Chapter 5 - Detailed Observation Designs

Contents

Introduction to Chapter 5

Detailed Observation Designs

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

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

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

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

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

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

NIMS Real-Time Software Reload		ACTIVITY ID:	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	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 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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

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

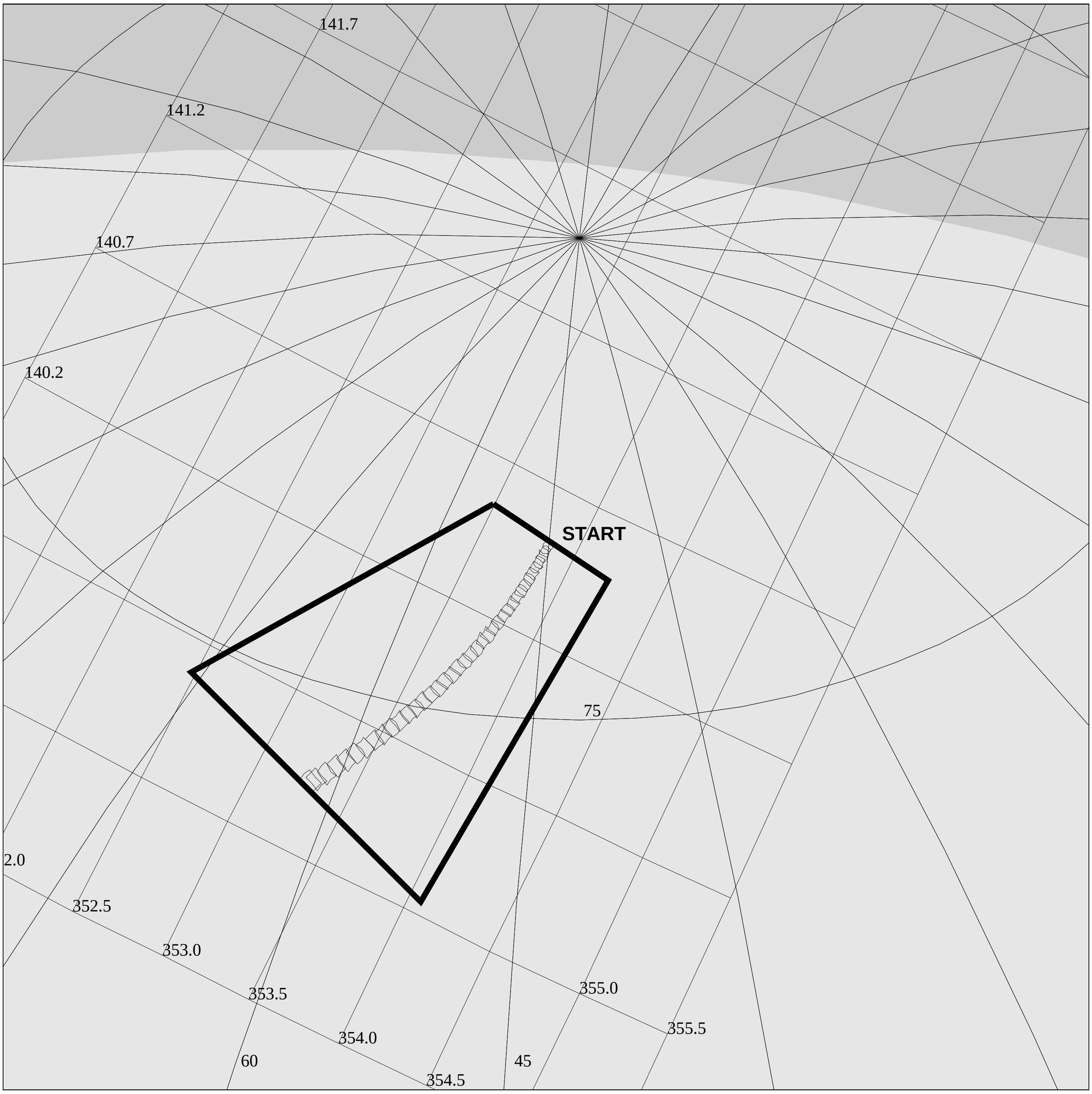
The NIMS I25 reload OAPELS are:
25NNNOPOLE01, 25NNSUBJUP01, 25NNEQUATR01, 25NNGLOBAL01, 25NNTIERMS01, 25NNSOPOLE01, 25NNPRMETH01, 25NNITUPAN02, 25NNGIANTS01, 25NNCULANN01, 25NNINTERM01, 25NNRELOAD01.

25INSOPOLE02, 25INEMAKNG01, 25INITUPAN01, 25INSAPPNG02, 25INEMAKNG02, 25INREGION01, 25INPCTRLT01, 25INRCTRLT01 did not have reloads.

Design Detail

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

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



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: **THINNING:NIM 2**

START:EEE 99-329/16:28:52.466 +CDS 10:00:0 **BODY PLOT TIME:TARGET-TIME D= 1992 S= 4.000**

OBSERVATION:25ENNOPOLE01 **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

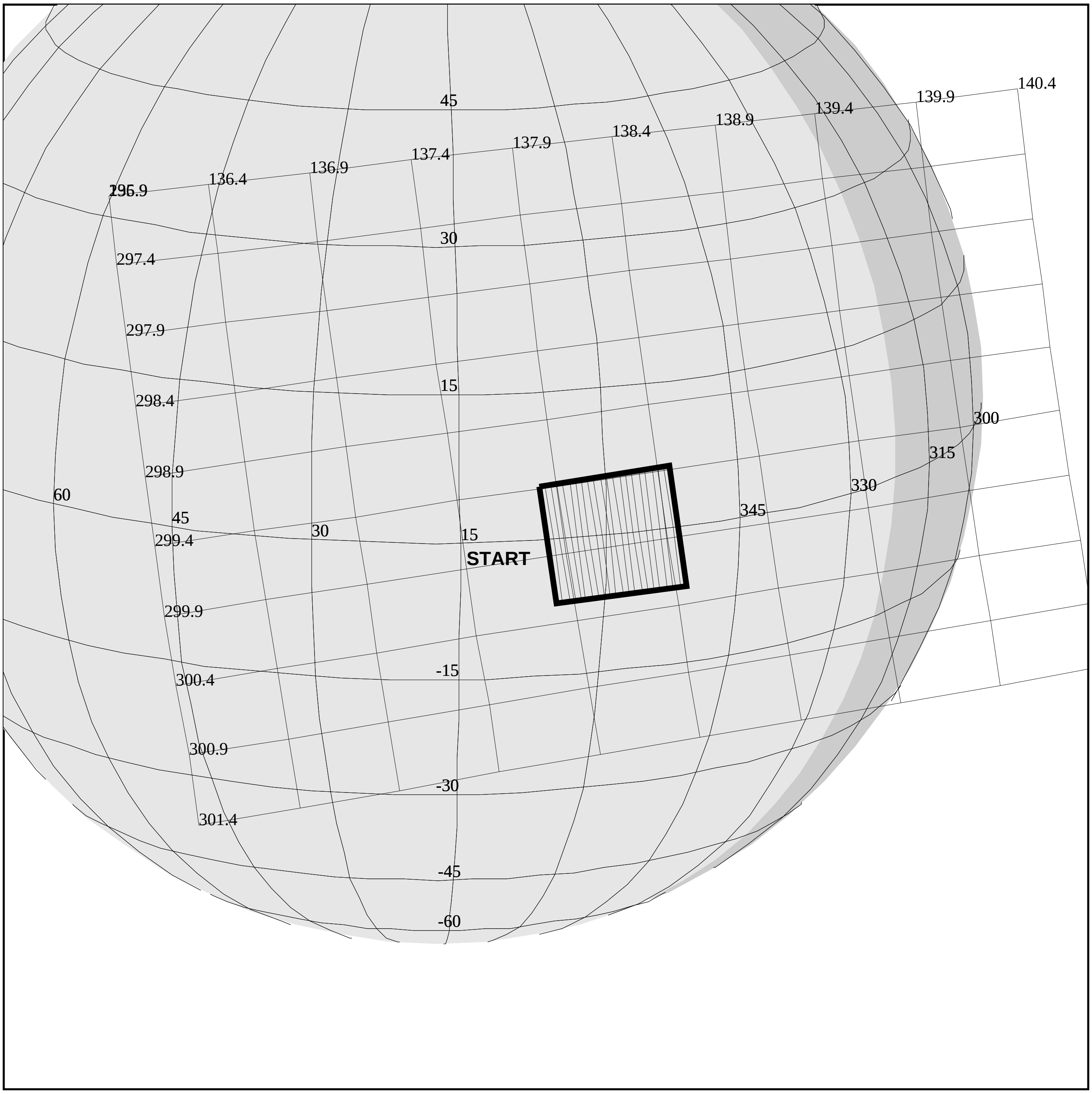
Design Detail

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



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

25ENSUBJUP01

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:

THINNING:NIM 2

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

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

OBSERVATION:25ENSUBJUP01

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

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.)

Data Returned

Design Detail

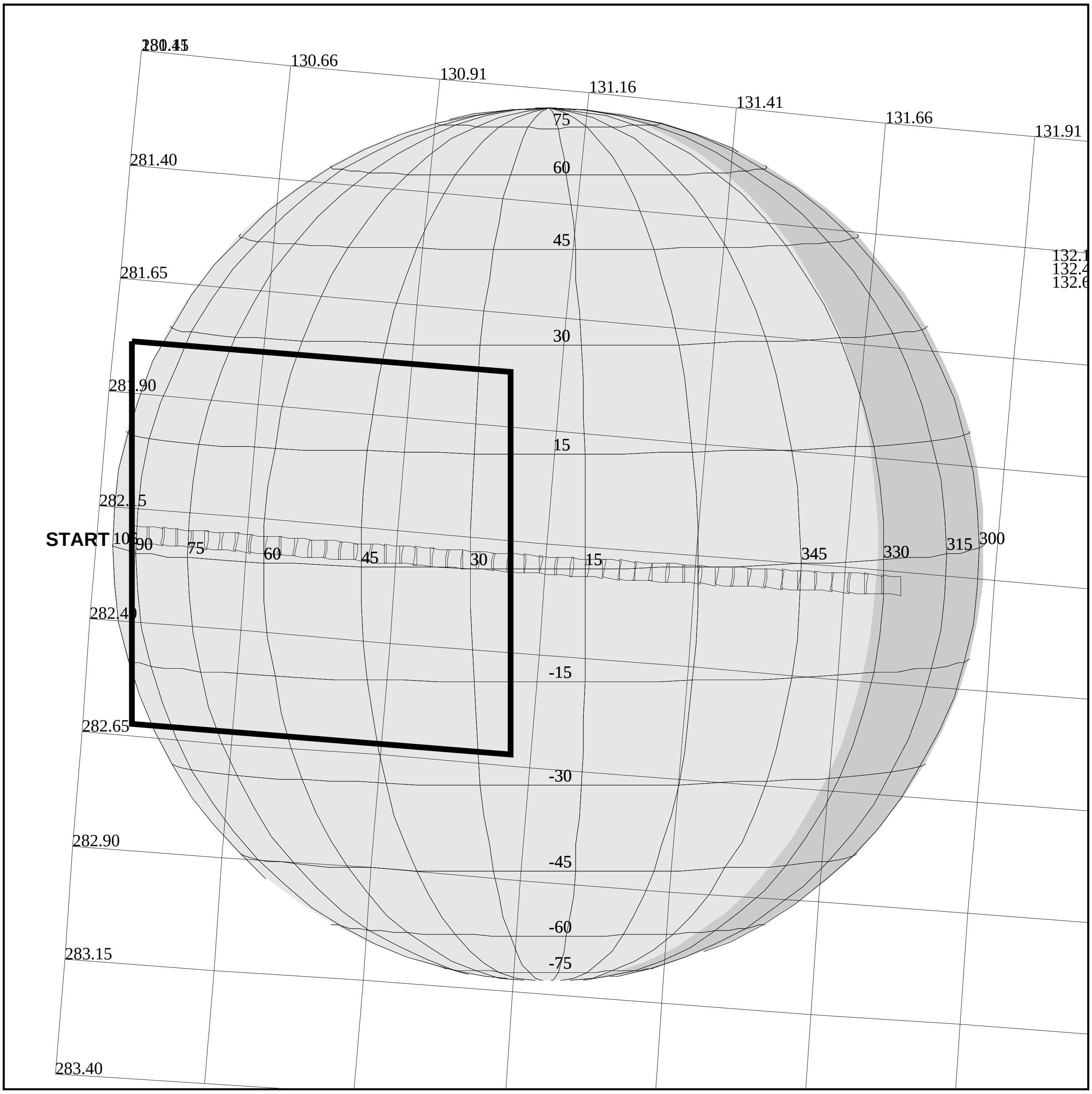
BTG=2.7359 MB, TICS=283, FMT=MPW

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

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 XCr= 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:

THINNING:NIM 2

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

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

OBSERVATION:25ENEQUATR01

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	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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

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.
Note: Observation now in Long Map mode.

Data Returned

Design Detail

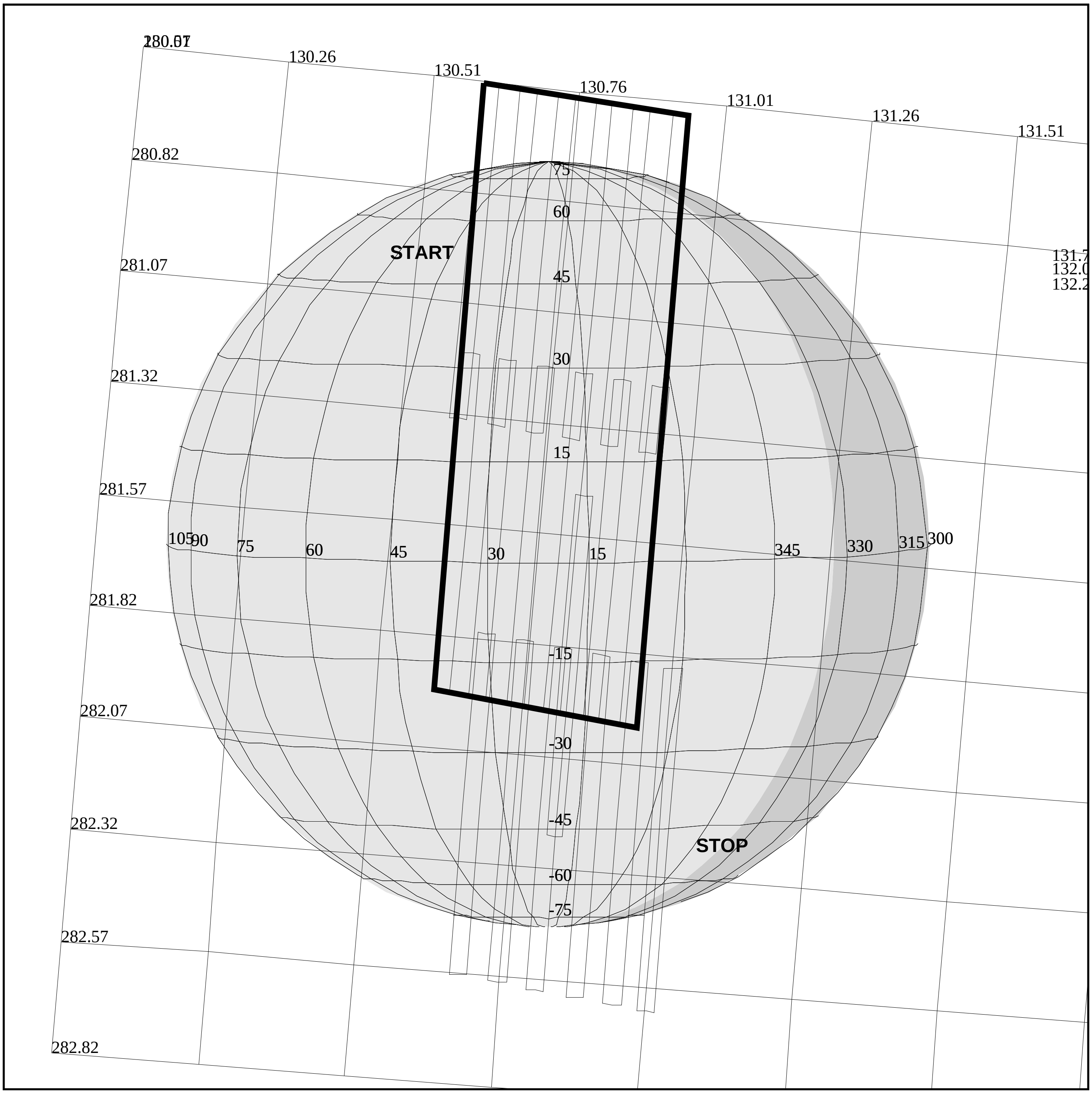
BTG=2.8799 MB, TICS=539, FMT=MPW

Single scan over equatorial region covering entire illuminated portion of Europa. 90 deg W to 330 deg W.
Long Map, Nyquist, range 124000 km, resolution 62 km/nimsel.
cone 138.3, clock 131.4, phase 41.7

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 protion of Europa.
Long map, Nyquist, range 130000 km, resolution 65 km/nimsel
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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	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

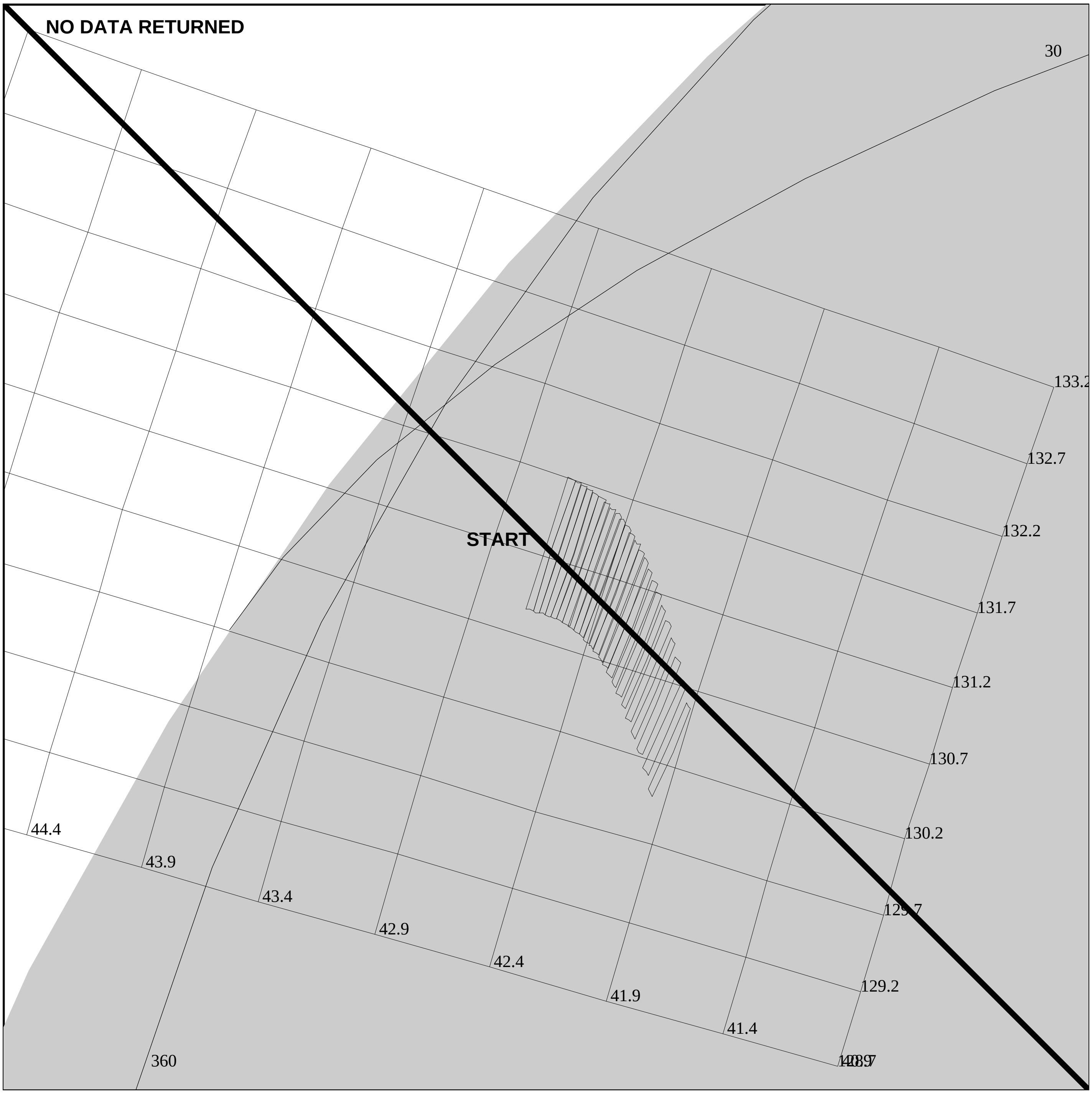
Use 6MCOPY command to copy NIMS Housekeeping values from NIMS RAM to CDS RAM.

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



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

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

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	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 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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

Nightside observation to measure thermal emission from Tiermes, a hot spot detected by Voyager, near 23 N. Latitude, 351 W. Longitude.

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.

Spacecraft Safed, No Data Returned

Design Detail

BTG=3.0239 MB, TICS=372, FMT=MPW

7 Rim obs with 1 Rim allocated for target at 23 N. Latitude, 351 W. Longitude. LM, Nyquist, gain state 4, one scan.

Note: scan platform start reposition before end of record, so the last recorded grating cycle or so is smeared.

Note: Cone angle 42 degrees - lots of s/c Booms.

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

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

25INSOPOLE01

DESIGN G3.2 kmage: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

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      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 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         Scan Platform      No
CDS Source   OAP       Spin State      DUAL         DMS                No
```

Observation Objective

To obtain compositional information of material near pole.

Spacecraft Safed, No Data Returned

Design Detail

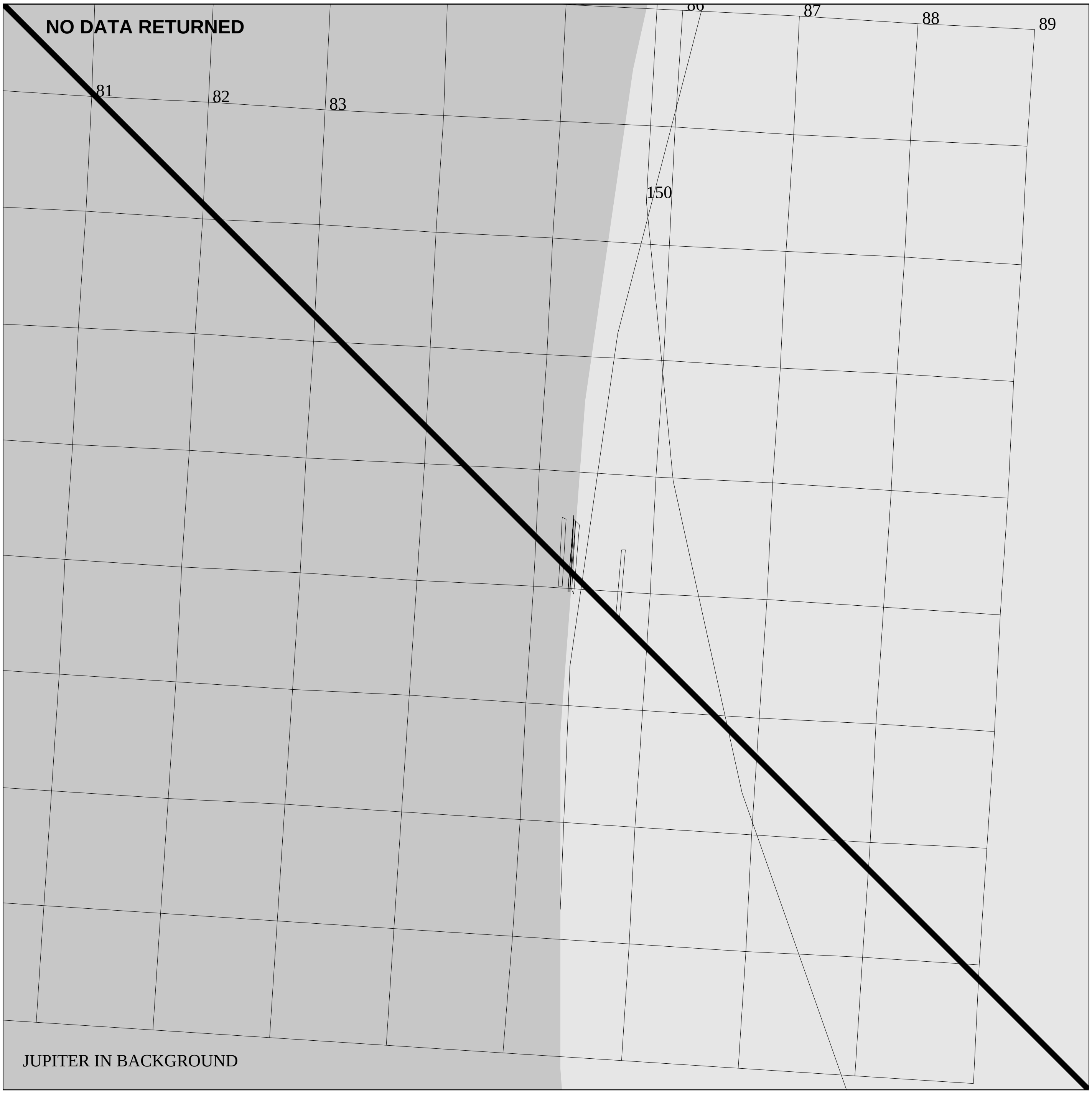
BTG=0.1872 MB, TICS=25, FMT=MPW

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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	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

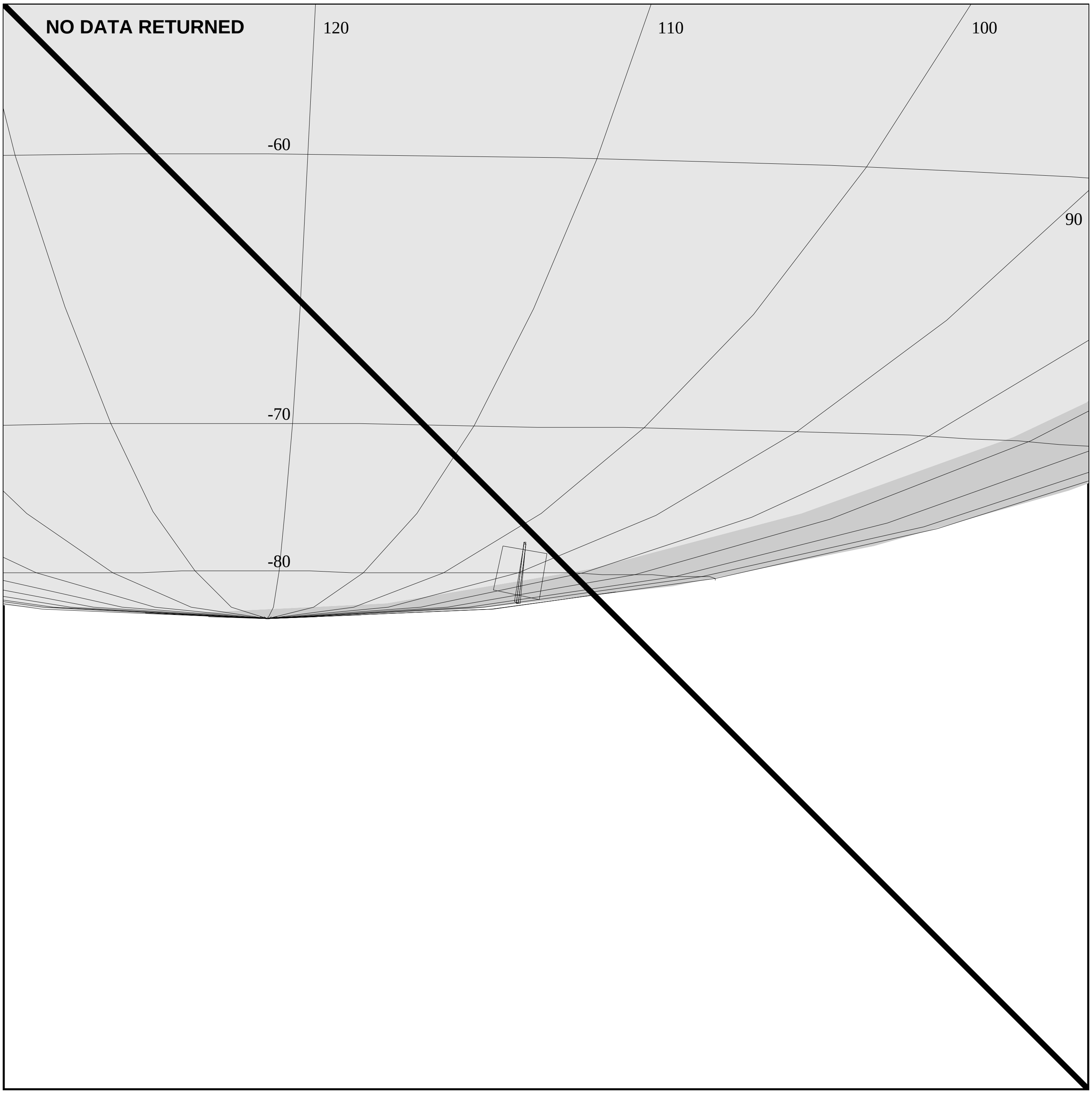
Limb scan extending from surface outwards. Joint observation with SSI.
Jupiter is in the background off-limb.

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

25INSOPOLE02

DESIGN G3.2 kmage: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	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 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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To obtain compositional information of materials in south polar region.

Spacecraft Safed, No Data Returned

Design Detail

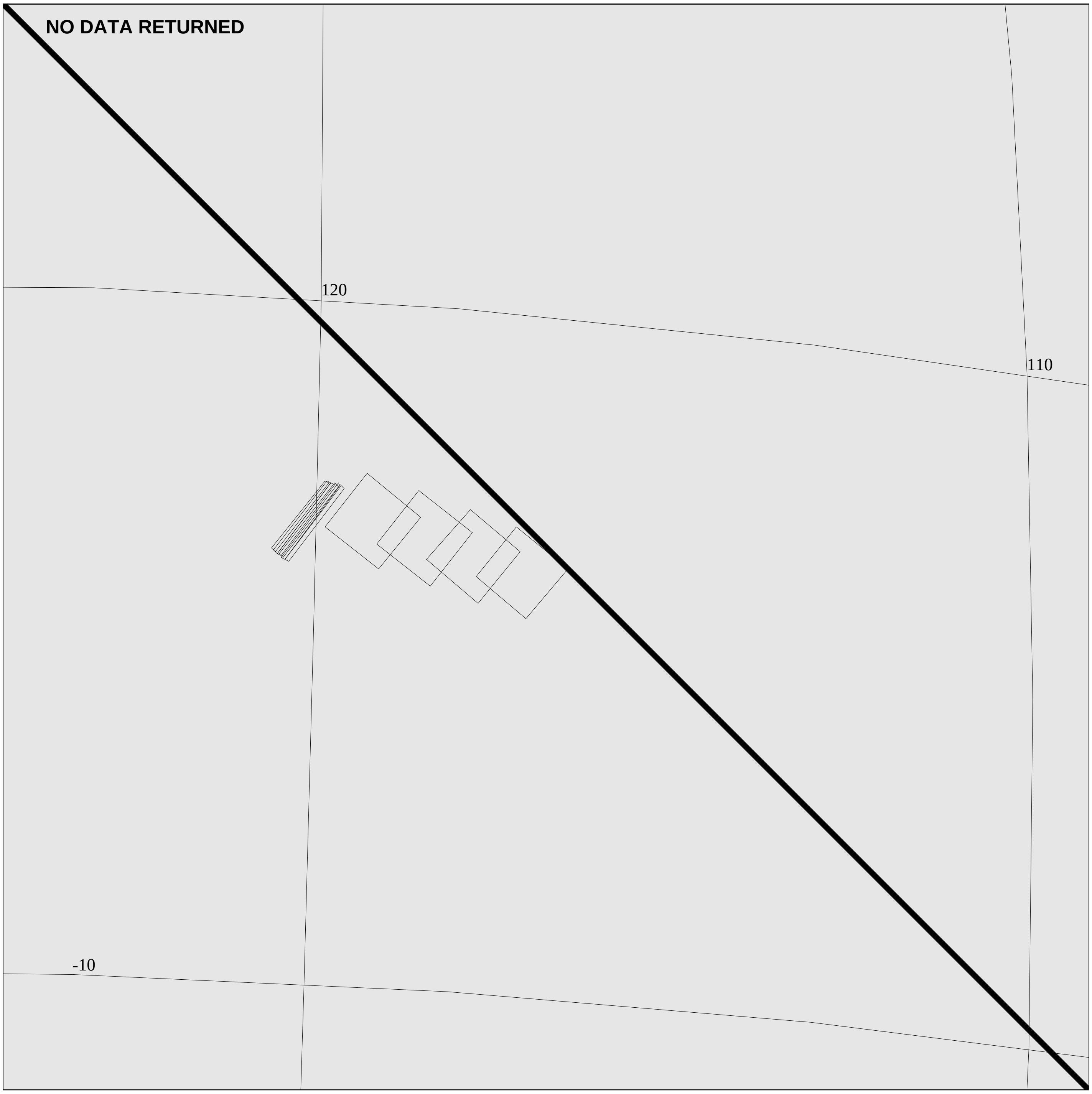
BTG=0.1872 MB, TICS=25, FMT=MPW

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 kmage: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	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 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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	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

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

25INITUPAN01

DESIGN G3.2 kmage: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

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	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 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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To obtain compositional information of materials in hot spot Tupan.

Spacecraft Safed, No Data Returned

Design Detail

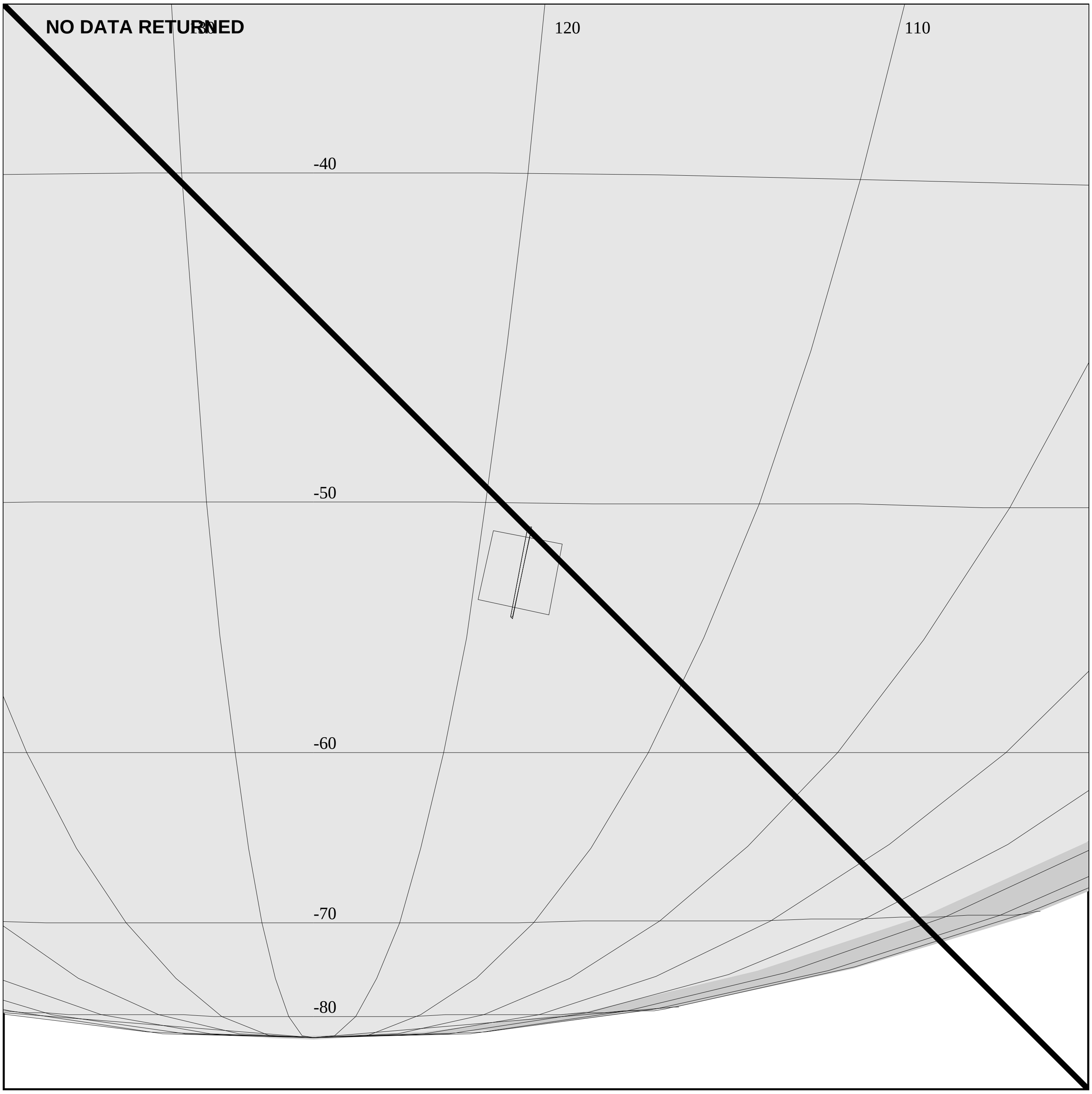
BTG=0.1872 MB, TICS=25, FMT=MPW

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 kmage: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:Io_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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To obtain compositional information of sapping materials.

Spacecraft Safed, No Data Returned

Design Detail

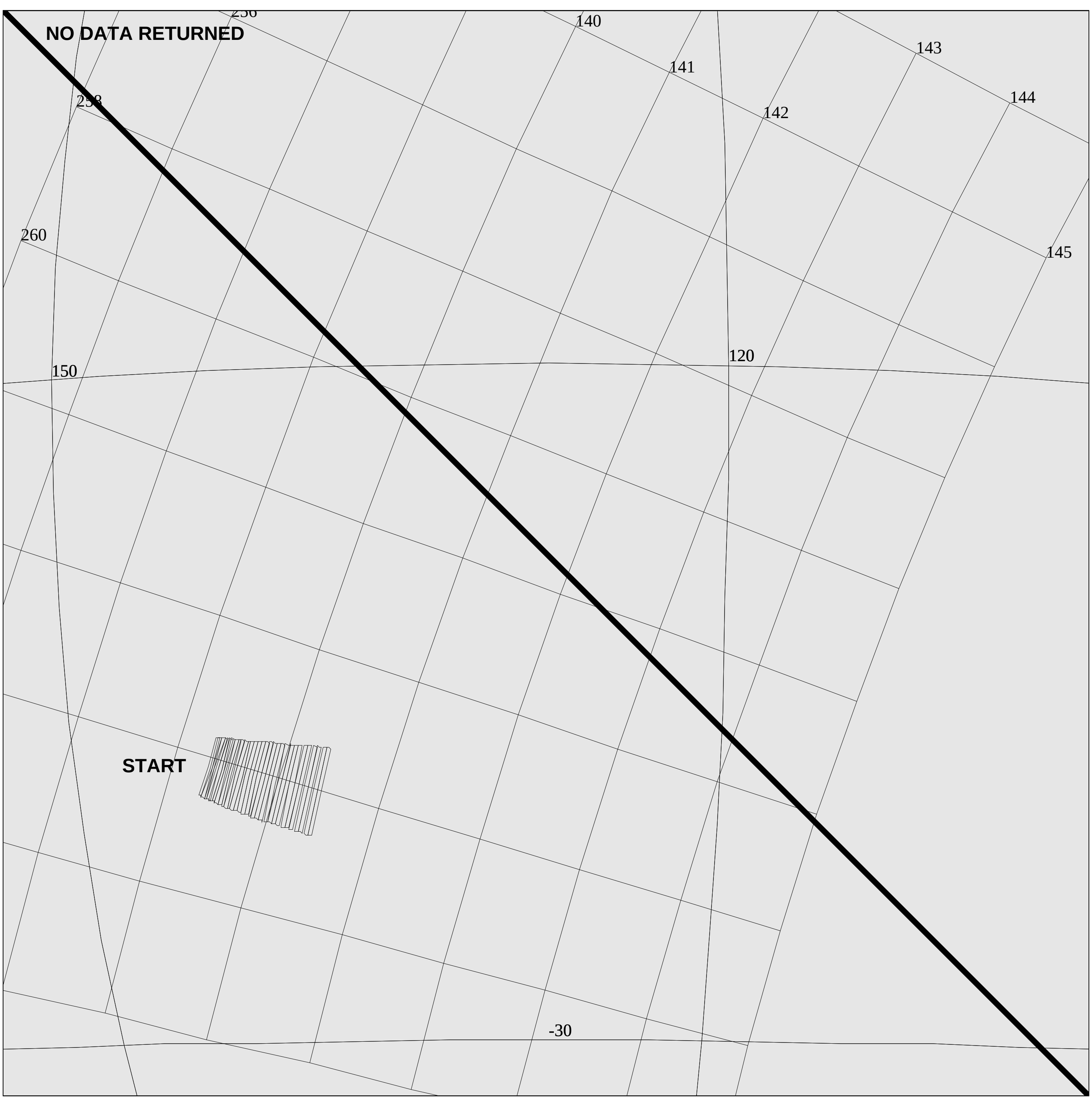
BTG=0.1872 MB, TICS=25, FMT=MPW

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	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 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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To investigate the composition of materials in the hot spot Tupan.

Spacecraft Safed, No Data Returned

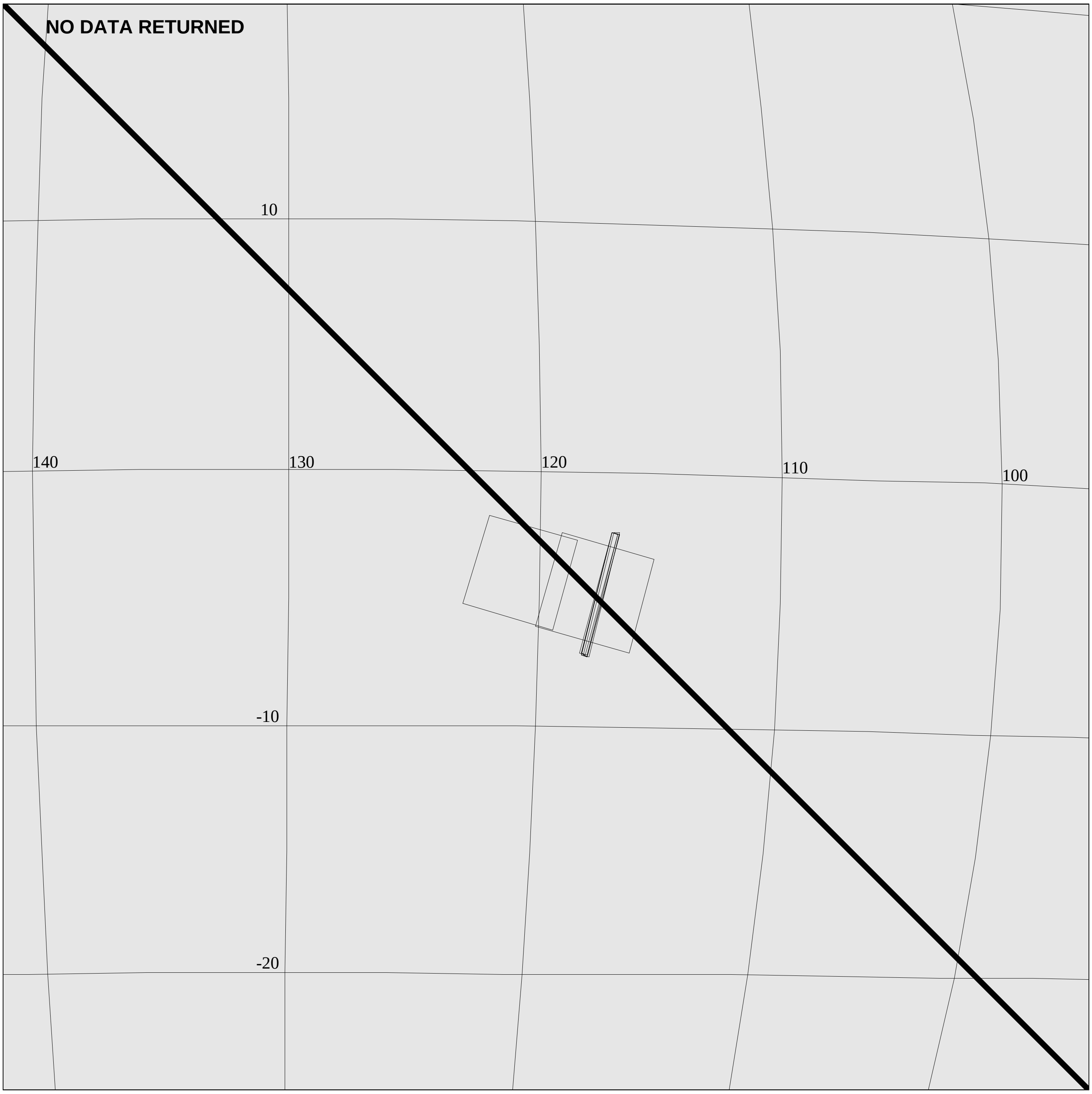
Design Detail

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



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 kmage:10/28/1999 10:46:13

FILE:P.25ISEMAKNG02

TARGET BODY : IO

MINI:m.25ISEMAKNG02

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

PERIAPSIS:

THINNING:NIM 1

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

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

OBSERVATION:25ISEMAKNG02

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	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	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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To obtain compositional information of materials in Emakong Patera Caldera.

Spacecraft Safed, No Data Returned

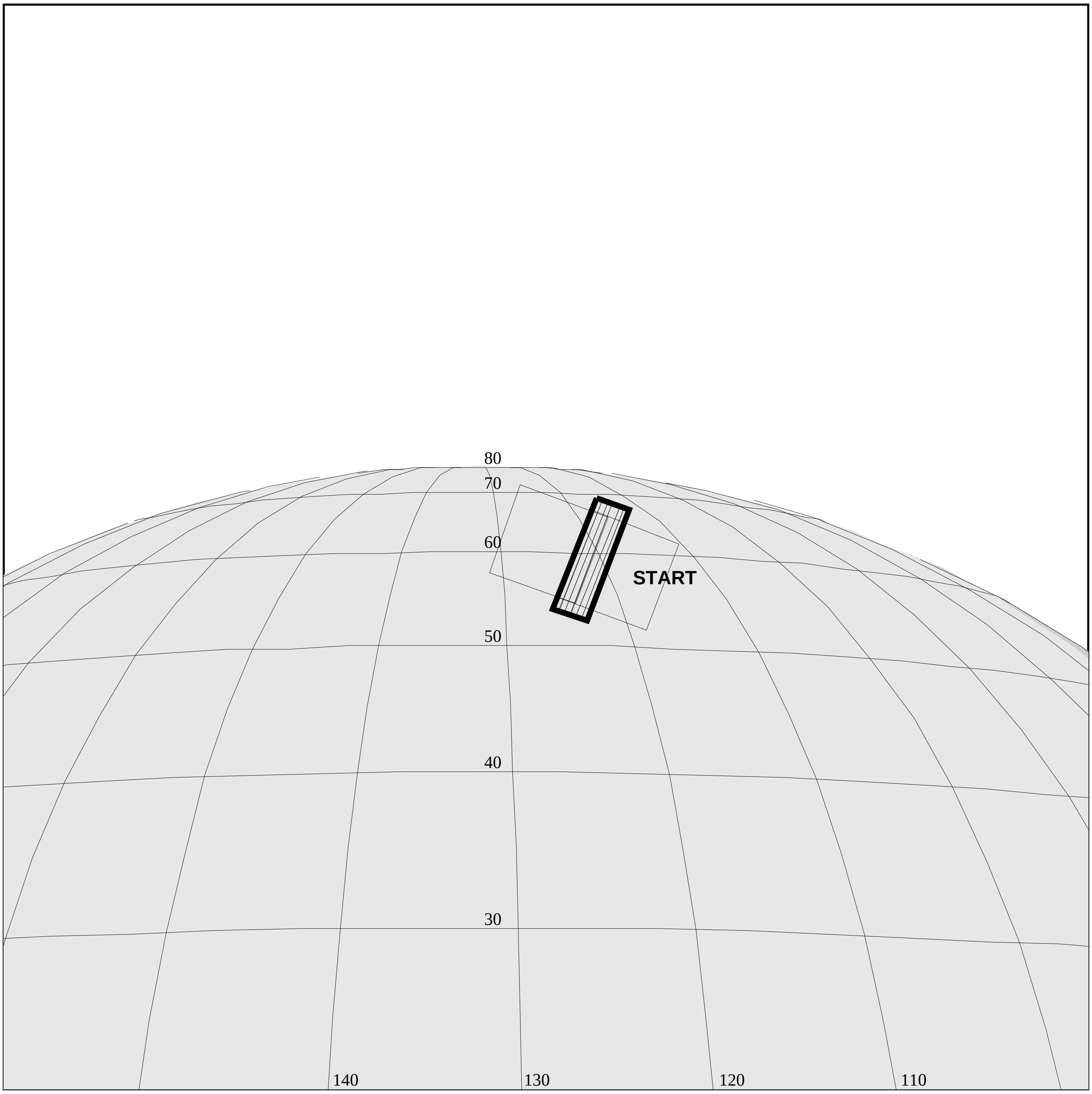
Design Detail

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



165IJ: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
118IJ:#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

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

THINNING:NIM 2

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

DESCRIP:Io_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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To obtain compositional information of materials of Io's Giant calderas in the Northern Hemisphere.

Data Returned

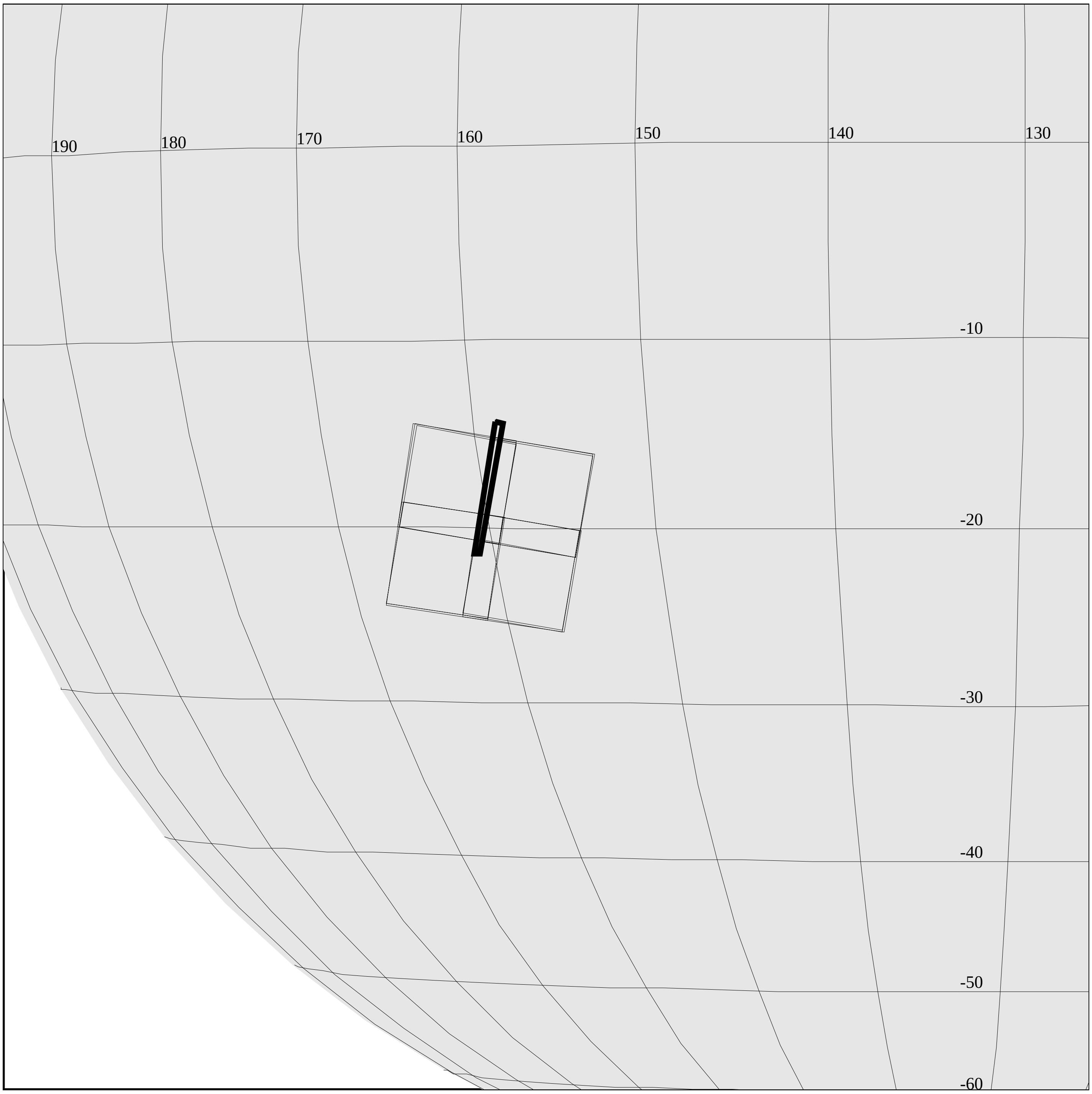
Design Detail

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



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

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:

THINNING:NIM 1

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

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

OBSERVATION:25ISCULANN01

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	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 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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	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

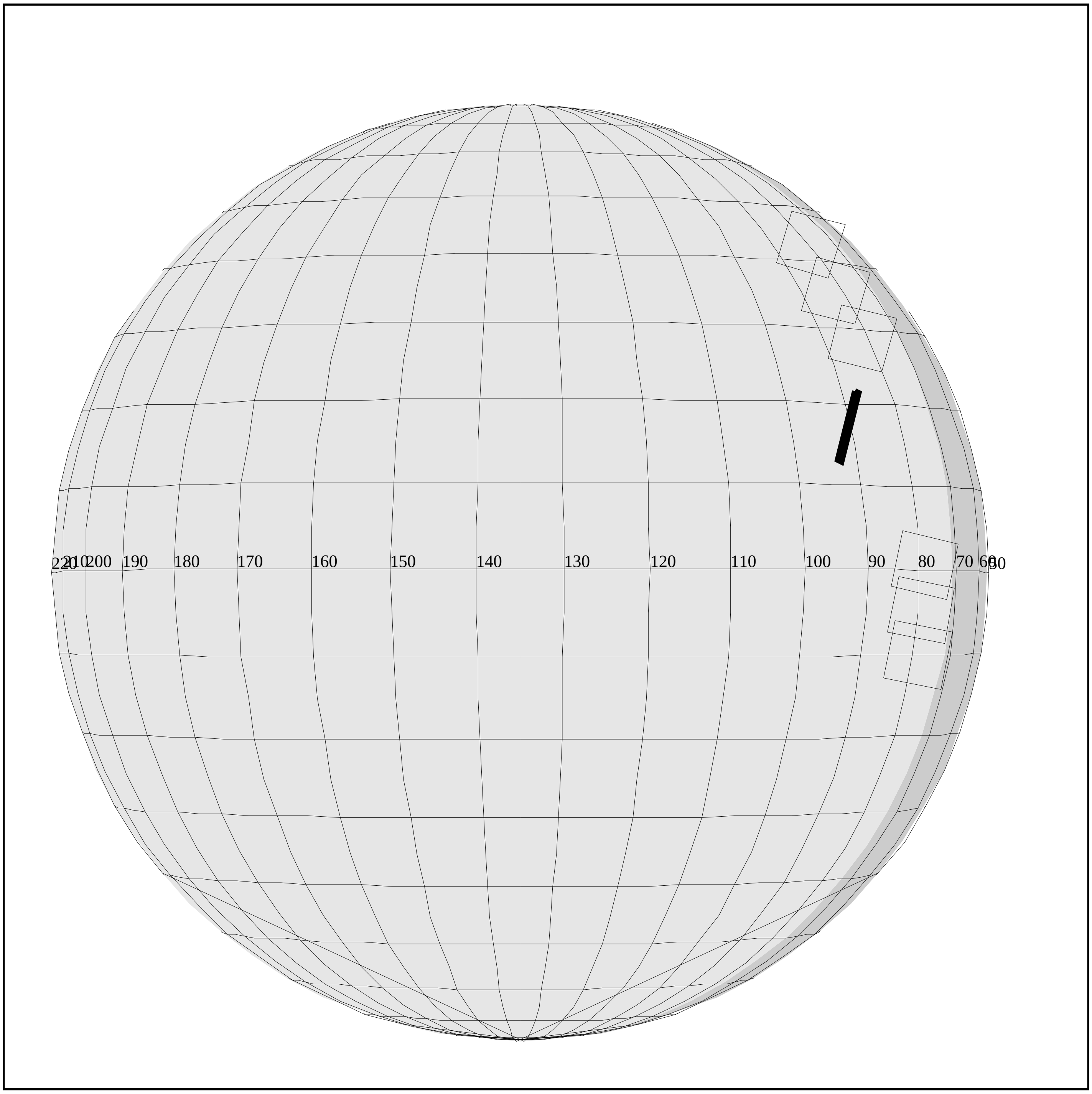
BTG=0.3744 MB, TICS=48, FMT=MPW

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

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

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

THINNING:NIM 1

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

DESCRIP:Io_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

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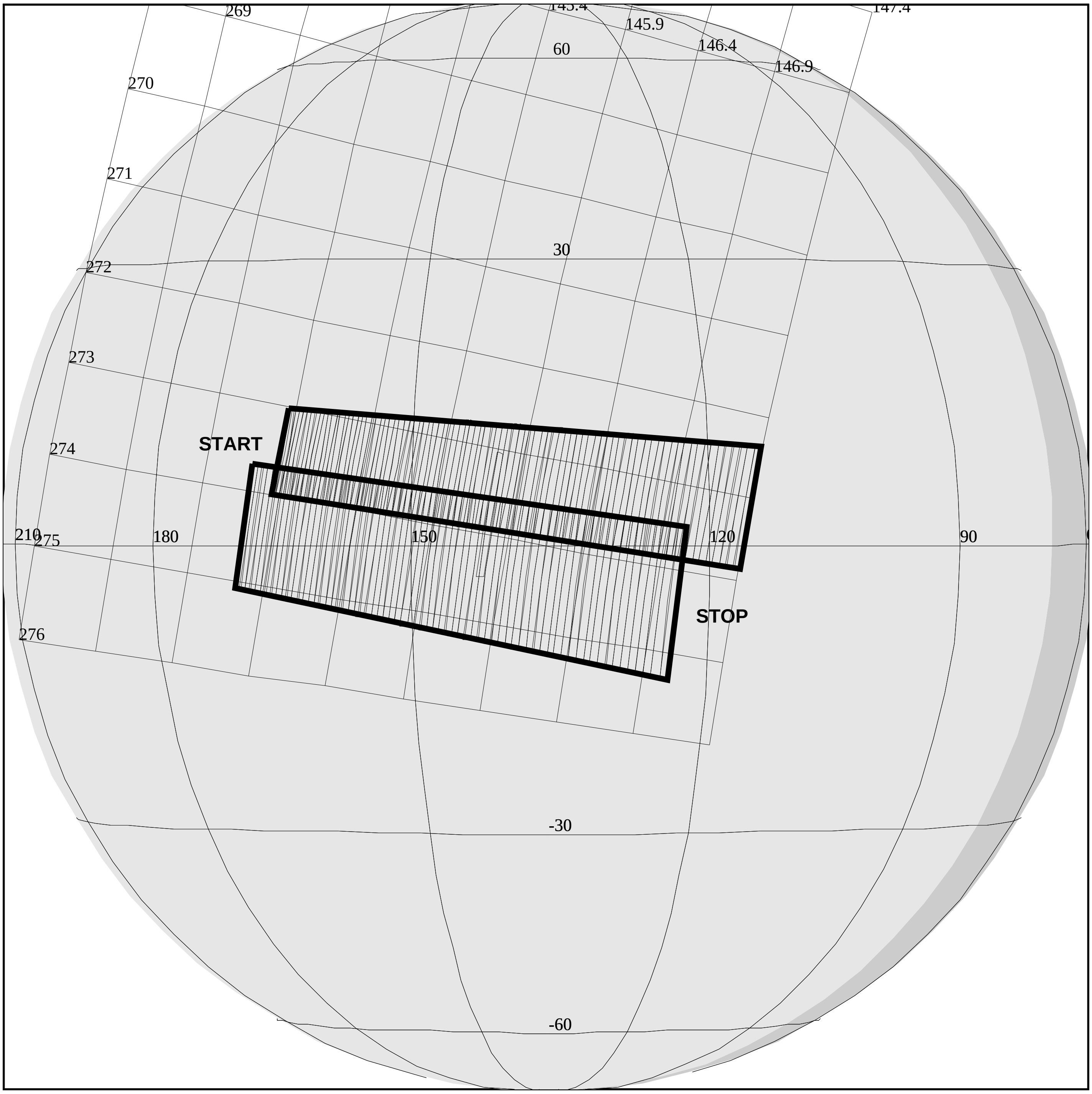

165DN:TT= 0 TMC= 1 C= -35.00 XC= -3.00 BS= 0/2231 TC= 1(1 133)
A= 182 pD= 9090 SR= 6.630 RA50= 57.29 DEC50= 22.74 cone=144.35 clock=273.50
117DN:#SB= 1 OR= 0.030 RR= 7.680 BM=F RC= 1 BS= 0/2231
1:#s= 2 Cs= 45.10 XCs= 0.00 Cr= -40.00 XCr= 8.00 sD= 4526 rD= 32

25INREGION01

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	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 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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	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

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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	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.

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	NIMS
Requestor	NIMS-SWG/M. Segura	Team	NIMS	Working Group	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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	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

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	NIMS
Requestor	NIMS-SWG/M. SEGURA	Team	NIMS	Working Group	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	Scan Platform	Yes
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

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.

No Data Returned due to loss of 70m antenna time.
This was in support of MPL.

Design Detail

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

Fixed Long Map (XLM), Gain 4, Grating Start 0, R/T, PCT252

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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	NIMS
Requestor	NIMS-AWG/K. BAINES	Team NIMS	Working Group	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	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

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

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

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

Design Detail

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

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

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