GALILEO ACTIVITY PLAN FORM - GASPRA
06/11/91 21:16:22 Gaspra Mtg

ACTIVITY ID: GAHUSTRCAL01-
START TIME: GCA-CDS 00001050:00:0

Activity ID	Orbit GA	Target H	Inst U	OAPEL STRCAL	SeqNo 01 Multi -
Title	UVS/NIMS STAR CALIBRATION				
Requestor	S.EDBERG		Team	UVS	
Bottom Label			Plot Key	UVS	

Time System	CDS	Encounter Load ID	EE3
Start	GCA-CDS 00001050:00:0	91-302/04:57:22	GCA-000/17:41:40
End	GCA-CDS 00001038:11:0	91-302/05:09:23	GCA-000/17:29:39
Duration	00000011:80:0	000/00:12:01	000/00:12:01

DMS Activity RECORD Minimum Data Rate 28.8 Data Format MPW

S/P Reserved Y Earth Reference N Spin Status D Coop Imaging N

Instruments Used:												
	DDS	N	EPD	N	EUV	N	HIC	N	MAG	N	NIMS	Y
	PLS	N	PPR	Y	PWS	N	RS	N	SSI	N	UVS	Y

Observation Objective

This observation will be a star calibration to be used in the analysis of the Gaspra data.

Design Detail

CDS COST 317 Observation to be designed in POINTER Y

This observation will be a star calibration of the star SPICA. It will consist of several swaths across the star. The first swath will be done at 28.8 for a duration of 2 minutes (MPW 0.016 tracks). The next couple of swaths will last 6 minutes at 7.68 (LRS 0.012 tracks) and will mosaic the star to insure that the PPR field of view catches the star even with the scan platform pointing uncertainty. Both of these will have a scan platform rate of .04 mrad/s.

```
TARGET (26+10)*2          = 72
CSMOS  14+13+10           = 37
CMDRS  (14*3)+11*2+14*2+10 = 102
SCIREC 8+10               = 18
SCITLM 2*(15+10)          = 50
SAFE scan platform        = 38
TOTAL                     =317
```

Version	4	Change Date	06/11/91
Submission Date	05/21/91	Changed By	V. HENDERSON

Apr 24, 2013 - K. Simmons

Note that times given may not have been true execution times, so use the command logs to verify.

Graphics are also estimated times but generally ~~so~~ show the body and FOV correctly.

GALILEO ACTIVITY PLAN FORM - GASPRA ACTIVITY ID: GAPUOUTGAS02-
06/11/91 21:17:23 Gaspra Mtg START TIME: GCA-CDS 00000179:00:0

Activity ID	Orbit GA	Target P	Inst U	OAPEL OUTGAS SeqNo 02 Multi -
Title	NARROW FIELD SYSTEM SCAN OF GASPRA			
Requestor	S. EDBERG		Team	UVS
Bottom Label			Plot Key	UVS

Time System	CDS	Encounter Load ID	EE3
Start	GCA-CDS 00000179:00:0	91-302/19:38:03	GCA-000/03:00:59
End	GCA-CDS 00000167:00:0	91-302/19:50:11	GCA-000/02:48:51
Duration	00000012:00:0	000/00:12:08	000/00:12:08

DMS Activity RECORD Minimum Data Rate 7.68 Data Format LRS

S/P Reserved Y Earth Reference N Spin Status D Coop Imaging Y

Instruments Used:												
	DDS	N	EPD	N	EUV	N	HIC	N	MAG	N	NIMS	N
	PLS	N	PPR	N	PWS	N	RS	N	SSI	Y	UVS	Y

Observation Objective

This observation series is a small area scan of the Gaspra system in search of Lyman-alpha outgassing. Measurements will be made by scanning the solar through the anti-solar direction around Gaspra from approximately +/- .8 degrees centered on Gaspra. One part of the observation will scan from -.8 degrees to Gaspra and the other part wil scan from Gaspra to +.8 degrees. UVS will do a G channel miniscan of Lyman-alpha. At the end of the measurement UVS will change to full F and G scans for ridealong albedo measurement.

Design Detail

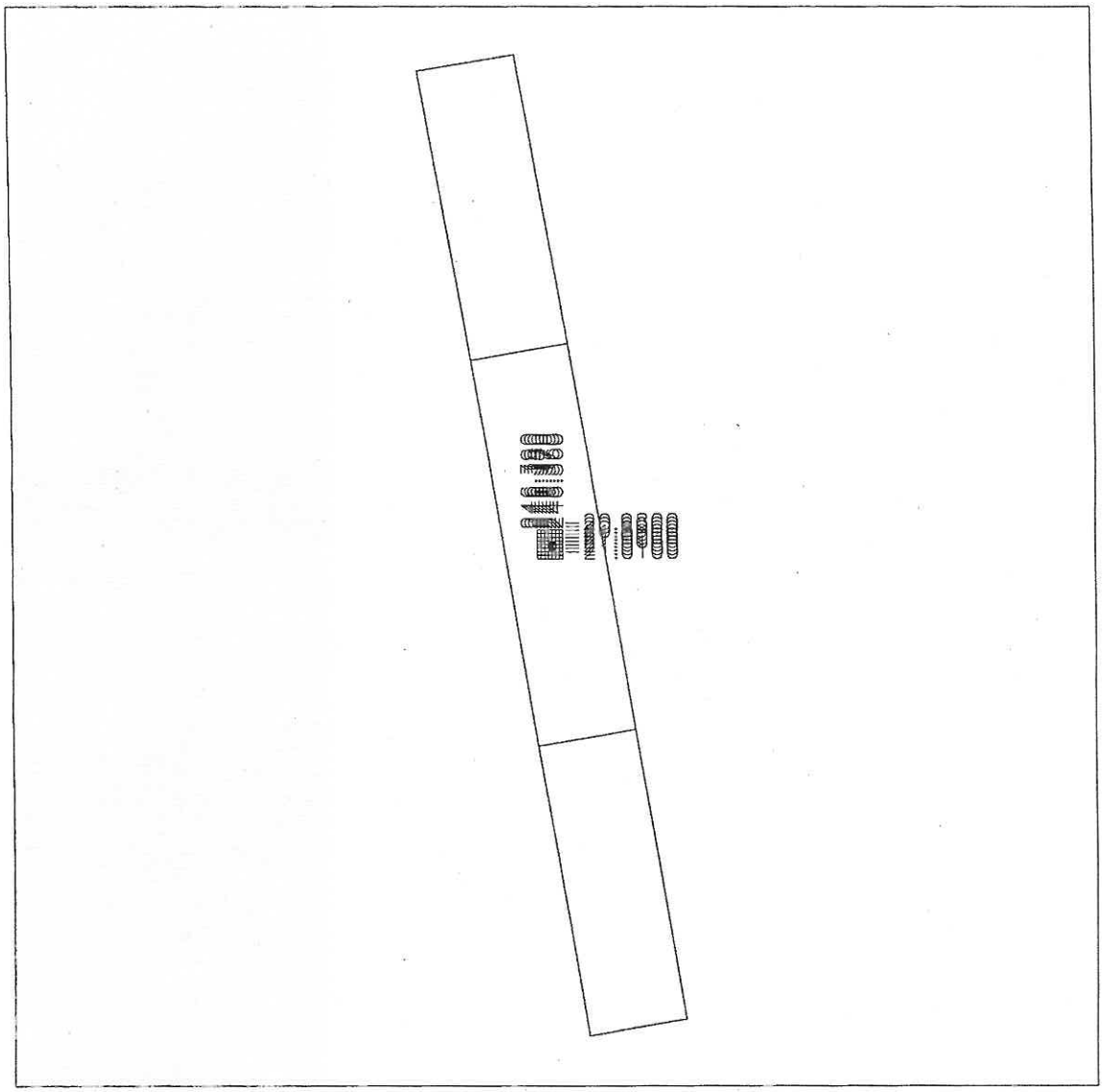
CDS COST 177 Observation to be designed in POINTER Y

A single observation slew will be made at approximately 20 microradians/second.

TARGET	(26+10)*2 = 72
CSMOS	10+14 = 24
CMDRS	(14*2)+10 = 38
SCIREC	8+10 = 18
SCITLM	15+10 = 25
TOTAL	=177

Version	9	Change Date	06/11/91
Submission Date	05/20/91	Changed By	V. HENDERSON

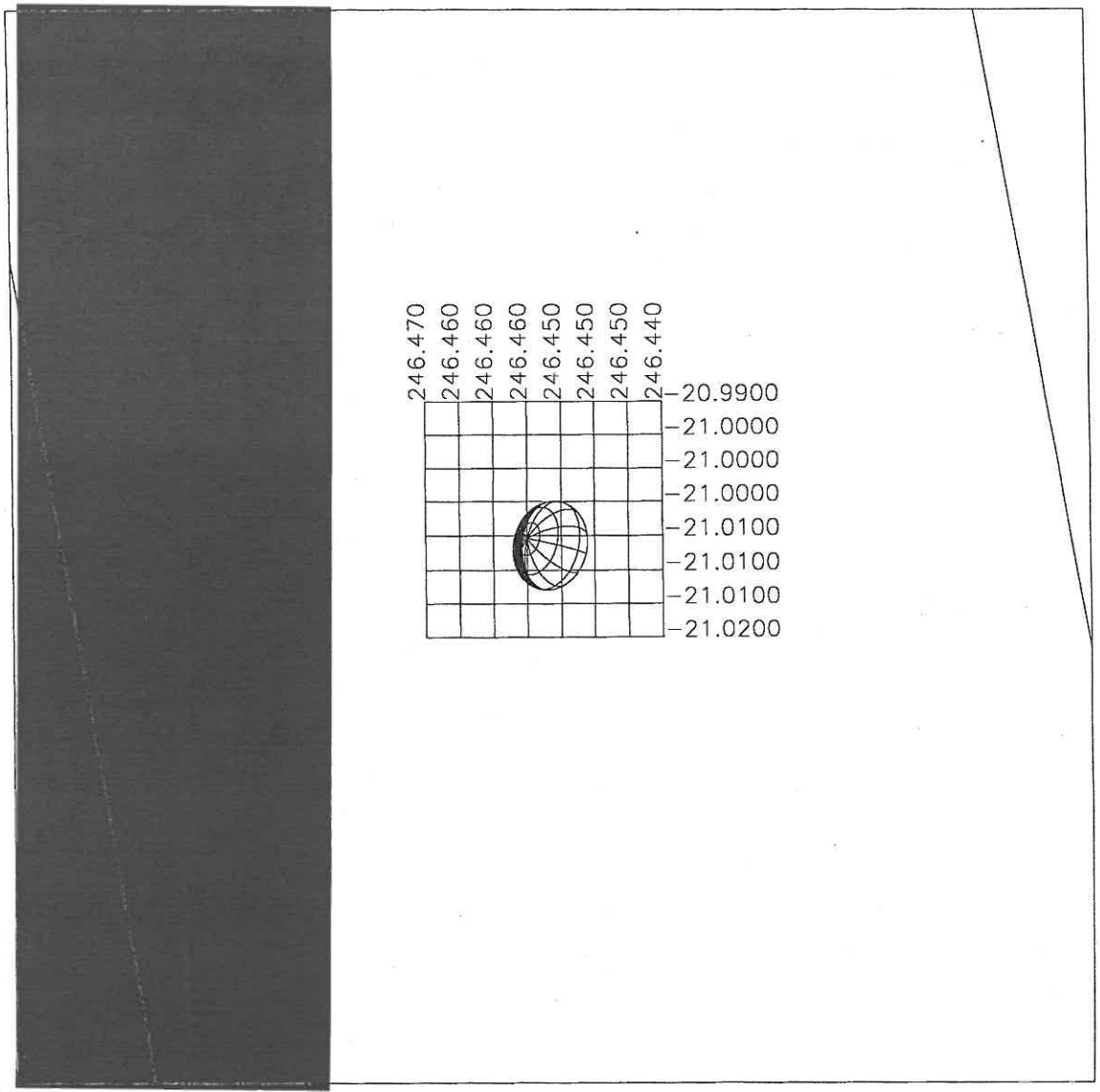
Thu Aug 9 20:47:08 2012



Start UTC_TIME : 1991-302 // 19:38:03.000
No End Time :
Start SCLK : 1/01073016:86:4:7

Target Body : GASPRA
Target Ra/Dec : 246.37/-21.00 Deg
S/C to Body Center : 85688.29 Km (11819.075 Rg)
Z-axis Pointing (Ra / Dec) : 175.28 / 2.58 Deg

Thu Jun 21 15:27:32 2012



Start UTC_TIME : 1991-302 // 19:23:54.000
No End Time :
Start SCLK : 1/01073002:86:9:7

Target Body : GASPRA
Target Ra/Dec : 246.45/-21.01 Deg
S/C to Body Center : 92470.39 Km (12754.536 Rg)
Z-axis Pointing (Ra / Dec) : 175.28 / 2.58 Deg

GALILEO ACTIVITY PLAN FORM - GASPRA ACTIVITY ID: GAPNGASPER01+
06/11/91 21:16:25 Gaspra Mtg START TIME: GCA-CDS 00000480:00:0

Activity ID	Orbit GA Target P Inst N	OAPEL GASPER	SeqNo 01 Multi +
Title	NIMS Meridional Albedo Map, PERiodic		
Requestor	C. BYRNE	Team NIMS	
Bottom Label	PERIODIC OBSERV	Plot Key NIMS	

Time System	CDS	Encounter Load ID	EE3
Start	GCA-CDS 00000480:00:0	91-302/14:33:42	GCA-000/08:05:20
End	GCA-CDS 00000479:66:0	91-302/14:33:59	GCA-000/08:05:03
Duration	00000000:25:0	000/00:00:17	000/00:00:17

DMS Activity RECORD Minimum Data Rate 28.8 Data Format MPW

S/P Reserved N Earth Reference N Spin Status D Coop Imaging N

Instruments Used:												
	DDS	N	EPD	N	EUV	N	HIC	N	MAG	N	NIMS	Y
	PLS	N	PPR	Y	PWS	N	RS	N	SSI	N	UVS	Y

Observation Objective

NIMS will observe the Gaspra Light Curve every 10 degrees of Gaspra's 7.04 hour rotation in one of three spectral resolutions.

Design Detail

CDS COST 181 Observation to be designed in POINTER Y

The GASPER, GASCUR and GASPEC observations together provide a meridional albedo map of Gaspra by sampling every 10 degrees of Gaspra's rotation (corresponding to about 12 minutes between observations.) The frequency of observation in the three different modes are as follows:

1) GASCUR - Short MAPMODE observations: Every 30 degrees of Gaspra rotation
2) GASPEC - Long Map mode observations: Every 120 degrees of Gaspra rotation
3) GASPER - Fixed mode observations: Performed at times other than the Short Map or Long Map observations so as the give samples every 10 degrees of Gaspra rotation.

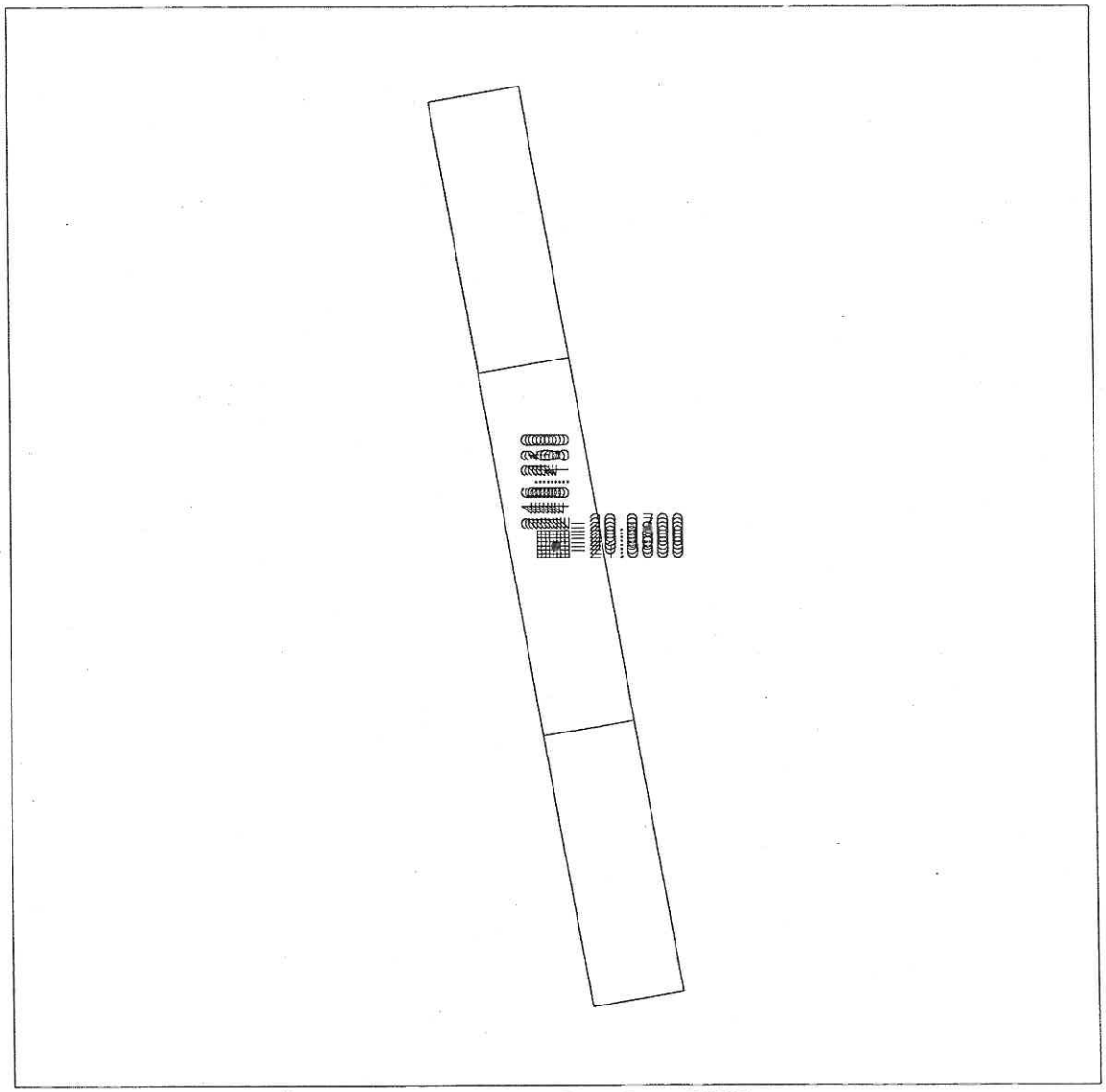
NIMS will map the error ellipse plus scan platform error in the Fixed Map mode at Nyquist Frequency (0.03 mrad/sec). This is one of eighteen Fixed Map observations in the Gaspra Far Encounter.

Bytes:
SCITLM = 15
1 TARGET (no TMC assumed) = 72
CMDRS (Assumes NIMS was in a mode other than Fixed Map)
14*3+10 = 52
CSMOS (1 sub-csmos)
14+10 = 24
RECORD
8+10 = 18

Version	3	Change Date	05/22/91
Submission Date	05/21/91	Changed By	C. BYRNE

These observations repeat many times through Gaspra encounter.

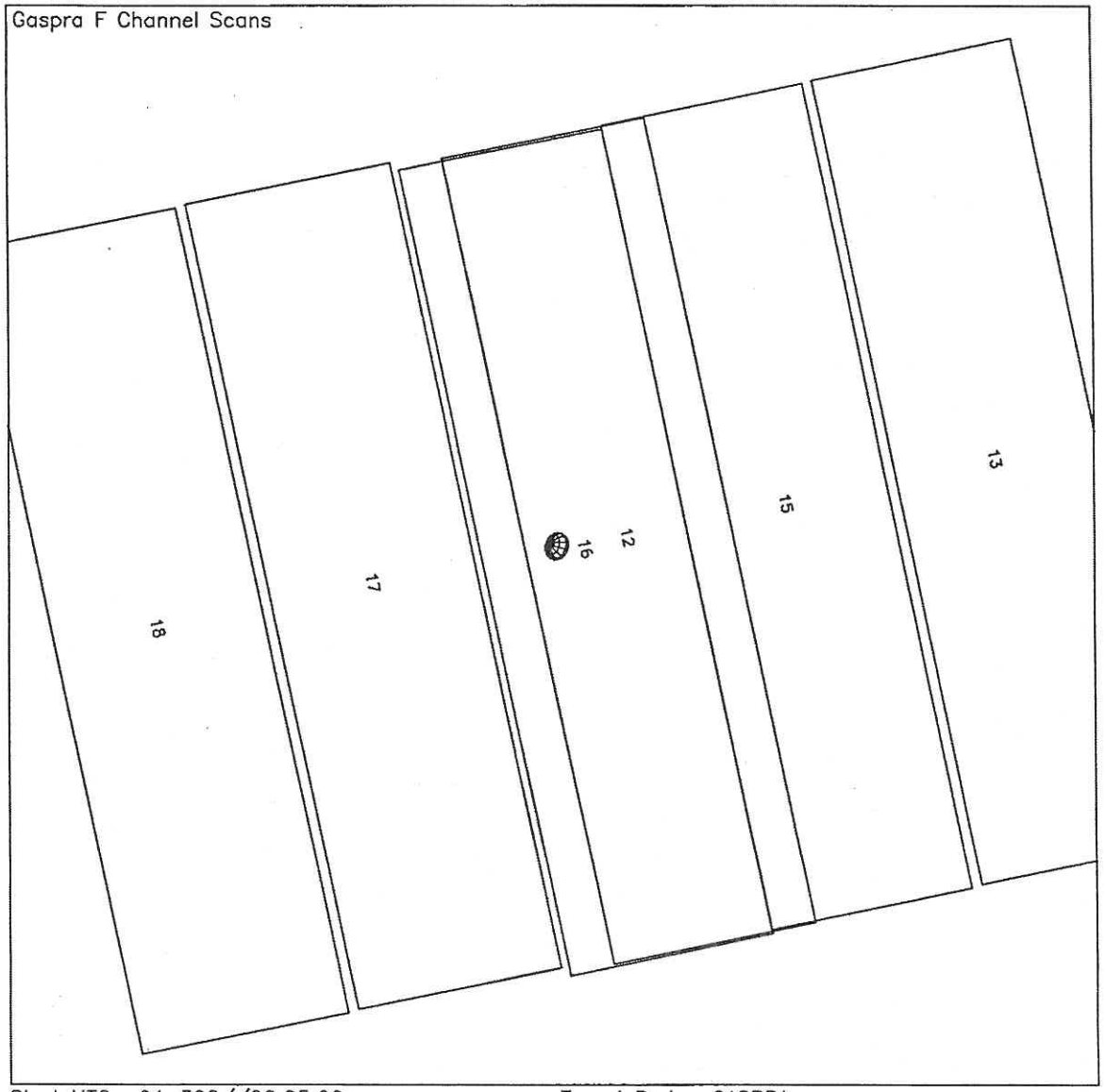
Thu Aug 9 21:39:04 2012



Start UTC_TIME : 1991-302 // 20:01:18.000
No End Time :
Start SCLK : 1/01073039:85:9:7

Target Body : GASPRA
Target Ra/Dec : 246.20/-20.99 Deg
S/C to Body Center : 74545.01 Km (10282.070 Rg)
Z-axis Pointing (Ra / Dec) : 175.28 / 2.58 Deg

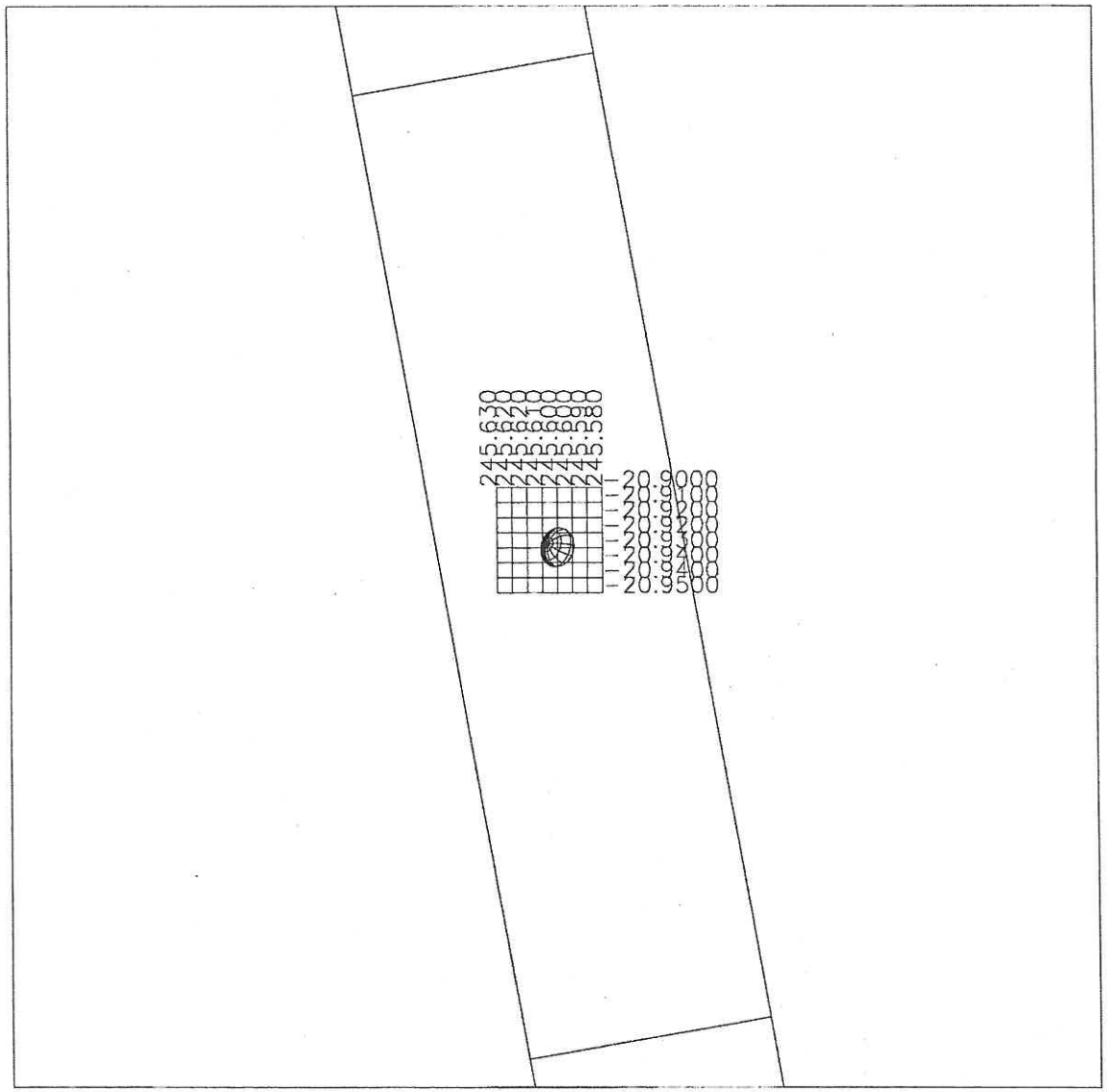
7-NOV-91 01:03:24



Start UTC : 91-302//20:25:00
End UTC : 91-302//20:33:00
Start SCLK :1/01073063:35:0:0
Time between FOV : 15.00000 sec

Target Body : GASPRA
Target Ra/Dec : 245.97/-20.97
S/C to Body Center : 63299.90 km
FOV for the F channel

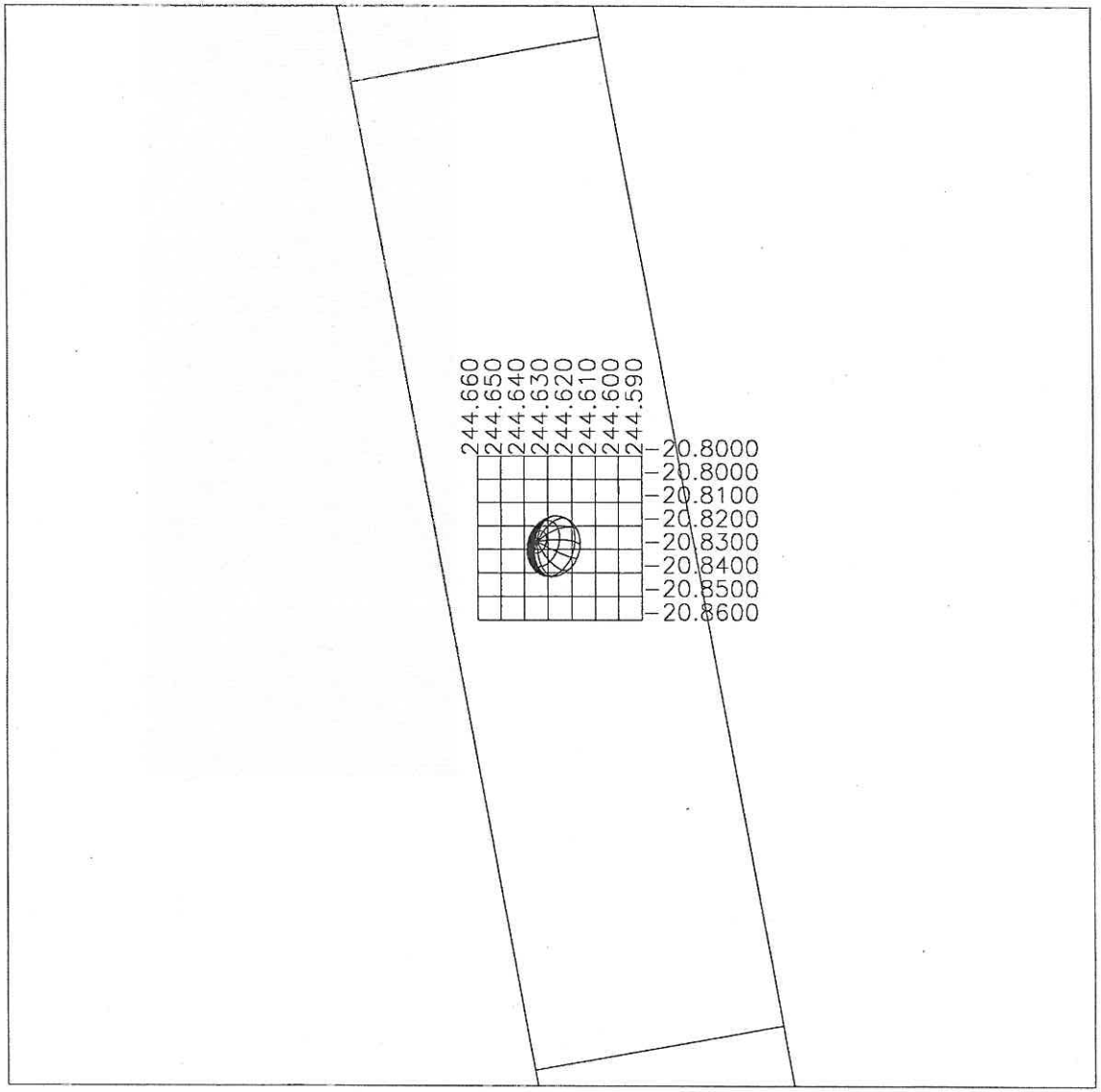
Mon Aug 13 16:01:28 2012



Start UTC_TIME : 1991-302 // 20:49:50.000
No End Time :
Start SCLK : 1/01073087:86:0:0

Target Body : GASPRA
Target Ra/Dec : 245.60/-20.93 Deg
S/C to Body Center : 51287.03 Km (7074.0725 Rg)
Z-axis Pointing (Ra / Dec) : 175.28 / 2.58 Deg

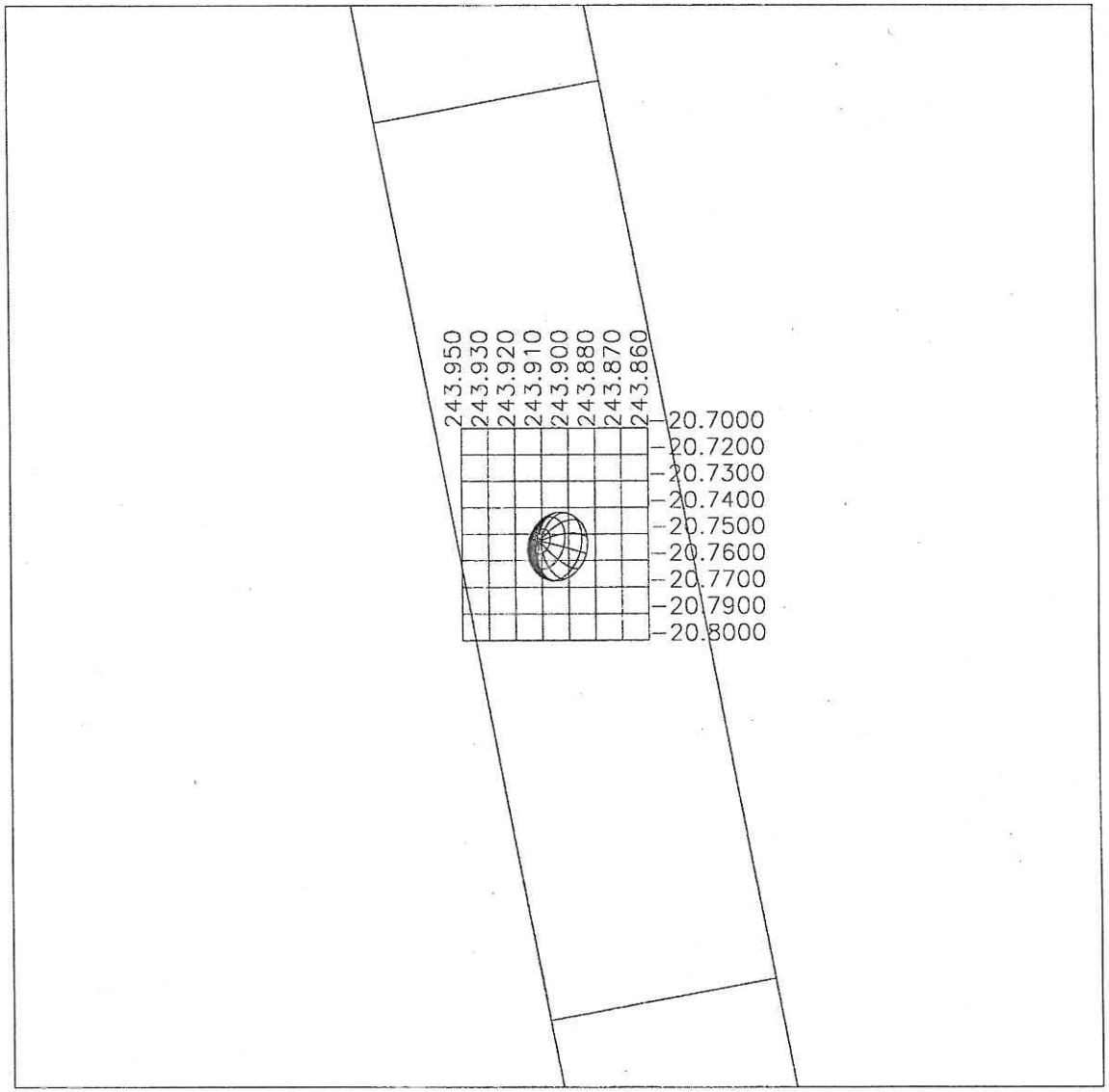
Mon Aug 13 16:07:12 2012



Start UTC_TIME : 1991-302 // 21:26:14.000
No End Time :
Start SCLK : 1/01073123:86:0:0

Target Body : GASPRA
Target Ra/Dec : 244.62/-20.83 Deg
S/C to Body Center : 33850.58 Km (4669.0449 Rg)
Z-axis Pointing (Ra / Dec) : 175.28 / 2.58 Deg

Mon Aug 13 16:13:45 2012



Start UTC_TIME : 1991-302 // 21:40:24.000
No End Time :
Start SCLK : 1/01073137:87:0:0

Target Body : GASPRA
Target Ra/Dec : 243.90/-20.76 Deg
S/C to Body Center : 27068.90 Km (3733.6415 Rg)
Z-axis Pointing (Ra / Dec) : 175.28 / 2.58 Deg

GALILEO ACTIVITY PLAN FORM - GASPRA ACTIVITY ID: GAPNGSCHEM02+
06/11/91 21:17:52 Gaspra Mtg START TIME: GCA-CDS 00000042:45:0

Activity ID	Orbit GA Target P Inst N OAPEL GSCHEM		SeqNo 02 Multi +
Title	NIMS CHEMical study at 102 wavelengths		
Requestor	C. BYRNE	Team	NIMS
Bottom Label	GASPRA CHEM HET	Plot Key	NIMS

Time System	CDS	Encounter Load ID	EE3
Start	GCA-CDS 00000042:45:0	91-302/21:56:04	GCA-000/00:42:58
End	GCA-CDS 00000039:00:0	91-302/21:59:36	GCA-000/00:39:26
Duration	00000003:45:0	000/00:03:32	000/00:03:32

DMS Activity RECORD Minimum Data Rate 28.8 Data Format MPW

S/P Reserved Y Earth Reference N Spin Status D Coop Imaging N

Instruments Used:												
	DDS	N	EPD	N	EUV	N	HIC	N	MAG	N	NIMS	Y
	PLS	N	PPR	Y	PWS	N	RS	N	SSI	N	UVS	Y

Observation Objective

Study chemical heterogeneity of Gaspra using 102 wavelengths.

Design Detail

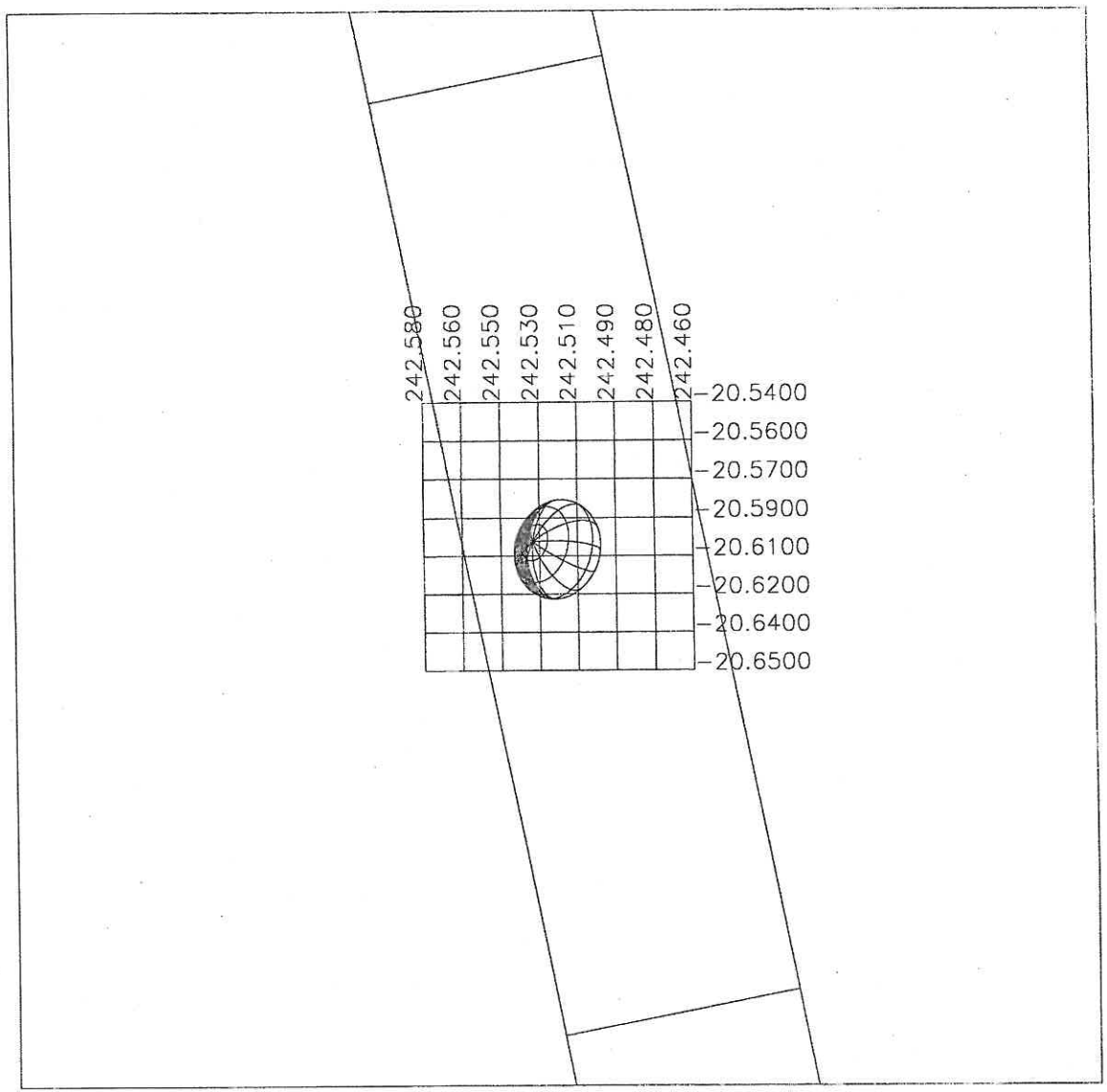
CDS COST 386 Observation to be designed in POINTER Y

This is the 2nd of 4 separate scans of the error ellipse in Short Map mode. This scan will cover one hemisphere of the error ellipse in which Gaspra can be found. Scans will be done at Nyquist Frequency (0.11 mrad/sec).

Bytes:
1 TARGET (5 TMC Sets assumed - BOTH strings)
(26+11+(25*5)+10)2 = 344
CSMOS (1 strip assumed - PRI string)
14+13*(0)+10 = 24
SCIREC
8+10 = 18

Version	5	Change Date	05/22/91
Submission Date	05/21/91	Changed By	C. BYRNE

Mon Aug 13 16:18:38 2012



Start UTC_TIME : 1991-302 // 21:56:04.000
No End Time :
Start SCLK : 1/01073153:41:0:0

Target Body : GASPRA
Target Ra/Dec : 242.52/-20.60 Deg
S/C to Body Center : 19576.84 Km (2700.2538 Rg)
Z-axis Pointing (Ra / Dec) : 175.28 / 2.58 Deg

GALILEO ACTIVITY PLAN FORM - GASPRA
06/11/91 21:17:57 Gaspra Mtg

ACTIVITY ID: GAPNGSCHEM04+
START TIME: GCA-CDS 00000029:00:0

Activity ID	Orbit GA	Target P	Inst N	OAPEL GSCHEM SeqNo 04 Multi +
Title	NIMS CHEMical study at 102 wavelengths			
Requestor	C. BYRNE		Team	NIMS
Bottom Label	GASPRA CHEM HET		Plot Key	NIMS

Time System	CDS	Encounter Load ID	EE3
Start	GCA-CDS 00000029:00:0	91-302/22:09:43	GCA-000/00:29:19
End	GCA-CDS 00000021:00:0	91-302/22:17:48	GCA-000/00:21:14
Duration	00000008:00:0	000/00:08:05	000/00:08:05

DMS Activity RECORD Minimum Data Rate 28.8 Data Format MPW

S/P Reserved Y Earth Reference N Spin Status D Coop Imaging N

Instruments Used:												
	DDS	N	EPD	N	EUV	N	HIC	N	MAG	N	NIMS	Y
	PLS	N	PPR	Y	PWS	N	RS	N	SSI	N	UVS	Y

Observation Objective

Study chemical heterogeneity of Gaspra using 102 wavelengths.

Design Detail

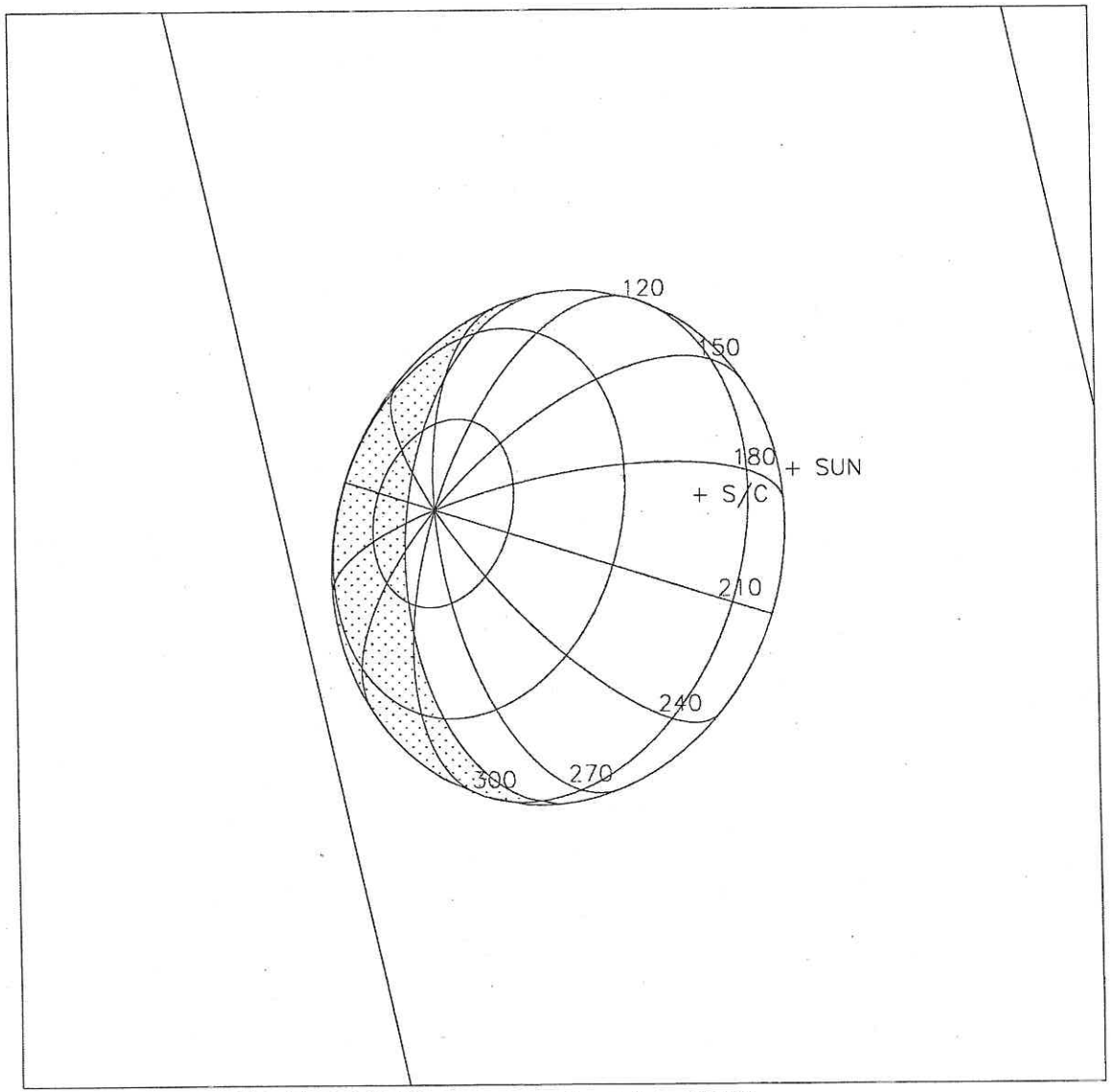
CDS COST 401 Observation to be designed in POINTER Y

This is the last of 4 separate scans of the error ellipse in Short Map mode. This scan will cover the most probable position of Gaspra in the error ellipse (center of ellipse). Scans will be done at Nyquist Frequency (0.11 mrad/sec).

Bytes:
1 SCITLM = 15
1 TARGET (5 TMC Sets assumed - BOTH strings)
(26+11+(25*5)+10)2 = 344
CSMOS (1 strip assumed - PRI string)
14+13*(0)+10 = 24
SCIREC
8+10 = 18

Version	6	Change Date	05/22/91
Submission Date	05/21/91	Changed By	C. BYRNE

Thu Jun 21 15:35:41 2012



Start UTC_TIME : 1991-302 // 22:09:43.000
No End Time :
Start SCLK : 1/01073166:86:5:0

Target Body : GASPRA
Target Ra/Dec : 240.04/-20.30 Deg
S/C to Body Center : 13066.21 Km (1802.2365 Rg)
Z-axis Pointing (Ra / Dec) : 175.28 / 2.58 Deg

GALILEO ACTIVITY PLAN FORM - GASPRA
06/11/91 21:17:58 Gaspra Mtg

ACTIVITY ID: GAPNGASMAP01-
START TIME: GCA-CDS 00000021:00:0

Activity ID	Orbit GA	Target P	Inst N	OAPEL GASMAP SeqNo 01 Multi -
Title	NIMS Chem Heterogeneity MAP @lower phase			
Requestor	C. BYRNE		Team	NIMS
Bottom Label	CHEMICAL MAP		Plot Key	NIMS

Time System	CDS		Encounter Load ID	EE3
Start	GCA-CDS	00000021:00:0	91-302/22:17:48	GCA-000/00:21:14
End	GCA-CDS	00000017:00:0	91-302/22:21:51	GCA-000/00:17:11
Duration		00000004:00:0	000/00:04:03	000/00:04:03

DMS Activity RECORD Minimum Data Rate 28.8 Data Format MPW

S/P Reserved Y Earth Reference N Spin Status D Coop Imaging Y

Instruments Used:	DDS	N	EPD	N	EUV	N	HIC	N	MAG	N	NIMS Y
	PLS	N	PPR	Y	PWS	N	RS	N	SSI	Y	UVS Y

Observation Objective

Observe the distribution of composition at a compromise between phase angle (affects spectral sensitivity) and spatial resolution.

Design Detail

CDS COST 753 Observation to be designed in POINTER Y

The first of 2 Fixed Map Observations of Gaspra, NIMS will scan the error ellipse plus scan platform pointing error at 0.75 mrad/sec. The lower phase angle (compared to the Fixed Map at -16 rims) at this time will provide better chemical signatures. Gaspra will grow from 2.9 Nimsels to 3.7 Nimsels during this time.

Bytes:
1 TARGET (10 TMC sets assumed; BOTH strings)
(26+11+(25*10)+10)2 = 594
CMDRS (Assumes instrument was in Short Map Mode and a long-running CMDRS is allowed...Counts in possibility for gain state/grating offset changes)
(14*3)+10 = 52
CSMOS (5 strips/sub-csmos' assumed; PRI string)
(14+13*(6-1)+10 = 89
SCIREC
8+10 = 18

Version	3	Change Date	06/11/91
Submission Date	05/21/91	Changed By	V. HENDERSON