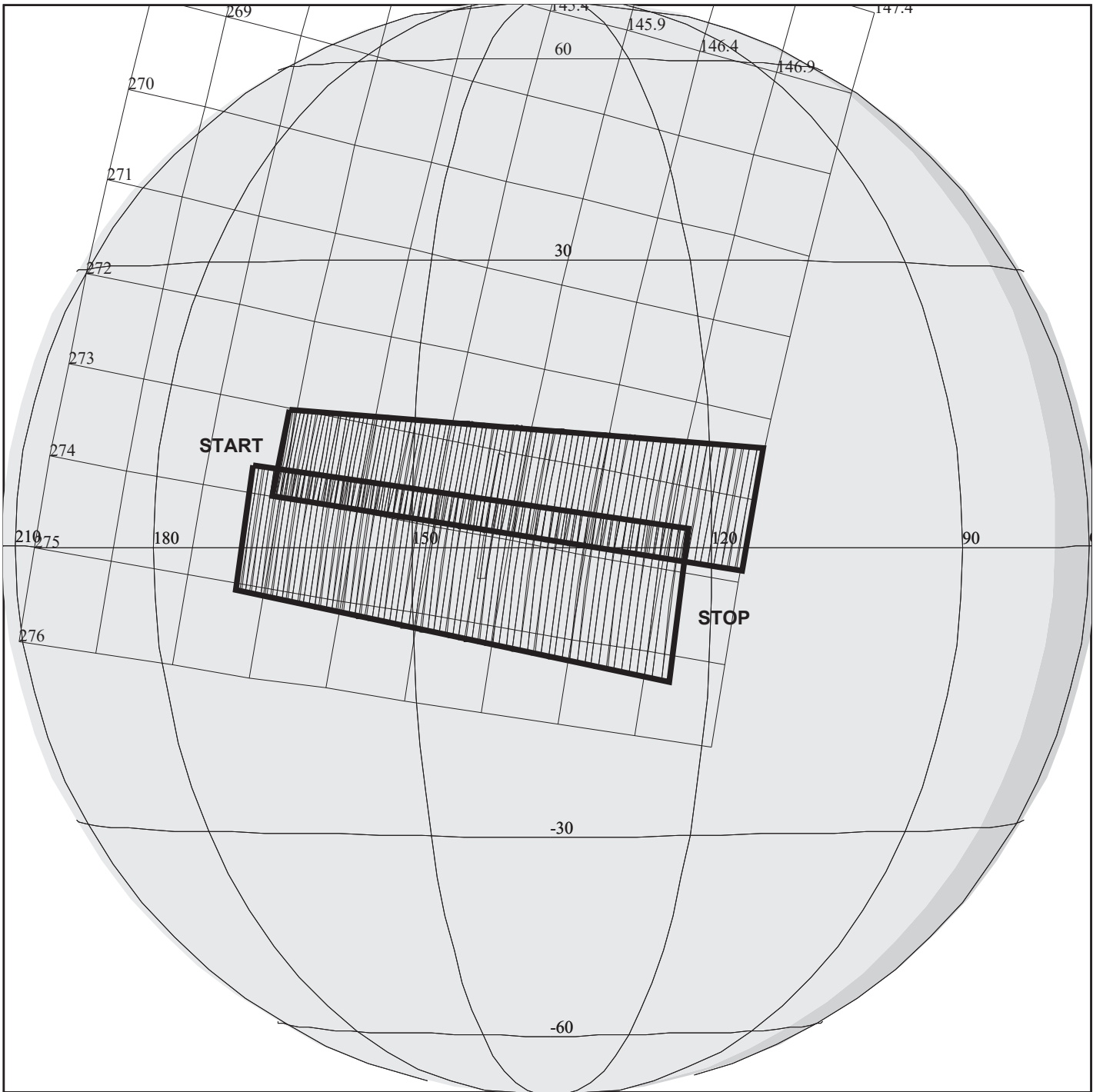
165IL:TT= 0 TMC= 1 C= -24.00 XC= -18.00 BS= 0/0959 TC= 1(20 68)
 A= 364 pD= 780 SR=17.450 RA50= 52.38 DEC50= 24.41 cone=147.61 clock=267.18
 118IL:#SB= 1 Cs= 5.60 XCs= 5.60 TPP= 26 SR= 5.000 RR= 3.000 BM=F RC= 1 BS= 3/0959
 1:#s= 3 #p= 1 Cr= 0.00 XCr= 0.00
 116IL:OR= 6.000 Cs= 17.70 XCs= 29.00 sD= 52 BS=39/1141 TF=N
 118IM:#SB= 1 Cs= 1.30 XCs= 6.20 TPP= 26 SR= 3.000 RR= 3.000 BM=F RC= 1 BS=68/1141
 1:#s= 3 #p= 1 Cr= 0.00 XCr= 0.00
 116DM:OR= 7.000 Cs= -18.00 XCs= -28.50 sD= 52 BS=13/1505 TF=N

THINNING:NIM 1

BODY PLOT TIME:TARGET-TIME D= 780 S= 0.900

DESCRIP:lo_terminator

Io Near Terminator Observation		ACTIVITY ID:	25ININTERM01-		
		START TIME:	99-330/05:07:12.399		
Activity ID: Orbit 25 Target I Inst N Oapel INTERM SeqNo 01 -					
Title	Io Near Terminator Observation		Instrument		NIMS
Requestor	NIMS-SWG/M. Segura		Team	NIMS Working Group	SWG
Time System	CDS	Load ID	Calendar Date	11/26/99	Week 48
Start	IEE+CDS 00000061:00:0		99-330/05:07:12.399	IEE+000/01:01:40.666	
End	IEE+CDS 00000063:00:0		99-330/05:09:13.733	IEE+000/01:03:42.000	
Duration	00000002:00:0		000/00:02:01.334	000/00:02:01.333	
Top Label	25ININTERM01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	0	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No
Observation Objective					
To obtain compositional information of materials of hot spot Gish Bar.					
Data Returned					
Design Detail					
BTG=0.3744 MB, TICS=48, FMT=MPW					
Joint observation with SSI.					
Target Gish Bar at 17 deg N. Latitude, 90 deg W. Longitude.					
SSI has mosaic along terminator, NIMS targetted ~20 deg from terminator.					
Long Map, gain state 3					
Grating Stuck					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM288					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM72					
Fixed Long Map (XLM), Gain 3, Grating Start 0, MPW, ILM442, ILM360					
Galileo Activity Plan Form			09/28/99	10:48:23	rev 1/99



25INREGION01

165DN:TT= 0 TMC= 1 C= -35.00 XC= -3.00 BS= 0/2231 TC= 1(1 133)
 A= 182 pD= 9090 SR= 6.630 RA50= 57.29 DEC50= 22.74 cone=144.35 clock=273.50
 117DN:#SB= 1 OR= 0.030 RR= 7.680 BM=F RC= 1 BS= 0/2231
 1:#s= 2 Cs= 45.10 XCs= 0.00 Cr= -40.00 XCr= 8.00 sD= 4526 rD= 32

TARGET G3.1 lisac:10/15/1999 11:16:32

FILE:P.25INREGION01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990923-tour.NS

PERIAPSIS:

START:IEE 99-330/04:05:31.733 +CDS 64:00:0

OBSERVATION:25INREGION01

THINNING:NIM 2

BODY PLOT TIME:TARGET-TIME D= 9090 S= 1.000

DESCRIP:NIMS_IO_REGIONAL_OBSERVATION

Io Regional Observation		ACTIVITY ID: 25INREGION01-	
		START TIME: 99-330/05:09:13.733	
Activity ID: Orbit 25 Target I Inst N Oapel REGION SeqNo 01 -			
Title	Io Regional Observation		Instrument
Requestor	NIMS-SWG/M. Segura		NIMS
	Team	NIMS	Working Group
			SWG
Time System	CDS	Load ID	Calendar Date 11/26/99 Week 48
Start	IEE+CDS 00000063:00:0		99-330/05:09:13.733 IEE+000/01:03:42.000
End	IEE+CDS 00000117:00:0		99-330/06:03:49.733 IEE+000/01:58:18.000
Duration	00000054:00:0		000/00:54:36.000 000/00:54:36.000
Top Label	25INREGION01-		
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			
To obtain compositional information of a variety of different terrain types.			
Data Returned			
Design Detail			
BTG=21.5992 MB, TICS=2639, FMT=MPW			
2 scan mosaic centered on center of lit disk near 133 deg W. Longitude			
4 Rims target time			
Long Map, Nyquist, gain state 2			
Grating Stuck			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM288			
Fixed Long Map (XLM), Gain 2, Grating Start 0, MPW, ILM442, ILM72			
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

Grating Step Test #3		ACTIVITY ID: 25NNDETECT03-	
		START TIME: 99-330/10:50:01.733	
Activity ID: Orbit 25 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 10/26/99 Week 48
Start	IEE+CDS 00000000:00:0	99-330/10:50:01.733	IEE+000/00:00:00.000
End	IEE+CDS 00000000:00:0	99-330/11:08:27.066	IEE+000/00:00:00.000
Duration	00000000:00:0	000/00:19:19.666	000/00:19:19.666
Top Label	25NNDETECT03-		
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 I25 encounter period.			
This third of three tests captures NIMS Housekeeping about 6 hours after the last NIMS I25 observation.			
Galileo Activity Plan Form		09/28/99 10:48:23 rev 1/99	

NIMS Chopper Off		ACTIVITY ID: 25NNCHOPOF01-	
		START TIME: 99-331/01:04:21.733	
Activity ID: Orbit 25 Target N Inst N OAPEL CHOPOF SeqNo 01 -			
Title	NIMS CHOPPER OFF	Instrument	
Requestor	NIMS-SWG/M. Segura	Team NIMS	Working Group NIMS SWG
Time System	CDS	Load ID	Calendar Date 11/27/99 Week 48
Start	IEE+CDS 00001245:00:0	99-331/01:04:21.733	IEE+000/20:58:50.000
End	IEE+CDS 00001255:00:0	99-284/01:14:28.399	IEE+000/21:08:56.666
Duration	00000010:00:0	000/00:10:06.666	000/00:10:06.666
Top Label	25NNCHOPOF01-		
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			
Turn off NIMS Chopper.			
Spacecraft Safed, No Data Returned			
Design Detail			
Reload NIMS phase 2 software (25NNRELOAD01)			
Chopper to 63Hz mode			
Chopper off			
Galileo Activity Plan Form		09/28/99 10:48:23	rev 1/99

NIMS Real-Time PCT Calibration		ACTIVITY ID: 25NNPCTRLT01-	
		START TIME: 99-335/22:00:27.466	
Activity ID: Orbit 25 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 12/01/99 Week 48
Start	PCT+CDS 0:00:0	99-335/22:00:27.466	PCT+000/00:00:00.000
End	PCT+CDS 00000465:00:0	99-336/05:50:37.466	PCT+000/07:50:10.000
Duration	00000465:00:0	000/07:50:10.000	000/07:50:10.000
Top Label	25NNPCTRLT01-		
Bottom Label			
Plot Key	NIMS	Type	SCI
CDS Bytes	275	Report Options	BOTH
CDS Source	OAP	Spin State	DUAL
		Scan Platform	Yes
		DMS	No
Observation Objective			
<p>This observation is an NIMS photometric calibration usint the PCT target. The data will be used to calibrate the NIMS visible detectors. The calibration data will be returned using Real-Time telemetry. At this time the off sun angle is about x.x degrees.</p>			
<p>No Data Returned due to loss of 70m antenna time. This was in support of MPL.</p>			
Design Detail			
<ol style="list-style-type: none"> 1) Turn off PCT heaters 6 hours before calibration. 2) Scan Platform is at Safe/Unstow (cone = 153.00, clock = 0.00) 3) Chopper on, Gain State 4, 4) Set NIMS to Long Map Mode, ETB = PCT252, Mirror Blocking (1B, 1B) (11011, 11011) 5) Select 2 RIMs of Dark in Real-Time (Return 2 LM grating cycle) 6) Slew to PCT (cone 54.88, clock = 244.07) 7) Select 10 RIMS of PCT in Real-Time (Return 10 LM grating cycles) 8) Slew to Safe (cone = 153.00, clock = 0.00) 9) NIMS to Safe Mode, Reset Mirror Blocking (00,00) (00000, 00000) 10) Chopper Off. 			
Fixed Long Map (XLM), Gain 4, Grating Start 0, R/T, PCT252			
Galileo Activity Plan Form		03/29/99 12:47:03	rev 6/95

NIMS RCT Real Time Calibration		ACTIVITY ID: 25NNRCTRLT01-	
		START TIME: 99-353/17:59:37.933	
Activity ID: Orbit 25 Target N Inst N OAPEL RCTRLT SeqNo 01 -			
Title	NIMS RCT Real Time Calibration		Instrument
Requestor	NIMS-AWG/K. BAINES	Team	NIMS Working Group
			NIMS AWG
Time System	CDS	Load ID	Calendar Date 12/19/99 Week 51
Start	RTA+CDS 00000000:00:0	99-353/17:59:37.933	RTA+000/00:00:00.000
End	RTA+CDS 00000787:00:0	99-354/07:15:22.599	RTA+000/13:15:44.666
Duration	00000787:00:0	000/13:15:44.666	000/13:15:44.666
Top Label	25NNRCTRLT01-		
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>			
Design Detail			
<ol style="list-style-type: none"> 1) Turn on RCT Heaters for 12 hours. 2) Set Engineering Variable Map to return NIMS Temps more frequently. 3) Set NIMS to Long Map Mode, Gain state 1, Chopper Reference, Mirror Blocking (11011,11011), ETB=RCT252. 4) Pause playback before using scan platform. 5) Slew to Dark (cone = 119.7), return 1 grating cycle (12 mf) in R/T 6) Slew to RCT (cone = 0.0), return 2 grating cycles (12 mf) in R/T 7) Slew to Dark (cone = 119.7), return 1 grating cycle (12 mf) in R/T 8) Slew to Safe (cone = 153.0) 9) Long Map, gain state 4, ETB=OPCAL48. 10) Use 37IST to turn on OPCAL Lamp (two times). 11) Select NIMS Real Time 1 Rim OPCAL, 1 Rim Dark, 1 Rim OPCAL 12) Set NIMS to Safe Mode and turn off Chopper. 13) Resume Playback after using scan platform. <p>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		05/04/99 14:29:51 rev 6/95	

Chapter 6 - Edit Tables

Contents

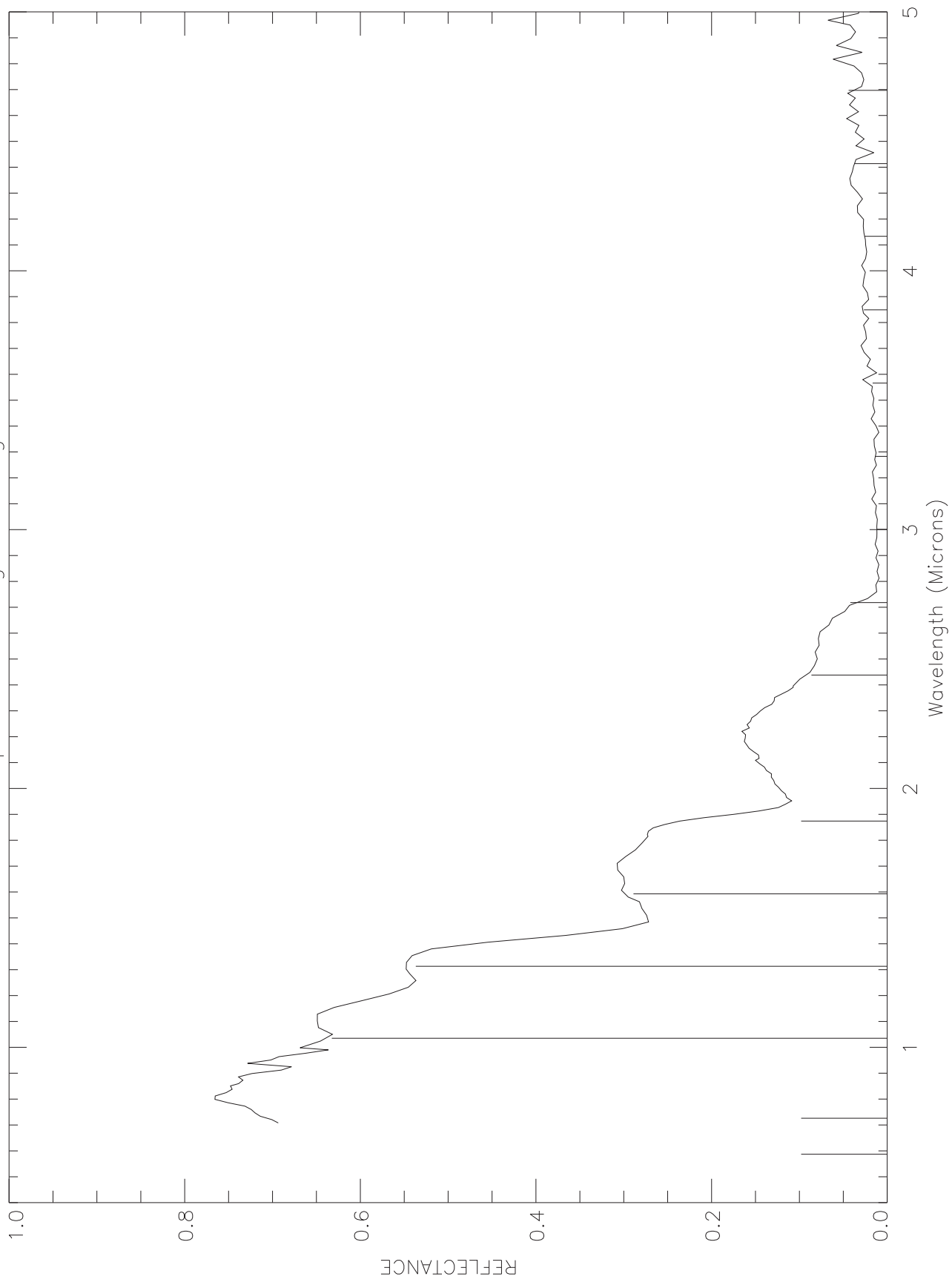
	Sub-Section	Page
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6.4	PCT	5
6.5	RCT	6

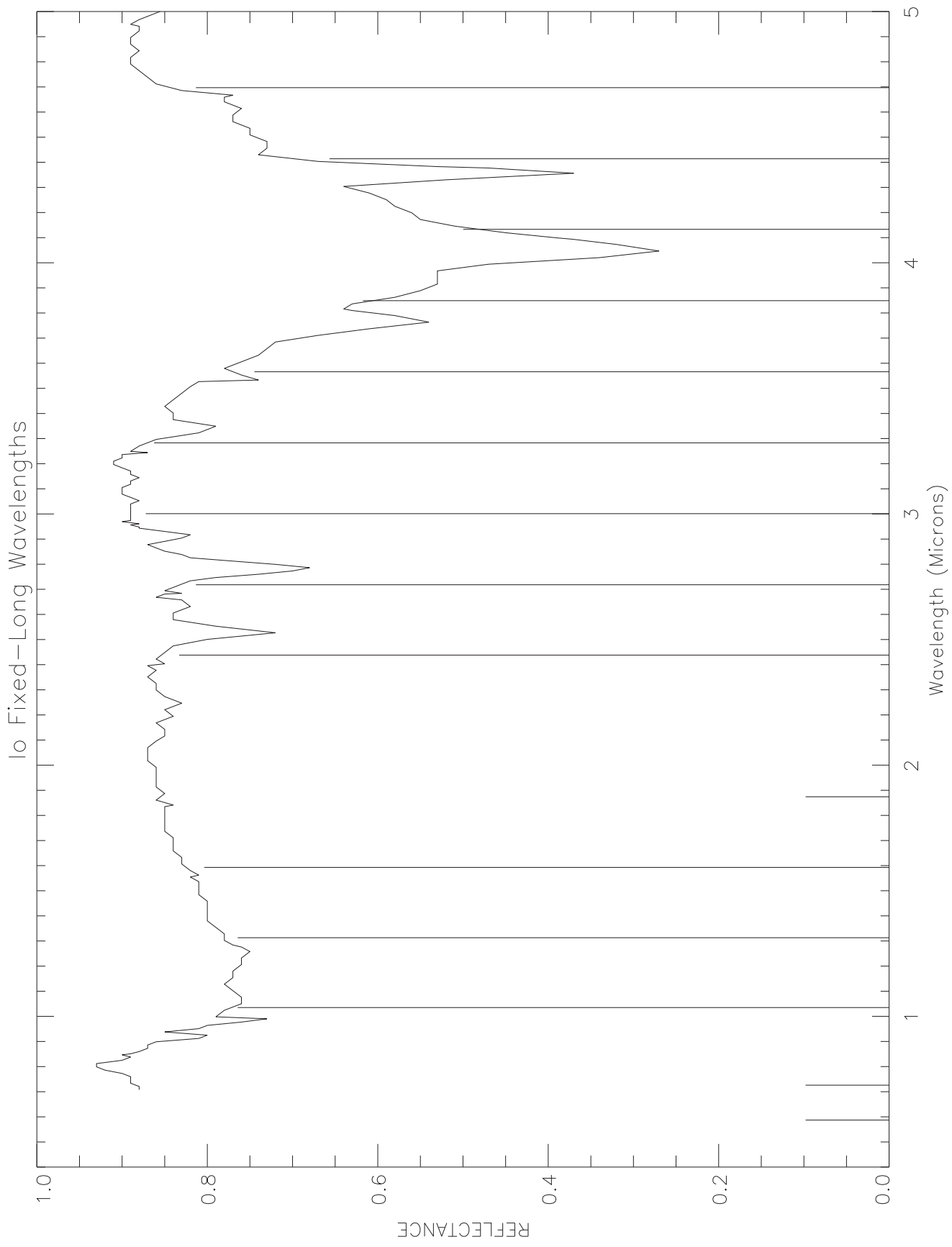
Introduction to Chapter 6

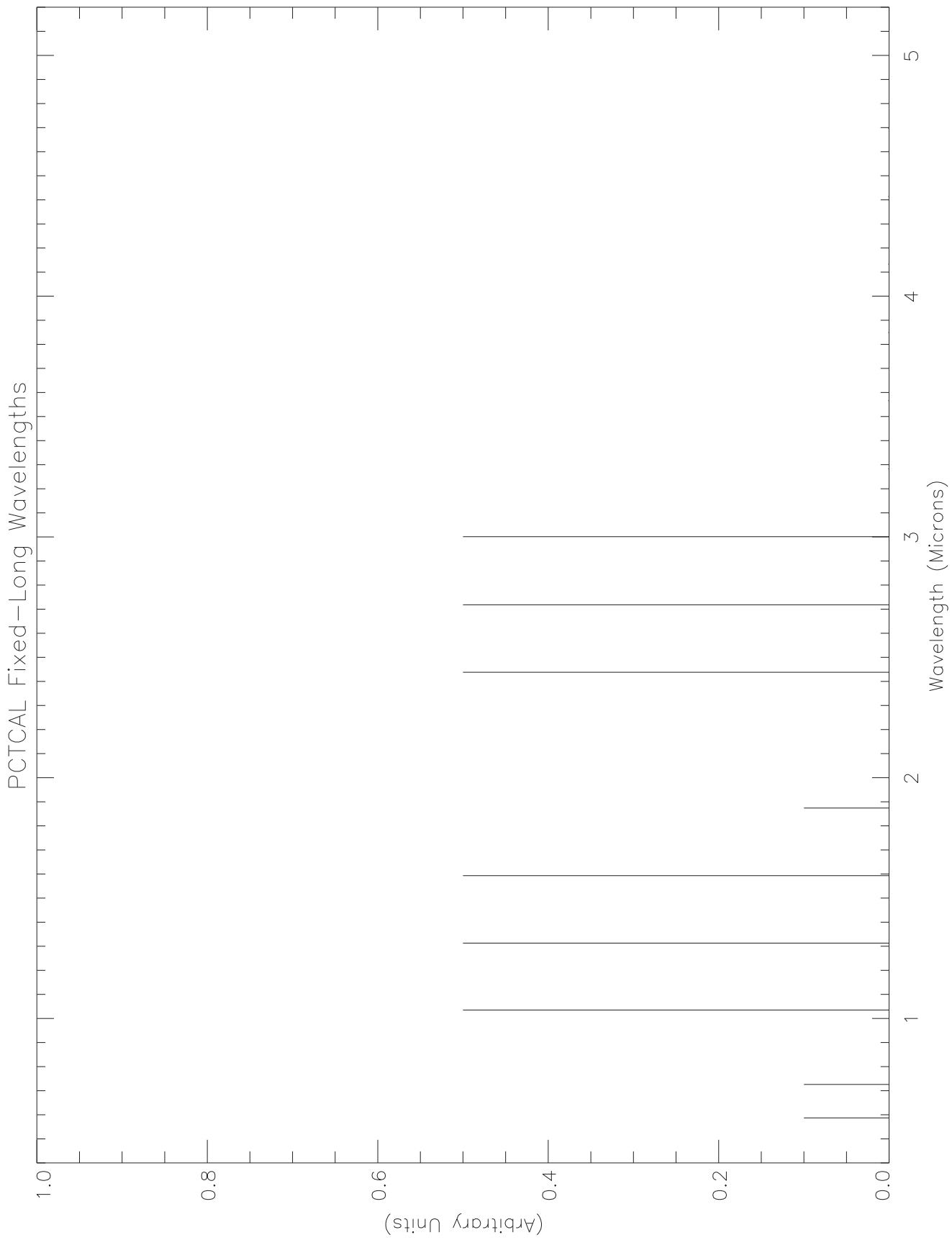
NIMS Edit Table Plots

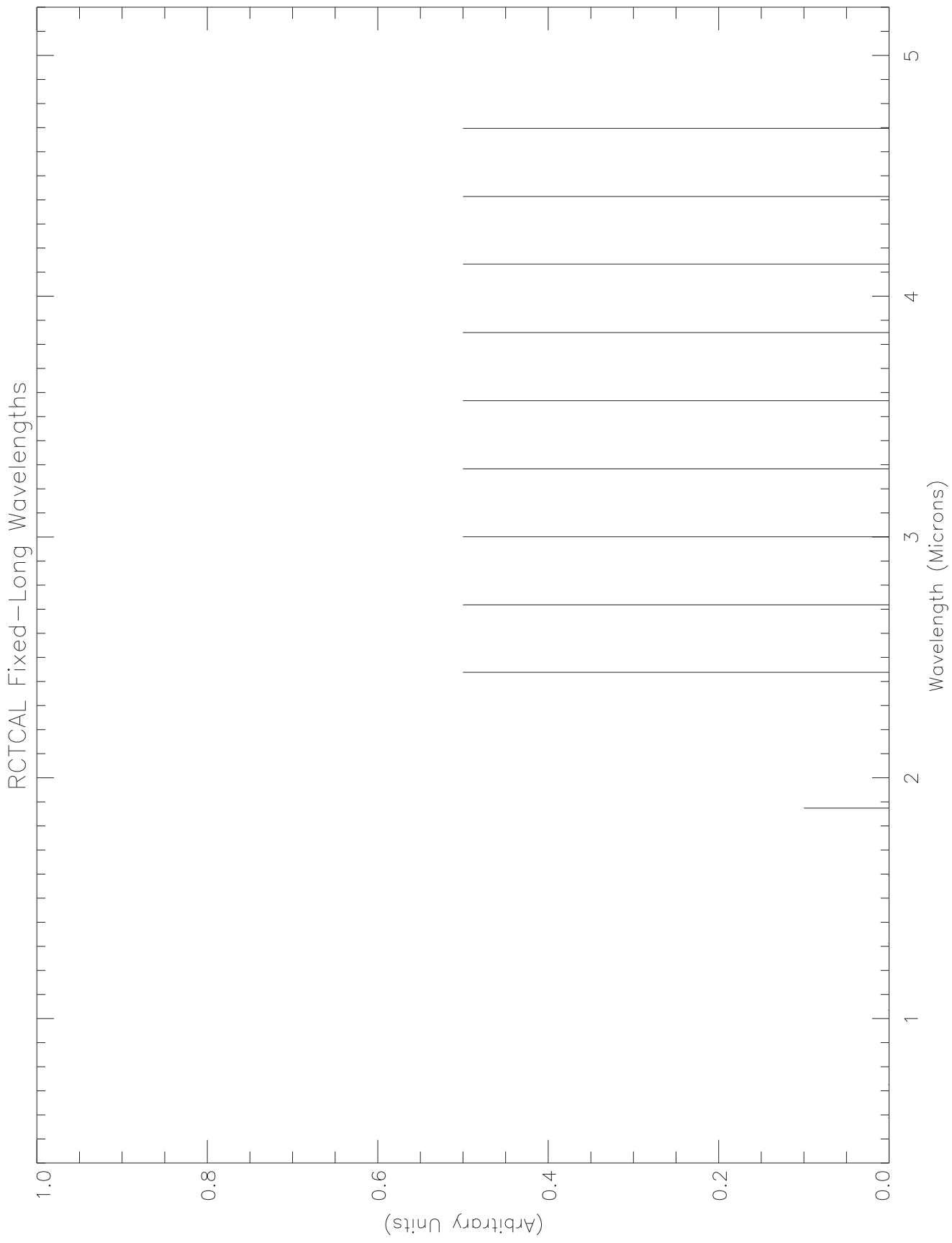
This chapter contains plots of the NIMS Edit Tables used in I25. The representative spectra used in these plots are observational reference spectra for the target body as obtained from telescopic observations from the Earth. Each reference spectrum is a composite of multiple published sources. Vertical 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.

Europa Fixed—Long Wavelengths









Chapter 7 - Data Return

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Introduction to Chapter 7

This chapter is a report on the NIMS data return for the I25 orbit. Due to the low downlink data rates available for Galileo Jupiter Operations and other unforeseen and unpredictable events during the I25 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.

The cruise portion of I25 was too short in duration to return all of the data recorded during the I25 encounter. Some of the I25 data were not recorded over during the E26 encounter and were later returned during E26 cruise.

There were twelve autonomous reloads of the NIMS RAM code from CDS during the I25 encounter, one just before each science observation. The NIMS processor halted in the middle of recording one observation, 25ENEQUATR01. NIMS halted two other times, but at times when NIMS was not taking data. The approach that we are taking to avoid data loss due to processor halts has proven to be very successful.

The spacecraft safed about 4 hours before the Io flyby. 9 of 13 NIMS observations were lost before the encounter sequence could be recovered.

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 plots on the pages 3, 4 and 5 show the geometry of the NIMS I25 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' I25 data returned during I25 and E26 cruise.

The text on page 10 gives a 'recap' of the I25 playback events which affected which observations were returned.

A Timeline of I24 playback events is on pages 10 through 24.

The text on pages 25 through 28 describes the I25 NIMS and Spacecraft Anomalies.

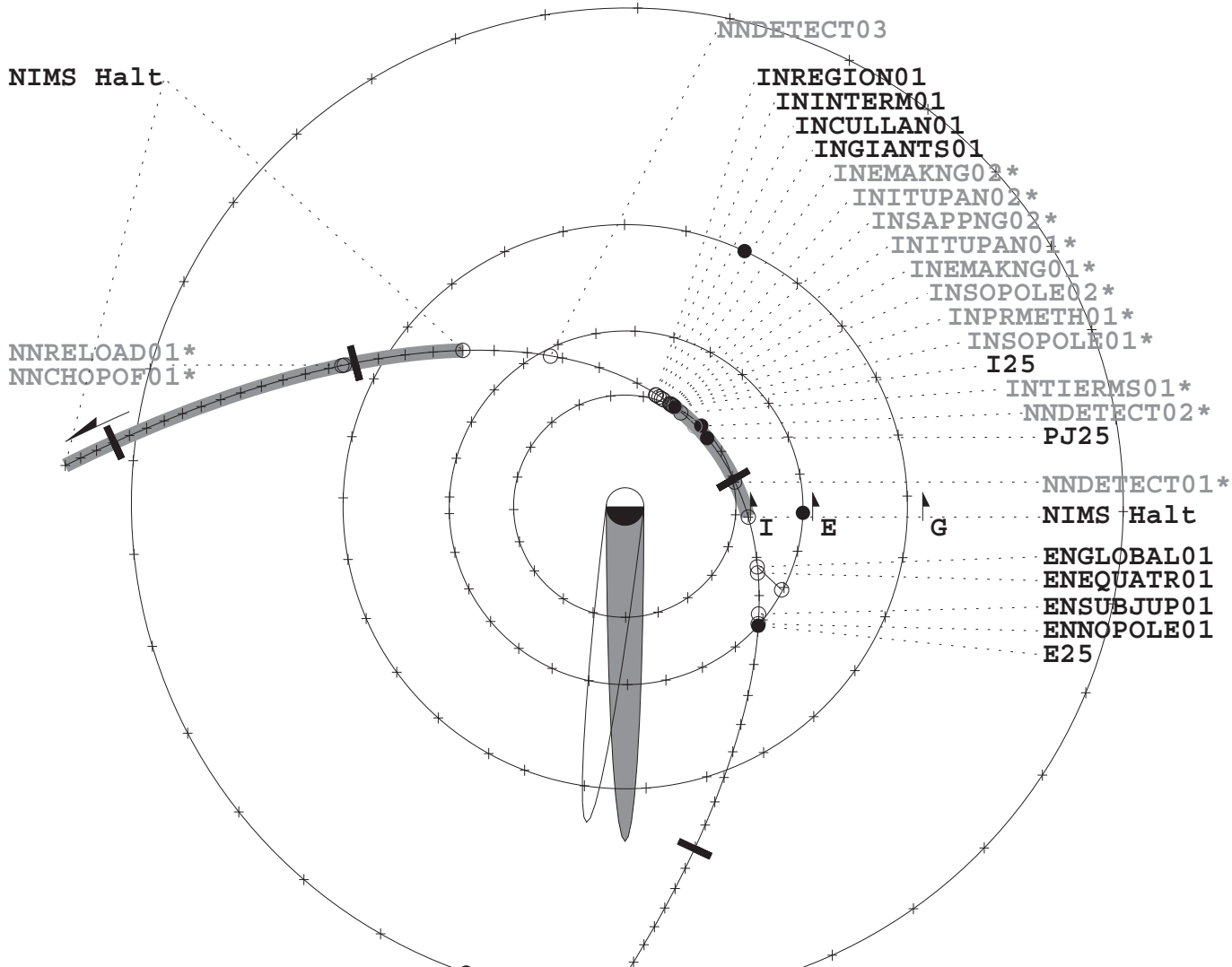
The text on page 29 gives a brief discussion of the NIMS data files. Additional information about NIMS data formats, data types, data labels and data access is given on pages 30 and 31.

The text on page 32 is a guide to understanding the NIMS MASK.

NIMS I25 OBSERVATIONS

Bold - Returned
 Gray - Not Returned
 * - Processor Halted

S/C ~~Safed~~

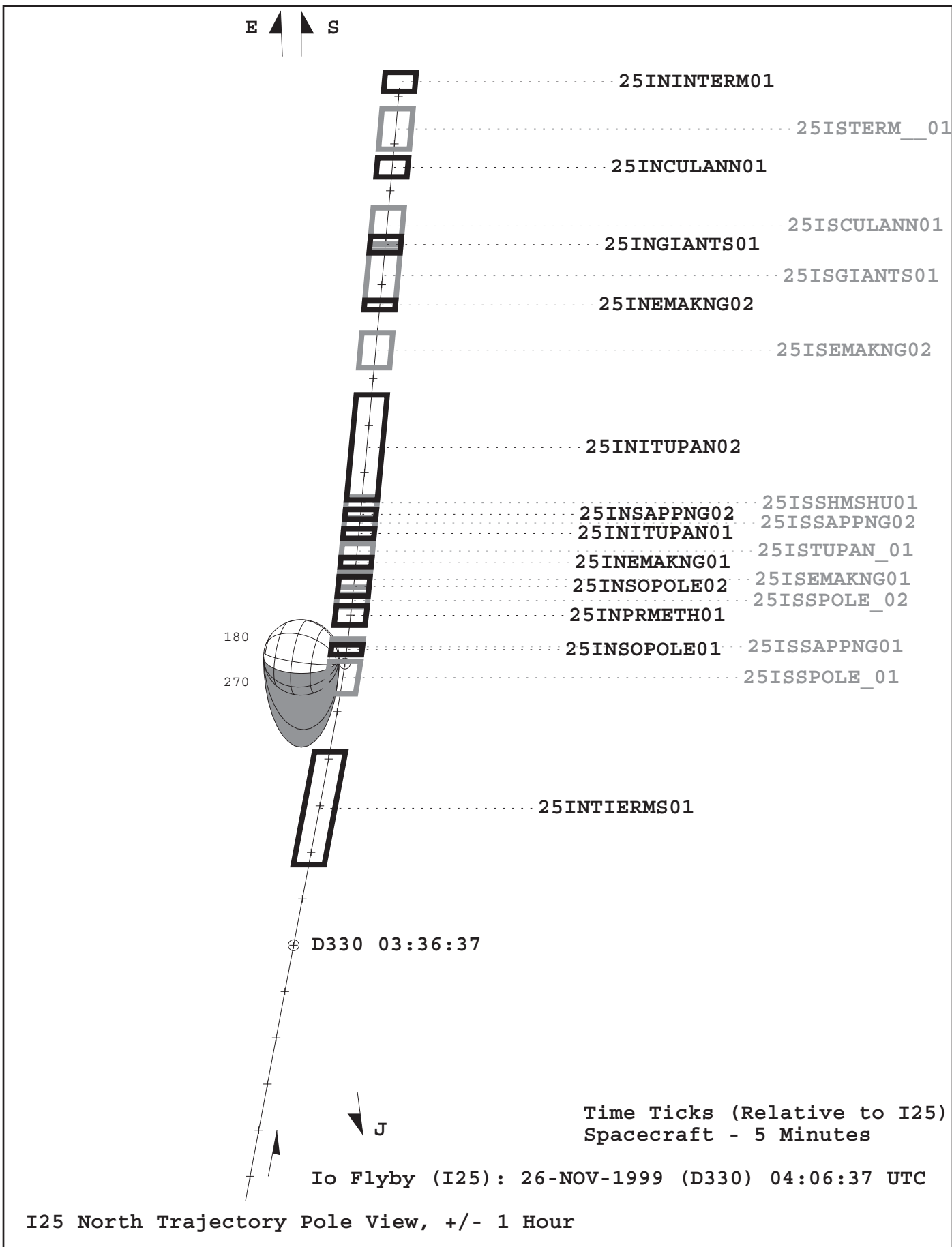


Time Ticks (Relative to PJ25)
 Io - 2 Hrs
 Europa - 3 Hrs
 Ganymede - 6 Hrs
 Callisto - 12 Hrs
 Spacecraft - 2 Hrs

Io Flyby (I25): 26-NOV-1999 (D330) 04:06:37 UTC
 Perijove (PJ25): 26-NOV-1999 (D330) 02:09:58 UTC

I25 North Trajectory Pole View

NIMS & SSI I25 IO FLYBY OBSERVATIONS

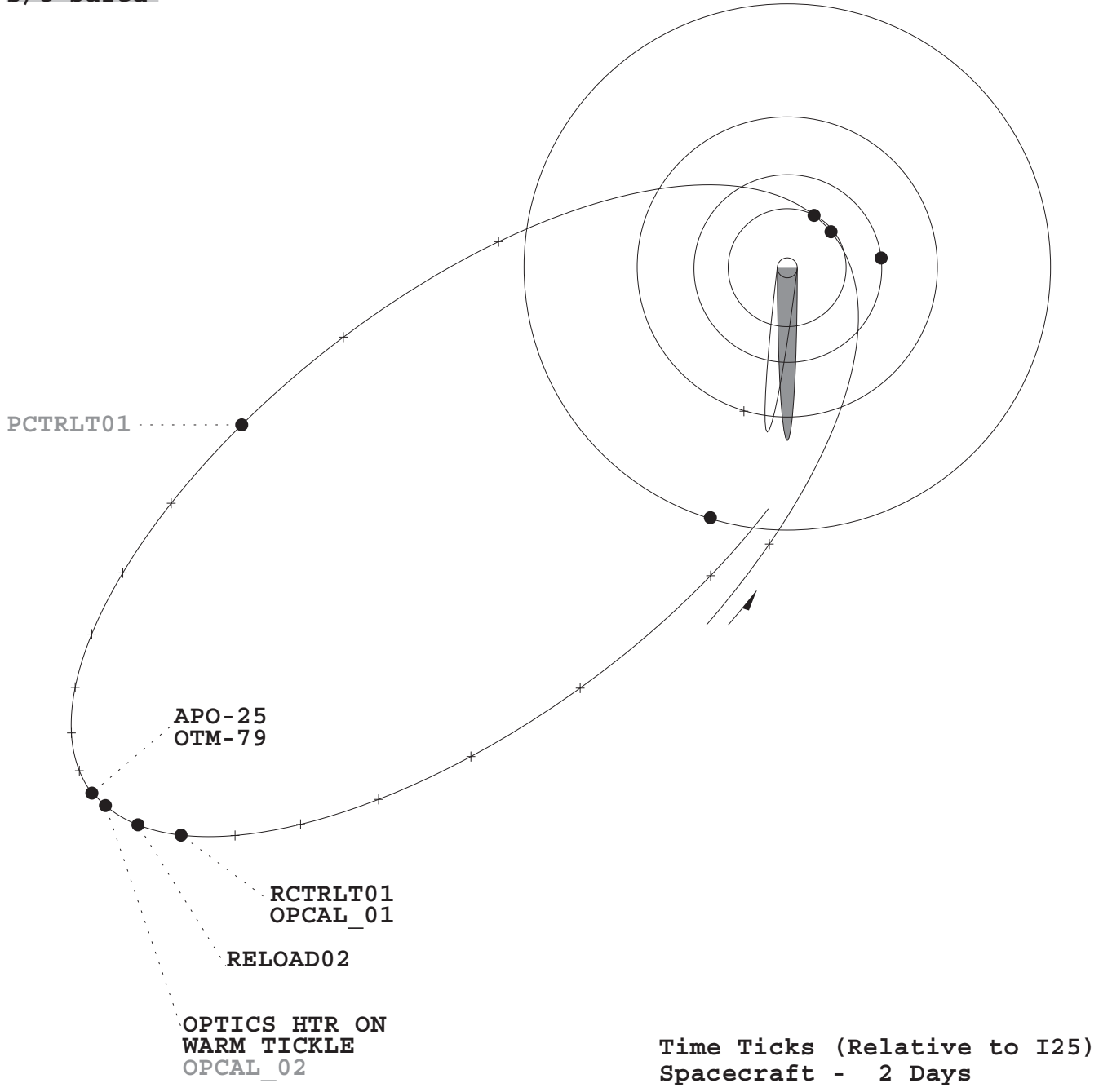


NIMS I25 CALIBRATIONS

Bold - Returned
 Gray - Not Returned
 * - Processor Halted

S/C Safed

S ▲ E



Io Flyby (I25): 26-NOV-1999 (D330) 04:06:37 UTC
 Perijove (PJ25): 26-NOV-1999 (D330) 02:09:58 UTC

I25 North Trajectory Pole View

NIMS I25 DATA RETURN

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating	Grating Record	PSID
					Start	Offset	Format	
25INGIANTS01-	Io Giant Calderas Obs.	I25ILM442	I25ILM288	LM	3	0	4 MPW	
25INCULANN01-	Io Culann Obs	I25ILM442	I25ILM288	LM	2	0	4 MPW	
25ININTERM01-	Io Obs. Near Terminator	I25ILM442	I25ILM288	LM	3	0	4 MPW	
25INREGION01-	Io Regional Observation	I25ILM442	I25ILM288	LM	2	0	4 MPW	
25NNPCTRLT01-	PCT Calibration	I25PCT252	R/T	LM	4	0	4 R/T	
25NNRCTRLT01-	RCT Calibration	I25RCT252	R/T	LM	1	0	4 R/T	
25NNROPAL01	NIMS OPCAL	I25OPCAL48	R/T	LM	4	0	4 R/T	
25ENNOPOLE01-	Europa North Polar Meridional Obs.	I25ELM442	I25ELM216	LM	4	0	4 MPW	
25ENSUBJUP01-	Europa Subjupiter Point Regional Obs.	I25ELM442	I25ELM360	LM	3	0	4 MPW	
25ENEQUATR01-	Europa Equatorial Band	I25ELM442	I25ELM360	LM	3,4	0	4 MPW	
25ENGLOBAL01-	Europa Jupiter-Facing Hemisphere Global	I25ELM442	I25ELM216	LM	3	0	4 MPW	
25INGIANTS01-	Io Giant Calderas Obs.	I25ILM442	I25ILM72	LM	3	0	4 MPW	
25INCULANN01-	Io Culann Obs	I25ILM442	I25ILM72	LM	2	0	4 MPW	
25ININTERM01-	Io Obs. Near Terminator	I25ILM442	I25ILM72	LM	3	0	4 MPW	
25INREGION01-	Io Regional Observation	I25ILM442	I25ILM72	LM	2	0	4 MPW	
25INREGION01-	Io Regional Observation	I25ILM442	I25ILM360	LM	2	0	4 MPW	
25ENNOPOLE01-	Europa North Polar Meridional Obs.	I25ELM442	I25ELM144	LM	4	0	4 MPW	
25ENNOPOLE01-	Europa North Polar Meridional Obs.	I25ELM442	I25ELM360	LM	4	0	4 MPW	
25ENSUBJUP01-	Europa Subjupiter Point Regional Obs.	I25ELM442	I25ELM360	LM	3	0	4 MPW	
	Pause Pb for test							
	UVS donation							
	Note: Additional I25 data were returned to Earth during E26.							

NIMS I25 DATA RETURN

Activity ID	Mode	Record Format	Wave-lengths Returned	Record Time (sec.)	PB Time (sec.)	Selected Bits to Tape (sBOT (Mbits) BOT (Mbit))	Total Bits to Tape (Mbit)	Mode Cycle (sec)	AACS Mbits c 2.5	Comp	Total BTG (Mbits) (w/4% ahead)	Data Reduct Factor (sBOT/BTG)	Pass
25INGIANTS01-	LM	MPW	288	104	104	1.20	1.20	8.667	0.01	2.04	0.3524	3.40	1
25INCULANN01-	LM	MPW	288	52	52	0.60	0.60	8.667	0.00	1.18	0.3046	1.97	1
25ININTERM01-	LM	MPW	288	52	52	0.60	0.60	8.667	0.00	1.13	0.3181	1.88	1
25INREGION01-	LM	MPW	288	2,702	1510	17.40	31.13	8.667	0.09	1.24	8.4167	2.07	1
25NNPCTRLT01-													
25NNRCTRLT01-													
25NNROPICAL01													
25ENNOPOLE01-	LM	MPW	216	660	341	3.93	7.60	8.667	0.02	1.24	1.4255	2.76	2
25ENSUBJUP01-	LM	MPW	360	190	95	1.09	2.19	8.667	0.01	1.31	0.6265	1.75	2
25ENNEQUATR01-	LM	MPW	360	790	240	2.76	9.10	8.667	0.01	1.19	1.7425	1.59	2
25ENGLOBAL01-	LM	MPW	216	503	211	2.43	5.79	8.667	0.01	1.12	0.9766	2.49	2
25INGIANTS01-	LM	MPW	72	104	104	1.20	1.20	8.667	0.01	1.38	0.1302	9.20	3
25INCULANN01-	LM	MPW	72	52	52	0.60	0.60	8.667	0.00	1.20	0.0749	8.00	3
25ININTERM01-	LM	MPW	72	52	52	0.60	0.60	8.667	0.00	1.20	0.0749	8.00	3
25INREGION01-	LM	MPW	72	2,702	1510	17.40	31.13	8.667	0.09	1.33	1.9618	8.87	3
25INREGION01-	LM	MPW	360	2,702	1175	13.54	31.13	8.667	0.07	1.33	7.6328	1.77	3
25ENNOPOLE01-	LM	MPW	144	660	341	3.93	7.60	8.667	0.02	1.20	0.9820	4.00	4
25ENNOPOLE01-	LM	MPW	360	660	318	3.66	7.60	8.667	0.02	1.20	2.2895	1.60	4
25ENSUBJUP01-	LM	MPW	360	190	103	1.19	2.19	8.667	0.01	1.30	0.6845	1.73	4
Pause Pb for test											2.3		
UVS donation											-0.979		
											29.3145	Total	
Note: Additional I25 data were returned to Earth during E26.											32.536	Allocation	
											-3.2215	Over/Under	

5/31/00

NIMS E26 DATA RETURN

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating	Grating Record	PSID
							Start	Offset
							Format	
26NNDETECT01-	Grating Step Test P2							
26NNDETECT02-	Grating Step Test Copy							
26INHSLOKI01-	Io Loki Observation	I26IILM442	I26IILM360	LM	2	0	4	MPW
26NNDETECT03-	Grating Step Test P2							
26NNDETECT04-	Grating Step Test Copy							
26INRELOAD01-	NIMS Software Reload							
26NNCHOPOF01-	NIMS Chopper Off							
26NNMROGRT01-	Grating MRO							
25INCULANN01-gf	Io Culann Obs	I25IILM442	I25IILM288	LM	2	0	4	MPW
25INREGION01-gf	Io Regional Observation	I25IILM442	I25IILM288	LM	2	0	4	MPW
25ENNOPOLE01-gf	Europa North Polar Meridional Obs.	I25EELM442	I25EELM360	LM	4	0	4	MPW
25ENNOPOLE01-gf	Europa North Polar Meridional Obs.	I25EELM442	I25EELM144	LM	4	0	4	MPW
25ENNEQUAT01-gf	Europa Equatorial Band	I25EELM442	I25EELM360	LM	3,4	0	4	MPW
25ENGLOBAL01-	Europa Jupiter-Facing Hemisphere Global	I25EELM442	I25EELM144	LM	3	0	4	MPW
25ENGLOBAL01-	Europa Jupiter-Facing Hemisphere Global	I25EELM442	I25EELM216	LM	3	0	4	MPW
26INHSLOKI01-gf	Io Loki Observation	I26IILM442	I26IILM360	LM	2	0	4	MPW
26INHSLOKI01-	Io Loki Observation	I26IILM442	I26IILM360	LM	2	0	4	MPW
25INREGION01-gf	Io Regional Observation	I25IILM442	I25IILM288	LM	2	0	4	MPW

NIMS E26 DATA RETURN

Activity ID	Mode	Record Format	Wave-length	Returned	Record Time (sec)	PB Time (sec)	Selected Bits to Tape (MBITS)	Total Bits of Tape (Mbit)	Mode Cycle (sec)	Comp Thold	RT	Total BTG Mbits (4% overhead)	Data Reduction Factor	Pass
26NNDETECT01-														
26NNDETECT02-														
26INHSLOK101-	LM	MPW		360	400.00	207.00	2.38	4.61	8.67	1.29		1.3864	1.72	1
26NNDETECT03-														
26NNDETECT04-														
26INRELOAD01-														
26NNCHOPOF01-														
26NNMROGRT01-														
25INCULANN01-gf	LM	MPW		288	52		0.33	0.60	8.67	1.18		0.1699	1.97	2
25INREGION01-gf	LM	MPW		288	2,702	408	4.70	31.13	8.67	1.24		2.2742	2.07	2
25ENNOPOLE01-gf	LM	MPW		360	660	60	0.69	7.60	8.67	1.24		0.4180	1.65	3
25ENNOPOLE01-gf	LM	MPW		144	660	41	0.47	7.60	8.67	1.24		0.1143	4.13	3
25ENNEQUATRO1-gf	LM	MPW		360	790	15	0.17	9.10	8.67	1.19		0.1089	1.59	3
25ENGLOBAL01-	LM	MPW		144	503	99	1.14	5.79	8.67	1.20		0.2851	4.00	3
25ENGLOBAL01-	LM	MPW		216	503	110	1.27	5.79	8.67	1.20		0.4752	2.67	3
26INHSLOK101-gf	LM	MPW		360	400.00	36.00	0.41	4.61	8.67	1.29		0.2411	1.72	3
26INHSLOK101-	LM	MPW		360	400.00	223.00	2.57	4.61	8.67	1.29		1.4935	1.72	3
25INREGION01-gf	LM	MPW		288	2,702	21	0.24	31.13	8.67	1.24		0.1171	2.07	4
7.0836 Total														
6.935 Allocation														
0.1486 Over/Under														

5/31/00

RECAP OF I25 PLAYBACK EVENTS

I25 was an extremely eventful orbit for Galileo and for NIMS playback. A spacecraft safing event occurred about 4 hours prior to Io close approach, which was successfully recovered from thanks to the efforts of the Sequence Team, who uplinked a revised sequence to the spacecraft within hours. Nearly 75% of the NIMS data that was in the original plan was successfully recorded.

The NIMS software halted at least 4 times during I25: During the recording of 25ENEQUATR01, about 1.75 hours before the spacecraft safing event, at the time of the spacecraft safing again near the end of the encounter sequence.

Playback was made complex by the adoption of a non-FIFO (first in first out) strategy, resulting in some confusion regarding pass numbers. This was adopted to allow carryover of some MAG data for playback in later orbits.

Rapid adaptation to the safing caused major revisions of the playback plan on the fly. In the end a remarkable Io dataset was obtained, together with several unique observations of the Jupiter-facing side of Europa. A preventable series of events caused an early termination of playback just before New Years, resulting in the failure to return the last 2.9 Mbits of Europa data commanded for return. A portion of this was recovered in E26.

During the cruise period commands were uplinked to exercise NIMS in hopes of freeing the "stuck" grating. These attempts were not successful. The grating test took place on 16 December.

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.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

10-20-99: (K. Schimmels) I realize there isn't an official OPG to use yet (it's in the last stage of revisions!), but here are the OPG allocations that were distributed in a Memo by Duane B. on 7/9/99 via email. Please design your playback tables to this until newer numbers are released. I will have newer allocations by Friday PM based on the newest I25 product.
Due to changes being made to the I25 record sequence, the PBT delivery schedule has been modified.
First Delivery: Monday, Nov. 1
Second Delivery: Wednesday, Nov. 10
Final Delivery (if needed) Friday, Nov. 19

I25 Playback Events Timeline (10-20-99 to 01-04-00)

Files are all due EOD, no later. We are short a delivery due to the compressed schedule, so the products need to be as close to the final product as possible. We are also pushing the last delivery very close to uplink, so the sooner we have a flight-ready PBT, the easier it will be to adapt to late changes in the sequence, if necessary.

I25 Bit to Ground Allocations (in Mbit)

Team/WG	Total MBTG	Europa	Io	Io Torus
NIMS	45.7	14.7	31.0	0.0

Notes: (1) MWG Io Torus data will be carried over into E26 and I27 and returned during playback in these orbits.

10-22-99: (K. Schimmels) Here's the new MBTG allocations based on the recently released I25XBA OP product. This is a pretty significant decrease in capability from the OAP estimate of 142 MB. Total Science Capability is now 104.410 MB, representing a 26% decrease.
NIMS 32.908

10-28-99: (K. Schimmels) There was some confusion over the I25 playback strategy, so let me re-iterate for you what the plan is as it stands in the OPG (based on what was presented, discussed, and agreed upon at the PSG in June): Track 1, 3, and 4 will be played back in I25. This means that only track 2 MWG Torus data will be maintained for definite playback partially in E26, finishing in I27. Now, not all three tracks will be recorded over by E26 data. Either track 1 or track 3 will contain the E26 recording (at about 4277 tics I believe), which will be determined in the near future. This does not mean we are preserving I25 data on the other 2 tracks for playback in E26, or in I27. It just means it is not overwritten yet... until I27. In I27, we overwrite tracks 1, 3, and 4, maintaining the remaining track 2 Torus data to finish playing back in I27. This means all data wished to be played back from I25 recording on tracks 1, 3, and 4, should be played back in I25 cruise (even despite the reduced MBTG allocations....) With this in mind, the current playback plan is as follows: Begin on track 3 with C/A data. This means we playback tracks 3, 4, then 1, skip 2. Then we get a second pass thru tracks 3, 4, and 1, and stop. This eliminates slewing over an additional track of tape, thus reducing our inefficiency greatly over a plan which begins playback on track 1. This means the following in terms of pass numbers in your playback table delivery next week:
Observations on tracks 3 and 4: First pass thru == Pass 1,
Second pass thru == Pass 2
Observations on track 1: First pass thru = Pass 2,
Second pass thru = Pass 3.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

- 11-01-99: (E. Barbinis) I delivered the I25 PBT today. Jim and I discussed how to deal with the reduction of the I25 BTGs (only 32.908 Mbits for NIMS) last week. We are returning everything that we are recording for the Io observations except for 25INREGION01 where we are returning 20 minutes out of the 45 minutes of the record duration. For the Europa observations, we are returning 2 minutes out of the 8 minutes of the record duration for 25ENGLOBAL01 and only 228 wavelengths for 25ENGLOBAL01 and 25ENSUBJUP01. This is the first delivery for I25 PBT. Depending on the results from the grating test we will do revisions in our second delivery (on 11/10).
- 11-17-99: (K. Schimmels) I25 allocations have decreased by ~1 MB overall. The new allocations follow:
NIMS 31.366% 30.534
- 11-18-99: The final pre-uplink I25 playback table was delivered today. There were many significant changes made. A few of these concern the timing and order of playback of our observations, but most relate to the selection of wavelengths for return. As usual we have insufficient downlink bits allocation to return the data that will be recorded. To make the best use of the resources, we are limiting the playback wavelengths of nearly all of our observations. Although it is possible that the grating will be functional once more during the I25 encounter over Thanksgiving, the current playback strategy assumes that it will remain stuck. That being the case, it is simplest to discuss the return of data in terms of detectors, rather than wavelengths. In I24 we returned data from all 15 functioning detectors, but found that the signal was unexpectedly low for detectors 1, 2, and 7. We believe this is due to blocking of the incident photons by the built-in blocking filters, which is in turn a result of the grating sticking in a position at one extreme of its range of motion. Although some signal is recorded for these detectors, their data are significantly less useful than that from the other detectors where blocking is not a problem. Thus in our bit-limited circumstances it is reasonable to optimize our science return by not selecting for playback the data from detectors 1, 2, and 7. (Note: If the grating is working by I25, we will be able to return to a more normal playback strategy during the initial playback table update cycle). Our allocation stands at about 66% of what we would require to bring down all our data. The distribution of resources between Io and Europa has been 2:1. We have about 20 Mbits to spend on Io, and 10 for Europa. The following strategy works within these constraints.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

Europa: We will bring down data from 9 detectors for three of our four observations. Not selected for playback are 3 and 8 (nonfunctioning); 1, 2, 7 (low signal); and 15, 16, 17 (lowest signal levels and lowest priority of the remaining functioning detectors). For the well-lit 25ENEQUATR01, we will get all of the above plus the thermal detectors (15-17). With this strategy we will be able to bring down our full spatial area coverage for the four observations.

Io: To check on the position of the grating and the function of detectors 1, 2, and 7, we will bring down 2 RIMS of data with all 15 detectors selected in pass 1. (This observation is the day side 25INTUPAN02). For all other observations we will bring down the data from 12 detectors (4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17). In the current plan we wanted to obtain as much spatial coverage as possible. We are not succeeding in getting all of it. About 7.5 RIMS of 25INREGION01 (about 35% of the second scan) is not in the playback plan at present. Returning this would require an additional 2.3 Mbits of allocation.

To have greater flexibility to adapt during playback, greater portions of two observations were shifted into pass 2. One of these is 25INTUPAN02, where we are receiving 15 detectors in pass 1 (but only 12 in the larger pass 2 portion). Secondly we are returning only the first 2 RIMS of 25INTIERS01 in pass 1. Note: This observation replaces 25INCREIDN01. It is 4 RIMS earlier in time, and is obtained at an improved cone angle (still in the 40 degree range however). We will receive about .7 Mbits of data for this one in pass 1, and 1.75 Mbits more in pass 2. There is one additional consideration for Io data return, and that is the observation 25INSOPOLE01, now in pass 2. This was recorded with NIMS in safe mode, and the question of how and whether to play it back is still open.

11-23-99: (K. Schimmels) Playback initiates Friday, November 26 at 4:33 PM PST. (99-331/00:33:00 SCET-UTC). Playback terminates on Friday, December 31 at approximately 3:56 PM PST. (99-365/23:56:00 SCET-UTC) Playback is being done in a non-first-in/first-out fashion again this orbit. We are starting pass 1 with track 3 - closest approach data. As such, the pass numbers are funky. Pass 1: first time through tracks 3 and 4
Pass 2: first time through tracks 1 and 2, and second time through tracks 3 and 4.
Pass 3: second time through track 1 only. There is no second pass through track 2 due to BTG limitations. This non FIFO strategy allows us to playback C/A data first, and to reduce downlink loss to slewing over a track of data we do not intend to playback during I25.

11-25-99: I25 encounter begins at 04:00 UTC.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

- 11-26-99: Spacecraft goes into safe mode at 00:02 UTC.
Perijove occurs at 02:09 UTC, and
Io close approach occurs at 04:06 UTC.
Recovery sequence goes active at 04:28 UTC.
- 11-26-99: (J. Erickson) Approximately 4 hours before Io 25 closest approach, at 4:44 pm PST (Earth Received Time), the Galileo spacecraft entered safing. Preliminary analysis shows that at about 4:39 pm PST a standard despun bus reset error occurred on the spacecraft, and was handled correctly by the onboard software. Within 5 minutes, the CDS (Command and Data Subsystem) "B" string High Level Module experienced a DBUM bus transaction error. Current analysis is that there is an error in the flight software patch designed to work around the failed memory bit in the CDS HLM "B" (the failed bit that caused the Io 24 safing), but the error is not identified yet. A work around to the probable error has been identified and used in the creation of new command sequences.
As of 8:06 pm PST, the Galileo spacecraft had resumed normal operations. After the spacecraft entered safing, commands to restore the spacecraft to normal operations were generated and sent within two hours, and a truncated science observation sequence generated and transmitted within two and one half hours. The truncated science observation sequence resumed recording at 9:12 pm PST (Earth Received Time), approximately 32 minutes after close approach to Io.
A subsequent despun bus reset was also handled correctly by the onboard software. A summary of the encounter observations successfully recorded:
1. All of the planned observations of the Jupiter facing hemisphere of Europa.
2. Approximately half of the Io torus recording.
3. One of two planned tracks of high resolution Io observations (Track 4, all recorded 32 minutes or greater after close approach).
One key loss was the fields and particles measurements to be taken during the actual close approach. These measurements would have been used to resolve the question of an internal magnetic field for Io.
- 11-26-99: (R. Mehlman) It's hard to tell from Jim Erickson's ERT times just where recording of NIMS observations resumed, so I phoned the ACE and got SCET times of the safing (330/00:02) and when recording resumed (330/04:28). The safing was a couple of hours before our first Io observation. But recording resumed in time for 25INITUPAN02 and presumably continued through EMAKNG02, GIANTS01, CULANN01, TERMAP01 and REGION01. We do have a good SCLK a few hours after REGION01, so we didn't halt within it. (Actually recording resumed in time for GIANTS01).

I25 Playback Events Timeline (10-20-99 to 01-04-00)

I would guess we lost TIERMS01, SOPOLE01, PRMETH01, SOPOLE02, EMAKNG01, ITUPAN01 and SAPPNG02. We also know from returned SCLKs that NIMS halted at 5273069 (~329/22:15 SCET) 1 hour and 45 minutes before the reported safing. This is well after our last Europa observation.

11-27-99: (D. Bindschadler) The purpose of this message is to give SPOT some details regarding the anomaly and recovery during I25, and to request some after-the-fact checking of the sequences that were sent, as well as status reports from each instrument team.

S/C safing occurred near 330/00:00, about two hours prior to perijove. Because of the extremely short time before Io c/a, a truncated version of the contingency sequence (i25aqb, in /i25/scg/loada/safing/qb/) was generated and sent to the spacecraft. That sequence was followed by a second sequence which contained commands to take GLL through the end of the original I25A load. Executed sequence info:

I25 contingency part 1: i25aqb
Location: /i25/scg/loada/qb2/
*BEGIN 99-330/04:11:00.000
*CUTOFF 99-331/01:15:00.000
Last sequenced cmd: 99-330/09:00:01.066
(Dummy record followingPPR RCT)
Contents: 1) State matching
2) Track 4 observations, all trk 4 records

I25 contingency part 2: i25a2b
Location: i25/scg/loada/safing/2b/
*BEGIN 99-331/01:17:00.000
*CUTOFF 99-348/08:00:00.000
Last sequenced cmd: n/a (same as nominal I25A - i24adf)
Contents: 1) DMS TRKCHG 4-->3 for PB
2) Deselect F&P RTS
3) PWS SEARCH COIL CAL (PSID 260NF)
4) MAG OPT AVE On
5) Safe EPD for cruise

Important note: There is a 16 hour gap in commanding between the part 1 and part 2 sequences. None of the instrument commands that were put into the nominal I25A sequence executed during this 16 hour span. RT commands were sent to take EPD out of chicken mode and to configure MAG.

NIMS appears to have suffered a memory corruption event like those seen in previous orbits. NIMS is checking to establish the time of the event. They will be pursuing commands to reload instrument memory and then turn off their chopper.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

Due to the anomaly, a new playback table was generated (i24pdb). This table begins playback on Track 4 and continues through data return of Track 1 (Europa) data. A playback update is planned for this week on the nominal schedule (Wed.), but stay tuned for updates. The only changes to the playback SINGLES that were made for I24pdb were (1) removal of all track 3 SINGLES and (2) removal of UVS SINGLES.

11-27-99: (M. Segura) As all of you have probably heard (from voice-mail and e-mail), the spacecraft experienced a safing event about 4 hours before closest approach. A truncated sequence recovered the encounter at approximately DOY 330 04:42 (Io EMAKNG02 observation for NIMS). Preliminary analysis of the engineering data has been done - temperatures were within the expected range for a safing event. The electronics temperature rose 6 DN over the few hours that the instrument was powered off and the heaters were on. Analysis of the NIMS clock has been completed for the period of time just prior to the safing event through the end of NIMS activities with the results detailed below:

RIM	Observation	Comment
5273071	after ENGLOBAL01	spacecraft safing caused software halt; first grating step position data lost
5273452	EMAKNG02	first NIMS observation after recovery - LOST - no reload
5273456	INGIANTS01	first NIMS data after recovery (see note)
5273578	after INREGION01	first valid NIMS clock value after recovery
5273890	after second grating position data taken	NIMS software stopped

Note: While there is no telemetered clock values during the time period after sequence recovery (INGIANTS through INREGION), there is also no reason to believe that the observations did not execute. Playback of these observations should continue as planned.

The final reload and instrument housekeeping activities in the sequence were removed during the mad dash to recover. This leaves NIMS in the "crashed" software state and the PCT calibration due to execute on DOY 335 (3 days from now). My goal is to reload the instrument software before the calibration and the SST supports this activity. There will be a command conference tomorrow afternoon at 3 PM - with uplink over the next available pass.

Detailed analysis of the Europa time period still must be done but at first glance, it appears that all the observations executed with active software. Playback should proceed as planned.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

The grating step data stored in CDS memory (from after IO) should be returned as soon as possible - the telemetry shows fluctuations in the current not evident in I24. We need to determine if that is due to an actual change in the grating or just due to a higher telemetry rate. This will be worked once the instrument phase 2 software is functioning again.

11-28-99: (M. Segura) Here are a few more details regarding the I25 safing event. It appears that the spacecraft experienced a bus reset prior to the safing. The time lines up nicely (?) with the NIMS software stoppage at 329/22:15 or so. The safing occurred at 330/00:02 - 6 mcopy commands of the first grating position activity had executed. Current instrument status - based on the NIMS clock updates the software halted well after our last observation and is still in that state. The telemetry readings of the clock channels have taken on a strange pattern - S1931 continues to increment by one and S1932 is frozen at 34. As well, some of the NIMS telemetry channels are returning 0 - this began to occur at the bus reset and continues until present. We did see one valid reading on Doy 330 07:11 with values well within normal operating ranges. I suspect there may have been ground system problems or that this may be due to an artifact of safing recovery and not more instrument problems. More investigation to follow. A PCT calibration is planned for Wednesday. The commands to reload the instrument and read out the physical grating position directly from NIMS will be uplinked tomorrow and will execute on Tuesday morning ~ 3 a.m. As I mentioned in the previous message, we did see some fluctuation in the grating current so I have requested an MRO of the CDS locations where the I25 grating position data was stored. That will execute this evening. The command conference for this occurs at 3 pm today.

11-29-99: The Galileo spacecraft entered safe mode about two hours prior to perijove and about four hours prior to Io close approach. In another extraordinary effort by the flight team, a recovery sequence was generated and uplinked in time to resume data recording about 32 minutes after Io close approach. The consequence for NIMS was the loss of 9 planned Io observations, the majority of these being short "tag-along" (with SSI) observations. Playback of the first observations recorded after recovery is already underway (25INGIANTS01 and 25INCULANN01 are on the ground). The observations lost comprised 26% of the NIMS data planned for playback in I25. They represent 39% of the recorded Io data in the initial playback plan. Although we lost our highest-resolution Io observations, we believe that the very large 25INREGION01 was recorded successfully. This may turn out to be as spectacular as our best I24 observations. It also appears that all of our Europa observations were recorded as planned.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

We will have no trouble making use of our full downlink allocation for I25. We will now be able to return the full spatial coverage of 25INREGION01 and will be able to increase the number of wavelengths selected for playback for the balance of our observations. Under the circumstances, we have been very fortunate. The NIMS I25 dataset is likely to be of great scientific value.

11-29-99: (F. Leader) Detectors 9-14 saturated for most of 25INGIANTS01. So, detector 7 might be useful. I hope we have bits enough to return the deselected detectors.

11-29-99: (P. Fieseler) There has been a understandable amount of confusion over what what sequences were created for I25A and where they are located on Donatello. A summary follows:

I25ADF - The original sequence. Not sent to spacecraft.
located on Donatello - /i25/scg/loada/df/

I25ADX - SSF only - all spacecraft commands same as version I25ADF but with CDS memory management changed. Sent to spacecraft.
located on Donatello - i25/scg/loada/df
Active from 99-329/04:00 to ~99-330/00:02 SCET

I25AQA - The first truncated sequence that folks reviewed.
located on Donatello - i25/scg/loada/safing/qa/

I25AQB - The final truncated sequence that was not sent.
located on Donatello - i25/scg/loada/safing/qb/

I25AQB - The post-safing truncated sequence that was sent. Same name was used as its predecessor to save time in the SEQGEN/SEQTRAN process.
located on Donatello - i25/scg/loada/qb/
Active from 99-330/04:11 to 99-331/01:15

I25A2A - The intended follow-on to the first I25AQB truncated sequence. Not sent.
located on Donatello - i25/scg/loada/safing/2a/.

I25A2B - The follow-on to the flown truncated sequence

I25AQB. Was sent. Active now.
located on Donatello - i25/scg/loada/2b/
Active from 99-331/01:17 to 99-348/08:00

11-29-99: (K. Schimmels) We are going to go ahead and do an early PBT update TODAY to playback more of the Europa data on track 1 in the first pass. This means we need to overwrite segment 3, which is already on board the spacecraft.
1) You may make changes to all track one recordings starting at 99-329/13:23:19.133.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

- 2) You MUST start with a teamstrip, located in /i25/pbt/current/teamstrips. These include your pass 1 SINGLES for track 4 and 1 (one pass only) as you submitted them in the last delivery.
- 3) All track 1 and 2 data selected (Europa track and Torus data) should be Pass #2 in the SINGLES.
- 4) MWG - the plan is for you to select Torus data on track 2. Duane will be sending out an email with Select/Deselect times later today. I will supply both the MWG and PPR with the latest time we have data recorded on track 2 by later today.

PBTs are due FIRST THING Tomorrow AM (Tuesday 11/30). Assuming enough data is selected in this update, we can wait until next week to do another update for selecting data on track 4,1, and 2 for a second pass thru.

11-29-99: An early update was accomplished today to adapt to the new conditions engendered by the events during I25 encounter. We lost 9 observations of Io leaving us with about 8 Mbits of available downlink allocation. Due to technical problems we could only modify playback commands for the first physical pass over the tape today. We could not enter commands for Io playback in pass 2; however I have produced a model for I25 playback that uses all of our available allocation.

Changes made today: To get some visibility into our grating position and function, I increased the spectral coverage on 25ENSUBJUP01 and 25ENEQUATR01 to 15 detectors (up from 9 and 12 respectively). Both 25ENNOPOLE01 and 25ENGLOBAL01 remain at 9 detectors, to retain some flexibility for pass 2 contingencies. (About 50% of the spatial coverage of each of the four Europa observations is commanded for playback in pass 2).

Playback of 25INREGION01 (12 detectors) will continue nearly all of this week. The first of the above Europa observations should come down Friday, and the last (25ENGLOBAL01) next week some time, following the SSI Europa global.

Strategy for pass 2: Based on the Europa data for detectors 1, 2, and 7, we can decide whether it would make sense to bring down the Io data for these detectors. We should certainly get all of the spatial coverage for 25INREGION01 as our first priority. We can get the rest of the detectors for 25INGIANTS01, 25INCULANN01, and 25INTERMAP01 at a modest cost (.3 Mbits).

We can do all of this, AND get all 15 detectors for 25INREGION01, with our current allocation. However, in this plan we will not be able to fill out our spectral coverage for the Europa observations in pass 2. We may perhaps wish to re-prioritize when we have data from all 15 detectors on the ground. Note also that we may be able to retrieve some I25 data during E26.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

- 11-30-99: (M. Segura) Real time commands were sent yesterday afternoon to reload the NIMS software and turn the chopper off. The commands executed around 3 am this morning successfully. The instrument is now up and running again in time for the PCT cal due to execute from the background sequence tomorrow. The "lost" telemetry channels also were recovered with the reload. The grating current is stable at 137 DN. The MRO of the grating position revealed nothing new - it's still stuck as of this morning. The warming activity will occur before December 14. I plan to target mid next week at the latest. The window of opportunity after December 14 is virtually non-existent due to maneuvers and other engineering activities.
- 11-30-99: (K. Schimmels) Playback is currently on schedule. As of 6:16 AM 11/30, we're playing back NIMS INREGION01, and were about 30% thru that observation. Due to an early Resume Playback after OTM-78, ~3 3/4 hours extra playback gained us ~ 0.53 MB additional capability. The current schedule continues until DOY 348, allowing us to do a standard update next week starting with Segment 5, Pass 3. This will begin with selecting some I24 data for return on track 3.
- 12-02-99: (J. Erickson) Further analysis of the safing during the Io 25 sequence indicates that the event was caused by two errors that have been present in the original Command and Data Subsystem software since pre-launch. Analysis indicates that the flight software has not been correctly protecting itself from its own code being inadvertently overwritten on the "B" CDS string. Evaluation of the coding errors is proceeding, and a decision on how to accomodate the errors are expected shortly.
- 12-06-99: (K. Schimmels)
- 1) Our capability has been reduced by 1.7 MB due to the delay in initiating playback last week. This was taken out of the SPOT Margin, and your allocations remain unaffected.
 - 2) We are currently on schedule in Segment 4, playing back ESGLOBAL, which is undercompressing.
 - 3) We will complete pass 1 playback (thru Track 2 Torus data) on Tuesday, December 14th (approximately).
 - 4) There will be a playback table update this week - nominal schedule - for pass 2.
This will include all pass 2 SINGLES for:
 - track 3 I24 gap fill data if desired (not required!)
 - track 4 Io data
 - track 1 Europa data
 - track 2 Torus/PPR Io data (if desired, and if BTG allow)
 - 5) Pass numbers on SINGLES: Please pay attention to the following, otherwise your SINGLES will be tossed out if you have the wrong pass numbers in the merge process. If you are unsure what pass number to use in your SINGLES, please don't hesitate to ask.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

Track 3 data: Pass #3
Track 4 Io data: Pass #3
Track 1 Europa data: Pass #4
Track 2 Torus/PPR Io data: Pass #4.

- 6) Teamstrips: There are currently NO teamstrips to start with for this update. Our uplinked product had all second pass playback removed. If you cannot start from your own file or NEED some sort of teamstrip, see me and I can set one up for you to start with. If you do use an old file as a starting point, please be aware that pass numbers and segment boundaries will be different now.
- 7) Finally, there will be at least one more update opportunity in I25 playback after this week to allow gaps on track 1 Europa data from pass 1 playback to be bested and filled in pass 2.

12-08-99: The table delivered today has commands for numerical tape passes 3 and 4 only. These pass number changes were necessitated by the requirement that we play back some data from track 3, which currently contains I24 data, before proceeding with the balance of the I25 playback. There appears to have been a NIMS software crash part way through 25ENEQUATR01. We received about 3 RIMS of nice data for this, followed by small amounts of questionable data for the other 3.5 RIMS in pass 2 (physical pass 1). In this update I deleted the balance of 25ENEQUATR01 from the playback plan. With the savings we are able to retrieve all recorded wavelengths for the remaining observations, while maintaining a cushion of about 1 Mbit to help pay for the upcoming grating test exercise. Since we are replaying ALL of the Io data from earlier passes (with fill-in wavelength tables commanded), it does not make sense to attempt to fill gaps at this time. Starting and stopping playback to change wavelength tables in the middle of an observation inevitably creates a small gap. We are fortunate this time because we will have the opportunity to go back and fill all our gaps during E26 playback. Although we lost 25ENEQUATR01, we will have good coverage of the central portion of the Jupiter-facing hemisphere with 25ENSUBJUB01 and 25ENGLOBAL01 (which overlaps the former). 25ENSUBJUP01 shows interesting spatial variations for almost all detectors.

12-10-99: (K. Schimmels) Playback is currently running ~ 1 day ahead of schedule. As of 10 AM Friday 12/10, we are about 43% thru playback, and are almost finished with the MWG track 2 Torus playback (track 2, tic 3587). The next (and final) update will be on schedule next week (files due Wednesday 12/15 at 3 PM, approval Thursday 12/16 at 3:30 PM). It will cover segments 6, 7, and 8.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

- 12-14-99: (K. Schimmels) Ok, I looked at the losses finally. (Jim - these were missing in the checkpoint report last week). Your BTG look like this:
- | | |
|---------------------------|--------|
| Allocation: | 30.177 |
| Usage (rec'd and lost): | 28.994 |
| Unused BTG: | 1.183 |
| Cost of pausing pb: | 2.3 |
| UVS BTG donation: | 0.979 |
| Remaining cost: | 1.321 |
| BTG released from margin: | 1.38 |
- Bottom line:
- | | | |
|---------|--------|--|
| Alloc: | 32.536 | |
| Usage: | 31.294 | |
| Unused: | 1.242 | (to use in this playback table update, or to donate to MWG or SSI) |
- 12-16-99: (K. Schimmels) Playback is currently ahead of schedule by about 20 hours. As of noon today (12/16), the tape is at tic 4505, track 4, playing back SSI ISFULANN01, and was about 30% thru that observation. Due to an early Resume Playback after OTM-79, ~8 hours extra playback gained us ~ 0.4 MB additional capability. Changes to this playback table are relatively minimal. In order to maximize the capability use at the end of playback, teams were released the rest of the margin and were allowed to slightly over-select data beyond their allocation. While this should mean we will use ALL the capability we have, there is still always the possibility that we will run ahead of schedule and still end up with a small amount of unused capability. Then again, we could also run behind schedule and not complete all the playback selected. In this case, bits will be available in E26 for playback of anything missed at the end of I25.
- 12-16-99: Elias Barbini delivered a new I25 playback table while I was in San Francisco this week. We received additional downlink allocation due to a release of margin bits. There was only one observation that was not fully selected in the existing plan. We recorded data AFTER the completion of the third scan of 25ENGLOBAL01. I do not know at present where the scan platform was pointed during recording of this data, but this will be derived from the AACS data accompanying the recording. Some will most probably be on Europa, and some will probably see dark sky. This may be valuable for noise assessment and other purposes. The new schedule shows the next NIMS observation to come down will be 25INCULANN01, approximately next Tuesday, followed by 25INREGION01 starting on Christmas eve.
- 12-16-99: (M. Segura) The NIMS grating warming began this afternoon around 2 pm. Approximately one hour into the test the phase 2 software crashed. Big surprise - the software doesn't enjoy heat any better than radiation.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

A discussion with Bill brought about a plan to recover part of the test. Run in Phase 0 software. The commands were uplinked to power cycle the instrument and set the instrument in the same configuration as previously commanded in the sequence. We got the commands generated and uplinked to the spacecraft in time to recover the last 3 hours of the test. The temperatures just prior the end of the warming cycle of 10 hours was: Chopper: -62.6 C, Telescope: -25.0 C, and Grating: -82 C with optics heater 1 on.

The grating current prior to the software crash was 134 DN; after power cycle it was and continues to be in the 114 DN range. The MROs of the actual grating position still show hex "00" after 10 hours of warming.

There will be some real time packets of opcal/ecal data HOWEVER the instrument is currently running phase 0 software with CDS phase 2 real time so if anything does appear, it may be less than useful. The NIMS instrument state at the end of the test will be: chopper off, safe mode, with phase 0 software in place. I would like to leave the instrument in this state until E26 at which time the encounter sequence will reload the Phase 2 software just before the Io observation we have planned. There are two reasons for doing this - we could more easily convince the project to repeat the activity with optics heater 2 before E26 if the only work required by the SST is a simple parameter edit to an existing file. The second reason is to reload the instrument, it will require the same people to do the work as supported this activity and I suspect there will be some resistance to doing both....

The downside of this is that any data SSI is taking in E26 prior to our Io observation will have no NIMS data embedded.

12-28-99: Playback pauses and is not successfully restarted.

01-04-00: (D. Bindschadler) During playback, we autonomously paused at the end of segment #7 because no additional segments had been placed on board. Subsequently, segs. 8 and 9 were uplinked. Instead of the expected nominal resumption of playback, the DMS slewed across the remainder of track 1, turned and proceeded across track 2, and then stepped back up to track 1. If this had been a simple limited search, playback should have proceeded with processing track 1 data from the 2nd time window in segment 8. When the tape continued to slew, commands were sent to MRO areas of memory that contained playback time markers and to terminate playback. Analysis of the MROs made it clear that playback had read a corrupted restart time at the end of segment 7, when playback autonomously paused. The restart time was significantly later in time than any I25 data, meaning that the playback process was searching for a time marker on the tape that did not exist. This kind of anomaly has occurred previously, although not in the context of an autonomous playback pause.

I25 Playback Events Timeline (10-20-99 to 01-04-00)

Given the limited time remaining for I25 playback (< 2 days by the time the anomaly was understood) and the workload of generating a new PBT, we simply re-initiated playback, starting with segment 9. Unfortunately, this segment (which contained MWG gap fill singles only) did not contain a RECFMT. The result was that no additional data were played back. If teams wish to recover data from segments 8 and 9, they will have to do so during E26 playback. None of the affected data were overwritten by the E26 recordings.

01-04-00: Playback paused autonomously at the end of segment 7 of the active playback table, following downlink of 25ENSUBJUP01. The following segments, uplinked later, did not execute correctly because a corrupted time value was obtained by the controlling software at the end of segment 7. All of this occurred on and after 12-28-99. Playback was terminated and re-initiated with a truncated table starting with segment 9. This was missing a required RECFMT command, so none of the commanded data was successfully retrieved from the tape thereafter. As a result about 8 Mbits of expected data were not received. Most of this was SSI's global Europa coverage, but we lost a significant amount (2.9 Mbits) of our own 25ENGLOBAL01. It will be possible to play back some or all of this in E26. However, we may face a shortage of bits due to grating tests and some prioritization will no doubt be required.

NIMS Anomaly Report - I25 Sequence

The NIMS grating became stuck prior to the I24 encounter. The grating continued to be stuck for the I25 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 were two NIMS processor halts detected during the I24 Encounter.

The spacecraft safed during the I25 encounter about 4 hours before the Io flyby. 9 of the 13 planned NIMS Io observations were lost due to this safing event.

Stuck Grating (from the I24 NIMS Guide)

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

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

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

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

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

NIMS Anomaly Report - I25 Sequence

Response to Stuck Grating Anomaly (I25)

At I25 the cause of the stuck grating was not known (and is still not clearly understood). An attempt was made during I25 cruise to unstick the grating by heating up the NIMS instrument by turning on the NIMS Optics heaters. This attempt was not successful in freeing up the stuck grating.

On Day 349 NIMS Optics Heater 1 was turned on in an attempt to heat up the NIMS grating mechanism. The optics heater was to be turned on for about 10 hours. The NIMS engineering telemetry showed a rise in the Telescope, Grating and Chopper temperature, a slight rise in the Shield temperature and no change in the FPA and Electronics temperatures. NIMS was commanded to band edge mode (as in I24) to have the grating jump between grating positions 11 and 23 every minor frame. MROs were commanded once per hour during this 10 hour period to return the NIMS grating position engineering to test if the grating was moving (unstuck).

About 10 minutes into this exercise the NIMS Phase 2 software (RAM) halted, most probably due to the elevated temperatures. Real time commands were sent to the spacecraft to power cycle the NIMS instrument. NIMS was left running the original Phase 0 software (ROM). NIMS was again commanded to band edge mode. The NIMS SCLK values in the engineering stream continued to show NIMS halted but this was due to running the Phase 0 code which does not save the SCLK in RAM where it is picked up and returned by CDS. MROs of the grating position engineering continued. No changes in the grating position were noted - the engineering values remained 00x as before.

After the NIMS Optics Heater was turned off, real time commands were sent to reload and run the NIMS Phase 2 software.

On day 353 the RCT calibration took place. The RCT data confirmed that the grating was not moving.

NIMS Anomaly Report - I25 Sequence

Processor Halts

NIMS suffered three processor halts during the I25 encounter. The first halt occurred during the inbound segment of the encounter in the middle of recording 25ENEQUATR01, resulting in data corruption in the second half of this observation. The second halt occurred before the Despun Bus reset error just prior to the spacecraft safing event. The third halt occurred in the outbound segment of I25 between the orbits of Europa and Ganymede after all of the NIMS I25 science observations had been recorded.

The first halt was not detected by analysis of the NIMS SCLK engineering values. The halt was inferred by the onset of bad data in the playback data. A software reload at the beginning of the following observation put NIMS back in working order.

The second halt occurred before the despun bus reset error about 4 hour prior to Io closest approach. NIMS has been observed to halt when the BURP patch executes. It is believed that NIMS lost RTI synch with CDS at this time.

The third halt, which occurred on D300 at about 16:00, was detected by the NIMS SCLK engineering. No NIMS observations were affected by this halt. NIMS was scheduled to reload the software about 8 hours later, but these commands were dropped from the spacecraft safing recovery sequence. NIMS remained halted until 12:00 on D334 when real time commands reloaded the NIMS software.

Timing:

SCLK	Comments
5272893:11	Software reload prior to 25ENEQUATR01
5272902:00	Start of 25ENQUATR01 observation
5272905:19	Halt #1 (start of anomalous data)
5272916:11	Software reload prior to 25ENGLOBAL01
5273071:00	Halt #2
5273133:40	Anomalous SCLK 5273071 reported
5273175	CDS Despun Reset Reported
5273180	Spacecraft Safed
5274402:00	Halt #3
5274615:58	Anomalous SCLK 5274402 reported
5279590:32	Software Reload (real time commanded)

NIMS Anomaly Report - I25 Sequence

Spacecraft Anomaly

A standard despun bus reset error occurred in CDS, followed by a DBUM bus transaction error in the B-string High Level Module. As a result, an error in the CDS flight software patch caused the spacecraft to safe at 00:07 on D330, about two hours prior to perijove and about four hours prior to Io closest approach. After the spacecraft entered safing, commands to restore the spacecraft to normal operations were generated and sent within two hours, and a truncated science observation sequence generated and transmitted within two and one half hours. The truncated science observation sequence resumed recording at 4:39 on D330, approximately 32 minutes after Io closest approach.

9 out of 13 planned NIMS Io observations were lost due to the spacecraft safing event:

25INTIERMS01, 25INSOPOLE01, 25IMPRMETH01, 25INSOPOLE02,
25INEMAKNG01, 25INITUPAN01, 25INSAPPNG02, 25INITUPAN02,
25INEMAKNG02.

In the rush to recover the Io flyby sequence as soon as possible, the original sequence was truncated shortly after the Io encounter, leaving a gap of about 16 hours with no commands to the spacecraft. A NIMS software reload in the outbound segment of I25 was part of the original sequence that was cut from the recovery sequence. NIMS suffered a software halt during this time and remained halted for almost 4 days.

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.