Chapter 5 - Detailed Observation Designs

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Introduction to Chapter 5

Detailed Observation Designs

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

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

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

The text of the OAPEL forms have been modified to reflect the actual NIMS instrument parameters for playback. An extra line containing one or some of the following statements has been added to the Observation Objective section of the OAPEL form to report the data 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: 22NNJUPRTS01- START TIME: 99-223/14:45:27.733

Activity ID: Orbit 22 Target N Inst N OAPEL JUPRTS 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 08/11/99 Week 32
Start	JEE-CDS 00001200:00:0	99-223/14:45:27.733	JEE-000/20:13:20.000
End	JEE-CDS 00001197:00:0	99-223/14:48:29.733	JEE-000/20:10:18.000
Duration	00000003:00:0	000/00:03:02.000	000/00:03:02.000

Top Label	22NNJUPRTS01-				
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

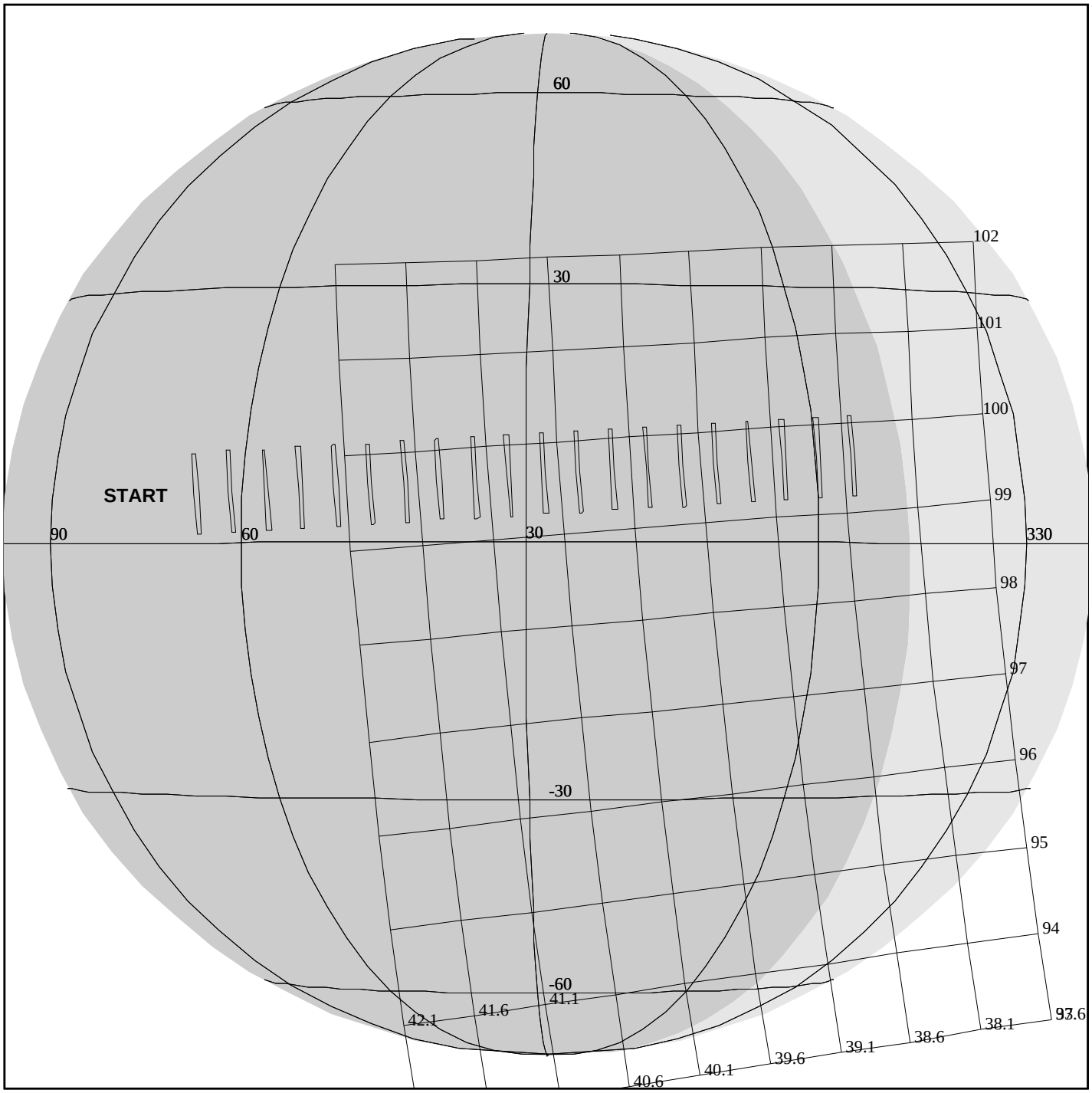
NIMS reload
Each NIMS GEM observation will have an instrument reload before the start of each observation. Each reload has its own OAPEL form, but only this first is included in the NIMSGUIDE. The NIMS C22 reload OAPELS are:

22NNJUPRTS01, 22NNJUPRTS02, 22NNHOTMAP01, 22NNHRSPEC01, 22NNHOTMAP02, 22NNHOTMAP03, 22NNWHTOVL01, 22NNBELUSL01, 22NNGLOBAL01, 22NNWHTOVL02, 22NNDKSPOT01, 22NNRELOAD01

Design Detail

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

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



165DB:TT= 0 TMC= 1 C= 25.00 XC= 0.00 BS= 0/2827 TC= 1(7 43)
A= 728 pD= 0 SR=17.450 RA50=254.68 DEC50=-24.33 cone= 43.21 clock= 99.71
117DB:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/2827
1:#s= 1 Cs= -72.40 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 3640 rD= 40

22JNJUPRTS01

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22JNJUPRTS01

CENTRAL BODY:JUPITER III

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 7**

START:JEE 99-224/10:58:47.733 -CDS 1192:00:0 **BODY PLOT TIME:TARGET-TIME D= 0 S= 1.000**

OBSERVATION:22JNJUPRTS01 **DESCRIP:Jupiter_Realtime_Observation**

Jupiter Realtime Observation	**ACTIVITY ID: 22JNJUPRTS01-** **START TIME: 99-223/14:49:30.400**

Activity ID: Orbit 22 Target J Inst N OAPEL JUPRTS SeqNo 01 -

Title	**Jupiter Realtime Observation**			**Instrument**	**NIMS**
Requestor	**NIMS-AWG/K. BAINES**	**Team**	**NIMS**	**Working Group**	**AWG**

Time System	**CDS**	**Load ID**		**Calendar Date**	**08/11/99 Week 32**
Start	**JEE-CDS 00001196:00:0**	**99-223/14:49:30.400**			**JEE-000/20:09:17.333**
End	**JEE-CDS 00001170:00:0**	**99-223/15:15:47.733**			**JEE-000/19:43:00.000**
Duration	**00000026:00:0**	**000/00:26:17.333**			**000/00:26:17.333**

Top Label	**22JNJUPRTS01-**				
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

FREE_RTS=0.32 Mbits

Search for Jupiter atmospheric composition and thermal variations over time.

Data Returned

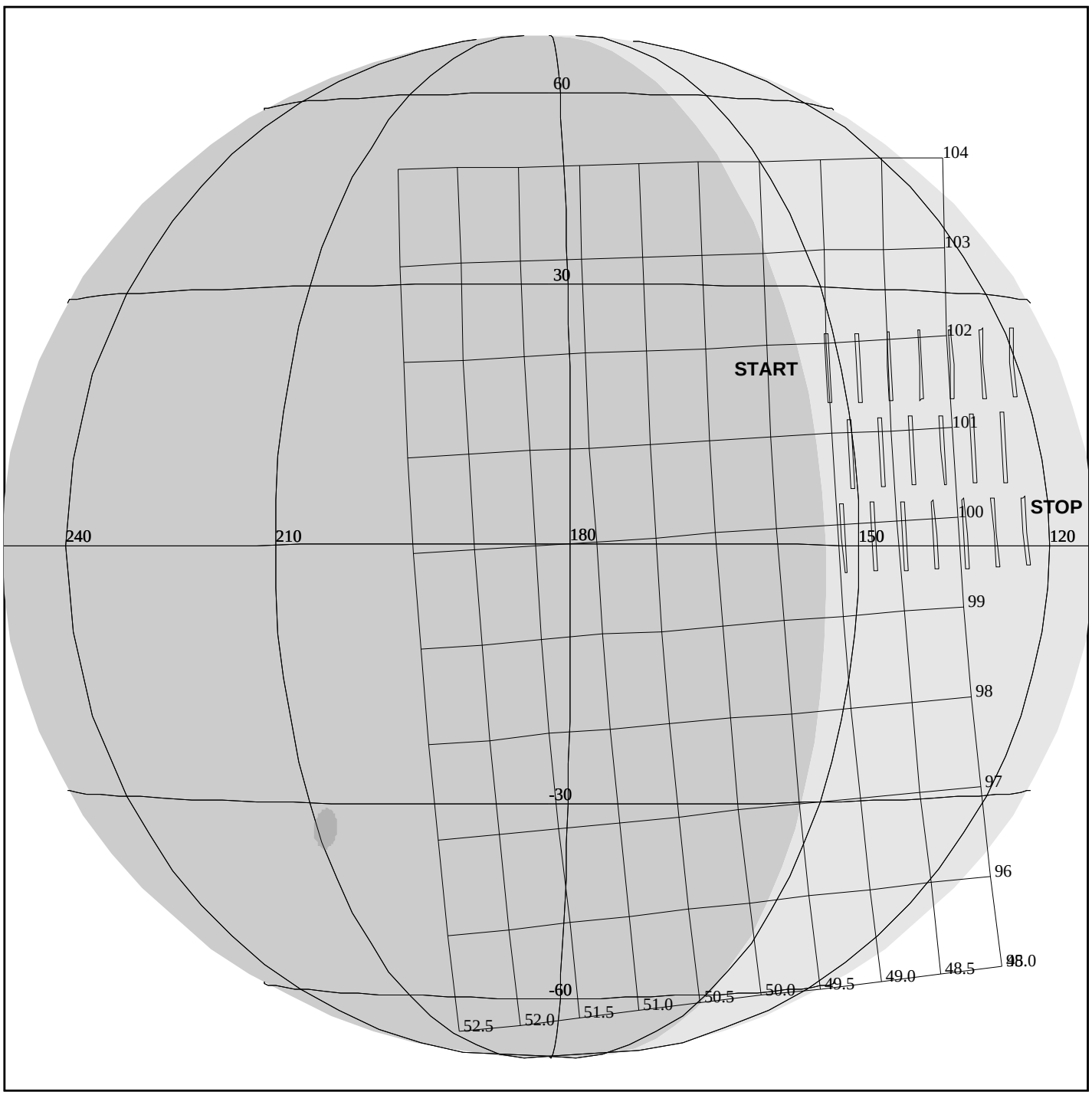
Design Detail

Long Map.
One scan, 20 Rims long across the equator.
Nyquist sampling not necessary.
Longitude - not dependent. No overlap in FOV.

20 Rim scan across the nightside North Equatorial Belt.
Near 7 degrees North latitude, 350 to 70 degrees West longitude.

Booms

Long Map (LM), Gain 4, Grating Start 0, R/T, C22JLM408



165DC:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/1967 TC= 1(20 152)
A= 728 pD= 0 SR=17.450 RA50=261.24 DEC50=-23.68 cone= 49.06 clock=101.71
117DC:#SB= 1 OR= 0.060 RR=12.000 BM=F RC= 1 BS= 0/1967
1:#s= 3 Cs= -22.90 XCs= 0.00 Cr= 28.00 XCr= -12.00 sD= 1152 rD= 24

22JNJUPRTS02

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22JNJUPRTS02

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 7**

START:JEE 99-224/10:58:47.733 -CDS 922:00:0 **BODY PLOT TIME:TARGET-TIME D= 0 S= 1.000**

OBSERVATION:22JNJUPRTS02 **DESCRIP:Jupiter_Realtime_Observation**

Jupiter Realtime Observation — **ACTIVITY ID: 22JNJUPRTS02-** / **START TIME: 99-223/19:19:28.400**

Activity ID: Orbit 22 Target J Inst N OAPEL JUPRTS SeqNo 02 -

Title	**Jupiter Realtime Observation**	**Instrument**	**NIMS**
Requestor	**NIMS-AWG/K. BAINES**	**Team NIMS**	**Working Group AWG**

Time System	**CDS**	**Load ID**		**Calendar Date**	**08/11/99 Week 32**
Start	**JEE-CDS 00000929:00:0**	**99-223/19:19:28.400**		**JEE-000/15:39:19.333**	
End	**JEE-CDS 00000903:00:0**	**99-223/19:45:45.733**		**JEE-000/15:13:02.000**	
Duration	**00000026:00:0**	**000/00:26:17.333**		**000/00:26:17.333**	

Top Label	**22JNJUPRTS02-**				
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

FREE_RTS=0.32 Mbits

Search for Jupiter atmospheric composition and thermal variations over time.

Data Returned

Design Detail

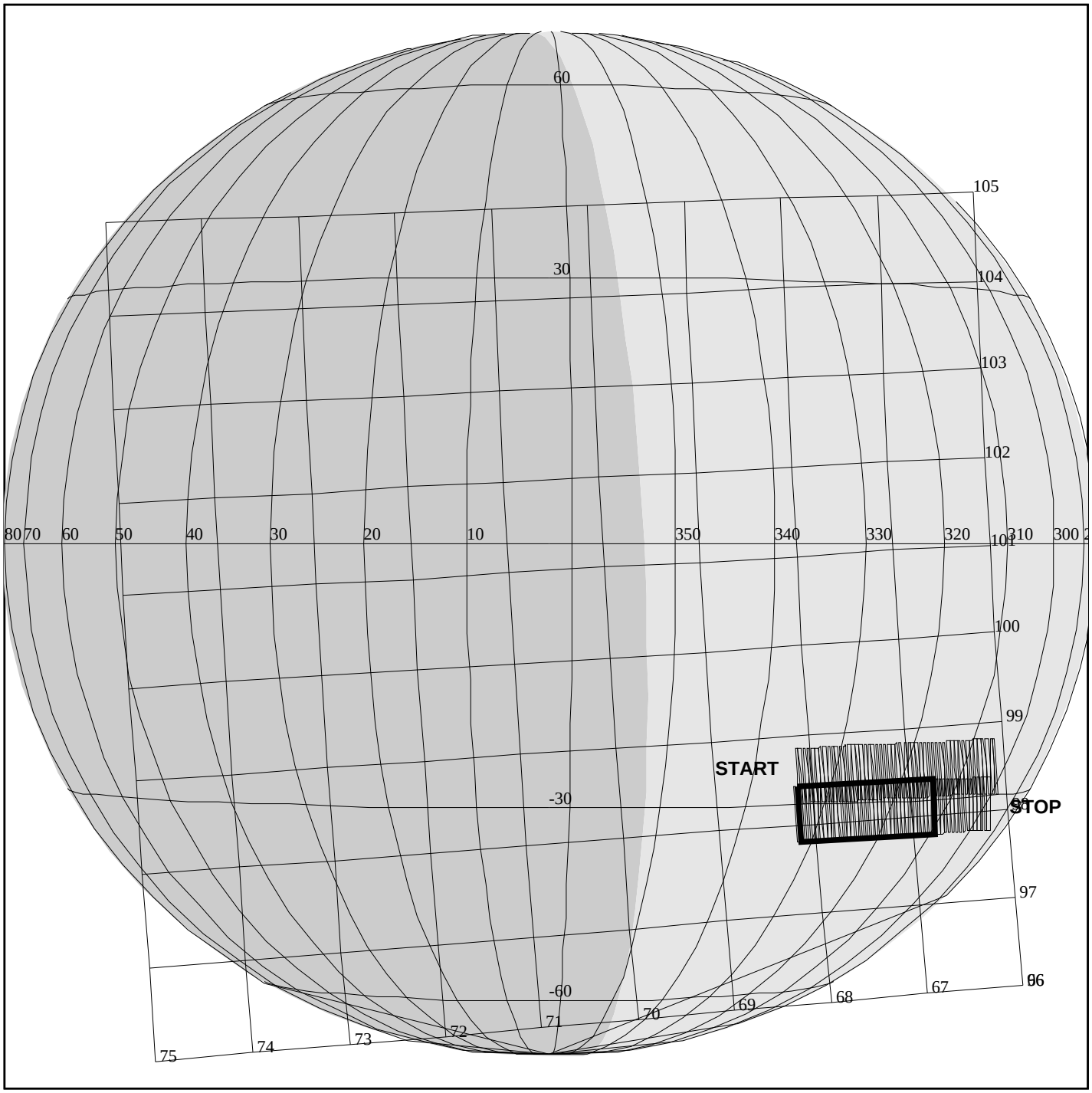
Long Map. Three scans, each 7 Rims long.
Target to 20 degrees North latitude for first scan.
No scan overlap: Nyquist sampling not necesary - lit surface only.
Not longitude not dependent. No overlap in FOV.

First scan: 20 degrees N latitude, 150 to 125 W. longitude
Second scan: 10 degrees N latitude, 155 to 135 W. longitude
Third scan: 0 degrees N latitude, 160 to 135 W. longitude

Daylit, high phase angle of 120 degrees.

Booms

Long Map (LM), Gain 2, Grating Start 0, R/T, C22JLM408



165DD:TT= 0 TMC= 1 C= 17.00 XC= 6.00 BS= 0/1299 TC= 1(-30 320)
A= 728 pD= 0 SR=17.450 RA50=282.26 DEC50=-27.07 cone= 68.15 clock= 98.55
117DD:#SB= 1 OR= 0.020 RR=12.000 BM=F RC= 1 BS= 0/1299
1:#s= 2 Cs= -17.30 XCs= 0.00 Cr= 38.00 XCr= -6.00 sD= 2616 rD= 40

22JNHOTMAP01

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22JNHOTMAP01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:JEE 99-224/10:58:47.733 -CDS 596:00:0 **BODY PLOT TIME:TARGET-TIME D= 0 S= 1.000**

OBSERVATION:22JNHOTMAP01 **DESCRIP:Jupiter_Hot_Map**

NIMS Jupiter HotMap

ACTIVITY ID: 22JNHOTMAP01-
START TIME: 99-224/00:52:07.733

Activity ID: Orbit 22 Target J Inst N OAPEL HOTMAP SeqNo 01 -

Title	NIMS Jupiter Hotmap			Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID	Calendar Date 08/12/99 Week 32
Start	JEE-CDS 00000600:00:0	99-224/00:52:07.733	JEE-000/10:06:40.000
End	JEE-CDS 00000567:00:0	99-224/01:25:29.733	JEE-000/09:33:18.000
Duration	00000033:00:0	000/00:33:22.000	000/00:33:22.000

Top Label 22JNHOTMAP01-
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

Long Map mapping of hotspot region at high spatial resolution.
Observation uses special wavelength table JSB253C.

This observation was converted to a White Oval region observation
near 30 degrees South latitude.

Data Returned

Design Detail

Observation converted to a White Oval region observation.

Two scans, each 14.5 Rims long.
First scan: 22 to 30 deg S. lat, 334 to 312 deg W. long.
Second scan: 27 to 35 deg S. lat, 342 to 317 deg W. long.

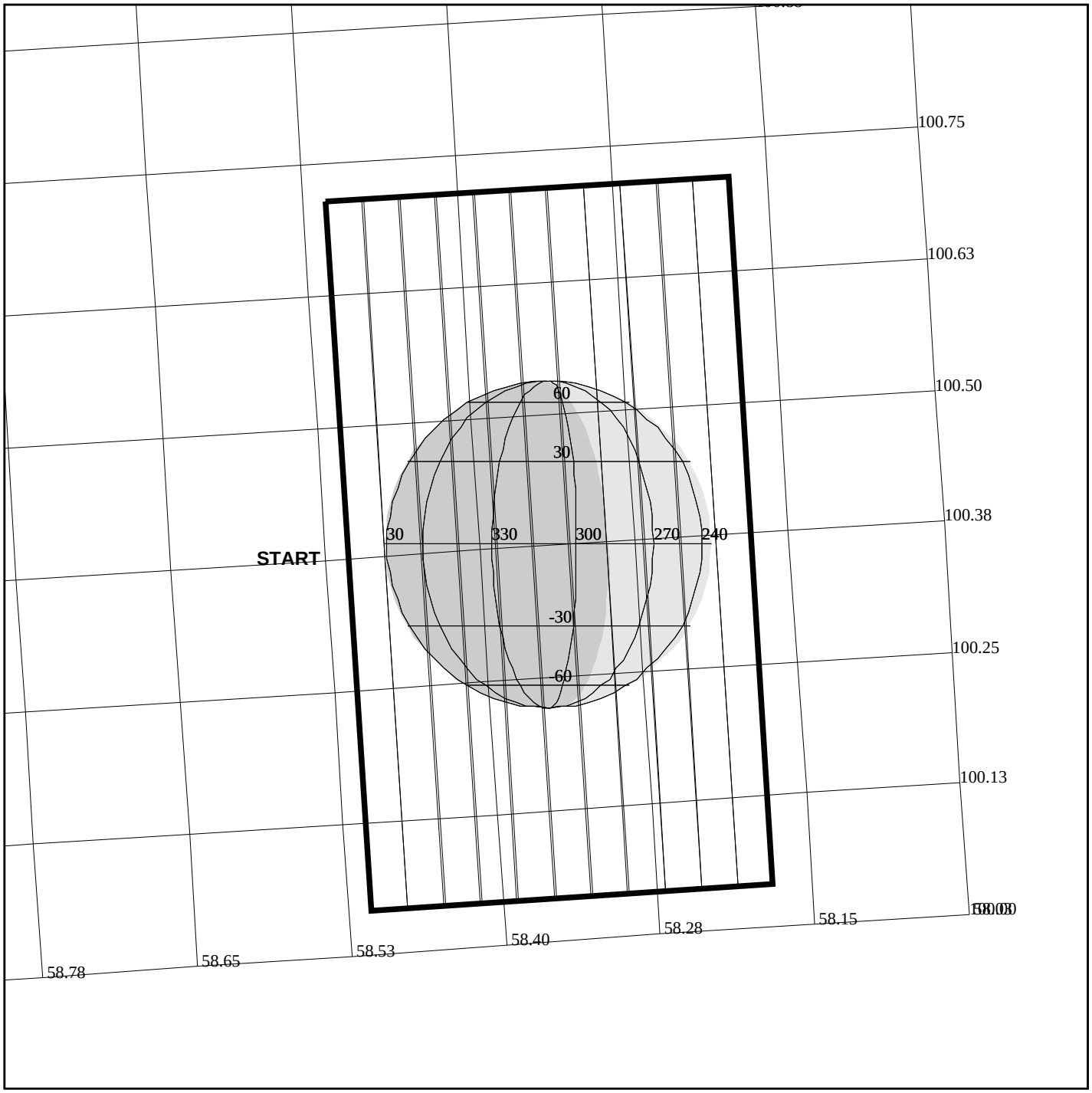
Phase angle near 100 degrees.

Only second scan recorded.

Booms

Long Map (LM), Gain 2, Grating Start 0, LPU, C22JSB253C, C22JSB76C
Long Map (LM), Gain 2, Grating Start 0, LPU, C22JSB253C, C22JSB177C

Galileo Activity Plan Form 01/31/00 14:29:49 rev 6/95



165DA:TT= 0 TMC= 1 C= 2.70 XC= 0.00 BS= 0/2249 TC= 3
A= 728 pD= 536 SR= 8.000 RA50=271.51 DEC50=-25.40 cone= 58.50 clock=100.38
117DA:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/2249
1:#s= 1 Cs= -5.30 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 536 rD= 40

22INHRSPEC01

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22INHRSPEC01

TARGET BODY : IO

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:IEE 99-223/14:42:25.800 +CDS 832:00:0 **BODY PLOT TIME:TARGET-TIME D= 536 S= 0.300**

OBSERVATION:22INHRSPEC01 **DESCRIP:Europa_Global_Observation**

Io monitoring	**ACTIVITY ID: 22INHRSPEC01-** **START TIME: 99-224/04:37:36.466**

Activity ID: Orbit 22 Target I Inst N OAPEL HRSPEC SeqNo 01 -

Title	**NIMS Jupiter Hotmap**			**Instrument**	**NIMS**
Requestor	**NIMS-AWG/MSEGURA**	**Team**	**NIMS**	**Working Group**	**SWG**

Time System	**CDS**	**Load ID**		**Calendar Date**	**08/12/99 Week 32**
Start	**IEE+CDS 00000826:00:0**	**99-224/04:37:36.466**		**IEE+000/13:55:10.666**	
End	**IEE+CDS 00000838:00:0**	**99-224/04:49:44.466**		**IEE+000/14:07:18.666**	
Duration	**00000012:00:0**	**000/00:12:08.000**		**000/00:12:08.000**	

Top Label	**22INHRSPEC01-**				
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

Io monitoring.

Final observation of Io before I24.

Data Returned

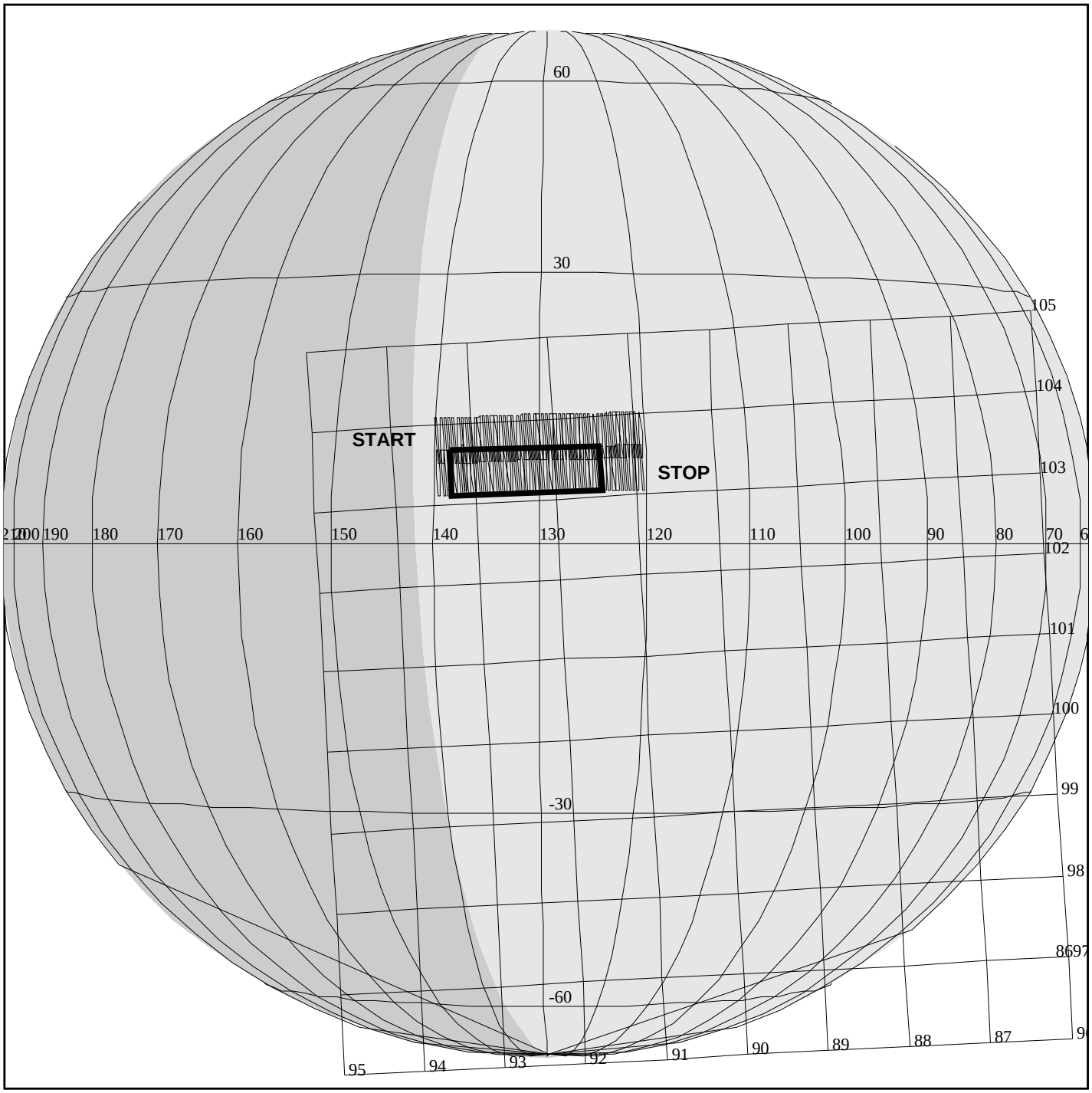
Design Detail

Long map, Nyquist sampling, 0.03 mrad scan rate.
Single scan across the 1/3 lit disk.

Low resolution: Io about 10 nimsels across.
Longitude 220 to 40 degrees West.

Booms

Long Map (LM), Gain 4, Grating Start 0, LPU, C22ILMDK243D, C22ILMDK228D



165DE:TT= 0 TMC= 1 C= 0.00 XC= 8.00 BS= 0/5525 TC= 1(7 139.5)
A= 728 pD= 5268 SR= 8.000 RA50=308.72 DEC50=-18.44 cone= 93.44 clock=103.81
117DE:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/5525
1:#s= 2 Cs= -25.40 XCs= 0.00 Cr= 46.00 XCr= -6.00 sD= 2548 rD= 40

22JNHOTMAP02

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22JNHOTMAP02

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS:

THINNING:NIM 2

START:JEE 99-224/10:58:47.733 -CDS 353:00:0

BODY PLOT TIME:TARGET-TIME D= 5268 S= 1.000

OBSERVATION:22JNHOTMAP02

DESCRIP:Jupiter_Hot_Map

NIMS Jupiter HotMap	ACTIVITY ID: 22JNHOTMAP02- START TIME: 99-224/04:57:49.733

Activity ID: Orbit 22 Target J Inst N OAPEL HOTMAP SeqNo 02 -

Title	NIMS Jupiter Hotmap	Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team NIMS	Working Group AWG

Time System	CDS	Load ID	Calendar Date 08/12/99 Week 32
Start	JEE-CDS 00000357:00:0	99-224/04:57:49.733	JEE-000/06:00:58.000
End	JEE-CDS 00000324:00:0	99-224/05:31:11.733	JEE-000/05:27:36.000
Duration	00000033:00:0	000/00:33:22.000	000/00:33:22.000

Top Label 22JNHOTMAP02-
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

Long Map mapping of hotspot region at high spatial resolution.
Observation uses special wavelength table JHT253A.

Data Returned

Design Detail

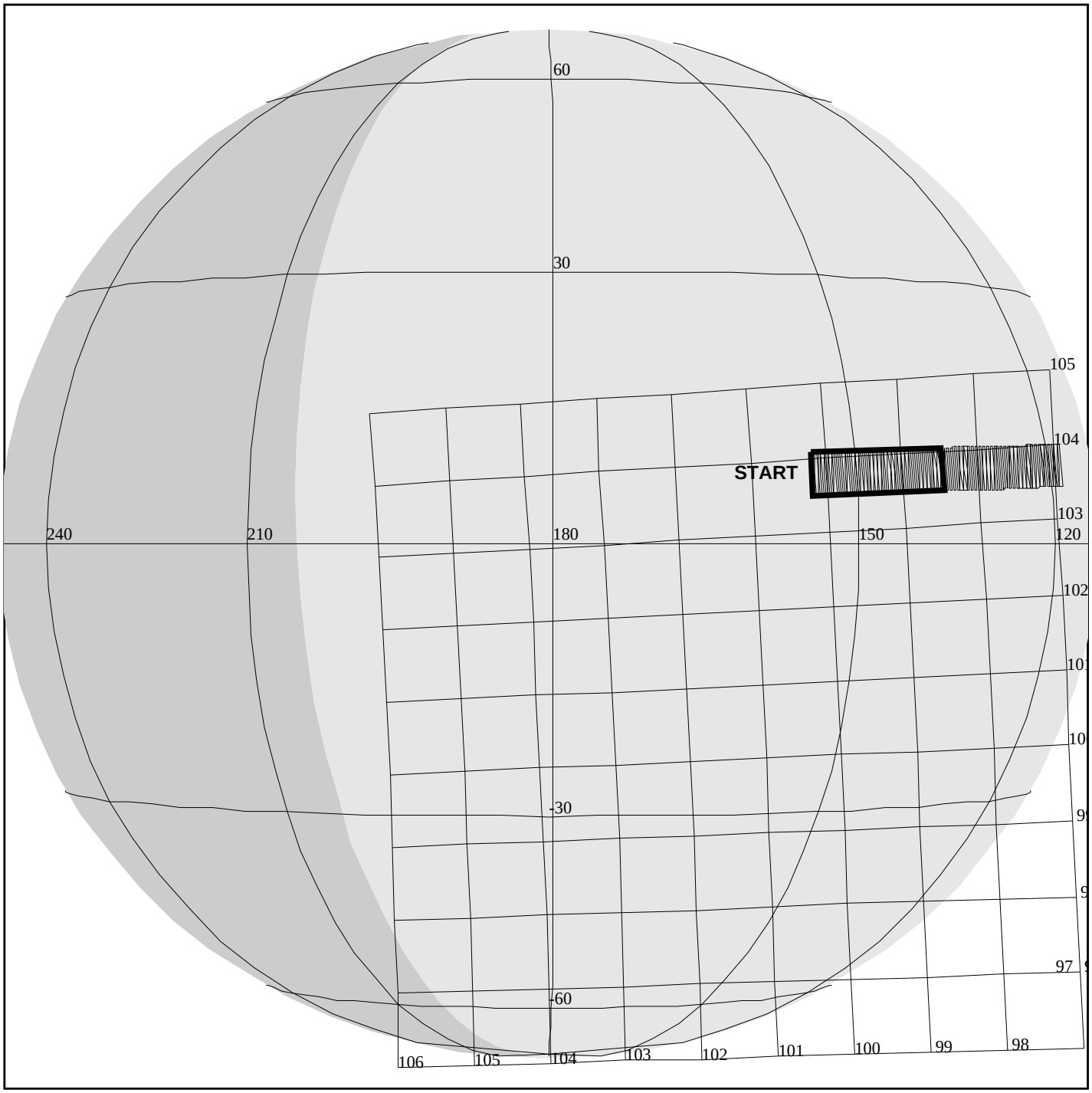
Two scans, each 14 Rims long.
First scan: 7 to 15 deg S. lat, 140 to 128 deg W. long.
Second scan: 4 to 12 deg S. lat, 148 to 138 deg W. long.

Phase angle near 76 degrees.

Only second scan recorded.

Long Map (LM), Gain 4, Grating Start 0, LPU, C22JHT253A, C22JHT46A
Long Map (LM), Gain 4, Grating Start 0, LPU, C22JHT253A, C22JHT80A

Galileo Activity Plan Form 01/31/00 14:29:49 rev 6/95



165DG:TT= 0 TMC= 1 C= 0.00 XC= 1.00 BS= 0/4271 TC= 1(7 155)
A= 728 pD= 3630 SR= 8.000 RA50=315.60 DEC50=-16.79 cone=100.20 clock=103.80
117DG:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/4271
1:#s= 1 Cs= -36.20 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 3630 rD= 40

22JNHOTMAP03

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22JNHOTMAP03

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:JEE 99-224/10:58:47.733 -CDS 250:00:0 **BODY PLOT TIME:TARGET-TIME D= 3630 S= 1.000**

OBSERVATION:22JNHOTMAP03 **DESCRIP:Jupiter_Hot_Map**

NIMS Jupiter HotMap	ACTIVITY ID: 22JNHOTMAP03- START TIME: 99-224/06:41:58.400

Activity ID: Orbit 22 Target J Inst N OAPEL HOTMAP SeqNo 03 -

Title	NIMS Jupiter Hotmap	Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team NIMS	Working Group AWG

Time System	CDS	Load ID	Calendar Date 08/12/99 Week 32
Start	JEE-CDS 00000254:00:0	99-224/06:41:58.400	JEE-000/04:16:49.333
End	JEE-CDS 00000230:00:0	99-224/07:06:14.400	JEE-000/03:52:33.333
Duration	00000024:00:0	000/00:24:16.000	000/00:24:16.000

Top Label	22JNHOTMAP03-				
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

Long Map mapping of hotspot region at high spatial resolution.
Observation uses special wavelength table JSB253C.

Data Returned

Design Detail

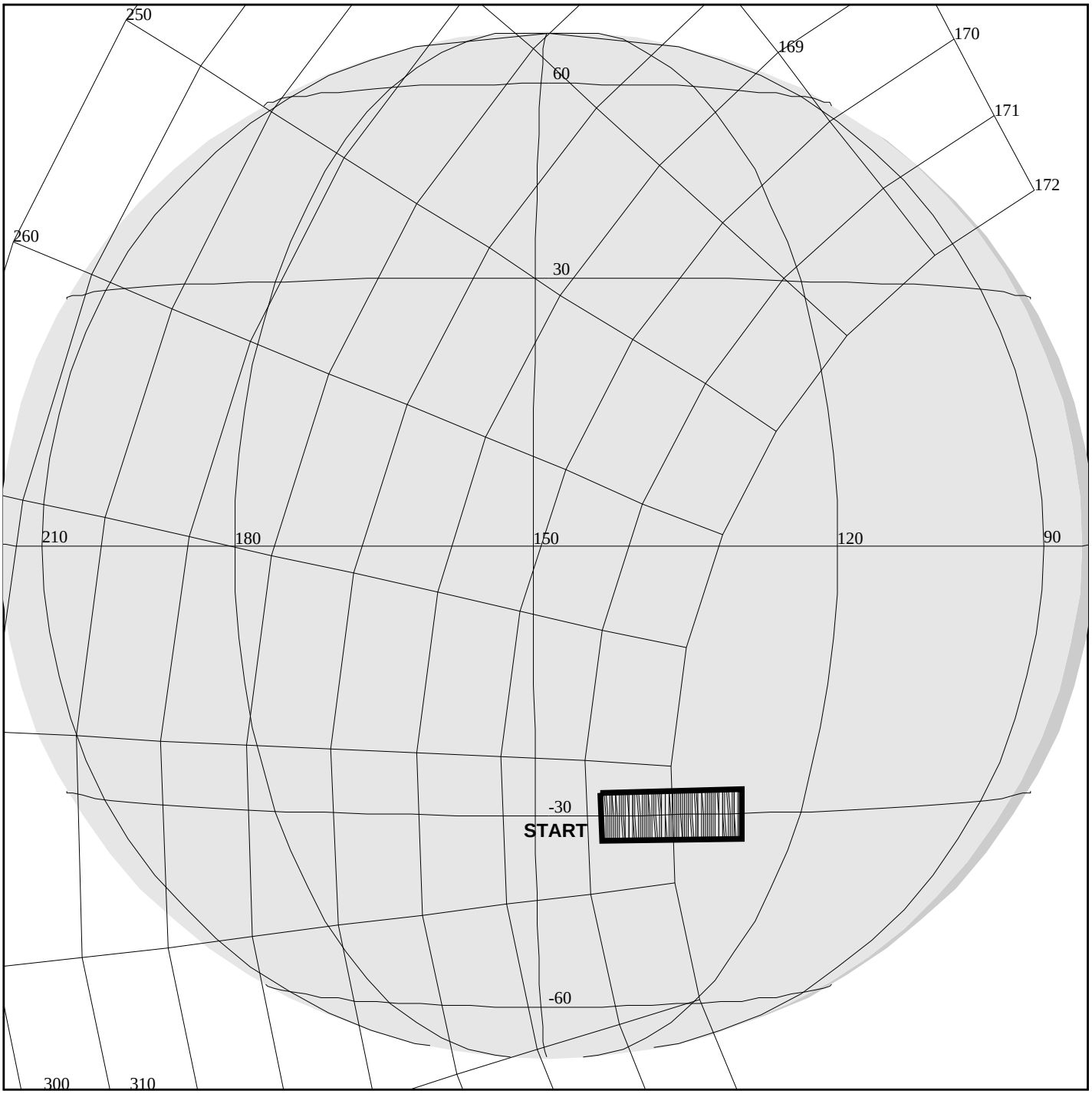
One scan, 21 Rims long.
Single scan: 4 to 12 deg S. lat, 155 to 129 deg W. long.

Phase angle near 76 degrees.

Only first 10 Rims recorded (155 to 146 W. longitude).

Long Map (LM), Gain 2, Grating Start 0, LPU, C22JSB253C, C22JSB253C

Galileo Activity Plan Form 01/31/00 14:29:49 rev 6/95



165DJ:TT= 0 TMC= 1 C= -13.00 XC= 0.00 BS= 0/7485 TC= 1(-30 136)
A= 728 pD= 1810 SR=17.000 RA50= 39.76 DEC50= 14.03 cone=171.19 clock=284.20
117DJ:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/7485
1:#s= 1 Cs= 18.00 XCs= 0.00 Cr= 29.50 XCr= -6.00 sD= 1810 rD= 40

22JNWHTOVL01

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22JNWHTOVL01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:JEE 99-224/10:58:47.733 +CDS 427:00:0 **BODY PLOT TIME:TARGET-TIME D= 1810 S= 1.000**

OBSERVATION:22JNWHTOVL01 **DESCRIP:JUPITER_WHITE_OVAL**

Jupiter White Oval	ACTIVITY ID: 22JNWHTOVL01- START TIME: 99-224/18:08:31.066

Activity ID: Orbit 22 Target J Inst N OAPEL WHTOVL SeqNo 01 -

Title	NIMS Jupiter Hotmap			Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID		Calendar Date	08/12/99 Week 32
Start	JEE+CDS 00000425:00:0	99-224/18:08:31.066		JEE+000/07:09:43.333	
End	JEE+CDS 00000437:00:0	99-224/18:20:39.066		JEE+000/07:21:51.333	
Duration	00000012:00:0	000/00:12:08.000		000/00:12:08.000	

Top Label	22JNWHTOVL01-				
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

Long Map mapping of white oval region at high spatial resolution.
Observation uses special wavelength table JSB253C.

Data Returned

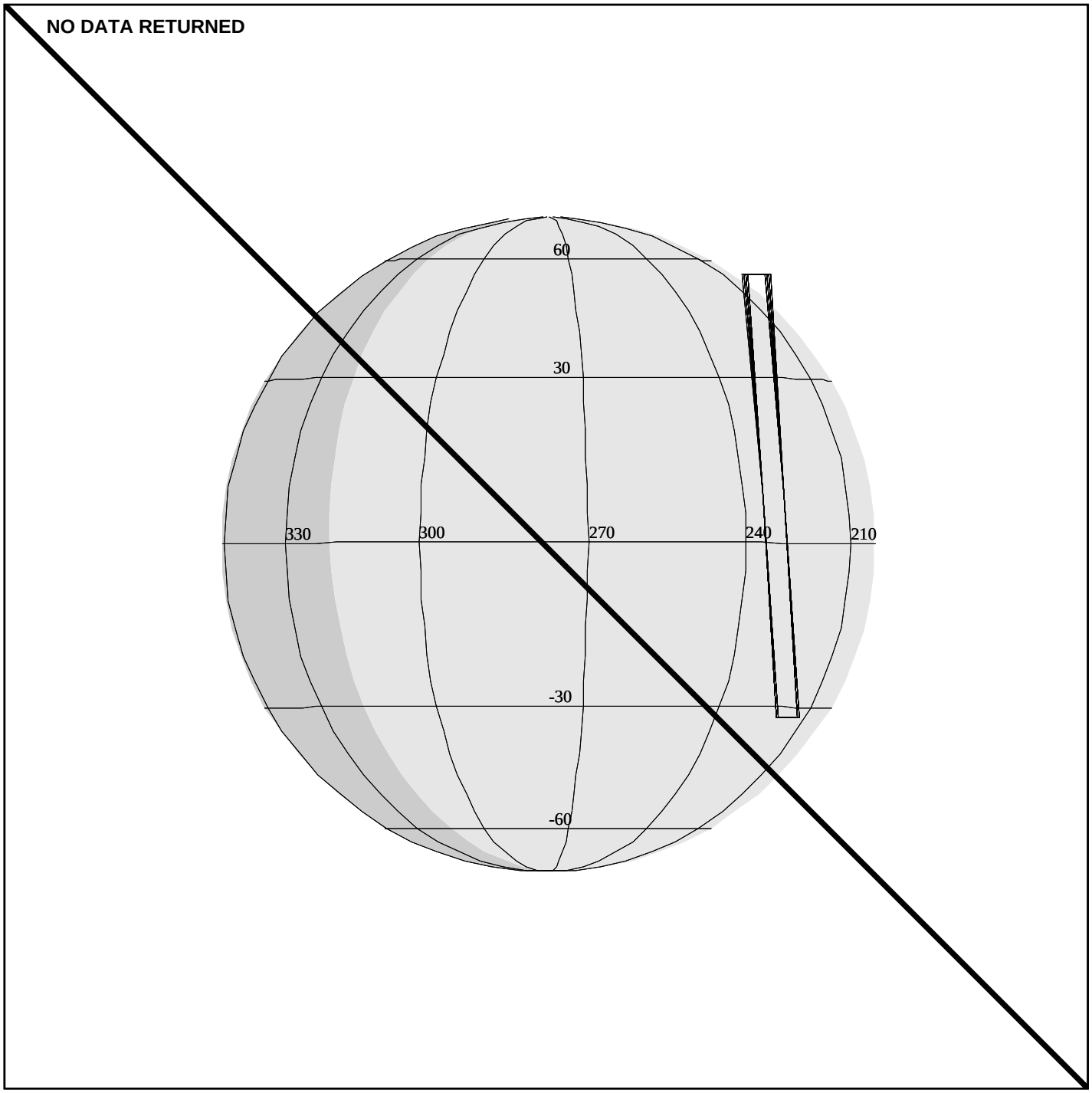
Design Detail

One scan, 10 Rims long.
Single scan: 26 to 34 deg S. latitude, 143 to 133 W. longitude

Phase angle near 19 degrees.

Long Map (LM), Gain 2, Grating Start 0, LPU, C22JSB253C, C22JSB132C

Galileo Activity Plan Form 01/31/00 14:29:49 rev 6/95



165DH:TT= 0 TMC= 1 C= 0.00 XC= 0.00 BS= 0/5685 TC= 1(8 233)
A= 728 pD= 1810 SR= 8.000 RA50=335.76 DEC50= -9.44 cone=121.13 clock=104.98

22ENBELUSL01

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22ENBELUSL01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:EEE 99-224/19:51:39.066 +CDS 00:00:0 **BODY PLOT TIME:TARGET-TIME D= 1810 S= 0.600**

OBSERVATION:22ENBELUSL01 **DESCRIP:EUROPA_BELUS_DARK_MATERIALS**

Europa Belus Linea Dark Materials Obs	ACTIVITY ID: 22ENBELUSL01- START TIME: 99-224/19:47:36.400

Activity ID: Orbit 22 Target E Inst N OAPEL BELUSL SeqNo 01 -

Title	Europa Belus Linea Dark Materials Obs	Instrument	NIMS
Requestor	NIMS-SWG/J. SHIRLEY	Team NIMS	Working Group SWG

Time System	CDS	Load ID	Calendar Date 08/12/99 Week 32
Start	EEE-CDS 00000004:00:0	99-224/19:47:36.400	EEE-000/00:04:02.666
End	EEE+CDS 00000010:00:0	99-224/20:01:45.732	EEE+000/00:10:06.666
Duration	00000014:00:0	000/00:14:09.332	000/00:14:09.332

Top Label 22ENBELUSL01-
Bottom Label

Plot Key	NIMS	Type	SCI		
CDS Bytes	150	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

To obtain high resolution spectra for a region with concentrated dark surface material.

No Data Returned, CDS, DMS errors

Design Detail

Long Spectrometer mode, MPW record format.
Sit and stare at longitude 230 deg. West, latitude 8 deg North.
Resolution ~110 Km/nimsel

Long Spectrometer (LS), Gain 3, Grating Start 0, MPW, C22ELS442

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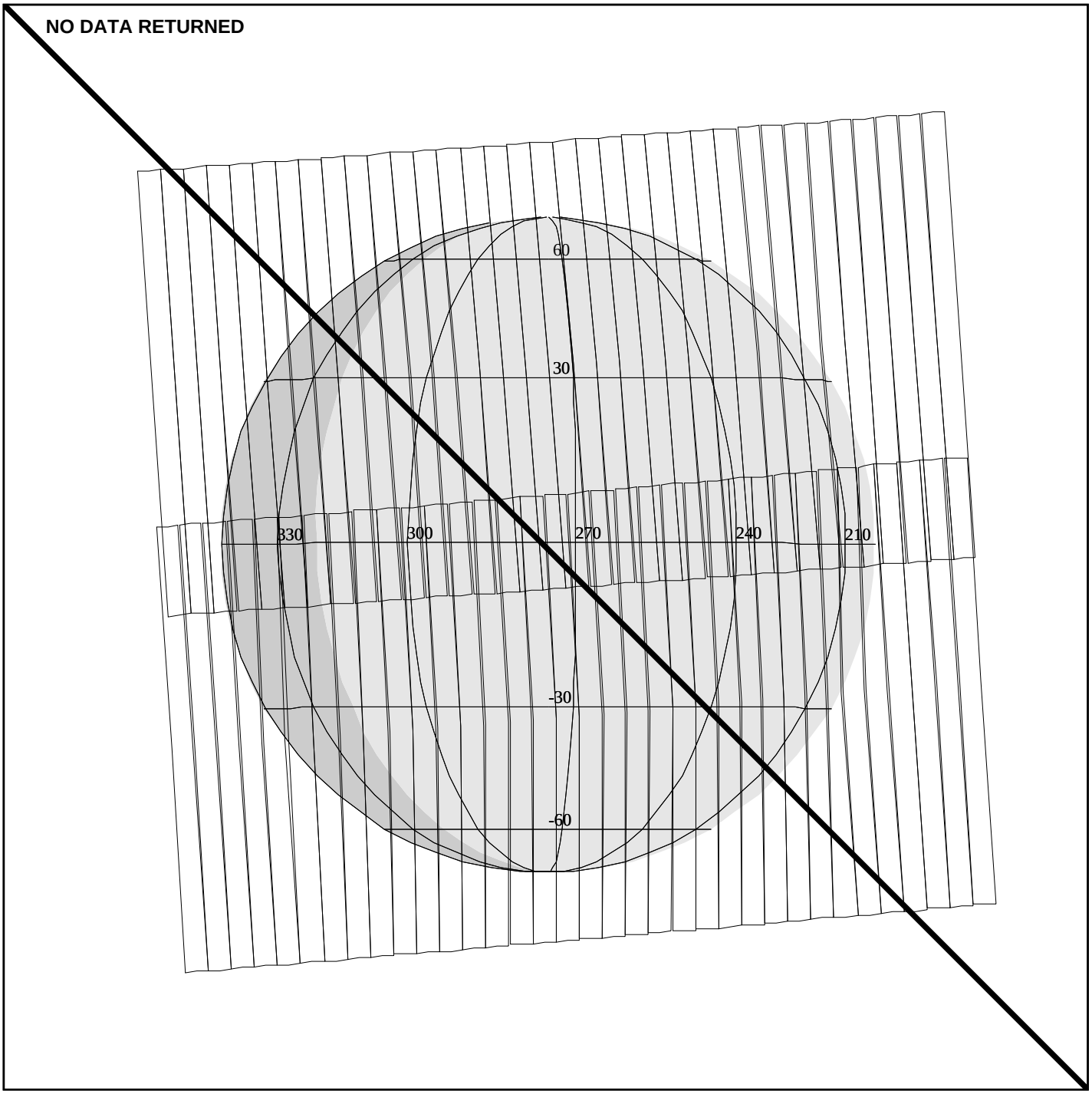

165DI:TT= 0 TMC= 1 C= 8.50 XC= 4.00 BS= 0/8233 TC= 3
A= 728 pD= 3640 SR= 8.000 RA50=339.25 DEC50= -7.78 cone=124.93 clock=105.47
117DI:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/8233
1:#s= 2 Cs= -17.80 XCs= 0.00 Cr= 17.80 XCr= -8.00 sD= 1794 rD= 40

22ENGLOBAL01

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22ENGLOBAL01

TARGET BODY : EUROPA

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:EEE 99-224/19:51:39.066 +CDS 14:00:0 **BODY PLOT TIME:TARGET-TIME D= 3640 S= 0.600**

OBSERVATION:22ENGLOBAL01 **DESCRIP:Europa_Global_Observation**

Europa Global

ACTIVITY ID: 22ENGLOBAL01-
START TIME: 99-224/20:04:47.732

Activity ID: Orbit 22 Target E Inst N OAPEL GLOBAL SeqNo 01 -

Title	Europa Global			Instrument	NIMS
Requestor	NIMS-SWG/J. SHIRLEY	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	08/12/99 Week 32
Start	EEE+CDS 00000013:00:0	99-224/20:04:47.732		EEE+000/00:13:08.666	
End	EEE+CDS 00000034:00:0	99-224/20:26:01.732		EEE+000/00:13422.666	
Duration	00000021:00:0	000/00:21:14.000		000/00:21:14.000	

Top Label	22ENGLOBAL01-				
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

Europa global observation covering the trailing hemisphere.

No Data Returned, CDS, DMS errors

Design Detail

Long Map mode, LPU record format.
Gain states 3 and 2.

Two scan across the disk, overlapping near the equator.
Higher sun angle segment in gain state 3,
lower sun angle segment in gain state 2

Long Map (LM), Gain 2,3, Grating Start 0, LPU, C22ELM253C

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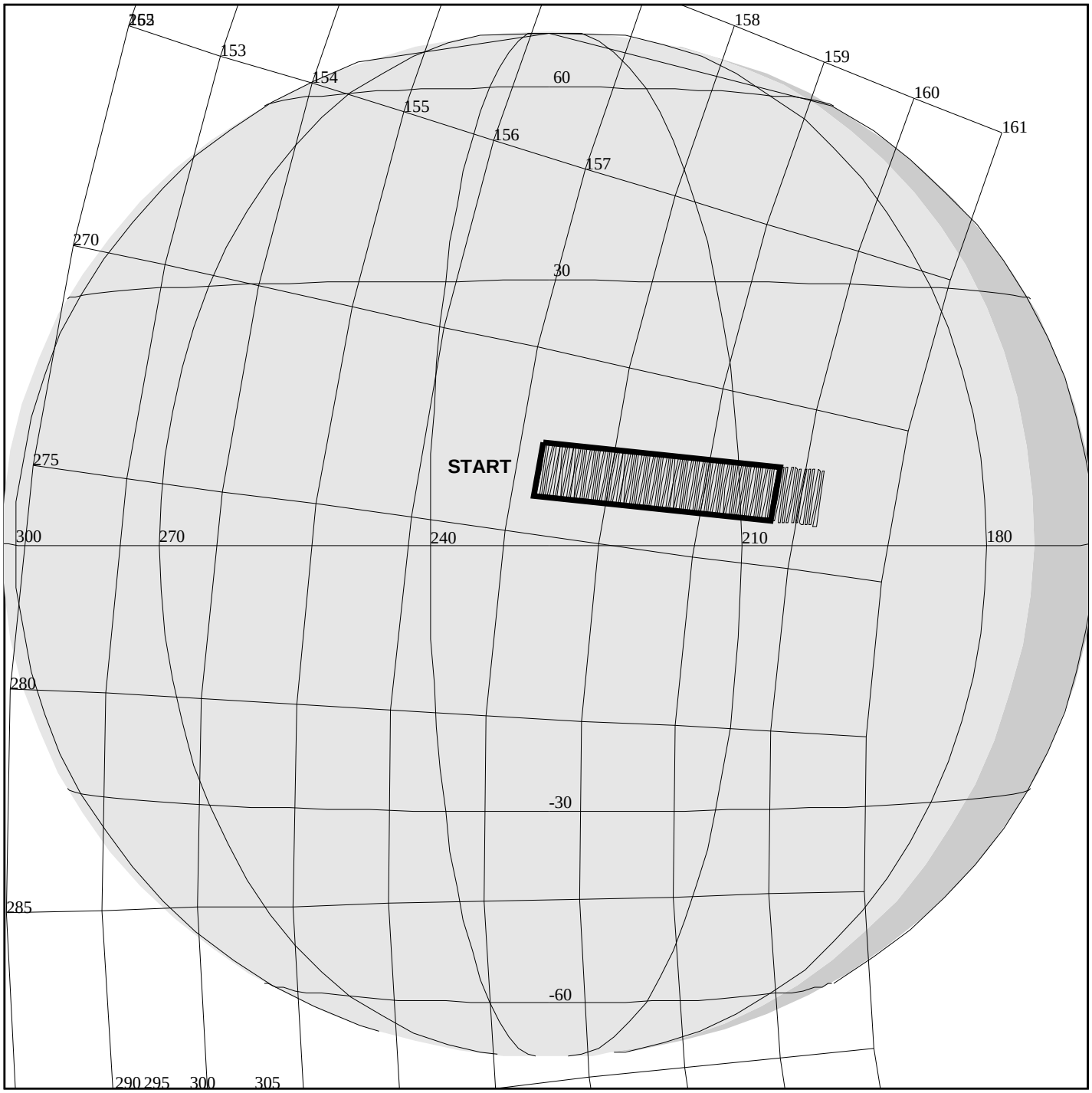

165DK:TT= 0 TMC= 1 C= -26.00 XC= 2.00 BS= 0/5149 TC= 1(7 216)
A= 728 pD= 3266 SR=17.450 RA50= 52.28 DEC50= 21.77 cone=157.25 clock=273.22
117DK:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/5149
1:#s= 1 Cs= 32.50 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 3266 rD= 40

22JNWHTOVL02

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22JNWHTOVL02

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:JEE 99-224/10:58:47.733 +CDS 579:00:0 **BODY PLOT TIME:TARGET-TIME D= 3266 S= 1.000**

OBSERVATION:22JNWHTOVL02 **DESCRIP:JUPITER_WHITE_OVAL**

Jupiter White Oval

ACTIVITY ID: 22JNWHTOVL02-
START TIME: 99-224/20:40:11.066

Activity ID: Orbit 22 Target J Inst N OAPEL WHTOVL SeqNo 02 -

Title	NIMS Jupiter Hotmap	Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team NIMS	Working Group AWG

Time System	CDS	Load ID	Calendar Date 08/12/99 Week 32
Start	JEE+CDS 00000575:00:0	99-224/20:40:11.066	JEE+000/09:41:23.333
End	JEE+CDS 00000589:00:0	99-224/20:54:20.399	JEE+000/09:55:32.666
Duration	00000014:00:0	000/00:14:09.333	000/00:14:09.333

Top Label 22JNWHTOVL02-
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

This observation converted to a hotspot observation.

Long Map mapping of hotspot region at high spatial resolution.
Observation uses special wavelength table JSB253C.

Data Returned

Design Detail

One scan, 19 Rims long.
Single scan: 4 to 12 deg N. latitude, 230 to 212 W. longitude

Phase angle near 32 degrees.

Long Map (LM), Gain 2, Grating Start 0, LPU, C22JSB253C, C22JSB238C

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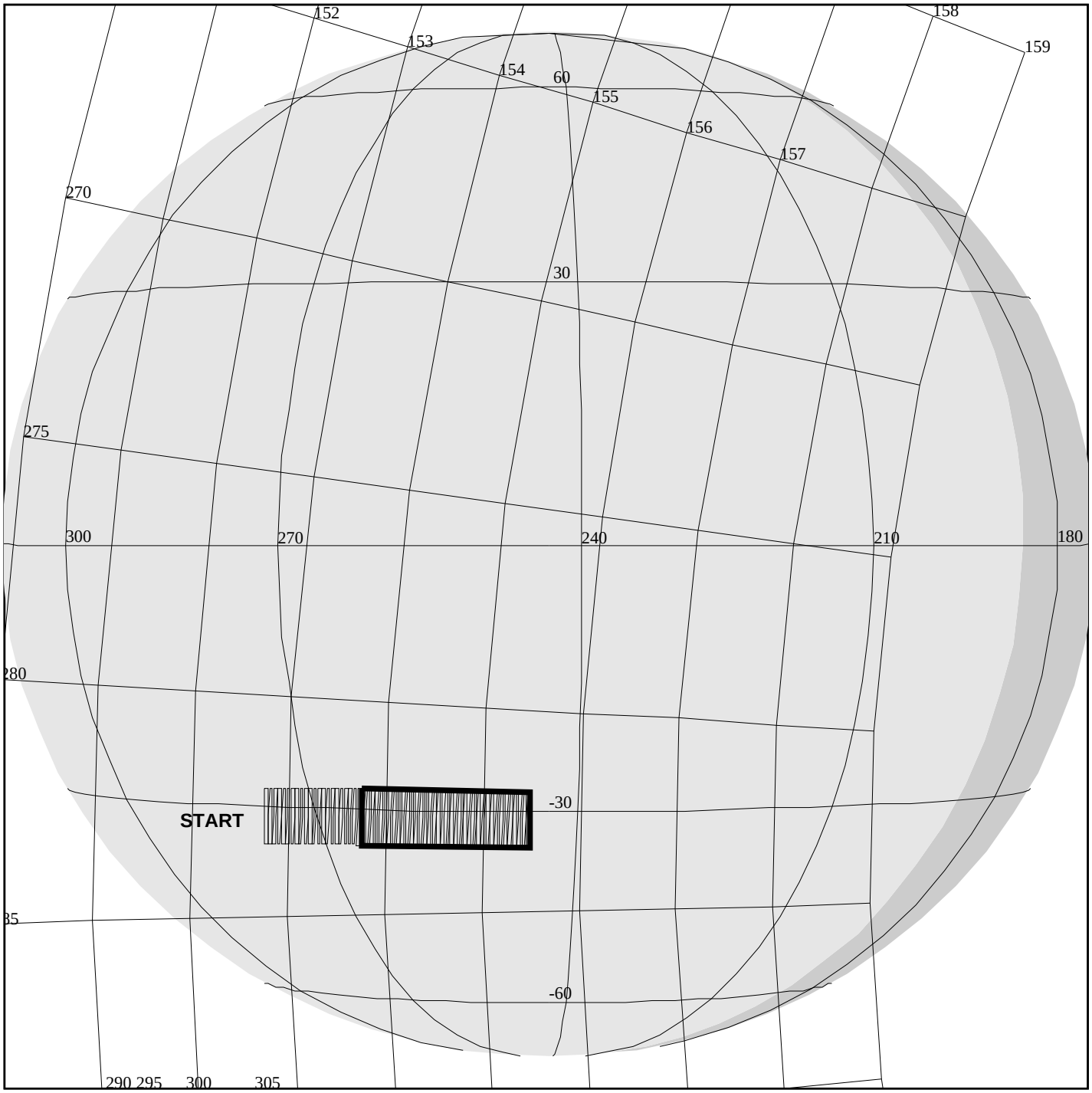

165DL:TT= 0 TMC= 1 C= -24.00 XC= 0.00 BS= 0/0063 TC= 1(-31 260)
A= 728 pD= 3084 SR=17.450 RA50= 58.18 DEC50= 19.40 cone=152.77 clock=282.72
117DL:#SB= 1 OR= 0.030 RR=12.000 BM=F RC= 1 BS= 0/0063
1:#s= 1 Cs= 30.80 XCs= 0.00 Cr= 0.00 XCr= 0.00 sD= 3084 rD= 40

22JNDKSPOT01

TARGET G3.1 lisac: 7/22/1999 15:30:31

FILE:P.22JNDKSPOT01

CENTRAL BODY:JUPITER

MINI:m.target

S/C EPH:/DATA/NAVIO/990706-tour.NS

PERIAPSIS: **THINNING:NIM 2**

START:JEE 99-224/10:58:47.733 +CDS 606:00:0 **BODY PLOT TIME:TARGET-TIME D= 3084 S= 1.000**

OBSERVATION:22JNDKSPOT01 **DESCRIP:JUPITER_DARK_SPOT**

Jupiter Dark Spot	ACTIVITY ID: 22JNDKSPOT01- START TIME: 99-224/21:09:30.399

Activity ID: Orbit 22 Target J Inst N OAPEL DKSPOT SeqNo 01 -

Title	NIMS Jupiter Hotmap			Instrument	NIMS
Requestor	NIMS-AWG/K. BAINES	Team	NIMS	Working Group	AWG

Time System	CDS	Load ID		Calendar Date	08/12/99 Week 32
Start	JEE+CDS 00000604:00:0	99-224/21:09:30.399		JEE+000/10:10:42.666	
End	JEE+CDS 00000616:00:0	99-224/21:21:38.399		JEE+000/10:22:50.666	
Duration	00000012:00:0	000/00:12:08.000		000/00:12:08.000	

Top Label	22JNDKSPOT01-				
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

Long Map mapping of dark spot region at high spatial resolution.
Observation uses special wavelength table JSB253C.

Data Returned

Design Detail

One scan, 17 Rims long.
Single scan: 36 to 26 deg S. latitude, 276 to 256 W. longitude

Phase angle near 37 degrees.

Long Map (LM), Gain 2, Grating Start 0, LPU, C22JSB253C. C22JSB238C

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Chopper Off	**ACTIVITY ID: 22NNCHOPOF01-** **START TIME: 99-225/15:05:19.733**

Activity ID: Orbit 22 Target N Inst N OAPEL CHOPOF SeqNo 01 -

Title	**Chopper Off**			**Instrument**	**NIMS**
Requestor	**NIMS-SWG/MSEGURA**		**Team**	**NIMS**	**Working Group**	**SWG**

Time System	**CDS**	**Load ID**	**Calendar Date**	**08/13/99**	**Week 32**

Start	**JEE+CDS 00001668:00:0**	**99-225/15:05:19.733**	**JEE+001/04:06:32.666**
End	**JEE+CDS 00001678:00:0**	**99-225/15:15:26.399**	**JEE+001/04:16:38.666**
Duration	**00000010:00:0**	**000/00:10:06.666**	**000/00:10:06.666**

Top Label	**22NNCHOPOF01-**						
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 Chopper Off.

Design Detail

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NIMS GRating Step Test	ACTIVITY ID: 22NNDETECT01- START TIME: 99-244/06:49:31.400

Activity ID: Orbit 22 Target N Inst N OAPEL DETECT SeqNo 01 -

Title	Chopper Off			Instrument	NIMS
Requestor	NIMS-SWG/MSEGURA	Team	NIMS	Working Group	SWG

Time System	CDS	Load ID		Calendar Date	09/01/99 Week 35
Start	GST-CDS 00000010:00:0	99-244/06:49:31.400		GST-000/00:10:06.666	
End	GST+CDS 00000175:00:0	99-244/09:56:34.732		GST+000/02:56:56.666	
Duration	00000185:00:0	000/03:07:03.332		000/03:07:03.332	

Top Label	22NNDETECT01-				
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 Grating Step Test.

Copy segments of NIMS RAM memory where grating position is stored to CDS memory.

Design Detail

1) Power cycle NIMS to Phase 0 (ROM) code
2) Short Map mode
3) Use 6MCOPY to move NIMS locations 150F thru 1517 to CDS
4) Long Map mode
5) Use 6MCOPY to move NIMS locations 150F thru 1517 to CDS
6) Load NIMS Phase 2 software from CDS
7) Repeat steps 2 thru 5

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NIMS RCT Real Time Calibration — ACTIVITY ID: 22NNRCTRLT01- / START TIME: 99-244/23:00:11.111

Activity ID: Orbit 22 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 09/01/99 Week 35
Start	RTA+CDS 00000000:00:0	99-244/23:00:11.111	RTA+000/00:00:00.000
End	RTA+CDS 00000787:00:0	99-245/12:15:55.777	RTA+000/13:15:44.666
Duration	00000787:00:0	000/13:15:44.666	000/13:15:44.666

Top Label	22NNRCTRLT01-				
Bottom Label					
Plot Key	NIMS	Type	SCI		
CDS Bytes	450	Report Options	BOTH	Scan Platform	No
CDS Source	OAP	Spin State	DUAL	DMS	No

Observation Objective

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

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

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

Design Detail

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

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

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