



11102 - HST as a Jovian Climate Satellite

Cycle: 16, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(2) JUPITER-01A (3) JUPITER-01B (4) JUPITER-01C	WFPC2	1	11-Apr-2008 21:01:26.0	yes
02	(5) JUPITER-02A (6) JUPITER-02B (7) JUPITER-02C	WFPC2	1	11-Apr-2008 21:01:35.0	yes
03	(8) JUPITER-03A (9) JUPITER-03B (10) JUPITER-03C (11) JUPITER-03D	WFPC2	1	11-Apr-2008 21:01:42.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
05	(12) JUPITER-05A (13) JUPITER-05B (14) JUPITER-05C	WFPC2	1	11-Apr-2008 21:01:47.0	yes
07	(15) JUPITER-07A (16) JUPITER-07B (17) JUPITER-07C	WFPC2	1	11-Apr-2008 21:01:53.0	yes
09	(22) JUPITER-09A (23) JUPITER-09B (24) JUPITER-09C (25) JUPITER-09D	WFPC2	1	11-Apr-2008 21:02:01.0	yes
10	(26) JUPITER-10A (27) JUPITER-10B (28) JUPITER-10C	WFPC2	1	11-Apr-2008 21:02:06.0	yes
11	(19) JUPITER-11A (20) JUPITER-11B (21) JUPITER-11C	WFPC2	1	11-Apr-2008 21:02:12.0	yes

8 Total Orbits Used

ABSTRACT

In the past year, there have been striking changes in Jupiter's atmosphere. Among these are the Oval BA's change from white to red, two new dark Disturbances in the southern hemisphere, and a 30% change (since 1997) in the aspect ratio of the potential vorticity anomaly of the GRS (not just its associated clouds), as we determined from high-accuracy velocities extracted from HST images. The determination of high-accuracy velocities requires both high-resolution imaging by HST (or flybys), and our novel adaptation of Correlation Image Velocimetry (CIV), a technique that has far greater accuracy than the traditional method (of identifying velocity tie-points by hand). Our proposed observations will test the hypothesis that these changes in Jupiter validate our 2004 prediction: that the merger of the 3 White Ovals in 1998-2000 would lead to climate change on Jupiter. The key is to determine, by indirect means, the temperature at the base of the weather layer, a quantity that cannot be observed directly at any wavelength.

The new Red Oval BA's velocities will be used to test our finding that the color change is due to global temperature changes. The change in the GRS's aspect ratio suggests a large (at least 20%) change in the shear of the local velocity since 1997. The latter can be investigated only by determining Jupiter's current zonal winds.

OBSERVING DESCRIPTION

WFPC2/PC1 imaging is done over two consecutive rotations of Jupiter, totalling about 19 hours. The current version of this phase 2 proposal specifies the acquisition of 8 orbits of data--on orbits 1, 2, 3, 5, 7, 9, 10, and 11 out of a sequence of 11 consecutive orbits. A schematic of this sequence is available through mid-2008 at astro.berkeley.edu/~mikewong/G480_hst/timing_v4.png.

ADDITIONAL COMMENTS

These observations will be challenging to schedule, requiring us to "hide the SAA" by timing the visits such that significant target science visibility can be achieved during our eight allocated orbits.

This Phase II calls for the sequence of orbits

1, 2, 3, 5, 7, 9, 10, and 11

out of 11 consecutive orbits, as shown in the timing diagram at astro.berkeley.edu/~mikewong/G480_hst/timing_v4.png.

HOWEVER, the following alternate sequences are equivalent scientifically but may have different scheduling opportunities:

1, 2, 3, 5, 6, 7, 9, and 11

1, 3, 4, 5, 6, 7, 9, and 11

1, 3, 4, 5, 7, 8, 9, and 11

1, 3, 5, 6, 7, 8, 9, and 11

1, 3, 5, 6, 7, 9, 10, and 11

1, 3, 5, 7, 8, 9, 10, and 11

Basically, we can use any sequence of 1, 3, 5, 7, 9, and 11, plus

two even numbered orbits--with the exception that combinations of even orbits (2 and 8) or (4 and 10) are not ideal, since these combinations redundantly image the same parts of Jupiter.

We will wait until spring 2008 to further refine scheduling for this program. At that time, improved predictions will be available for the orbit of HST, as well as the Jupiter atmospheric features of interest.

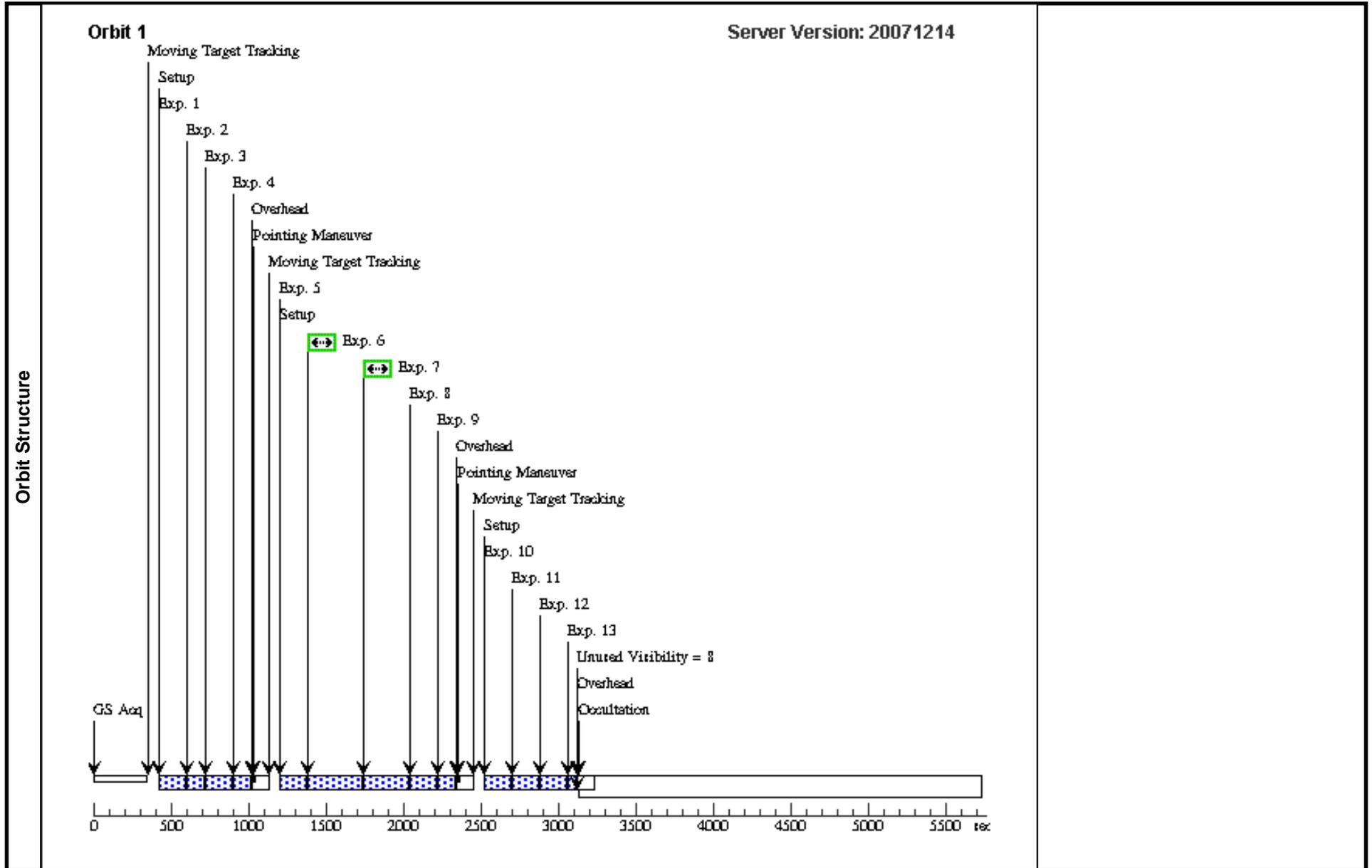
Proposal 11102 - Visit 01 - HST as a Jovian Climate Satellite

Sat Apr 12 01:02:15 GMT 2008

Visit	Proposal 11102, Visit 01, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: ORIENT 257D TO 263 D; BETWEEN 09-MAY-2008:19:10:00 AND 09-MAY-2008:20:00:00 Comments: ORBIT *01* of 11 CONSECUTIVE HST ORBITS AROUND THE EARTH									
	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
Solar System Targets	(2)	JUPITER-01A	STD=JUPITER	TYPE=PGRAPHIC, LONG=352, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(3)	JUPITER-01B	STD=JUPITER	TYPE=PGRAPHIC, LONG=48, LAT=0		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(4)	JUPITER-01C	STD=JUPITER	TYPE=PGRAPHIC, LONG=17, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
Exposures	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F673N	(2) JUPITER-01A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	2	F673N	(2) JUPITER-01A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	3	F502N	(2) JUPITER-01A	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	4	F410M	(2) JUPITER-01A	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	5	F673N	(4) JUPITER-01C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	6	F218W	(4) JUPITER-01C	WFPC2, IMAGE, PC1-FIX	F218W	ATD-GAIN=7; CLOCKS=YES			200.0 Secs [==>]	[1]
	7	F255W	(4) JUPITER-01C	WFPC2, IMAGE, PC1-FIX	F255W	ATD-GAIN=7			160.0 Secs [==>]	[1]

Proposal 11102 - Visit 01 - HST as a Jovian Climate Satellite

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	8	F336W	(4) JUPITER-01C	WFPC2, IMAGE, PC1-FIX	F336W	ATD-GAIN=15			10.0 Secs	
									[==>]	[1]
	9	F673N	(4) JUPITER-01C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs	
									[==>]	[1]
	10	F410M	(3) JUPITER-01B	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs	
									[==>]	[1]
11	F502N	(3) JUPITER-01B	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs		
								[==>]	[1]	
12	F673N	(3) JUPITER-01B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs		
								[==>]	[1]	
13	F673N	(3) JUPITER-01B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs		
								[==>]	[1]	



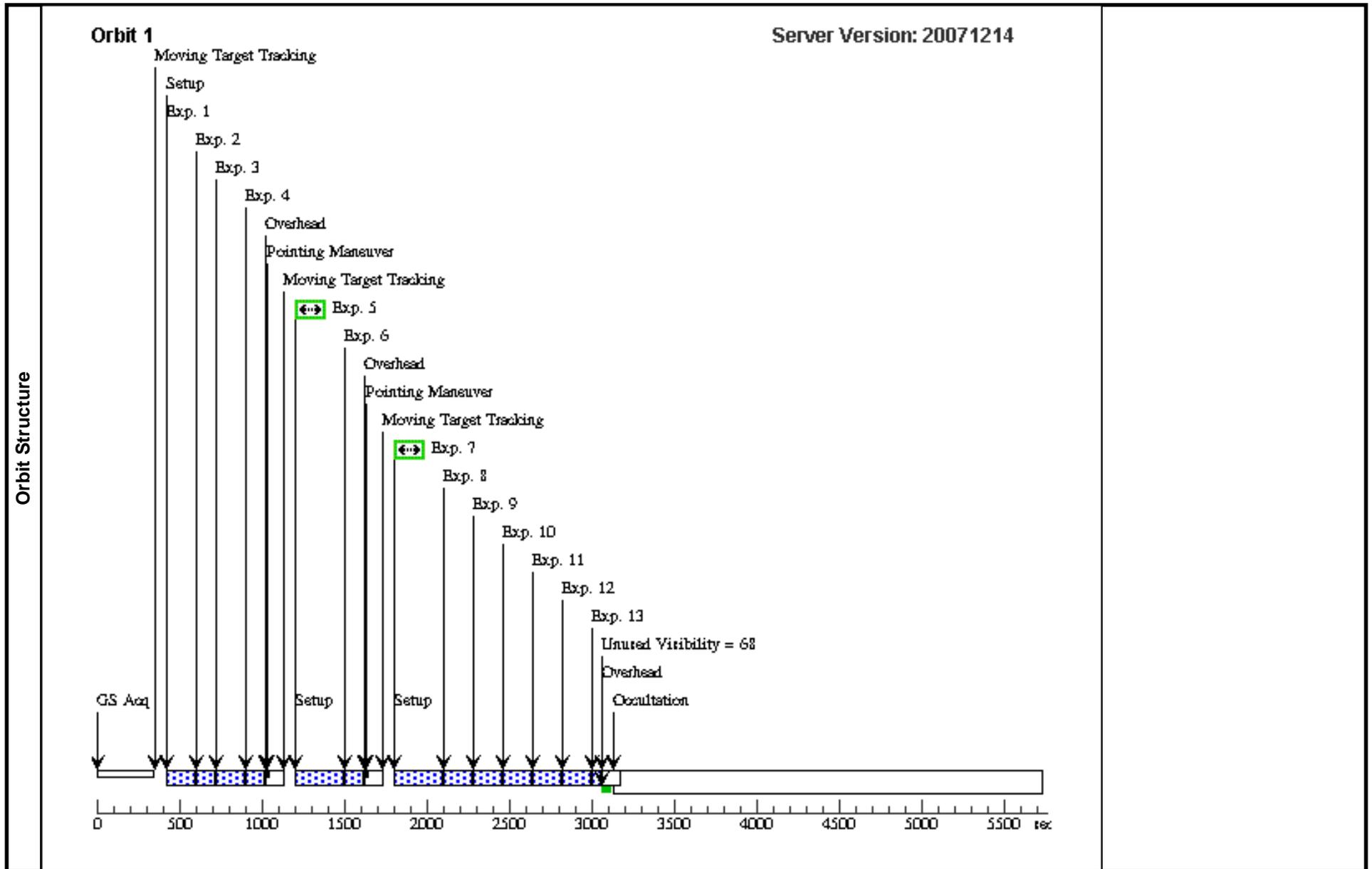
Proposal 11102 - Visit 02 - HST as a Jovian Climate Satellite

Sat Apr 12 01:02:17 GMT 2008

Visit	Proposal 11102, Visit 02, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 257D TO 263 D; AFTER 01 BY 0.8 Orbits TO 1.2 Orbits <i>Comments: ORBIT *02* of 11 CONSECUTIVE HST ORBITS AROUND THE EARTH</i>									
	(FQCH4P15 (02.005)) Warning (Form): Partially rotated filters should generally be specified with a corresponding aperture.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(5)	JUPITER-02A	STD=JUPITER	TYPE=PGRAPHIC, LONG=50, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(6)	JUPITER-02B	STD=JUPITER	TYPE=PGRAPHIC, LONG=87, LAT=-14		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(7)	JUPITER-02C	STD=JUPITER	TYPE=PGRAPHIC, LONG=100, LAT=0		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
Exposures	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F673N	(5) JUPITER-02A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs	
									[==>]	[1]
	2	F673N	(5) JUPITER-02A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs	
									[==>]	[1]
3	F502N	(5) JUPITER-02A	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs		
								[==>]	[1]	
4	F410M	(5) JUPITER-02A	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs		
								[==>]	[1]	

Proposal 11102 - Visit 02 - HST as a Jovian Climate Satellite

	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures (continued)	5	FQCH4P15	(6) JUPITER-02B	WFPC2, IMAGE, PC1-FIX	FQCH4P15 8929.0 A	ATD-GAIN=7			70 Secs [==>]	[1]
	6	F953N	(6) JUPITER-02B	WFPC2, IMAGE, PC1-FIX	F953N	ATD-GAIN=15			30 Secs [==>]	[1]
	7	F255W	(7) JUPITER-02C	WFPC2, IMAGE, PC1-FIX	F255W	ATD-GAIN=7			160.0 Secs [==>]	[1]
	8	F336W	(7) JUPITER-02C	WFPC2, IMAGE, PC1-FIX	F336W	ATD-GAIN=15			10.0 Secs [==>]	[1]
	9	F673N	(7) JUPITER-02C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	10	F502N	(7) JUPITER-02C	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	11	F410M	(7) JUPITER-02C	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	12	F673N	(7) JUPITER-02C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	13	F673N	(7) JUPITER-02C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]



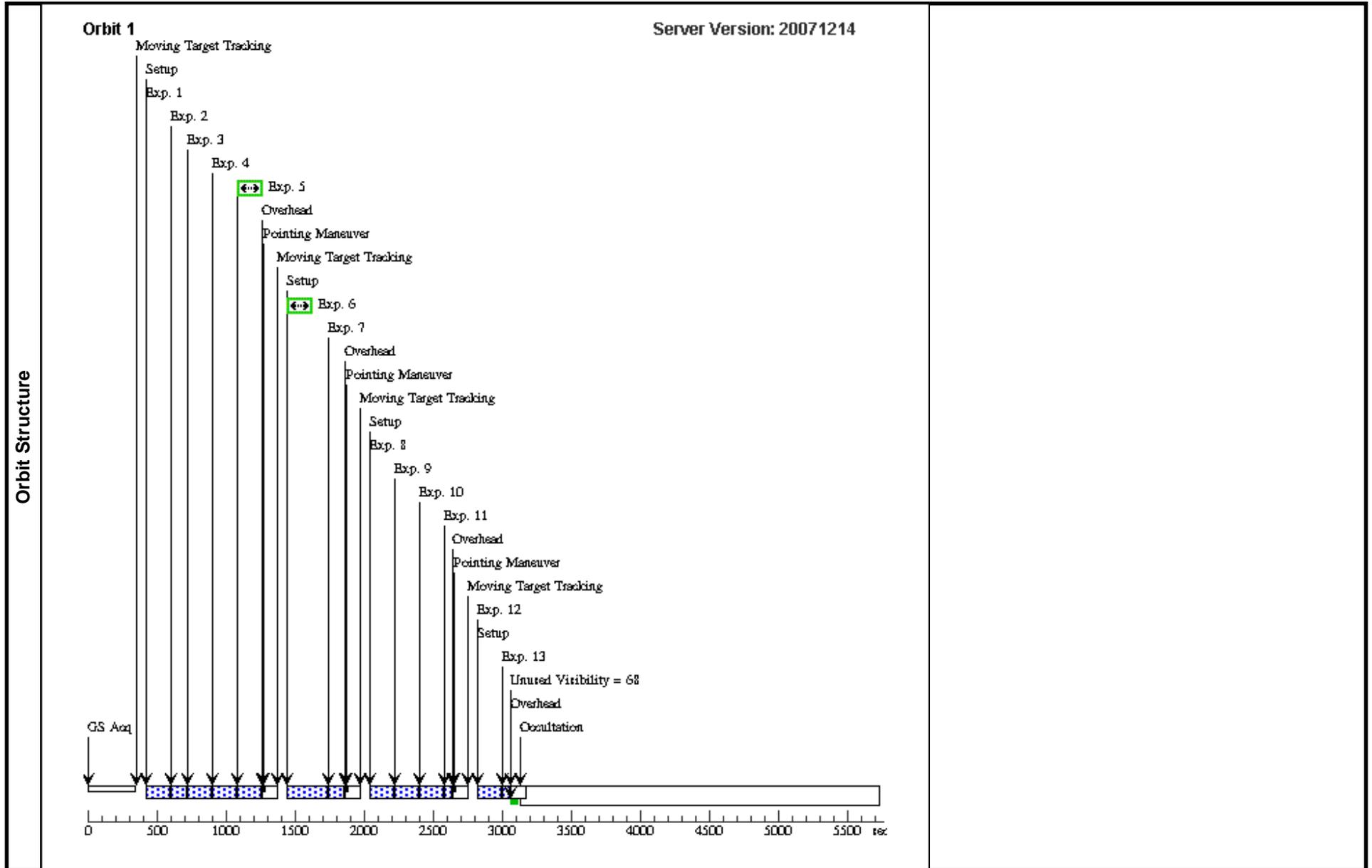
Proposal 11102 - Visit 03 - HST as a Jovian Climate Satellite

Sat Apr 12 01:02:18 GMT 2008

Visit	Proposal 11102, Visit 03, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 257D TO 263 D; AFTER 01 BY 1.8 Orbits TO 2.2 Orbits <i>Comments: ORBIT *03* of 11 CONSECUTIVE HST ORBITS AROUND THE EARTH</i>									
	Diagnostics (FQCH4P15 (03.006)) Warning (Form): Partially rotated filters should generally be specified with a corresponding aperture.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(8)	JUPITER-03A	STD=JUPITER	TYPE=PGRAPHIC, LONG=114, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(9)	JUPITER-03B	STD=JUPITER	TYPE=PGRAPHIC, LONG=111, LAT=-12		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(10)	JUPITER-03C	STD=JUPITER	TYPE=PGRAPHIC, LONG=152, LAT=0		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(11)	JUPITER-03D	STD=JUPITER	TYPE=PGRAPHIC, LONG=129, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
Exposures	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F673N	(8) JUPITER-03A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs	
									[==>]	[1]
	2	F673N	(8) JUPITER-03A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs	
								[==>]	[1]	

Proposal 11102 - Visit 03 - HST as a Jovian Climate Satellite

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	3	F502N	(8) JUPITER-03A	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	4	F410M	(8) JUPITER-03A	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	5	F255W	(8) JUPITER-03A	WFPC2, IMAGE, PC1-FIX	F255W	ATD-GAIN=7			100 Secs [==>]	[1]
	6	FQCH4P15	(9) JUPITER-03B	WFPC2, IMAGE, PC1-FIX	FQCH4P15 8929.0 A	ATD-GAIN=7			70 Secs [==>]	[1]
	7	F953N	(9) JUPITER-03B	WFPC2, IMAGE, PC1-FIX	F953N	ATD-GAIN=15			30 Secs [==>]	[1]
	8	F410M	(10) JUPITER-03C	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	9	F502N	(10) JUPITER-03C	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	10	F673N	(10) JUPITER-03C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	11	F673N	(10) JUPITER-03C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	12	F673N	(11) JUPITER-03D	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	13	F673N	(11) JUPITER-03D	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]



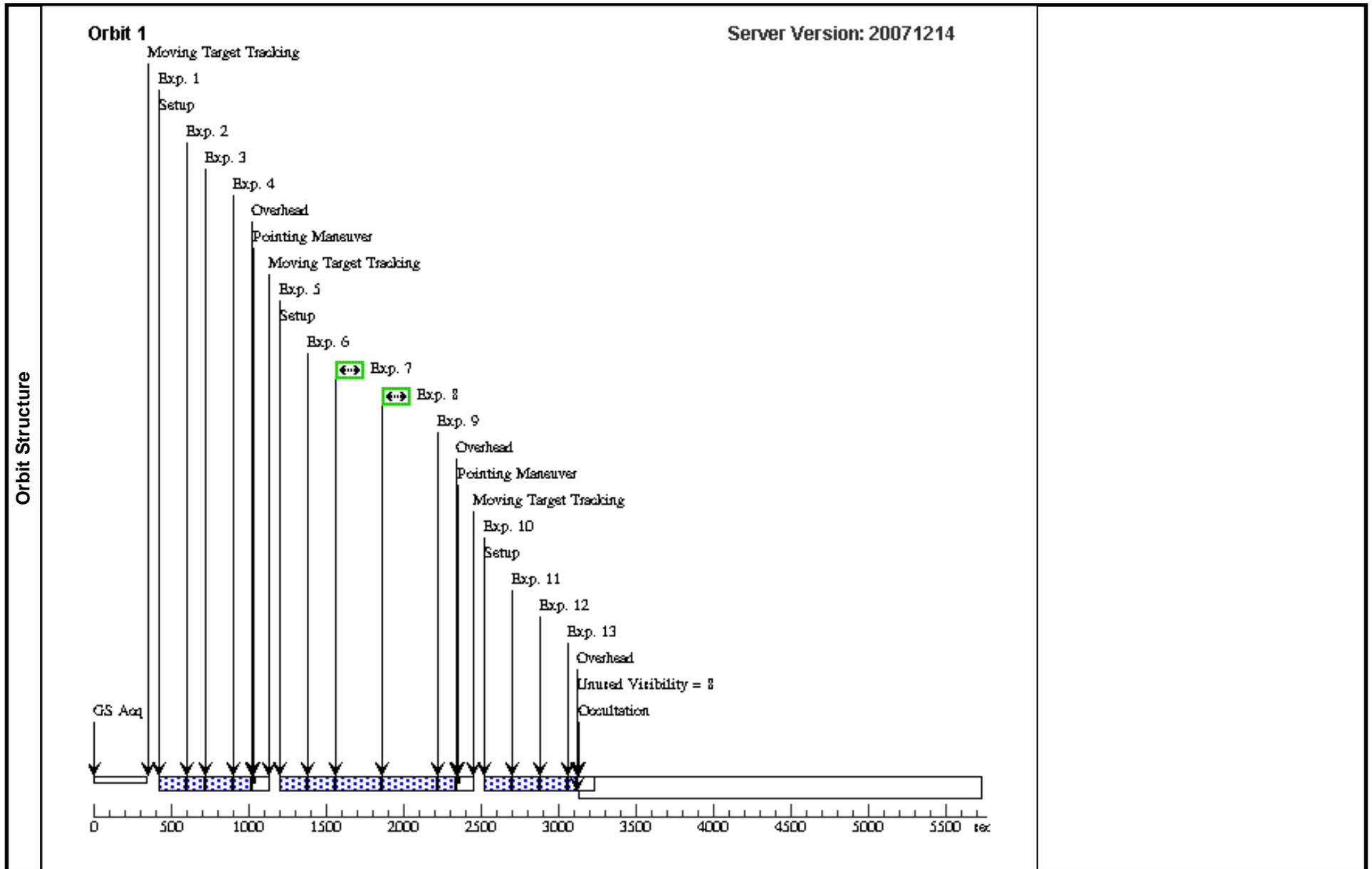
Proposal 11102 - Visit 05 - HST as a Jovian Climate Satellite

Sat Apr 12 01:02:19 GMT 2008

Visit	Proposal 11102, Visit 05, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: ORIENT 257D TO 263 D; AFTER 03 BY 1.8 Orbits TO 2.2 Orbits Comments: ORBIT *05* of 11 CONSECUTIVE HST ORBITS AROUND THE EARTH									
	Solar System Targets									
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
(12)	JUPITER-05A	STD=JUPITER	TYPE=PGRAPHIC, LONG=226, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH				
(13)	JUPITER-05B	STD=JUPITER	TYPE=PGRAPHIC, LONG=282, LAT=0		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH				
(14)	JUPITER-05C	STD=JUPITER	TYPE=PGRAPHIC, LONG=251, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH				
Exposures	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F673N	(12) JUPITER-05A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	2	F673N	(12) JUPITER-05A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	3	F502N	(12) JUPITER-05A	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	4	F410M	(12) JUPITER-05A	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	5	F673N	(14) JUPITER-05C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	6	F336W	(14) JUPITER-05C	WFPC2, IMAGE, PC1-FIX	F336W	ATD-GAIN=15			10.0 Secs [==>]	[1]
	7	F255W	(14) JUPITER-05C	WFPC2, IMAGE, PC1-FIX	F255W	ATD-GAIN=7			160.0 Secs [==>]	[1]

Proposal 11102 - Visit 05 - HST as a Jovian Climate Satellite

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	8	F218W	(14) JUPITER-05C	WFPC2, IMAGE, PC1-FIX	F218W	ATD-GAIN=7; CLOCKS=YES			200.0 Secs [==>]	[1]
	9	F673N	(14) JUPITER-05C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	10	F410M	(13) JUPITER-05B	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	11	F502N	(13) JUPITER-05B	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	12	F673N	(13) JUPITER-05B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	13	F673N	(13) JUPITER-05B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]



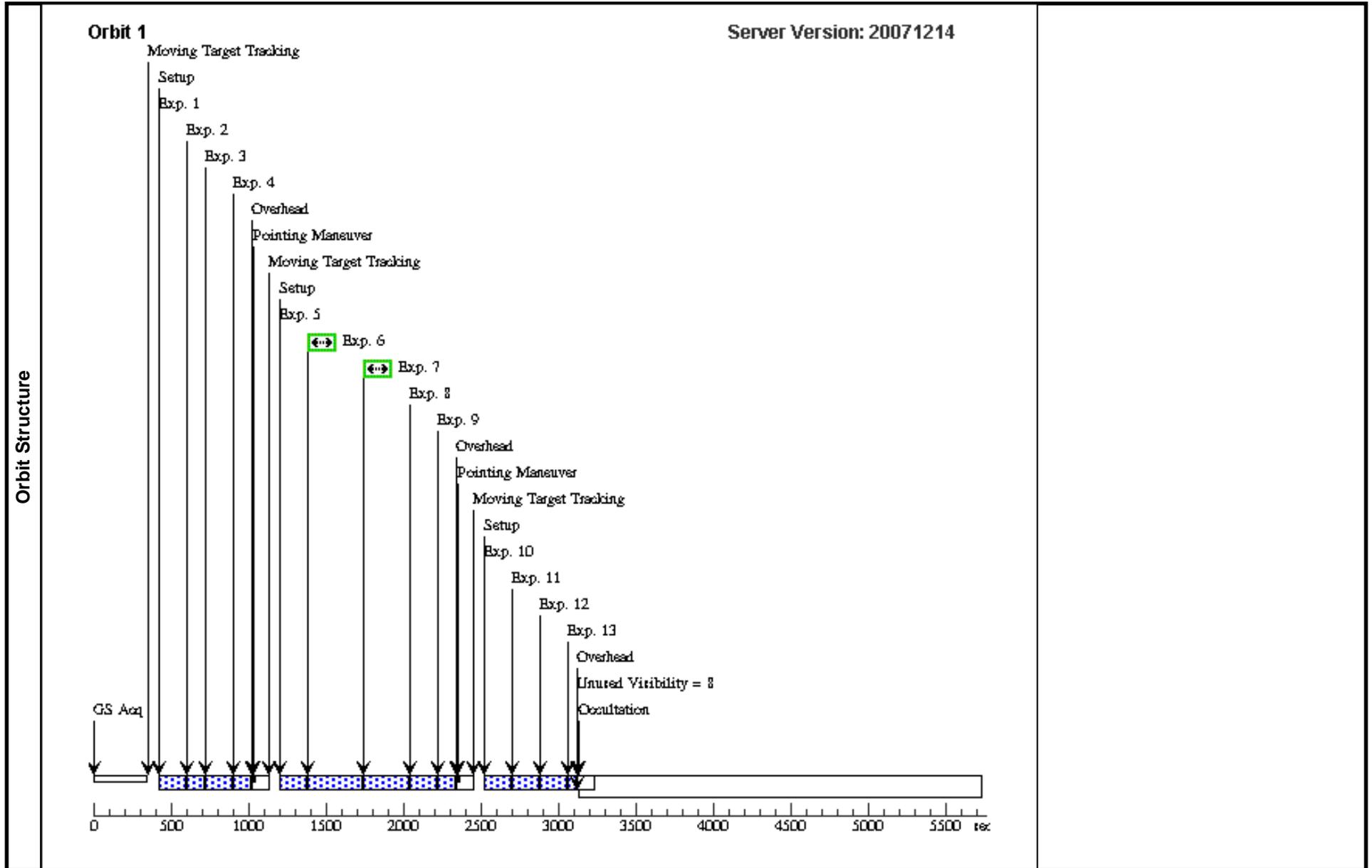
Proposal 11102 - Visit 07 - HST as a Jovian Climate Satellite

Sat Apr 12 01:02:19 GMT 2008

Visit	Proposal 11102, Visit 07, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: ORIENT 257D TO 263 D; AFTER 05 BY 1.8 Orbits TO 2.2 Orbits Comments: ORBIT *07* of 11 CONSECUTIVE HST ORBITS AROUND THE EARTH									
	Solar System Targets									
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
(15)	JUPITER-07A	STD=JUPITER	TYPE=PGRAPHIC, LONG=340, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH				
(16)	JUPITER-07B	STD=JUPITER	TYPE=PGRAPHIC, LONG=35, LAT=0		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH				
(17)	JUPITER-07C	STD=JUPITER	TYPE=PGRAPHIC, LONG=5, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH				
Exposures	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F673N	(15) JUPITER-07A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	2	F673N	(15) JUPITER-07A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	3	F502N	(15) JUPITER-07A	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	4	F410M	(15) JUPITER-07A	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	5	F673N	(17) JUPITER-07C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	6	F218W	(17) JUPITER-07C	WFPC2, IMAGE, PC1-FIX	F218W	ATD-GAIN=7; CLOCKS=YES			200.0 Secs [==>]	[1]
	7	F255W	(17) JUPITER-07C	WFPC2, IMAGE, PC1-FIX	F255W	ATD-GAIN=7			160.0 Secs [==>]	[1]

Proposal 11102 - Visit 07 - HST as a Jovian Climate Satellite

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	8	F336W	(17) JUPITER-07C	WFPC2, IMAGE, PC1-FIX	F336W	ATD-GAIN=15			10.0 Secs	
									[==>]	[1]
	9	F673N	(17) JUPITER-07C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs	
									[==>]	[1]
	10	F410M	(16) JUPITER-07B	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs	
									[==>]	[1]
11	F502N	(16) JUPITER-07B	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs		
								[==>]	[1]	
12	F673N	(16) JUPITER-07B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs		
								[==>]	[1]	
13	F673N	(16) JUPITER-07B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs		
								[==>]	[1]	



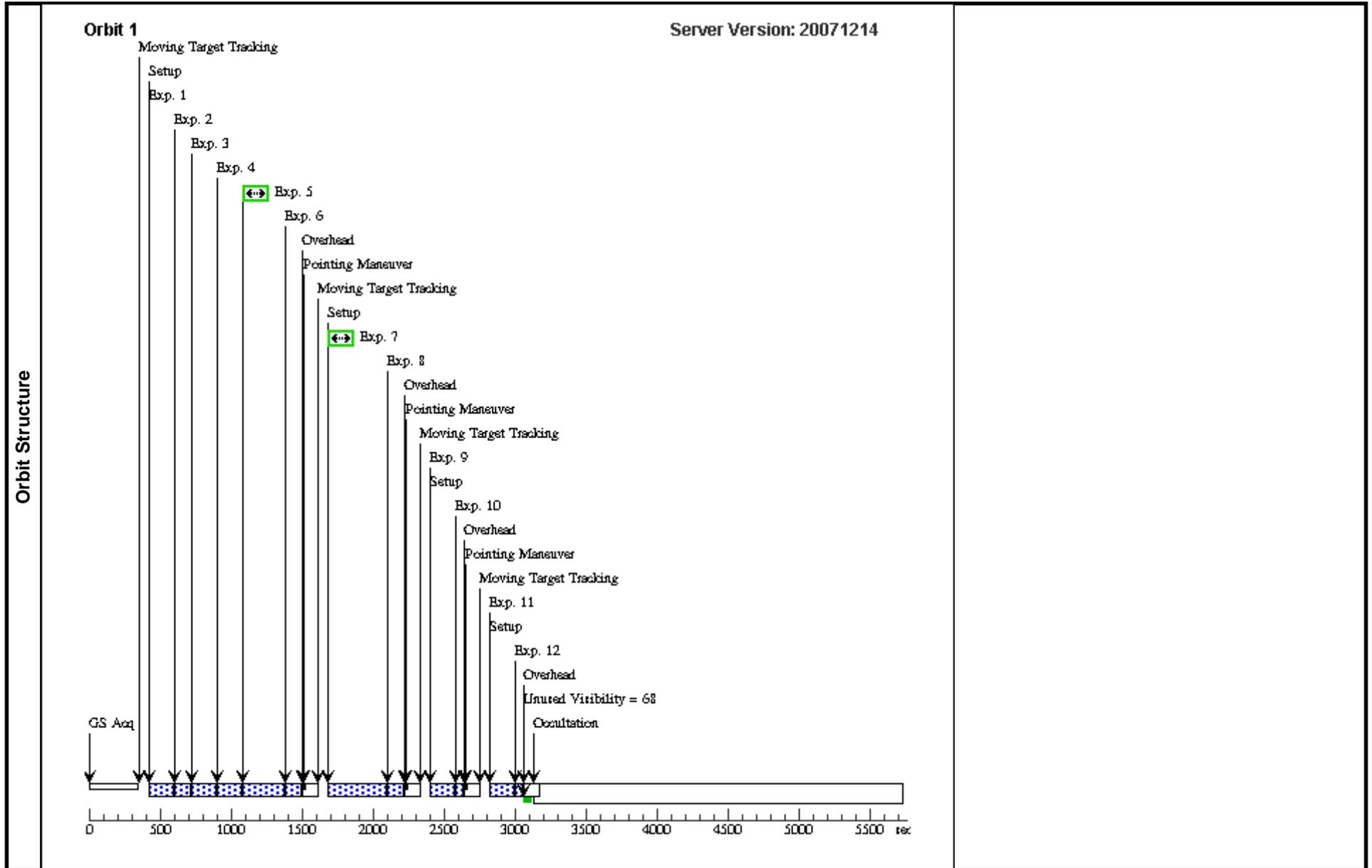
Proposal 11102 - Visit 09 - HST as a Jovian Climate Satellite

Sat Apr 12 01:02:20 GMT 2008

Visit	Proposal 11102, Visit 09, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 257D TO 263 D; AFTER 07 BY 1.8 Orbits TO 2.2 Orbits Comments: <i>ORBIT *09* of 11 CONSECUTIVE HST ORBITS AROUND THE EARTH</i>									
	Diagnostics (FQCH4P15 (09.005)) Warning (Form): Partially rotated filters should generally be specified with a corresponding aperture.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(22)	JUPITER-09A	STD=JUPITER	TYPE=PGRAPHIC, LONG=98, LAT=-14		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(23)	JUPITER-09B	STD=JUPITER	TYPE=PGRAPHIC, LONG=119, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(24)	JUPITER-09C	STD=JUPITER	TYPE=PGRAPHIC, LONG=142, LAT=0		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
	(25)	JUPITER-09D	STD=JUPITER	TYPE=PGRAPHIC, LONG=114, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
Exposures	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F673N	(22) JUPITER-09A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	2	F673N	(22) JUPITER-09A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]

Proposal 11102 - Visit 09 - HST as a Jovian Climate Satellite

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	3	F502N	(22) JUPITER-09A	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	4	F410M	(22) JUPITER-09A	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	5	FQCH4P15	(22) JUPITER-09A	WFPC2, IMAGE, PC1-FIX	FQCH4P15 8929.0 A	ATD-GAIN=7			70 Secs [==>]	[1]
	6	F953N	(22) JUPITER-09A	WFPC2, IMAGE, PC1-FIX	F953N	ATD-GAIN=15			30 Secs [==>]	[1]
	7	F218W	(23) JUPITER-09B	WFPC2, IMAGE, PC1-FIX	F218W	ATD-GAIN=7; CLOCKS=YES			260 Secs [==>]	[1]
	8	F336W	(23) JUPITER-09B	WFPC2, IMAGE, PC1-FIX	F336W	ATD-GAIN=15			10.0 Secs [==>]	[1]
	9	F673N	(24) JUPITER-09C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	10	F673N	(24) JUPITER-09C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	11	F673N	(25) JUPITER-09D	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
12	F673N	(25) JUPITER-09D	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]	



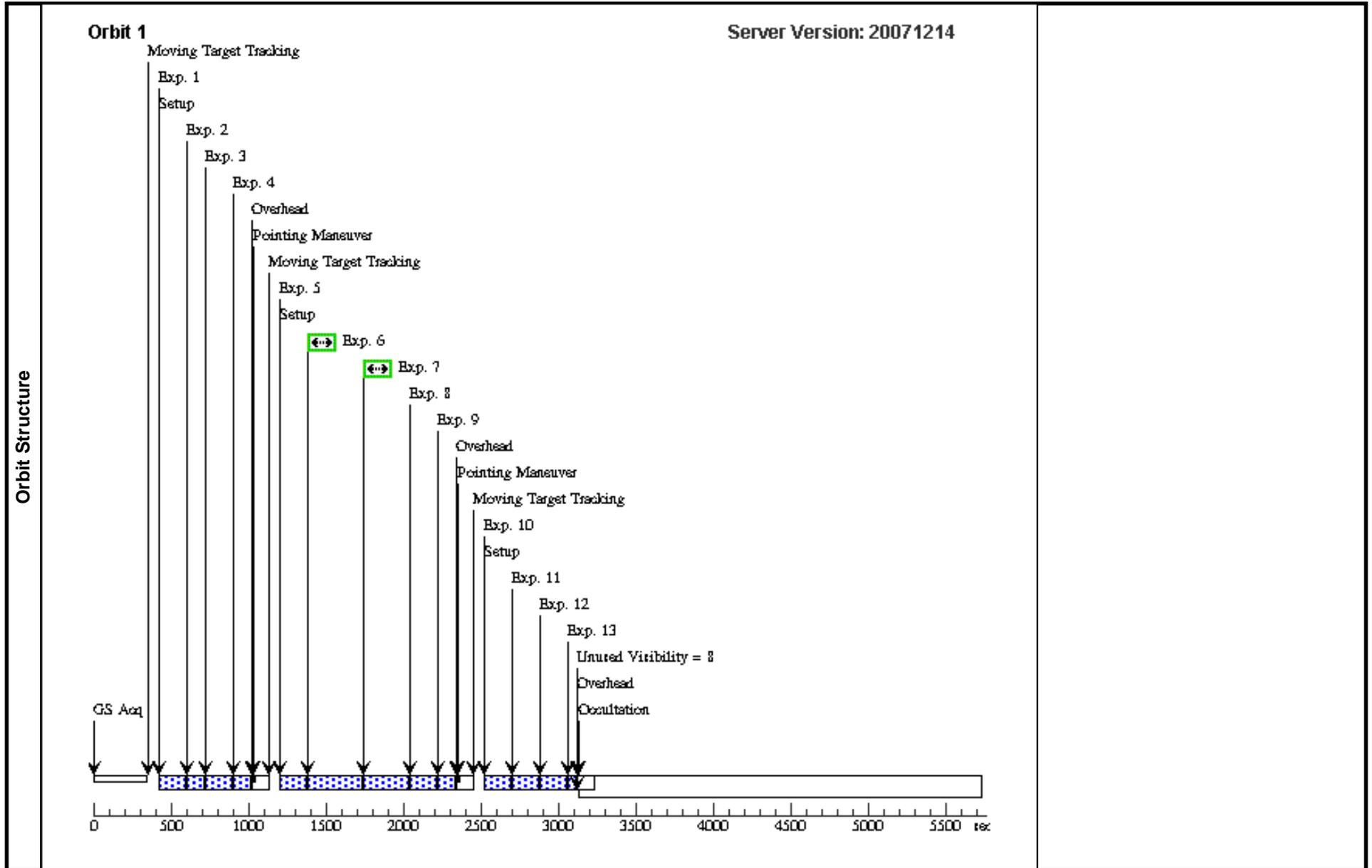
Proposal 11102 - Visit 10 - HST as a Jovian Climate Satellite

Sat Apr 12 01:02:21 GMT 2008

Visit	Proposal 11102, Visit 10, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: ORIENT 257D TO 263 D; AFTER 09 BY 0.8 Orbits TO 1.2 Orbits Comments: ORBIT *10* of 11 CONSECUTIVE HST ORBITS AROUND THE EARTH									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
(26)		JUPITER-10A	STD=JUPITER	TYPE=PGRAPHIC, LONG=150, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
(27)		JUPITER-10B	STD=JUPITER	TYPE=PGRAPHIC, LONG=175, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
(28)		JUPITER-10C	STD=JUPITER	TYPE=PGRAPHIC, LONG=206, LAT=0		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
Exposures	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F673N	(26) JUPITER-10A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	2	F673N	(26) JUPITER-10A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	3	F502N	(26) JUPITER-10A	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	4	F410M	(26) JUPITER-10A	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	5	F673N	(27) JUPITER-10B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	6	F218W	(27) JUPITER-10B	WFPC2, IMAGE, PC1-FIX	F218W	ATD-GAIN=7; CLOCKS=YES			200.0 Secs [==>]	[1]
	7	F255W	(27) JUPITER-10B	WFPC2, IMAGE, PC1-FIX	F255W	ATD-GAIN=7			160.0 Secs [==>]	[1]

Proposal 11102 - Visit 10 - HST as a Jovian Climate Satellite

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	8	F336W	(27) JUPITER-10B	WFPC2, IMAGE, PC1-FIX	F336W	ATD-GAIN=15			10.0 Secs	
									[==>]	[1]
	9	F673N	(27) JUPITER-10B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs	
									[==>]	[1]
	10	F410M	(28) JUPITER-10C	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs	
									[==>]	[1]
11	F502N	(28) JUPITER-10C	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs		
								[==>]	[1]	
12	F673N	(28) JUPITER-10C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs		
								[==>]	[1]	
13	F673N	(28) JUPITER-10C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs		
								[==>]	[1]	



Proposal 11102 - Visit 11 - HST as a Jovian Climate Satellite

Sat Apr 12 01:02:21 GMT 2008

Visit	Proposal 11102, Visit 11, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: ORIENT 257D TO 263 D; AFTER 09 BY 1.8 Orbits TO 2.2 Orbits Comments: ORBIT *11* of 11 CONSECUTIVE HST ORBITS AROUND THE EARTH									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
(19)		JUPITER-11A	STD=JUPITER	TYPE=PGRAPHIC, LONG=212, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
(20)		JUPITER-11B	STD=JUPITER	TYPE=PGRAPHIC, LONG=268, LAT=0		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
(21)		JUPITER-11C	STD=JUPITER	TYPE=PGRAPHIC, LONG=237, LAT=-3		NOT TRANSIT OF IO ACROSS JUPITER FROM EARTH, NOT TRANSIT OF EUROPA ACROSS JUPITER FROM EARTH, NOT TRANSIT OF GANYMEDE ACROSS JUPITER FROM EARTH, NOT TRANSIT OF CALLISTO ACROSS JUPITER FROM EARTH	EARTH			
Exposures	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F673N	(19) JUPITER-11A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	2	F673N	(19) JUPITER-11A	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	3	F502N	(19) JUPITER-11A	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15			14 Secs [==>]	[1]
	4	F410M	(19) JUPITER-11A	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15			8.0 Secs [==>]	[1]
	5	F673N	(21) JUPITER-11C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15			4 Secs [==>]	[1]
	6	F336W	(21) JUPITER-11C	WFPC2, IMAGE, PC1-FIX	F336W	ATD-GAIN=15			10.0 Secs [==>]	[1]
	7	F255W	(21) JUPITER-11C	WFPC2, IMAGE, PC1-FIX	F255W	ATD-GAIN=7			160.0 Secs [==>]	[1]

Proposal 11102 - Visit 11 - HST as a Jovian Climate Satellite

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
Exposures (continued)	8	F218W	(21) JUPITER-11C	WFPC2, IMAGE, PC1-FIX	F218W	ATD-GAIN=7; CLOCKS=YES		200.0 Secs	[==>]	[1]
	9	F673N	(21) JUPITER-11C	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15		4 Secs	[==>]	[1]
	10	F410M	(20) JUPITER-11B	WFPC2, IMAGE, PC1-FIX	F410M	ATD-GAIN=15		8.0 Secs	[==>]	[1]
	11	F502N	(20) JUPITER-11B	WFPC2, IMAGE, PC1-FIX	F502N	ATD-GAIN=15		14 Secs	[==>]	[1]
	12	F673N	(20) JUPITER-11B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15		4 Secs	[==>]	[1]
	13	F673N	(20) JUPITER-11B	WFPC2, IMAGE, PC1-FIX	F673N	ATD-GAIN=15		4 Secs	[==>]	[1]

