Chapter 2 - Orbit Overview

Contents

Introduction to Chapter 2

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

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

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

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

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

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

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

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

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

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

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

NIMS I24 SCIENCE OVERVIEW

Io Science

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

24INLOKIRA01 - high resolution nightside obs. of Loki’s caldera.
24INHSPELE01 - nightside tag-along obs. of Pele.
24INPILLAN01 - nightside tag-along obs. of Pillan caldera.
24INCOLCHS01 - dayside 52 sec. tag-along obs. of Colchis region.
24INZAMAMA01 - dayside 52 sec. tag-along obs. of Zamama hot spot.
24INPROMTH01 - dayside 52 sec. tag-along obs. of Promethes hot spot.
24INCOLCHS02 - dayside 52 sec. tag-along obs. of Colchis region.
24INNTOHIL01 - dayside 52 sec. tag-along obs. of Tohil region.
24INPROMTH02 - 7 Rims dayside obs. of Prometheus hot spot, coordinated with a SSI mosaic.
24INZAMAMA02 - dayside 156 sec. tag-along obs. of Zamama hot spot.
24INDORINA01 - dayside 52 sec. tag-along obs. of Dorian green area.
24INAMSKGI01 - dayside 156 sec. tag-along obs. of Amirani hot spot.
24INTERMAP01 - dayside 52 sec. tag-along obs. of a caldera near the terminator.
24INREGION01 - dayside 32 min. three swath regional map centered at 0 deg latitude, 150 deg W. longitude.
24INPPLUME01 - dayside 5 min. limbscan map from Pillan hot spot to off-limb to look for Pillan’s plume, if active. Coordinated with a SSI observation.
24INPELEPM01 - dayside 5 min. limbscan map from PELE hot spot to off-limb to look for PELE’S plume, if active.
24INREGION02 - dayside 16 min. two swath global map centered at 0 deg latitude, 190 deg W. longitude.

Calibration

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

Early Data Return

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

I24 Playback

I24 playback is split into two passes through the tape.

I24 TAPE AND BTG PLAN

I. I24 TAPE PLAN OVERVIEW

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

II. TAPE ALLOCATIONS IN IO REMOTE SENSING GROUP:

We agreed to the following allocations:

Track 2: PPR and MWG only, no conflicts.

Track 3:
- SSI: 0.79 track
- NIMS: 0.10 track
- MWG: 0.11 track
- PPR: ridealong

Track 4:
- SSI: 0.855 track
- NIMS: 0.145 track
- PPR: ridealong

Track 1:
- SSI: 0.37 track
- NIMS: 0.60 track
- PPR: 0.03 track (?)
- (If PPR needs a little more or less, re-apportion SSI and NIMS)

III. BTG ALLOCATIONS

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

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

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

I24 DETAILED OBSERVATION PLAN

Track 2:

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

Track 3:

day/hr:mn	Min from Io C/A	Target	Target Lat/Lon	S/C Lat/Lon	Range	notes (SSI unless otherwise noted)
284/03:32	-60 to -50	tape track turnaround (2-->3)				
284/03:43	-50 to -11	Loki, Ra	long ~300	, 303	~10000	PPR only (booms)
284/04:24	-11 to -5	Loki	+12, 309	, 290	~2000	NIMS mapping of south Loki caldera at night
284/04:30	-4	Pele	-18.3, 255.7	, 264	~1300	NIMS 52 s
284/04:31	-3	Pele	-18.3, 255.7	, 254	~800	1x10 AI8 and 1 IM8/400, thru booms
32	-1.6	Pillan P.	-10.5, 243.3	, 243	~800	1x12 AI8 and 1 IM8/240, NIMS 52 s
35	~+1	Colchis M.	+3.9, 215.7	, 212	~700	1x10 AI8 and 1 IM8/240, NIMS 52+ s
40	~+6	Zamama	+18.1, 172.5	, 173	~2000	1x10 AI8 and 1 IM8/240, NIMS 52+ s
44	+10	Prometh.	-1.7, 153.8	, 161	~3500	2x6 clear, 1x5 green (last of each record IM8/240), NIMS 52+ s

PPR ridealong with most SSI and NIMS sequences listed above.

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

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

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

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

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

I24 DETAILED OBSERVATION PLAN

Track 4:

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

Comments on designs:

All clear filter unless otherwise stated.

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

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

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

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

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

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

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

I24 DETAILED OBSERVATION PLAN

Track 1:

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

Comments on designs:

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

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

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

Eclipse -- how many OCMs possible in IM4? Change to HMA? 18 RJ, 15 km/pixel. Filters: clear, 1MC, add green, violet, red if possible.

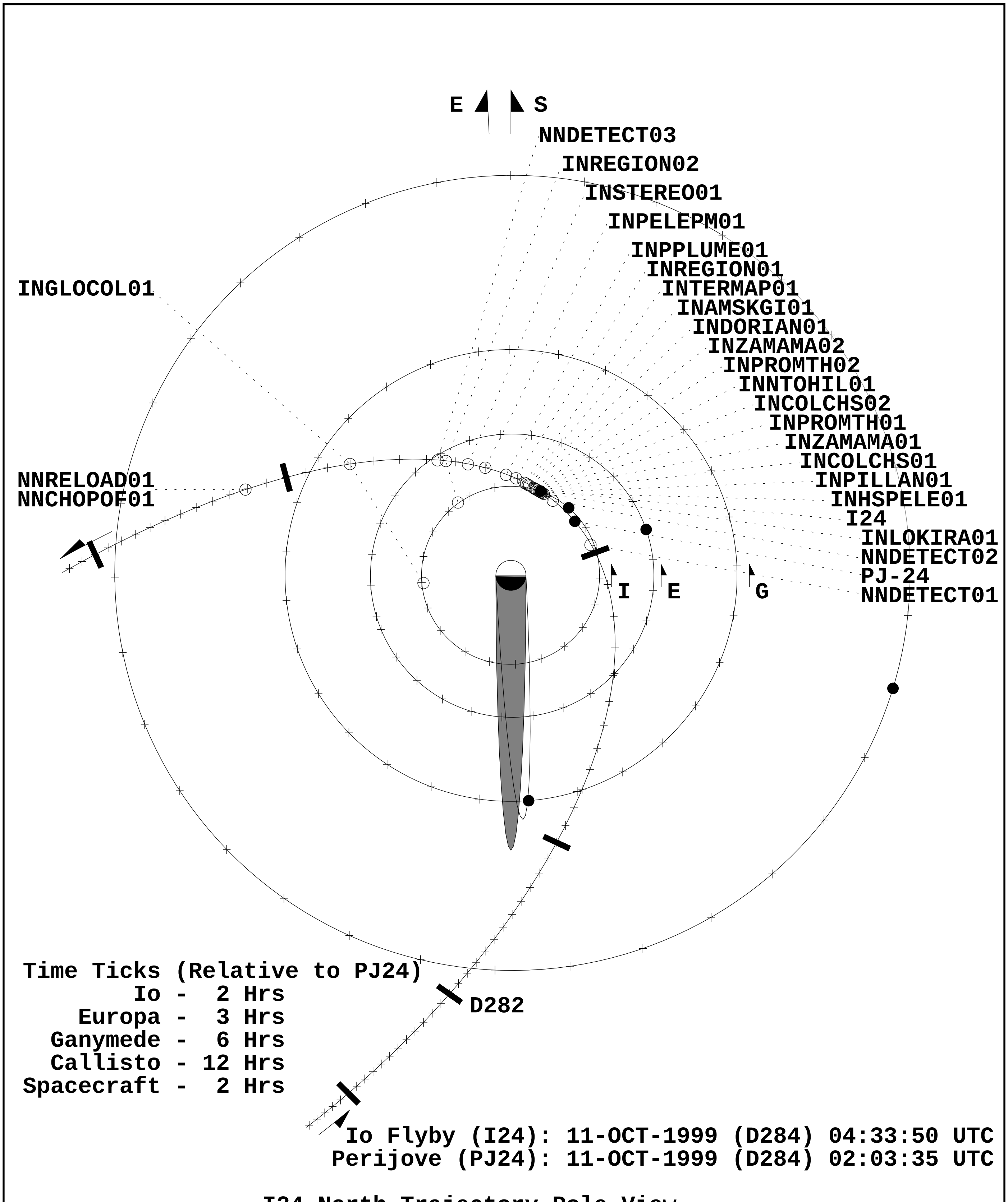
I24 Time-Ordered Listing

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

I24 Time-Ordered Listing

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

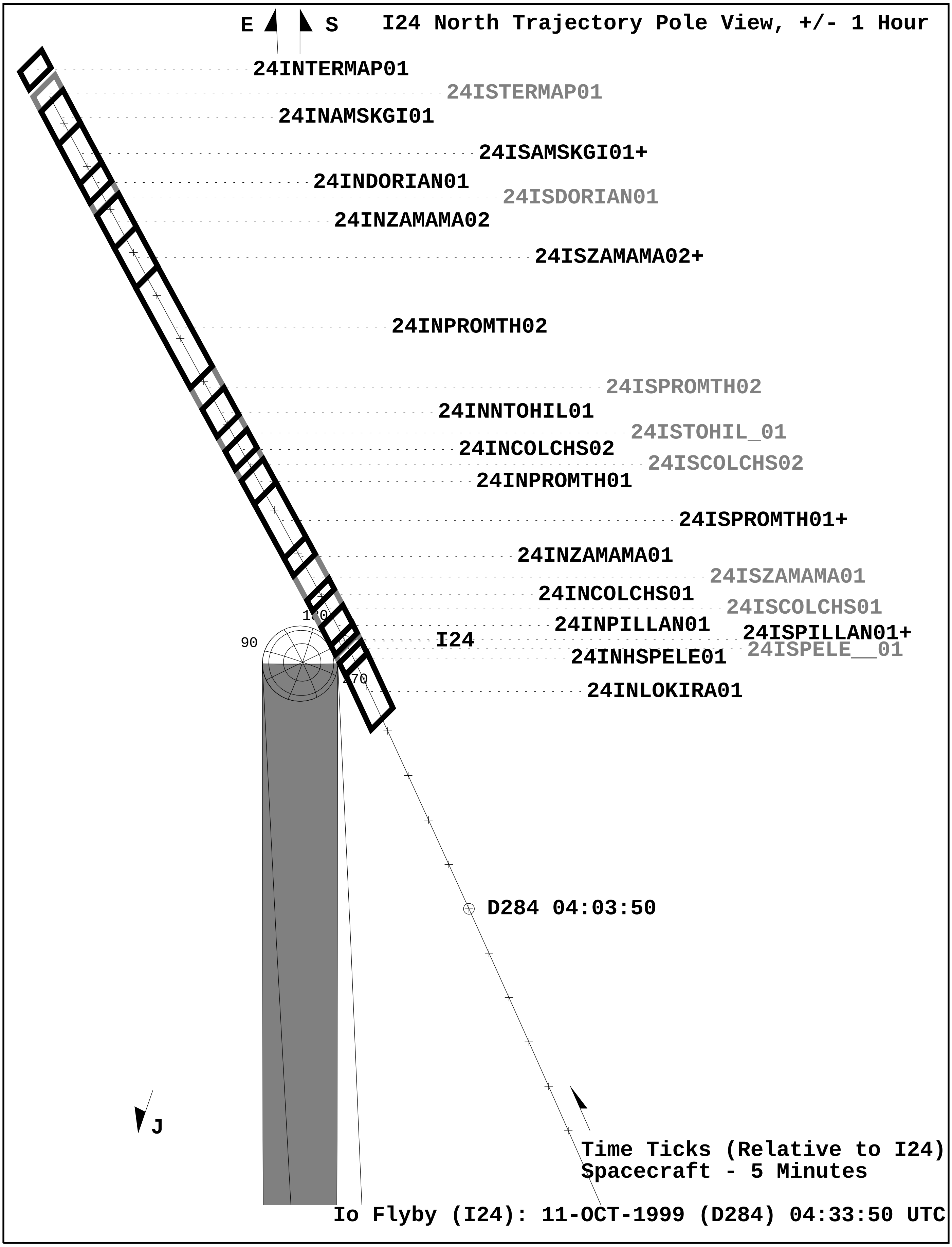
NIMS I24 OBSERVATIONS



I24 North Trajectory Pole View

NIMS - FEL - 12/06/99

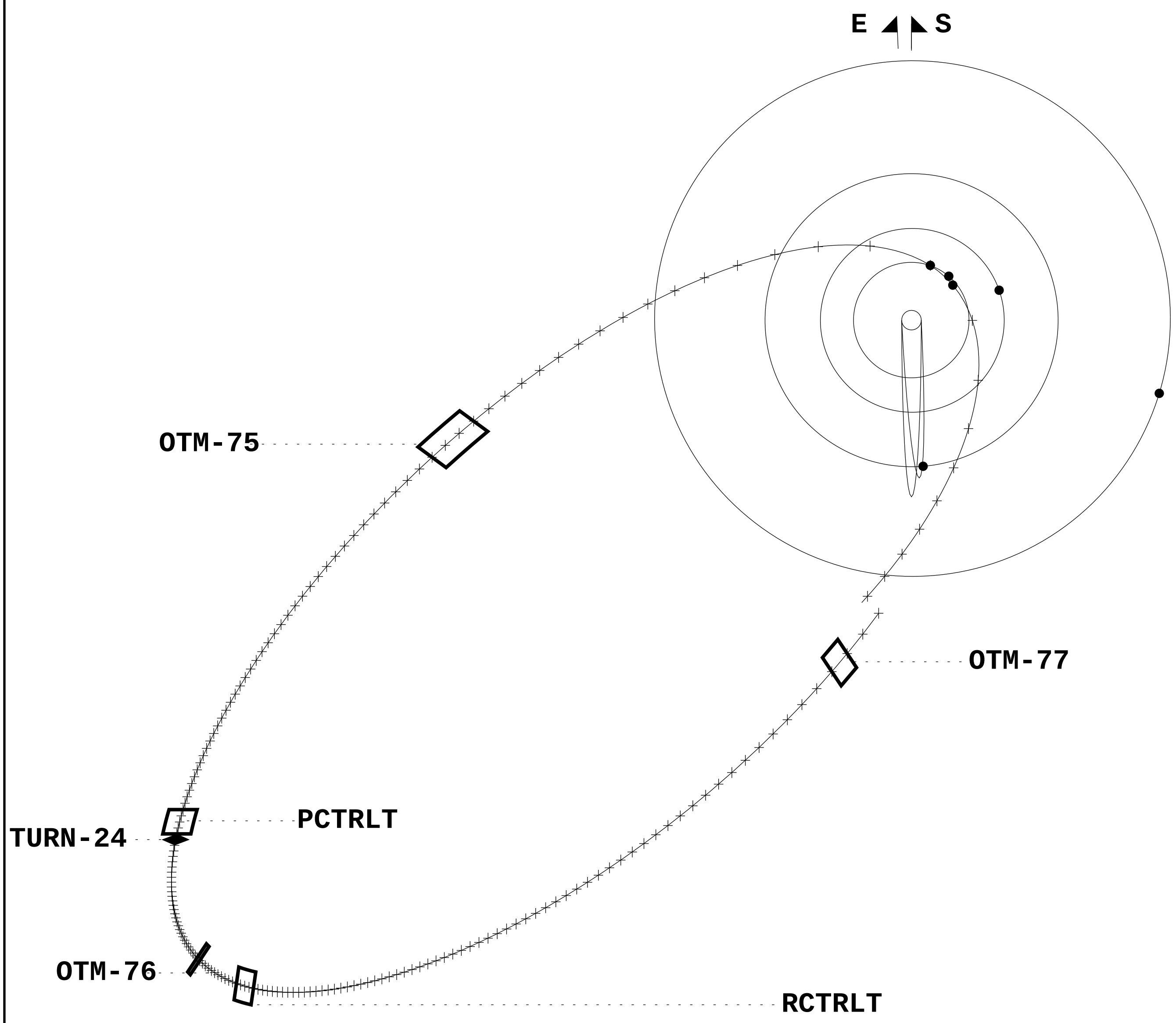
NIMS & SSI I24 IO FLYBY OBSERVATIONS



NIMS I24 CRUISE CALIBRATIONS

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

Time Ticks (Relative to I24)
Spacecraft - 6 Hours



I24 North Trajectory Pole View, Perijove to Perijove

I24 NIMS INPUTS

Activity ID	Observation Title	NIMS Edit Table	NIMS PB Table	Mode	Gain	Grating Start	Grating Offset	Record Format	PSID
24NNDETECT01	Grating Step Test								
24NNDETECT02	Grating Step Test								
24NNLOKIRA01-	NIMS Software Reload								
24INLOKIRA01-	Io Loki Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	DA
24INHSPELE01-	Io Pele Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	
24NNPILLAN01-	NIMS Software Reload								
24INPILLAN01-	Io Pillan Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	DC
24INCOLCHS01-	Io Colchs Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DD
24NNZAMAMA01-	NIMS Software Reload								
24INZAMAMA01-	Io Zamama Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DE
24NNPROMTH01-	NIMS Software Reload								
24INPROMTH01-	Io Prometheus Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DF
24NNCOLCHS02-	NIMS Software Reload								
24INCOLCHS02-	Io Colchs Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DG
24NNNTOHIL01-	NIMS Software Reload								
24INNTOHIL01-	Io Tohil Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DH
24NNPROMTH02-	NIMS Software Reload								
24INPROMTH02-	Io Prometheus Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DI
24NNZAMAMA02-	NIMS Software Reload								
24INZAMAMA02-	Io Zamama Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DJ
24NNDORIAN01-	NIMS Software Reload								
24INDORIAN01-	Io Dorian Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DK
24NNAMSKGI01-	NIMS Software Reload								
24INAMSKGI01-	Io Amskgi Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DL
24NNTERMAP01-	NIMS Software Reload								
24INTERMAP01-	Io Termap Obs	I24ILM442	I24ILM360	LM	3	0	4	MPW	DM
24NNREGION01-	NIMS Software Reload								
24INREGION01-	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DN
24NNPPLUME01-	NIMS Software Reload								
24INPPLUME01-	Io Plume Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	DO
24NNPELEPM01-	NIMS Software Reload								
24INPELEPM01-	Io Pele Plume Obs	I24ILM442	I24ILM360	LM	4	0	4	MPW	DP
24NNREGION02-	NIMS Software Reload								
24INREGION02-	Io Region Obs	I24ILM442	I24ILM360	LM	2	0	4	MPW	DQ
24NNDETECT03	Grating Step Test								
24NNRELOAD01-	NIMS Software Reload								
24NNCHOPOF01-	NIMS Chopper Off								
24NNRCTRLT01-	RCT Calibration	I24RCT252	R/T	LM	1	0	4	R/T	XE
24NNROPCAL01	NIMS OPCAL	I24OPCAL48	R/T	LM	4	0	4	R/T	DC
24NNPCTRLT01-	PCT Calibration	I24PCT252	R/T	LM	4	0	4	R/T	FB

I24 RESOURCES

Activity ID	Mode	Record Format	Obs. Cost (tracks)	Obs. Cost (ticks)	Number Wavelengths Returned	Obs Record (sec.)	Obs PB (sec.)	Selected Bits to Tape sBOT (MBITS)	Bits to Tape BOT (Mbits)	Mode Cycle time (sec)
24INLOKIRA01-	LM	MPW	0.0457	266	360	300.00	308.67	3.56	3.46	8.667
24INHSPELE01-	LM	MPW	0.0083	48	360	52.02	51.40	0.59	0.60	8.667
24INPILLAN01-	LM	MPW	0.0083	48	360	52.02	51.40	0.59	0.60	8.667
24INCOLCHS01-	LM	MPW	0.0083	48	360	52.02	51.40	0.59	0.60	8.667
24INZAMAMA01-	LM	MPW	0.0083	48	360	52.02	51.40	0.59	0.60	8.667
24INPROMTH01-	LM	MPW	0.0083	48	360	52.02	51.40	0.59	0.60	8.667
24INCOLCHS02-	LM	MPW	0.0083	48	360	52.02	51.40	0.59	0.60	8.667
24INNTOHIL01-	LM	MPW	0.0083	48	360	52.02	51.40	0.59	0.60	8.667
24INPROMTH02-	LM	MPW	0.0638	372	360	420.00	428.67	4.94	4.84	8.667
24INZAMAMA02-	LM	MPW	0.0240	140	360	156.00	155.35	1.79	1.80	8.667
24INDORIAN01-	LM	MPW	0.0083	48	360	52.02	51.40	0.59	0.60	8.667
24INAMSKGI01-	LM	MPW	0.0240	140	360	156.00	155.35	1.79	1.80	8.667
24INTERMAP01-	LM	MPW	0.0122	71	360	78.00	77.34	0.89	0.90	8.667
24INREGION01-	LM	MPW	0.2900	1690	360	1,920.00	1928.67	22.22	22.12	8.667
24INPPLUME01-	LM	MPW	0.0457	266	360	300.00	308.67	3.56	3.46	8.667
24INPELEPM01-	LM	MPW	0.0457	266	360	300.00	308.67	3.56	3.46	8.667
24INREGION02-	LM	MPW	0.1491	869	360	986.00	994.67	11.46	11.36	8.667
Resource Totals			**0.7663**	**4465**						

I24 RESOURCES

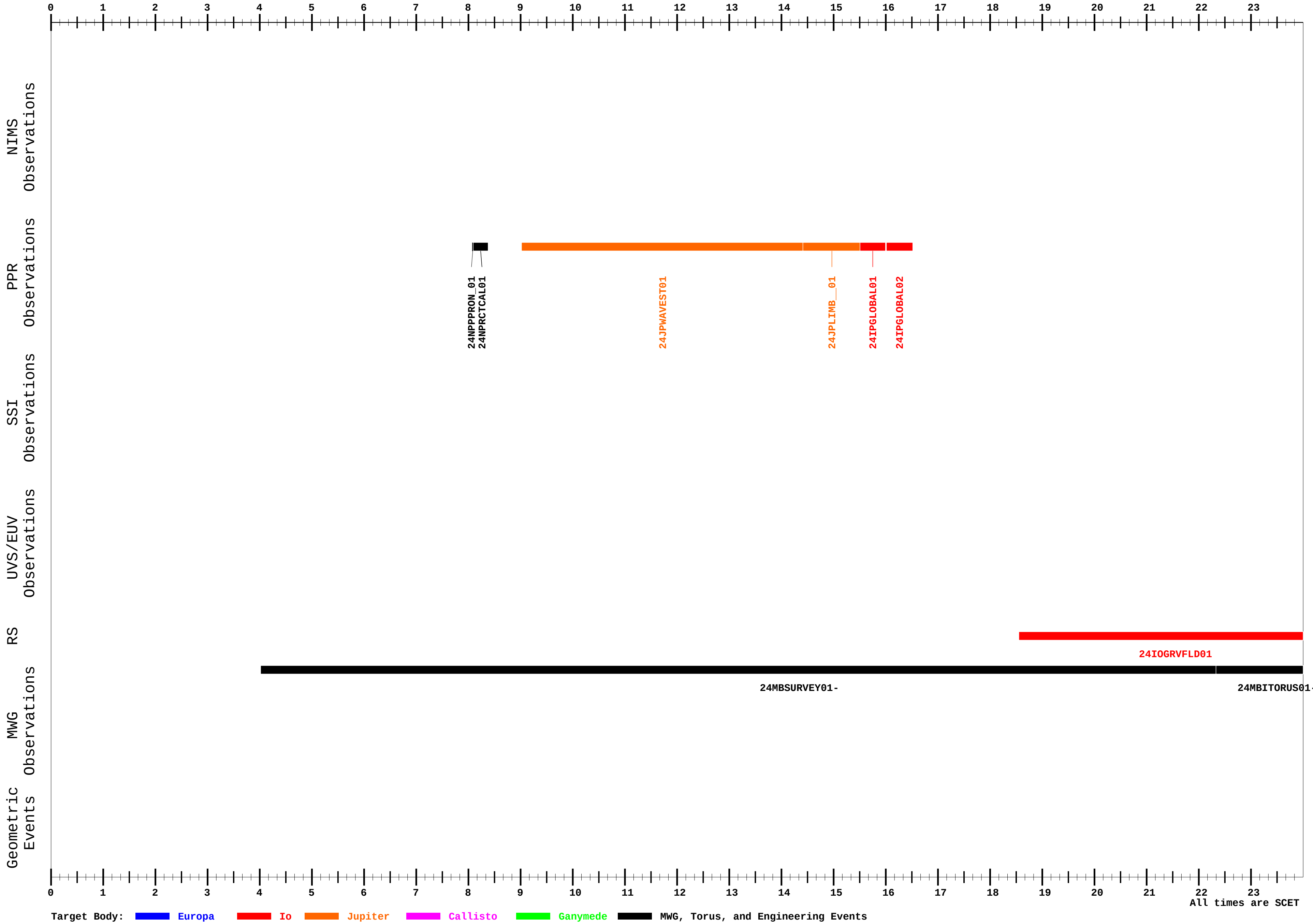
Activity ID	AACS Mbits c 2.5	Comp	Thold	RT	Total BTG Mbits Mbits (w/4% ohead)	Data Reduction Factor (sBOT/BTG)	Pass
24INLOKIRA01-	0.02	1.05	0		2.5398	1.40	1,2
24INHSPELE01-	0.00	1.05	0		0.4229	1.40	1
24INPILLAN01-	0.00	1.05	0		0.4229	1.40	1
24INCOLCHS01-	0.00	1.05	0		0.4229	1.40	1
24INZAMAMA01-	0.00	1.05	0		0.4229	1.40	1
24INPROMTH01-	0.00	1.05	0		0.4229	1.40	1
24INCOLCHS02-	0.00	1.05	0		0.4229	1.40	1
24INNTOHIL01-	0.00	1.05	0		0.4229	1.40	1
24INPROMTH02-	0.02	1.05	0		3.5272	1.40	1,2
24INZAMAMA02-	0.01	1.05	0		1.2783	1.40	1
24INDORIAN01-	0.00	1.05	0		0.4229	1.40	1
24INAMSKGI01-	0.01	1.05	0		1.2783	1.40	1
24INTERMAP01-	0.00	1.05	0		0.6364	1.40	1
24INREGION01-	0.11	1.05	0		15.8696	1.40	1,2
24INPPLUME01-	0.02	1.05	0		2.5398	1.40	1,2
24INPELEPM01-	0.02	1.05	0		2.5398	1.40	1,2
24INREGION02-	0.06	1.20	0		7.1613	1.60	1,2
Resource Totals					**40.7539**		
		Alloc.			40.9280		
		Over			-0.1741		

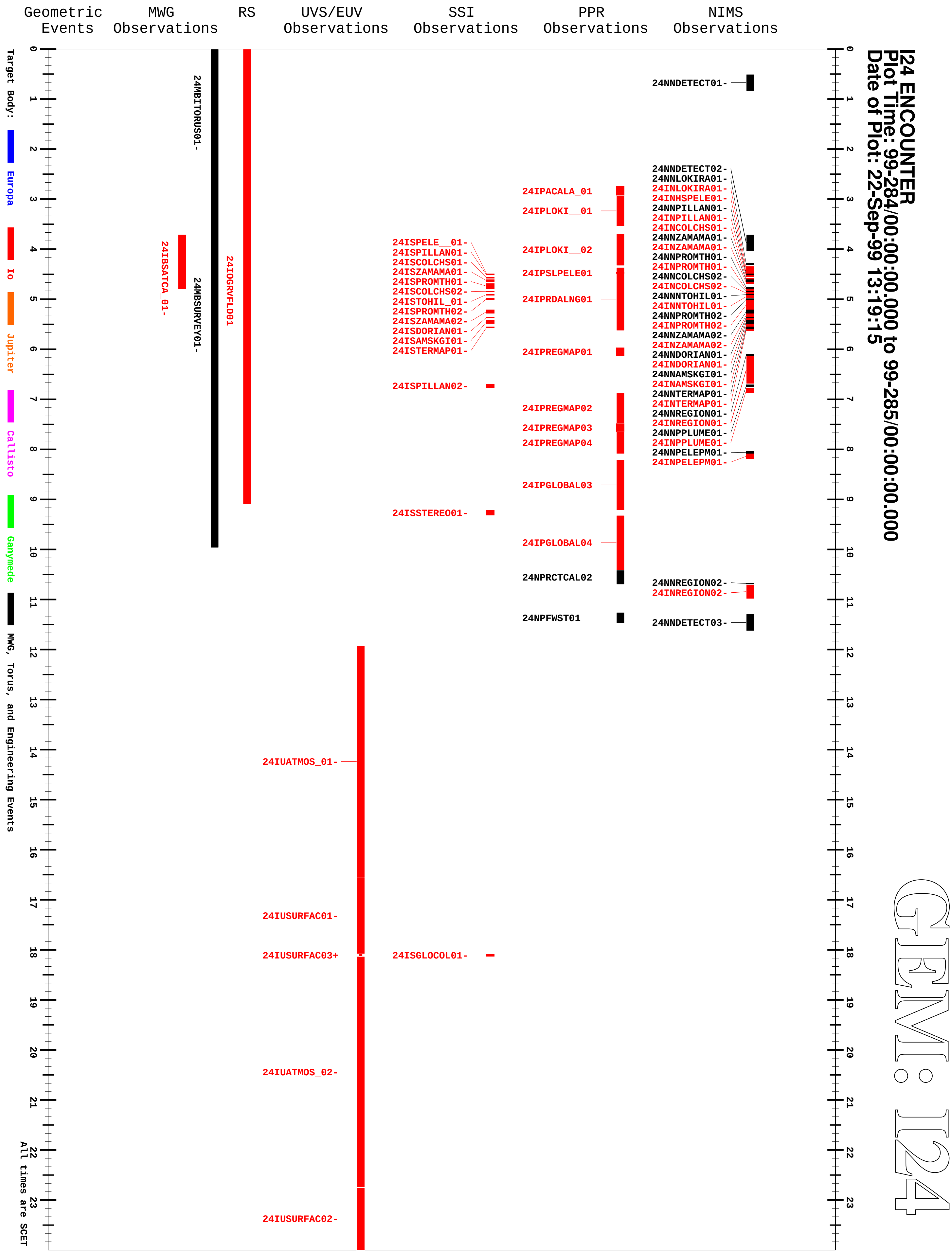
NIMS I24 OBSERVING GEOMETRY

OAPEL	Latitude (deg)	Longitude (deg)	Range (km)	Cone (deg)	Light (deg)	View (deg)	Phase (deg)
24INLOKIRA01	+12 to +14	308 to 310	2.7 to 4.2K	56 to 80	146	32 to 53	98 to 122
24INHSPELE01	-19 to -18	255.5	.9 to 2.0K	64 to 85	63 to 99	48 to 54	93 to 115
24INPILLAN01	-11 to -10	227 to 247	.9 to 1.0K	94 to 144	67 to 87	45 to 65	35 to 85
24INCOLCHS01	+3.8 to +4.2	214.8	.7 to 1.2K	151 to 174	51 to 63	29 to 48	4 to 48
24INZAMAMA01	+17.5 to +18.5	172.	1.6 to 2.8K	155 to 164	16 to 23	26 to 30	13 to 23
24INPROMTH01	-3.5 to -1.5	155.	3.1 to 6.5K	170 to 176	2 to 15	4 to 18	2 to 10
24INCOLCHS02	+1 to +4	216	8.3 to 9.4K	157	52	75 to 77	23 to 25
24INNTOHIL	-29 to -25	159	10K	164	31	34 to 41	17 to 19
24INPROMTH02	-4 to +2	152 to 157	11 to 17K	161	9 to 14	7 to 12	18 to 22
24INZAMAMA02	+15 to +22	172 to 174	18 to 21K	156	15 to 58	34 to 82	23 to 27
24INDORIAN01	-25 ot -17	185 to 189	23K	156	27 to 47	42 to 69	24 to 26
24INAMSKGI01	+18 to +28	112 to 120	25K	160	42 to 82	27 to 64	19 to 22
24INTERMAP01	-8 to -2	95 to 98	28K	161	73 to 92	51 to 72	20 to 21
24INREGION01	-22 to +25	135 to 170	44 to 60K	156	11 to 45	4 to 23	24 to 26
24INPPLUME01	-24 to -2	211 to 244	65K	155	41 to 65	66 to 91	26 to ---
24INPELEPM01	-40 to +2	205 to 256	106K	156	31 to 67	50 to 90	25 to ---
24INREGION02	-90 to +90	112 to 282	213K	158	24 to 103	26 to 90	22

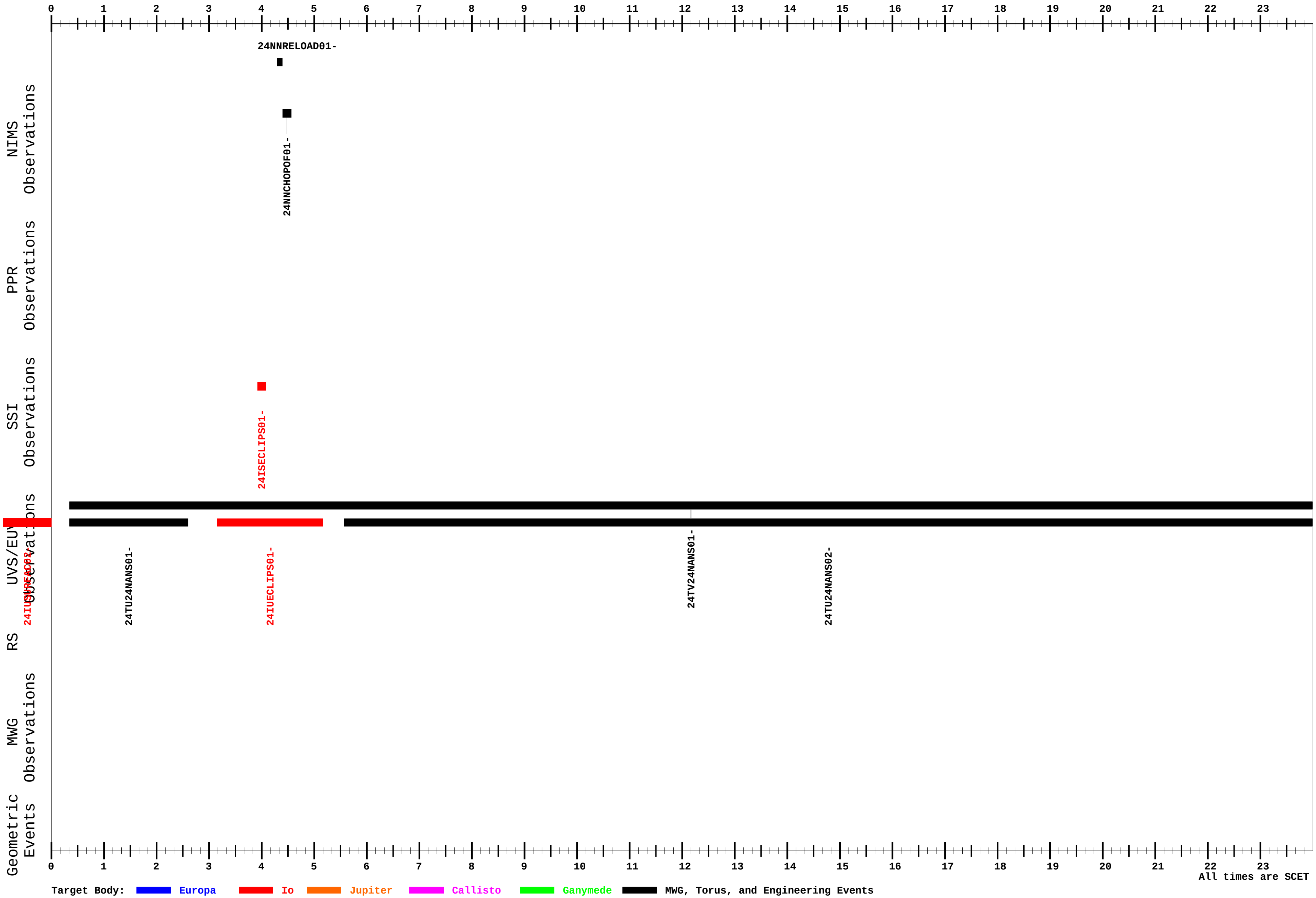
I24 ENCOUNTER
Plot Time: 99-283/00:00:00.000 to 99-284/00:00:00.000
Date of Plot: 22-Sep-99 13:19:14

GEM: I24




I24 ENCOUNTER
Plot Time: 99-284/00:00:00.000 to 99-285/00:00:00.000
Date of Plot: 22-Sep-99 13:19:15
GEM: I24
Geometric Events
MWG Observations
RS
UVS/EUV Observations
SSI Observations
PPR Observations
NIMS Observations
Target Body:
Europa
Io
Jupiter
Callisto
Ganymede
MWG, Torus, and Engineering Events
All times are SCET
24MBITORUS01-
24MBSURVEY01-
24IBSATCA_01-
24IOGRVFLD01
24IUATMOS_01-
24IUSURFAC01-
24IUSURFAC03+
24IUATMOS_02-
24IUSURFAC02-
24ISPELE__01-
24ISPILLAN01-
24ISCOLCHS01-
24ISZAMAMA01-
24ISPROMTH01-
24ISCOLCHS02-
24ISTOHIL_01-
24ISPROMTH02-
24ISZAMAMA02-
24ISDORIAN01-
24ISAMSKGI01-
24ISTERMAP01-
24ISPILLAN02-
24ISSTERE001-
24ISGLOCOL01-
24IPACALA_01
24IPLOKI__01
24IPLOKI__02
24IPSLPELE01
24IPRDALNG01
24IPREGMAP01
24IPREGMAP02
24IPREGMAP03
24IPREGMAP04
24IPGLOBAL03
24IPGLOBAL04
24NPRCTCAL02
24NPFWST01
24NNDETECT01-
24NNDETECT02-
24NNLOKIRA01-
24INLOKIRA01-
24INHSPELE01-
24NNPILLAN01-
24INPILLAN01-
24INCOLCHS01-
24NNZAMAMA01-
24INZAMAMA01-
24NNPROMTH01-
24INPROMTH01-
24NNCOLCHS02-
24INCOLCHS02-
24NNNTOHIL01-
24INNTOHIL01-
24NNPROMTH02-
24INPROMTH02-
24NNZAMAMA02-
24INZAMAMA02-
24NNDORIAN01-
24INDORIAN01-
24NNAMSKGI01-
24INAMSKGI01-
24NNTERMAP01-
24INTERMAP01-
24NNREGION01-
24INREGION01-
24NNPPLUME01-
24INPPLUME01-
24NNPELEPM01-
24INPELEPM01-
24NNREGION02-
24INREGION02-
24NNDETECT03-
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

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



GEM: I24

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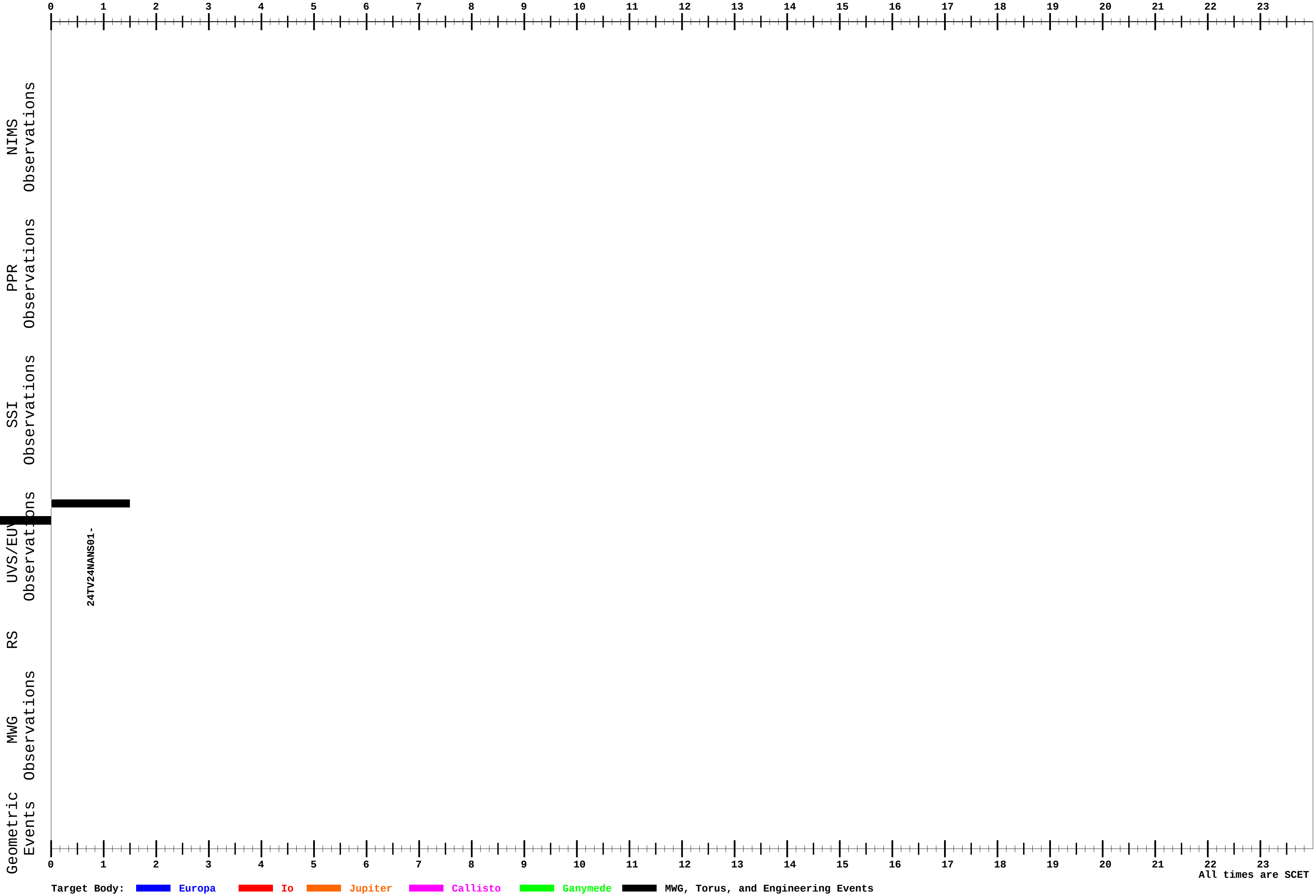
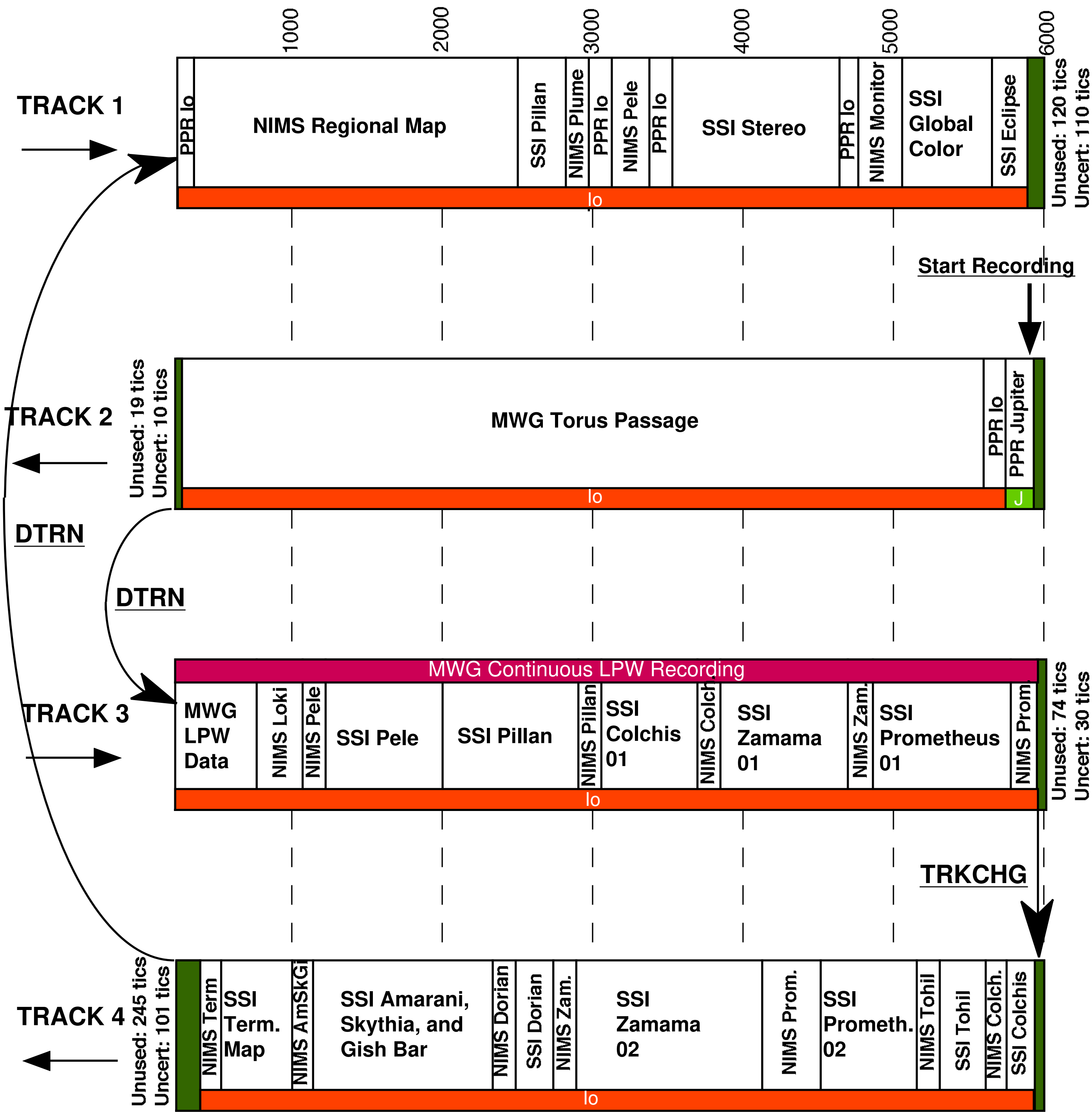
Date of Plot: 22-Sep-99 13:19:15

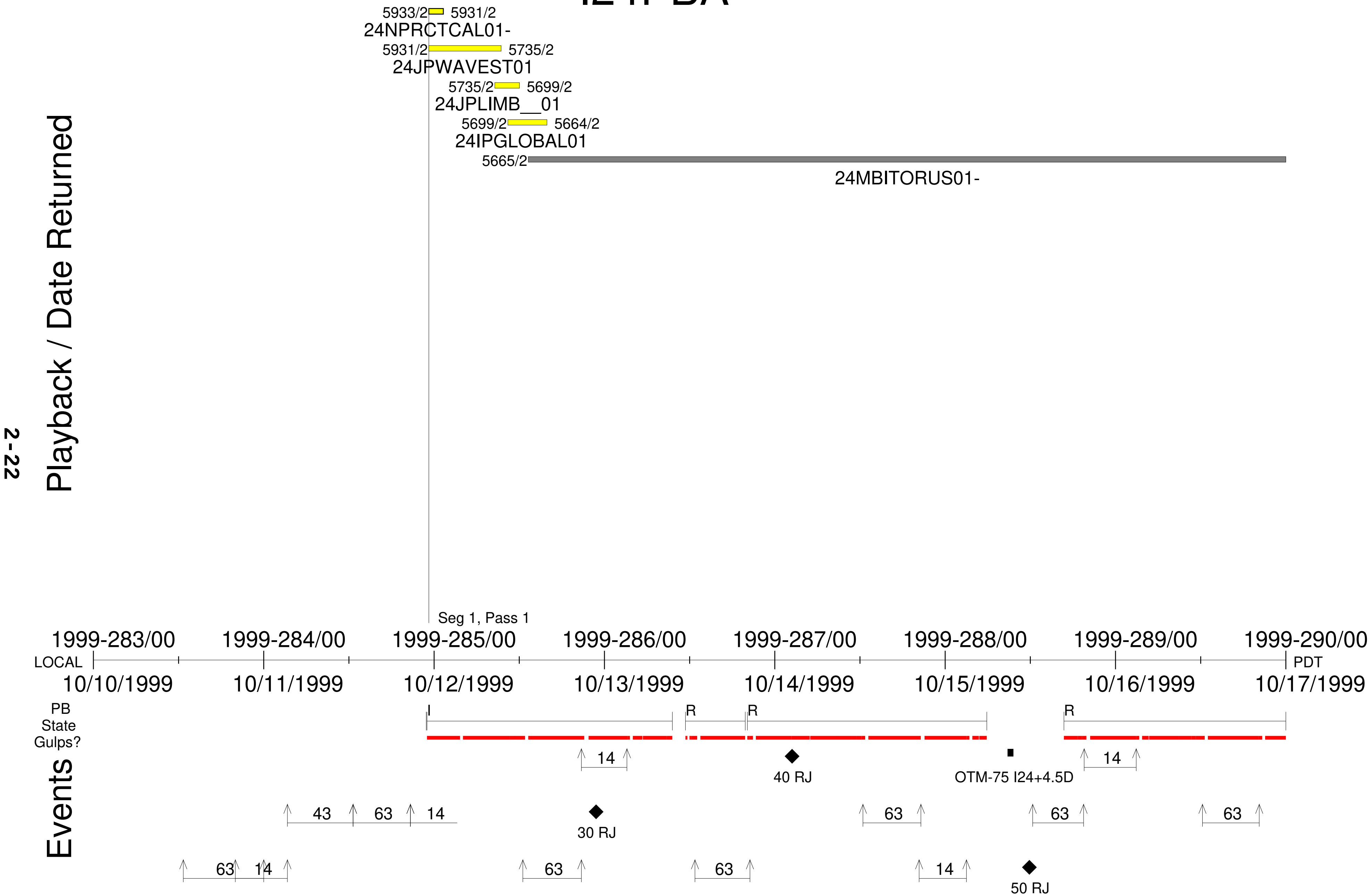


I24 ENCOUNTER HIGH-LEVEL TAPEMAP



J. Gross, 7/12/99

I24PBA



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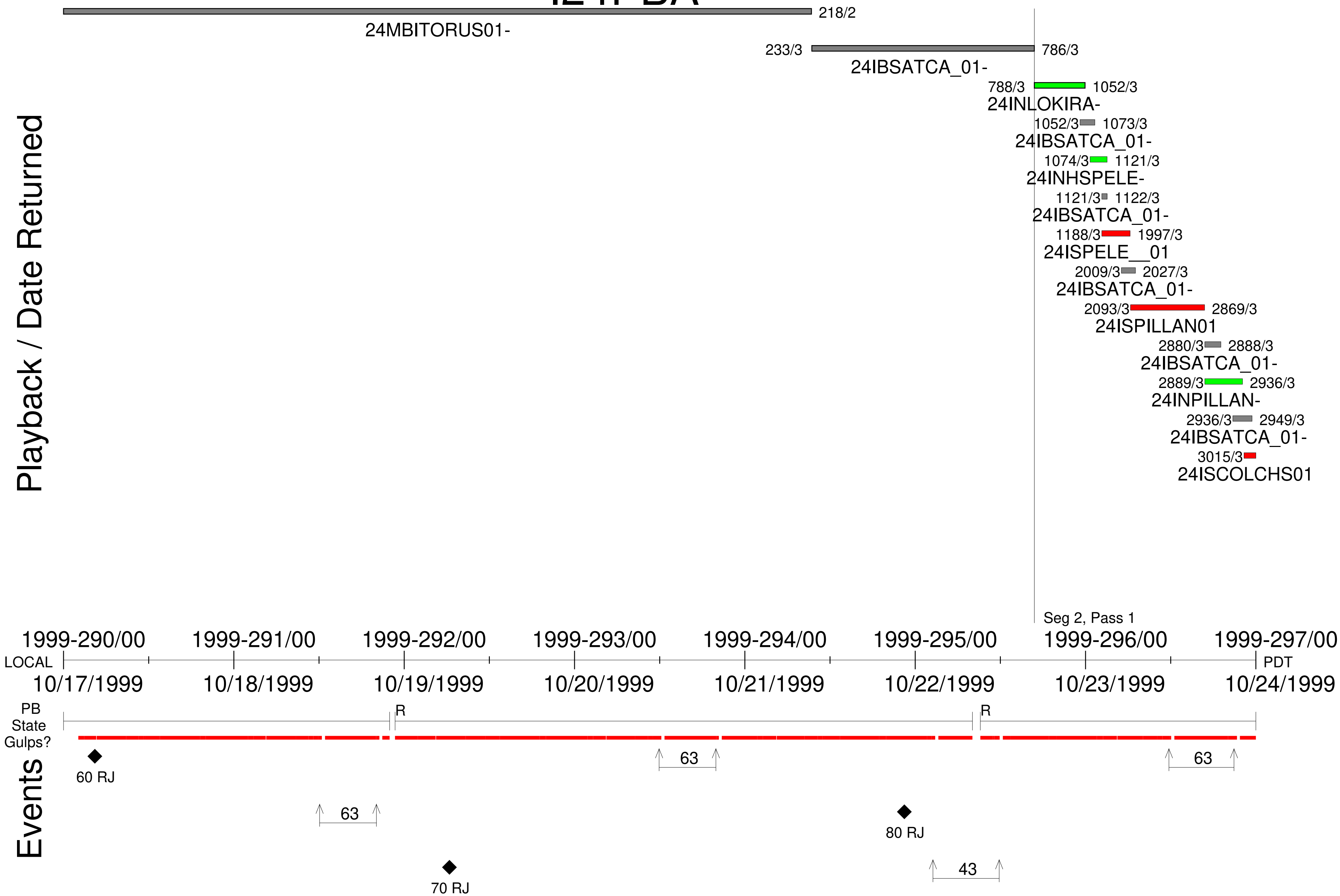

Playback / Date Returned
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218/2
233/3
786/3
24IBSATCA_01-
788/3
1052/3
24INLOKIRA-
1052/3
1073/3
24IBSATCA_01-
1074/3
1121/3
24INHSPELE-
1121/3
1122/3
24IBSATCA_01-
1188/3
1997/3
24ISPELE__01
2009/3
2027/3
24IBSATCA_01-
2093/3
2869/3
24ISPILLAN01
2880/3
2888/3
24IBSATCA_01-
2889/3
2936/3
24INPILLAN-
2936/3
2949/3
24IBSATCA_01-
3015/3
24ISCOLCHS01
Seg 2, Pass 1
1999-290/00
1999-291/00
1999-292/00
1999-293/00
1999-294/00
1999-295/00
1999-296/00
1999-297/00
LOCAL
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10/18/1999
10/19/1999
10/20/1999
10/21/1999
10/22/1999
10/23/1999
10/24/1999
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State
Gulps?
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63
63
63
80 RJ
70 RJ
43

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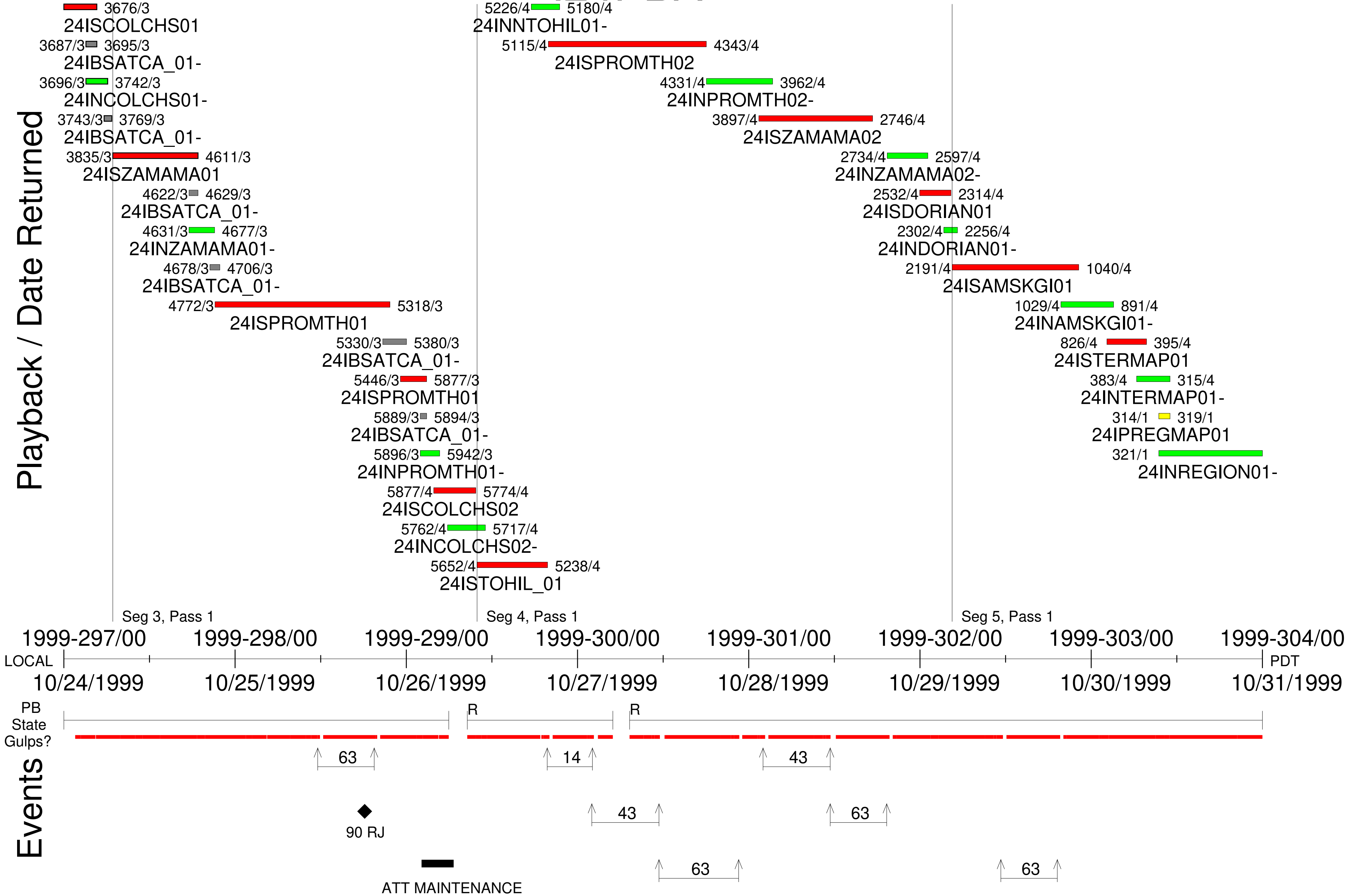

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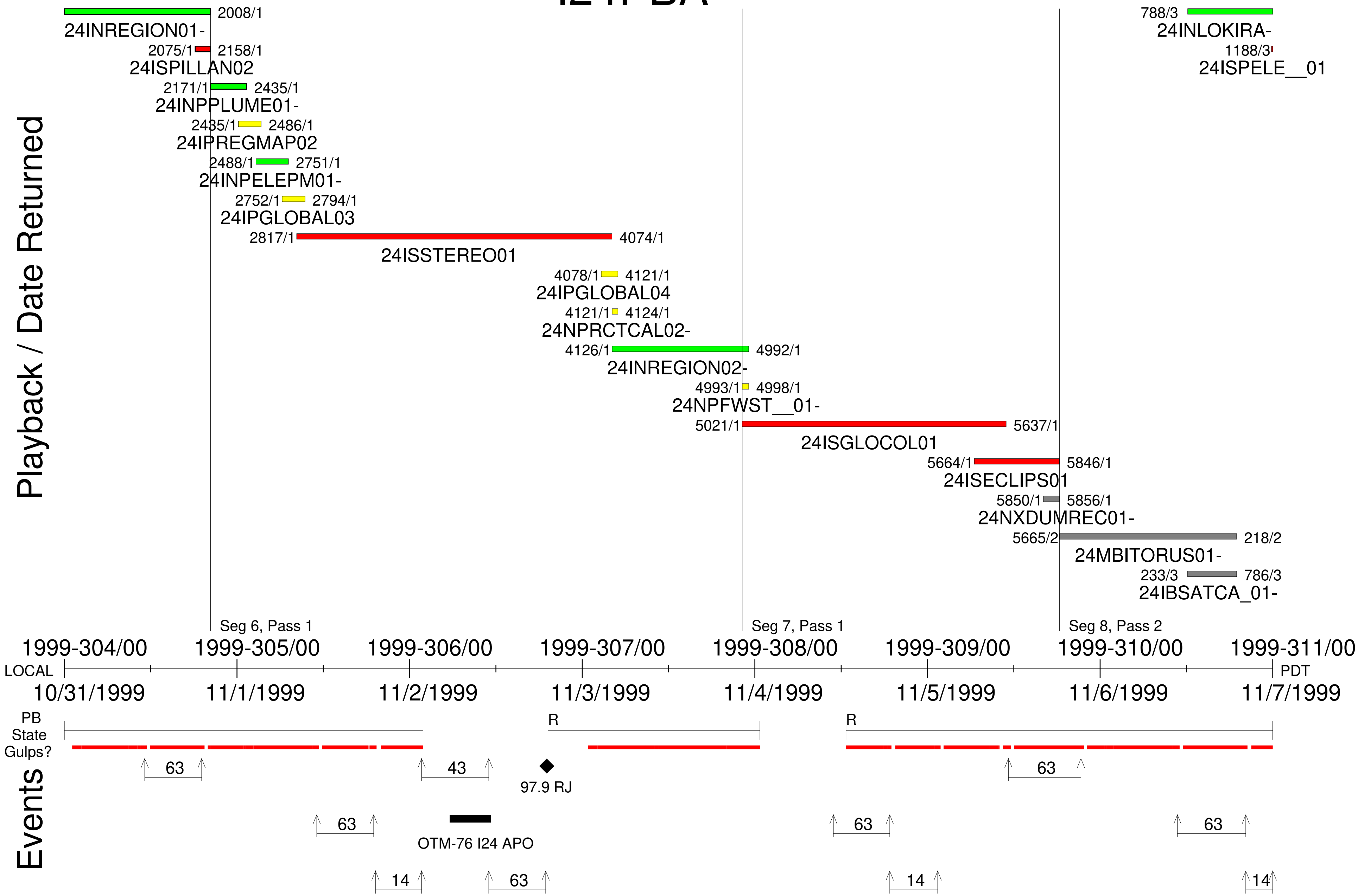
Wed Sep 22 14:38:16 1999, Page 3 of 7

I24PBA


Playback / Date Returned
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2075/1 2158/1
24ISPILLAN02
2171/1 2435/1
24INPPLUME01-
2435/1 2486/1
24IPREGMAP02
2488/1 2751/1
24INPELEPM01-
2752/1 2794/1
24IPGLOBAL03
2817/1 4074/1
24ISSTEREO01
4078/1 4121/1
24IPGLOBAL04
4121/1 4124/1
24NPRCTCAL02-
4126/1 4992/1
24INREGION02-
4993/1 4998/1
24NPFWST__01-
5021/1 5637/1
24ISGLOCOL01
5664/1 5846/1
24ISECLIPS01
5850/1 5856/1
24NXDUMREC01-
5665/2 218/2
24MBITORUS01-
233/3 786/3
24IBSATCA_01-
788/3
24INLOKIRA-
1188/3
24ISPELE__01
Seg 6, Pass 1
Seg 7, Pass 1
Seg 8, Pass 2
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1999-305/00
1999-306/00
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11/7/1999
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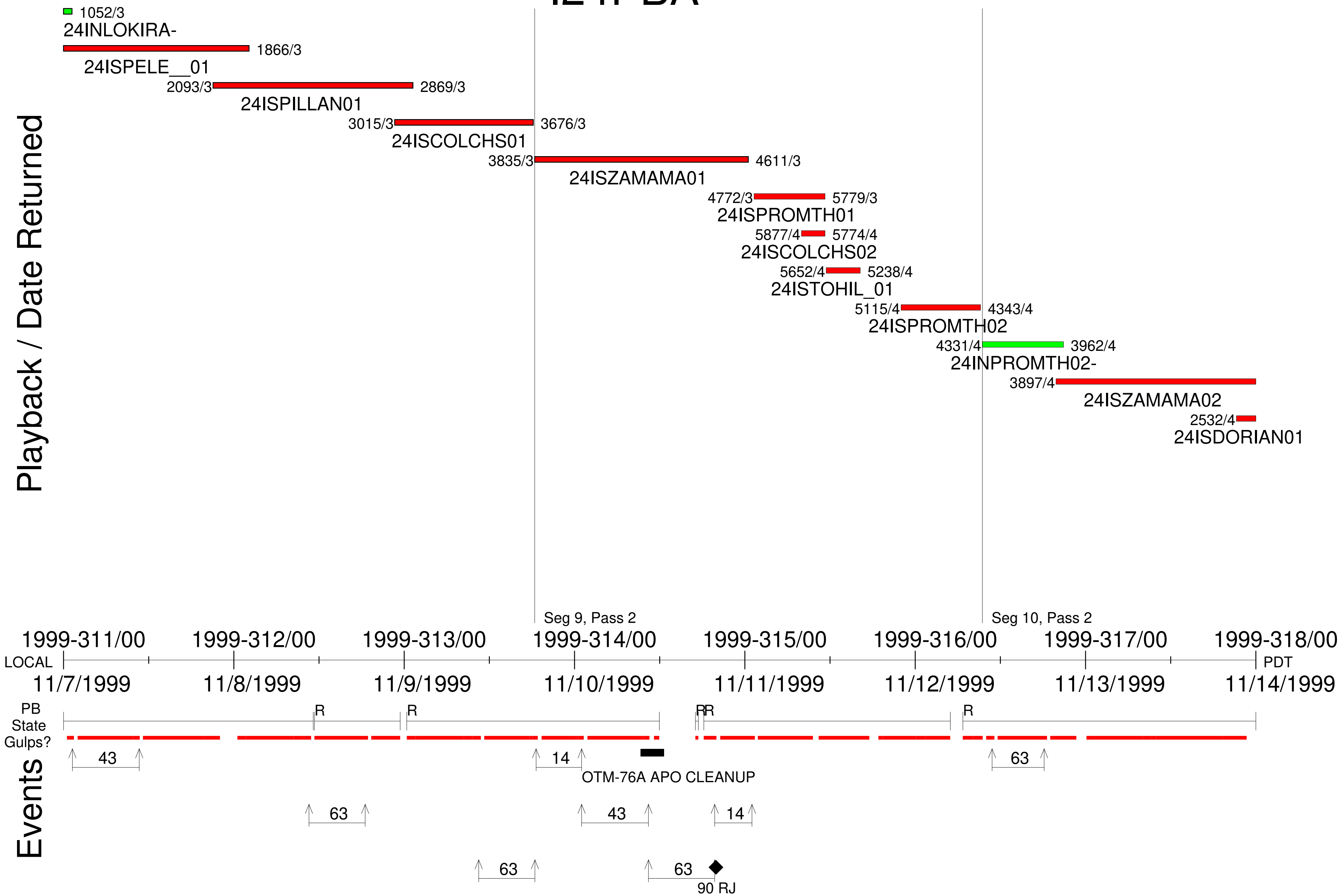

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Wed Sep 22 14:38:16 1999, Page 5 of 7

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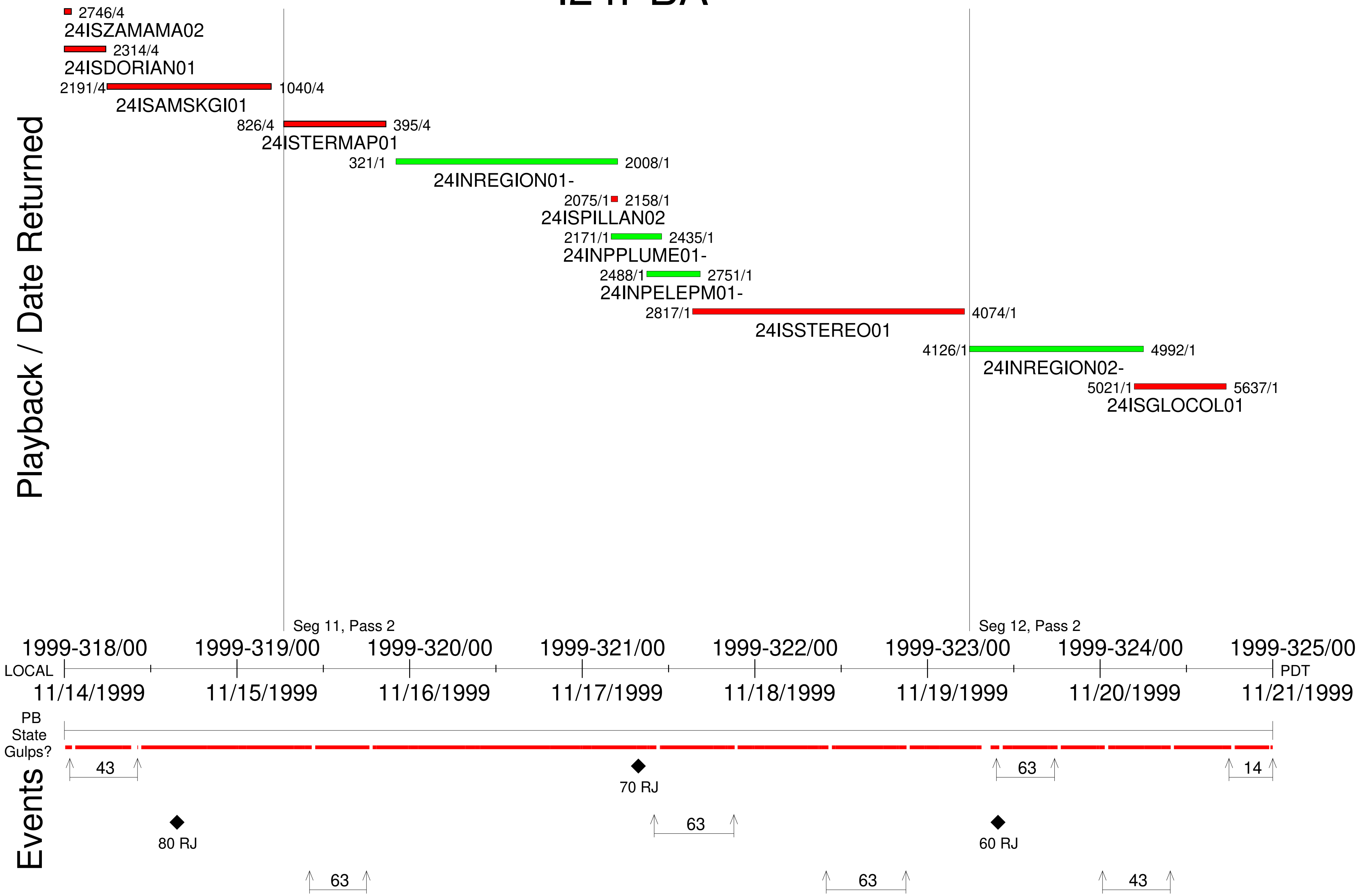

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Wed Sep 22 14:38:16 1999, Page 6 of 7

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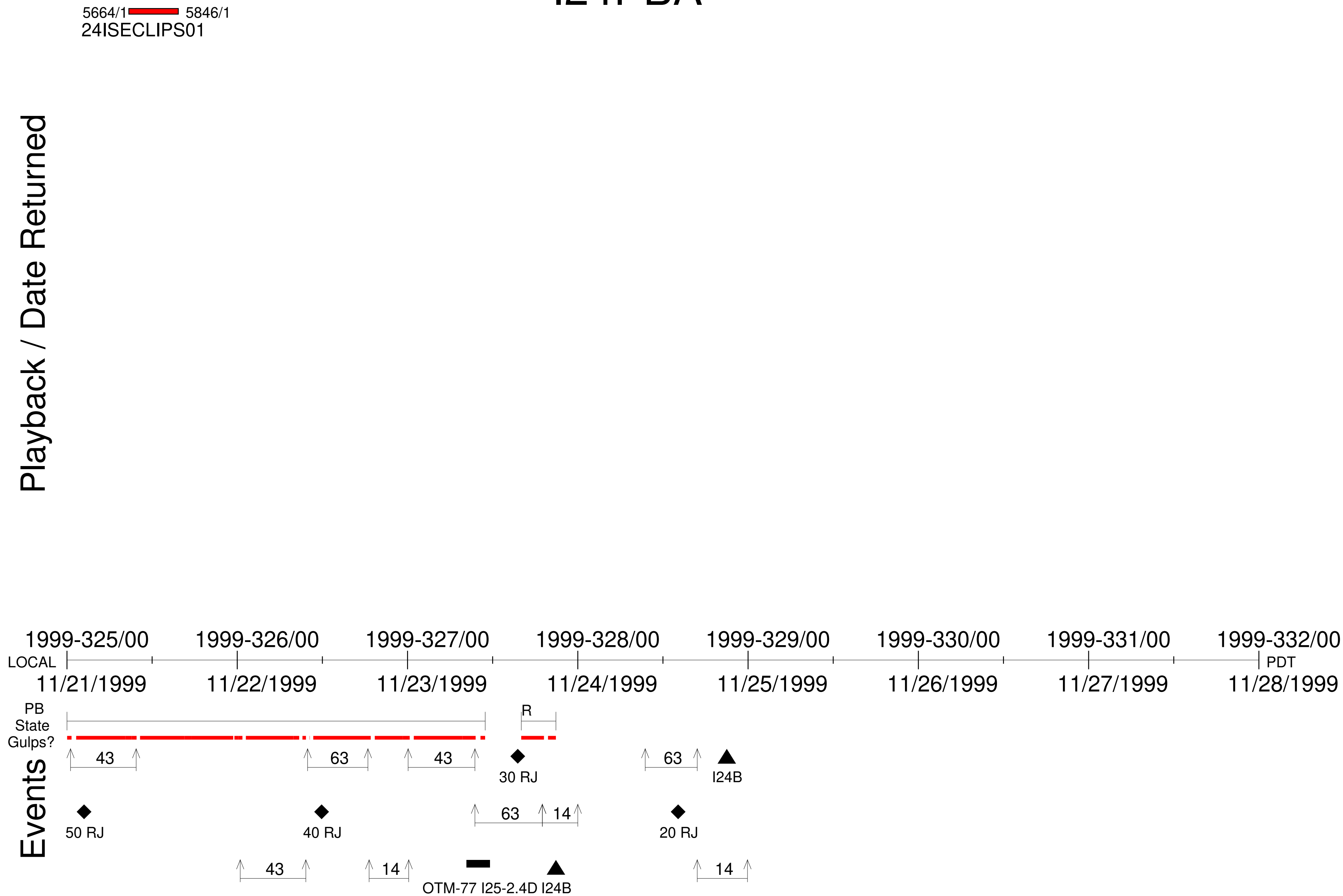

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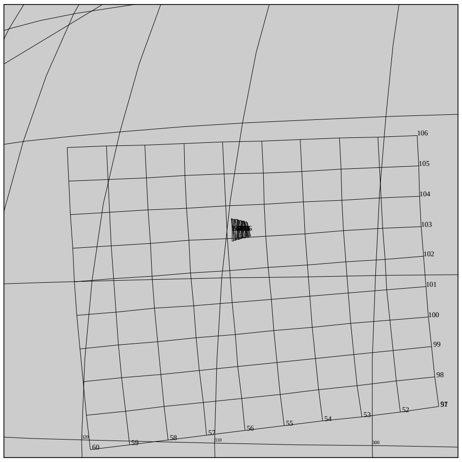
I24 NIMS A



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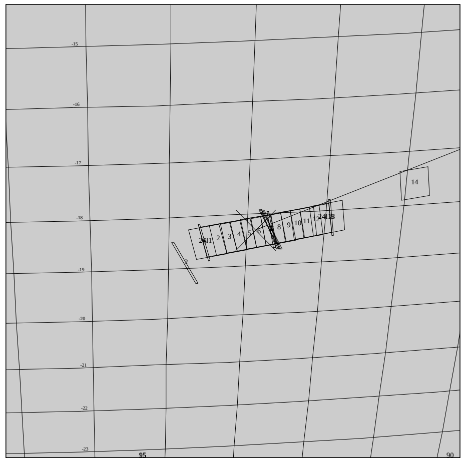

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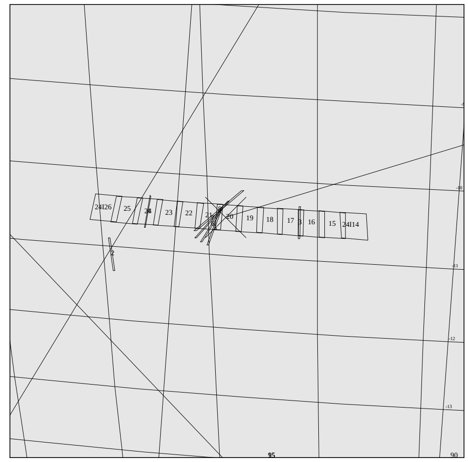

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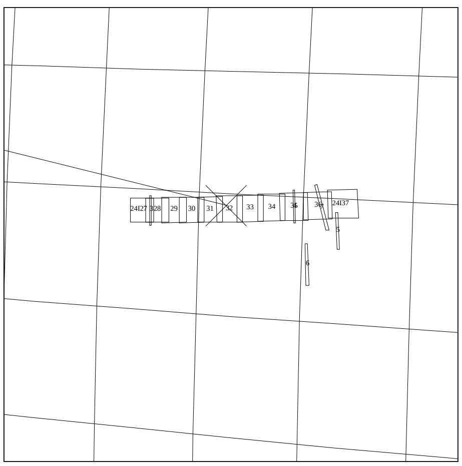
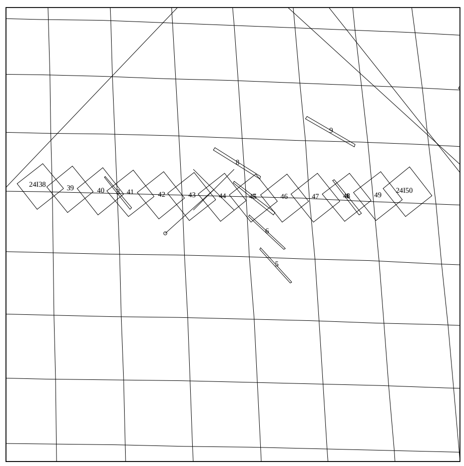


24INCOLCHS01
99-284/04:35:05



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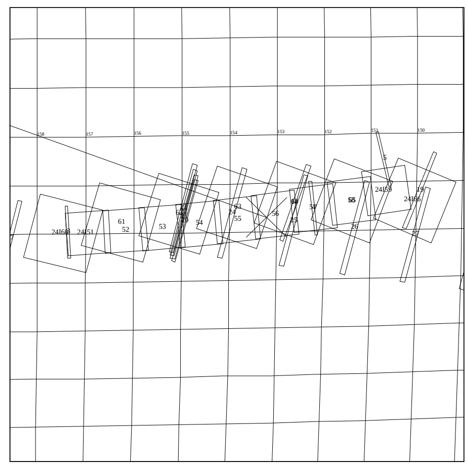
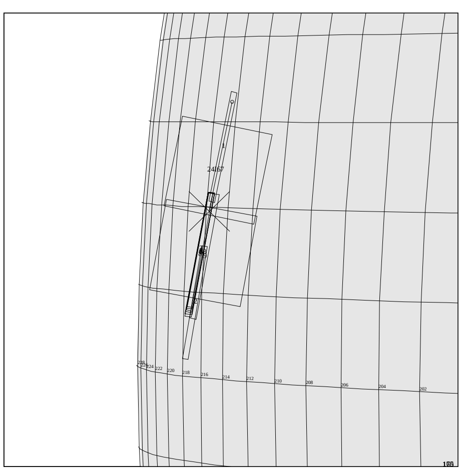


24INPROMTH01
99-284/04:47:24



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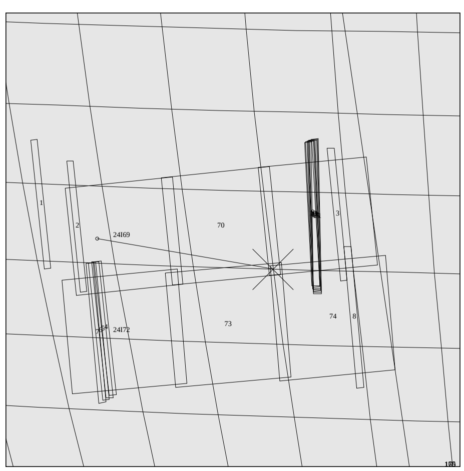

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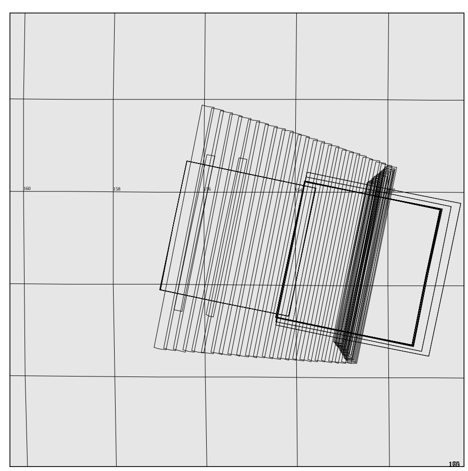

24INPROMTH02
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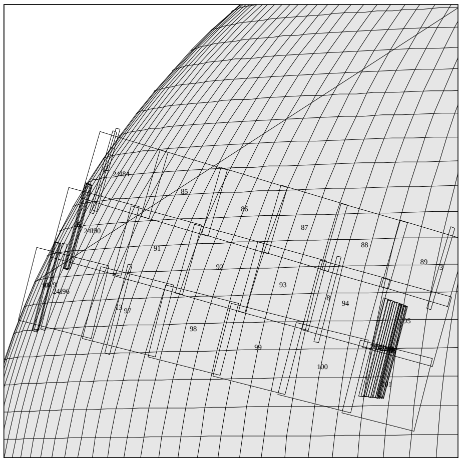
I24 NIMS B



24INZAMAMA02

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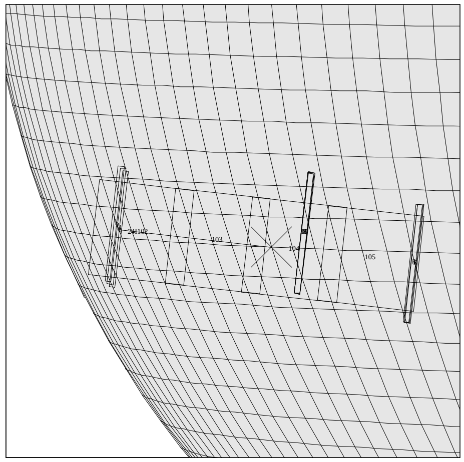
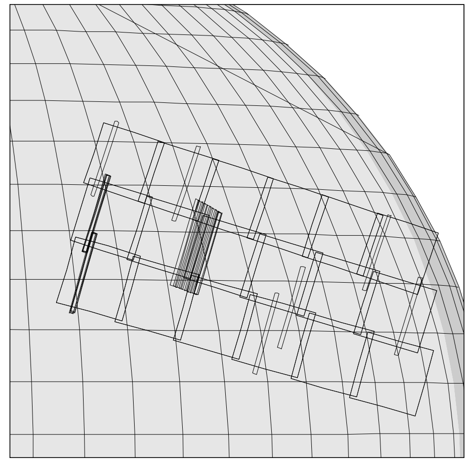


24INDORIAN01

99-284/05:22:31



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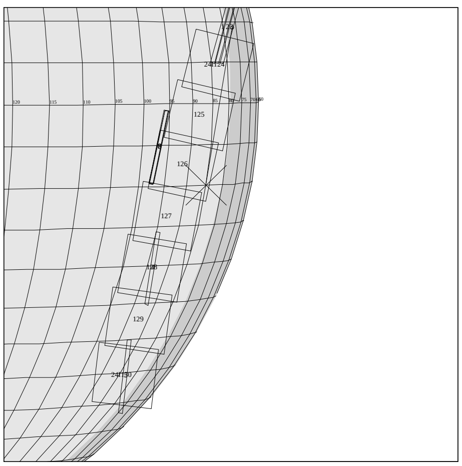

24INTERMAP01

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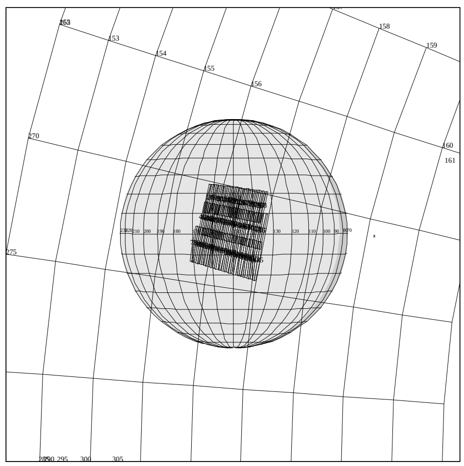

24INREGION01

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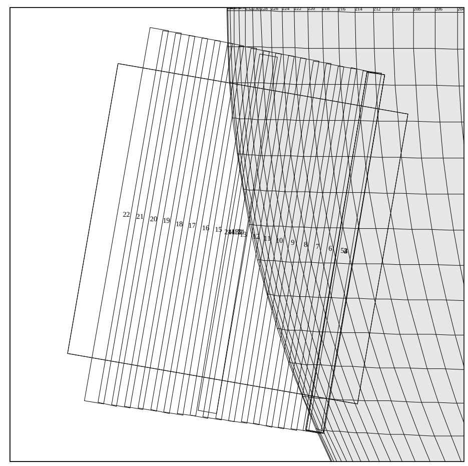

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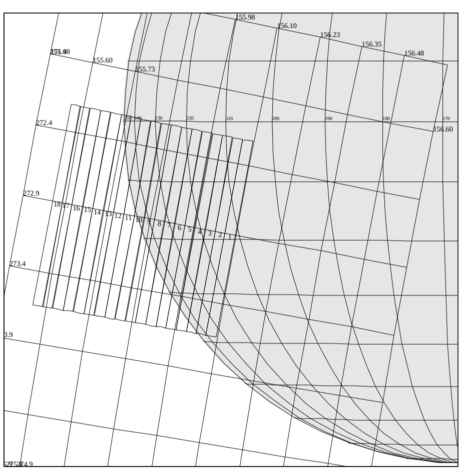

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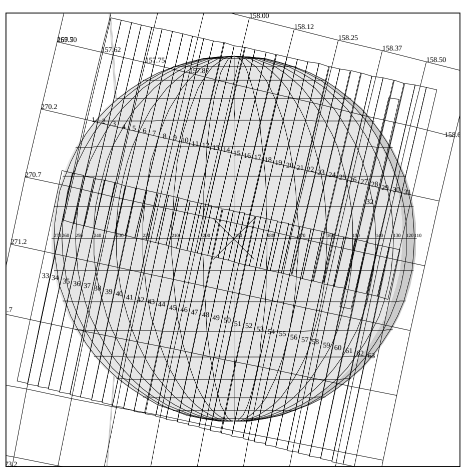

24INREGION02

99-284/10:42:00