



10468 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Cycle: 14, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. Erich Karkoschka (PI)	University of Arizona	erich@lpl.arizona.edu

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>
13	(2) JUPITER-SW (3) JUPITER-SE (4) JUPITER-NE (5) JUPITER-NW	ACS/HRC	1	29-Mar-2007 21:02:44.0	yes
21	(1) JUPITER+GANYMEDE	WFPC2	1	29-Mar-2007 21:03:05.0	yes
22	(1) JUPITER+GANYMEDE	WFPC2	1	29-Mar-2007 21:03:17.0	yes
23	(1) JUPITER+GANYMEDE	WFPC2	1	29-Mar-2007 21:03:40.0	yes
31	(1) JUPITER+GANYMEDE	WFPC2	1	29-Mar-2007 21:03:50.0	yes
32	(1) JUPITER+GANYMEDE	WFPC2	1	29-Mar-2007 21:03:59.0	yes
41	(6) GANYMEDE+JUPITER	WFPC2	1	29-Mar-2007 21:04:11.0	yes
42	(6) GANYMEDE+JUPITER	WFPC2	1	29-Mar-2007 21:04:23.0	yes

8 Total Orbits Used

ABSTRACT

I propose to observe a disappearance of Ganymede behind the dark limb of Jupiter with five filters of the ACS/HRC camera. Two exposures in each filter can be taken during such an event. The images will provide the spectral variation of the altitude of the apparent limb of Jupiter. The altitude of the apparent limb is dependent on the presence of hazes in Jupiter's stratosphere. Hazes of vertical optical depths below 0.001 could be detected with these observations, providing an extremely sensitive probe of high hazes. The observations probe altitudes levels near the 1-mb pressure level, for which we have very limited data.

The creation of aerosols, their growth, and their transport by winds is currently a mostly theoretical study. It would significantly benefit from constraints derived from the proposed observations. ACS/HRC is the only instrument capable of the required spatial resolution in the ultraviolet. Furthermore, a favorable geometry of Ganymede's orbit occurs only once every six years. This proposal achieves unique results with a minimum of HST time.

OBSERVING DESCRIPTION

I propose to image the disappearance or reappearance of Ganymede behind Jupiter's dark limb from 16 minutes before the midpoint (when half of Ganymede is covered by Jupiter) to 16 minutes past the midpoint. The ACS/HRC camera is used with five filters, F250W, F330W, F435W, F658N, and F892N. Exposure times are 3 seconds for filter F435W, 20 seconds for F250W, and 10 seconds otherwise. HRC will record more than a quarter of Jupiter's disk together with Ganymede.

The filters are cycled four times. One cycle of five exposures (each filter once) takes 8 minutes including all overheads. Additionally, the same part of Jupiter is imaged once with ACS/HRC and filters F220W (at least 200 seconds exposure time), F550M (3 s), and three wavelength settings of FR656N (10 s each). F220W probes the highest altitudes in Jupiter's atmosphere, closest to the levels probed by Ganymede. F550M fills in between F435W and F658N. FR656N probes the ammonia absorption at 647 nm.

For each filter, the first or last Ganymede exposure will show the whole disk of Ganymede unaffected by Jupiter's atmosphere, while the last or first exposure records the background level. The two intermediate exposures record the location of Jupiter's limb for all filters except F250W with only

one exposure due to the limited duration of the event.

The exposures on Ganymede in filters F330W, F658N, and F892N are expected to reach signals of about 30,000 electrons per pixel, corresponding to signal-to-noise ratios of almost 200. Filters F435W and F250W will give signals of 80,000 and 8,000 electrons per pixel, respectively. The Jupiter exposures with F220W, F550M, and F656N are expected to reach signals of 8,000, 90,000, and 30,000 electrons/pixel, respectively.

HST will be tracking Jupiter. This will cause a smear of up to one HRC-pixel of Ganymede due to its orbital motion (except two pixels for F250W). This does not significantly affect the observations.

REAL TIME JUSTIFICATION

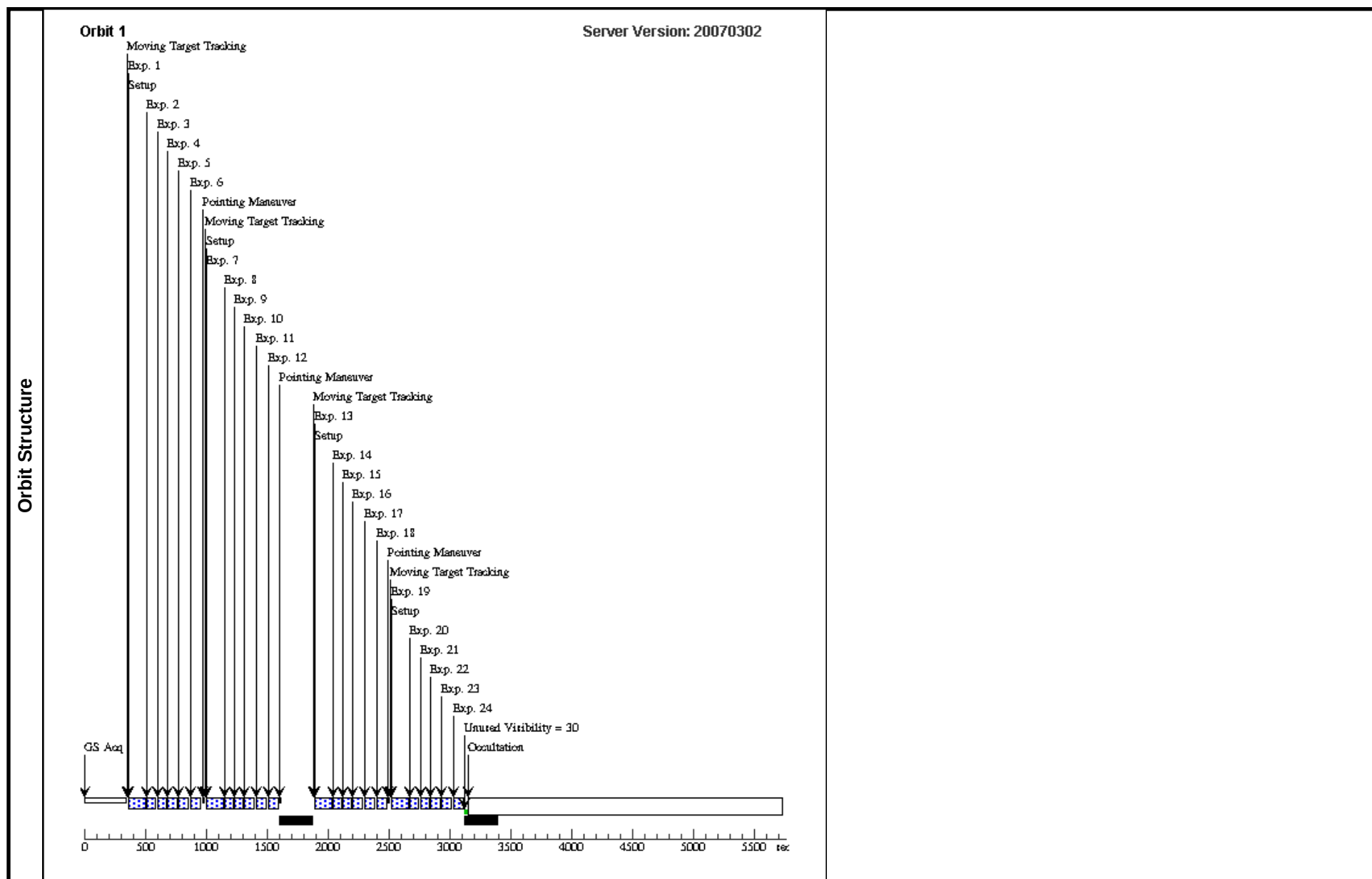
The observations need to be scheduled around an occultation disappearance or reappearance of Ganymede behind Jupiter's dark limb, so that the 32-minute time interval centered on the mid-event (half of Ganymede behind Jupiter) can be used for imaging.

Proposal 10468 - Visit 13 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Visit	Proposal 10468, Visit 13, failed										Fri Mar 30 01:04:29 GMT 2007
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: ACS/HRC										
	Special Requirements: SCHED 60%; BETWEEN 11-JUN-2005:22:09:00 AND 11-JUN-2005:22:19:00; BETWEEN 19-JUN-2005:01:59:00 AND 19-JUN-2005:02:09:00; BETWEEN 06-JAN-2006:00:08:00 AND 06-JAN-2006:00:18:00; BETWEEN 13-JAN-2006:04:22:00 AND 13-JAN-2006:04:32:00; BETWEEN 20-JAN-2006:08:31:00 AND 20-JAN-2006:08:41:00; BETWEEN 18-MAR-2006:15:27:00 AND 18-MAR-2006:15:37:00; BETWEEN 25-MAR-2006:18:58:00 AND 25-MAR-2006:19:08:00; BETWEEN 12-JUN-2006:09:29:00 AND 12-JUN-2006:09:39:00										
Comments: Must include an occultation disappearance of Ganymede at Jupiter's dark limb centered on exposure B550 or an occultation reappearance of Ganymede at Jupiter's dark limb centered on exposure A550.											
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window					
	(2)	JUPITER-SW	STD=JUPITER	TYPE=POS_ANGLE,RAD=14.0,ANG=23 9.0,REF=NORTH							
	Comments: Southwestern part of Jupiter including Ganymede during disappearance. Only one of visits 11-14 needs to be executed.										
	(3)	JUPITER-SE	STD=JUPITER	TYPE=POS_ANGLE,RAD=15.0,ANG=15 0.0,REF=NORTH							
	Comments: Southeastern part of Jupiter including Ganymede during reappearance. Only one of visits 11-14 needs to be executed.										
Solar System Targets	(4)	JUPITER-NE	STD=JUPITER	TYPE=POS_ANGLE,RAD=15.0,ANG=64. 0,REF=NORTH							
	Comments: Northeastern part of Jupiter. Only one of visits 11-14 needs to be executed.										
	(5)	JUPITER-NW	STD=JUPITER	TYPE=POS_ANGLE,RAD=14.0,ANG=33 5.0,REF=NORTH							
Comments: Northwestern part of Jupiter. Only one of visits 11-14 needs to be executed.											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	A250	(3) JUPITER-SE	ACS/HRC, ACCUM, HRC-FIX	F250W	CR-SPLIT=NO		Sequence 1-24 Non-Int	20.0 Secs		
									[==>]	[1]	
	2	A330	(3) JUPITER-SE	ACS/HRC, ACCUM, HRC-FIX	F330W	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	15.0 Secs		
									[==>]	[1]	
	3	A435	(3) JUPITER-SE	ACS/HRC, ACCUM, HRC-FIX	F435W	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	3.0 Secs		
									[==>]	[1]	
	4	A550	(3) JUPITER-SE	ACS/HRC, ACCUM, HRC-FIX	F550M	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	3.0 Secs		
									[==>]	[1]	
	5	A658	(3) JUPITER-SE	ACS/HRC, ACCUM, HRC-FIX	F658N	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	10.0 Secs		
									[==>]	[1]	
	6	A892	(3) JUPITER-SE	ACS/HRC, ACCUM, HRC-FIX	F892N	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	12.0 Secs		
								[==>]	[1]		
7	B250	(2) JUPITER-SW	ACS/HRC, ACCUM, HRC-FIX	F250W	CR-SPLIT=NO		Sequence 1-24 Non-Int	20.0 Secs			
								[==>]	[1]		
8	B330	(2) JUPITER-SW	ACS/HRC, ACCUM, HRC-FIX	F330W	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	15.0 Secs			
								[==>]	[1]		
9	B435	(2) JUPITER-SW	ACS/HRC, ACCUM, HRC-FIX	F435W	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	3.0 Secs			
								[==>]	[1]		
10	B550	(2) JUPITER-SW	ACS/HRC, ACCUM, HRC-FIX	F550M	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	3.0 Secs			
								[==>]	[1]		

Proposal 10468 - Visit 13 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	11	B658	(2) JUPITER-SW	ACS/HRC, ACCUM, HRC-FIX	F658N	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	10.0 Secs [==>]	[1]
	12	B892	(2) JUPITER-SW	ACS/HRC, ACCUM, HRC-FIX	F892N	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	12.0 Secs [==>]	[1]
	13	C250	(5) JUPITER-NW	ACS/HRC, ACCUM, HRC-FIX	F250W	CR-SPLIT=NO		Sequence 1-24 Non-Int	20.0 Secs [==>]	[1]
	14	C330	(5) JUPITER-NW	ACS/HRC, ACCUM, HRC-FIX	F330W	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	15.0 Secs [==>]	[1]
	15	C435	(5) JUPITER-NW	ACS/HRC, ACCUM, HRC-FIX	F435W	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	3.0 Secs [==>]	[1]
	16	C550	(5) JUPITER-NW	ACS/HRC, ACCUM, HRC-FIX	F550M	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	3.0 Secs [==>]	[1]
	17	C658	(5) JUPITER-NW	ACS/HRC, ACCUM, HRC-FIX	F658N	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	10.0 Secs [==>]	[1]
	18	C892	(5) JUPITER-NW	ACS/HRC, ACCUM, HRC-FIX	F892N	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	12.0 Secs [==>]	[1]
	19	D250	(4) JUPITER-NE	ACS/HRC, ACCUM, HRC-FIX	F250W	CR-SPLIT=NO		Sequence 1-24 Non-Int	20.0 Secs [==>]	[1]
	20	D330	(4) JUPITER-NE	ACS/HRC, ACCUM, HRC-FIX	F330W	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	15.0 Secs [==>]	[1]
	21	D435	(4) JUPITER-NE	ACS/HRC, ACCUM, HRC-FIX	F435W	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	3.0 Secs [==>]	[1]
	22	D550	(4) JUPITER-NE	ACS/HRC, ACCUM, HRC-FIX	F550M	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	3.0 Secs [==>]	[1]
	23	D658	(4) JUPITER-NE	ACS/HRC, ACCUM, HRC-FIX	F658N	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	10.0 Secs [==>]	[1]
	24	D892	(4) JUPITER-NE	ACS/HRC, ACCUM, HRC-FIX	F892N	CR-SPLIT=NO; GAIN=4		Sequence 1-24 Non-Int	12.0 Secs [==>]	[1]

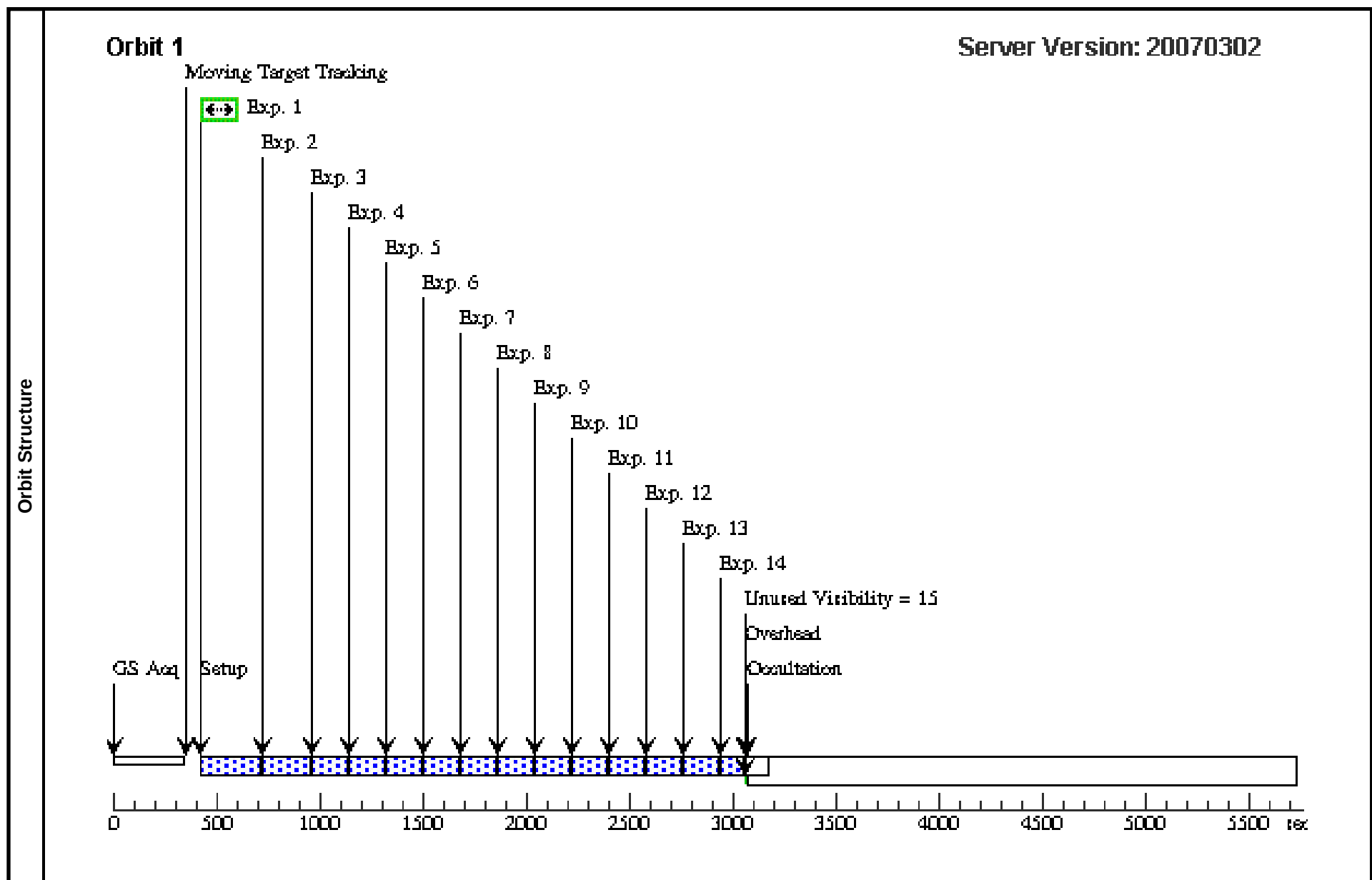


Proposal 10468 - Visit 21 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Visit	Proposal 10468, Visit 21, implementation										Fri Mar 30 01:04:35 GMT 2007
	Diagnostic Status: Error										
	Scientific Instruments: WFPC2										
Diagnostics	Special Requirements: SCHED 80%; BETWEEN 02-APR-2007:10:12:00 AND 02-APR-2007:10:37:00; BETWEEN 09-APR-2007:13:54:00 AND 09-APR-2007:14:19:00; BETWEEN 16-APR-2007:17:31:00 AND 16-APR-2007:17:56:00; BETWEEN 23-APR-2007:21:03:00 AND 23-APR-2007:21:28:00; BETWEEN 01-MAY-2007:00:32:00 AND 01-MAY-2007:00:57:00; BETWEEN 08-MAY-2007:03:56:00 AND 08-MAY-2007:04:21:00										
	Comments: The middle of the disappearance of Ganymede should happen between exposures A953 and C953.										
	(A890 (21.002)) Error: This attribute cannot have this value due to other choices: Wavelength=8930.0 The combination of attributes chosen is illegal.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window					
	(1)	JUPITER+GANYMED E	STD=JUPITER	TYPE=POS_ANGLE,RAD=10.0,ANG=20.0,REF=NORTH							
	Comments: Southern part of Jupiter including Ganymede.										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	A255	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F255W	ATD-GAIN=7; CR-SPLIT=NO		Sequence 1-14 Non-Int	160.0 Secs [==>]	[1]	
	2	A890	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	FQCH4P15 8930.0 A	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	40.0 Secs [==>]	[1]	
	3	A336	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F336W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	12.0 Secs [==>]	[1]	
	4	A502	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	16.0 Secs [==>]	[1]	
	5	A953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]	
	6	B300	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]	
	7	B410	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	8.0 Secs [==>]	[1]	
	8	B673	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	4.0 Secs [==>]	[1]	

Proposal 10468 - Visit 21 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	9	B953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	20.0 Secs [==>]	[1]
	10	C300	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	20.0 Secs [==>]	[1]
	11	C410	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	8.0 Secs [==>]	[1]
	12	C673	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	4.0 Secs [==>]	[1]
	13	C953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	20.0 Secs [==>]	[1]
	14	D502	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	16.0 Secs [==>]	[1]

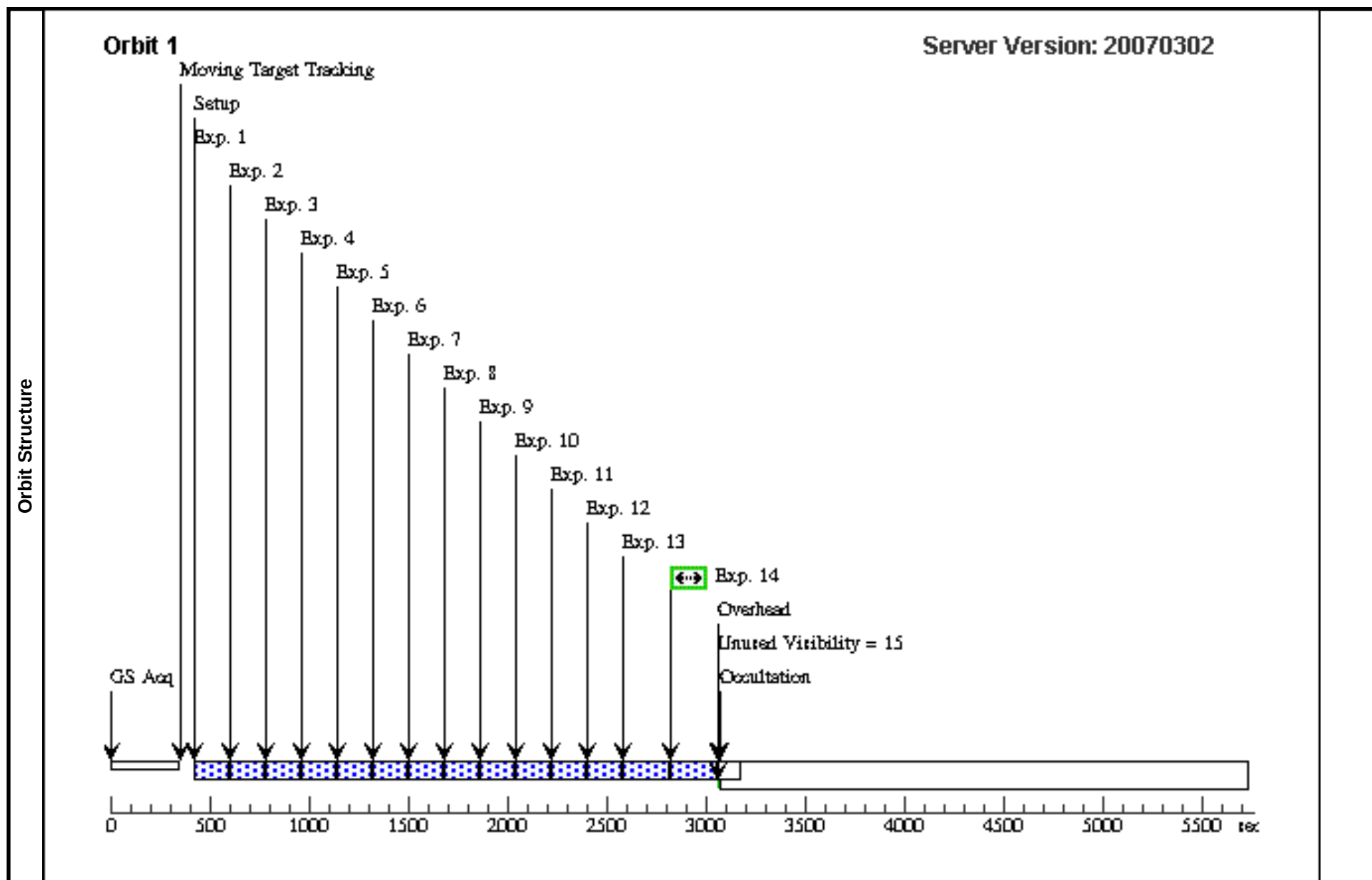


Proposal 10468 - Visit 22 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Visit	Proposal 10468, Visit 22, scheduling										Fri Mar 30 01:04:37 GMT 2007	
	Diagnostic Status: Error											
	Scientific Instruments: WFPC2											
	Special Requirements: SCHED 80%; BETWEEN 02-APR-2007:10:34:00 AND 02-APR-2007:10:52:00; BETWEEN 09-APR-2007:14:16:00 AND 09-APR-2007:14:34:00; BETWEEN 16-APR-2007:17:53:00 AND 16-APR-2007:18:11:00; BETWEEN 23-APR-2007:21:25:00 AND 23-APR-2007:21:43:00; BETWEEN 01-MAY-2007:00:54:00 AND 01-MAY-2007:01:12:00; BETWEEN 08-MAY-2007:04:18:00 AND 08-MAY-2007:04:36:00											
Comments: The middle of the disappearance of Ganymede should happen between exposures A502 and C673.												
Diagnostics	(D890 (22.013)) Error: This attribute cannot have this value due to other choices: Wavelength=8930.0 The combination of attributes chosen is illegal.											
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window						
	(1)	JUPITER+GANYMED E	STD=JUPITER	TYPE=POS_ANGLE,RAD=10.0,ANG=20.0,REF=NORTH								
Comments: Southern part of Jupiter including Ganymede.												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit		
	1	A336	(1) JUPITER+GANYMEDE	WFPC2, IMAGE, FQCH4P15	F336W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	12.0 Secs [==>]	[1]		
	2	A502	(1) JUPITER+GANYMEDE	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	16.0 Secs [==>]	[1]		
	3	A953	(1) JUPITER+GANYMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]		
	4	B300	(1) JUPITER+GANYMEDE	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]		
	5	B410	(1) JUPITER+GANYMEDE	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	8.0 Secs [==>]	[1]		
	6	B673	(1) JUPITER+GANYMEDE	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	4.0 Secs [==>]	[1]		
	7	B953	(1) JUPITER+GANYMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]		
	8	C300	(1) JUPITER+GANYMEDE	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]		

Proposal 10468 - Visit 22 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	9	C410	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	8.0 Secs [==>]	[1]
	10	C673	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	4.0 Secs [==>]	[1]
	11	C953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]
	12	D502	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	16.0 Secs [==>]	[1]
	13	D890	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	FQCH4P15 8930.0 A	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	40.0 Secs [==>]	[1]
	14	D255	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F255W	ATD-GAIN=7; CR-SPLIT=NO		Sequence 1-14 Non-Int	160.0 Secs [==>]	[1]

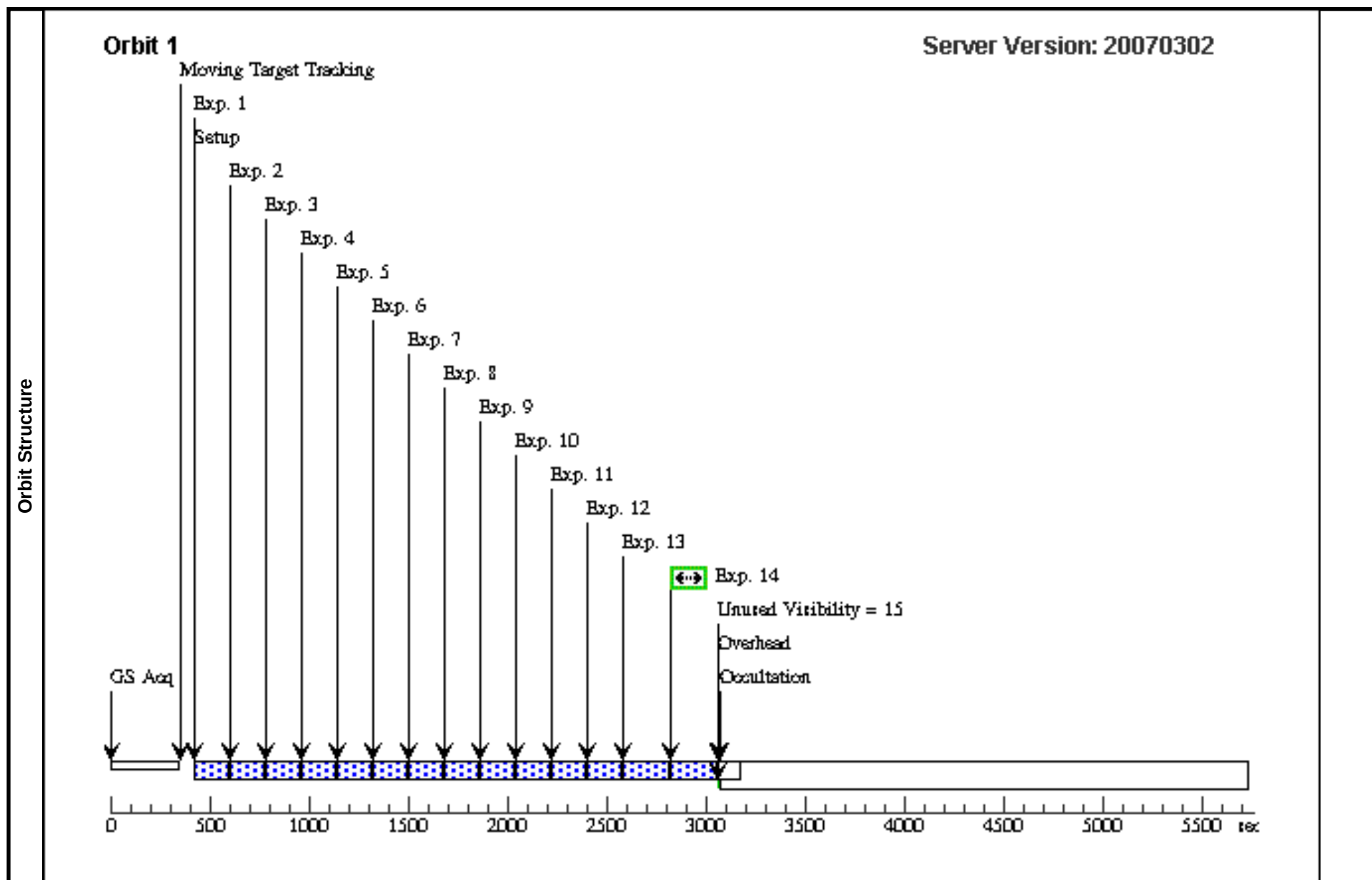


Proposal 10468 - Visit 23 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Visit	Proposal 10468, Visit 23										Fri Mar 30 01:04:39 GMT 2007		
	Diagnostic Status: Error												
	Scientific Instruments: WFPC2												
Special Requirements: SCHED 80%; BETWEEN 02-APR-2007:10:34:00 AND 02-APR-2007:10:52:00; BETWEEN 09-APR-2007:14:16:00 AND 09-APR-2007:14:34:00; BETWEEN 16-APR-2007:17:53:00 AND 16-APR-2007:18:11:00; BETWEEN 23-APR-2007:21:25:00 AND 23-APR-2007:21:43:00; BETWEEN 01-MAY-2007:00:54:00 AND 01-MAY-2007:01:12:00; BETWEEN 08-MAY-2007:04:18:00 AND 08-MAY-2007:04:36:00													
Comments: The middle of the disappearance of Ganymede should happen between exposures A502 and C673.													
Diagnostics	(D890 (23.013)) Error: This attribute cannot have this value due to other choices: Wavelength=8930.0 The combination of attributes chosen is illegal.												
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window							
	(1)	JUPITER+GANYMED E	STD=JUPITER	TYPE=POS_ANGLE,RAD=10.0,ANG=20.0,REF=NORTH									
Comments: Southern part of Jupiter including Ganymede.													
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit		
	1	A336	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F336W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	12.0 Secs	[==>]	[1]		
	2	A502	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	16.0 Secs	[==>]	[1]		
	3	A953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs	[==>]	[1]		
	4	B300	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs	[==>]	[1]		
	5	B410	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	8.0 Secs	[==>]	[1]		
	6	B673	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	4.0 Secs	[==>]	[1]		
	7	B953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs	[==>]	[1]		
	8	C300	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs	[==>]	[1]		

Proposal 10468 - Visit 23 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	9	C410	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	8.0 Secs [==>]	[1]
	10	C673	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	4.0 Secs [==>]	[1]
	11	C953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]
	12	D502	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	16.0 Secs [==>]	[1]
	13	D890	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	FQCH4P15 8930.0 A	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	40.0 Secs [==>]	[1]
	14	D255	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F255W	ATD-GAIN=7; CR-SPLIT=NO		Sequence 1-14 Non-Int	160.0 Secs [==>]	[1]

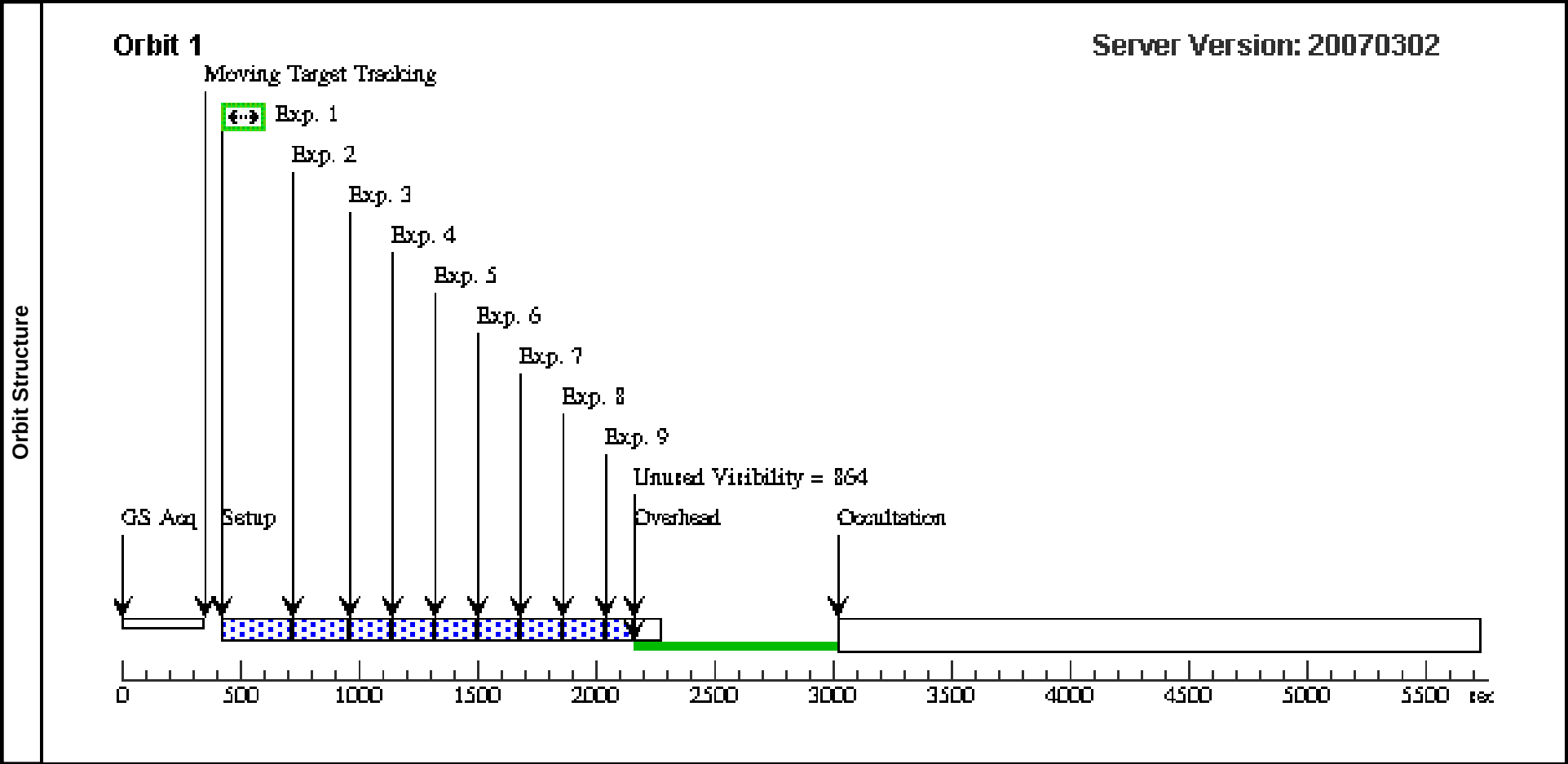


Proposal 10468 - Visit 31 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Visit	Proposal 10468, Visit 31, withdrawn										Fri Mar 30 01:04:41 GMT 2007			
	Diagnostic Status: Error													
	Scientific Instruments: WFPC2													
Special Requirements: SCHED 100%; BETWEEN 02-APR-2007:10:26:00 AND 02-APR-2007:10:42:00; BETWEEN 09-APR-2007:14:08:00 AND 09-APR-2007:14:24:00; BETWEEN 16-APR-2007:17:45:00 AND 16-APR-2007:18:01:00; BETWEEN 23-APR-2007:21:17:00 AND 23-APR-2007:21:33:00; BETWEEN 01-MAY-2007:00:46:00 AND 01-MAY-2007:01:02:00; BETWEEN 08-MAY-2007:04:10:00 AND 08-MAY-2007:04:26:00														
Comments: The middle of the disappearance of Ganymede should happen between exposures A953 and B953.														
Diagnostics	(A890 (31.002)) Error: This attribute cannot have this value due to other choices: Wavelength=8930.0 The combination of attributes chosen is illegal.													
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window								
	(1)	JUPITER+GANYMED E	STD=JUPITER	TYPE=POS_ANGLE,RAD=10.0,ANG=20.0,REF=NORTH										
	Comments: Southern part of Jupiter including Ganymede.													
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit				
	1	A255	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F255W	ATD-GAIN=7; CR-SPLIT=NO		Sequence 1-9 Non-Int	160.0 Secs [==>]	[1]				
	2	A890	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	FQCH4P15 8930.0 A	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-Int	40.0 Secs [==>]	[1]				
	3	A336	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F336W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-Int	12.0 Secs [==>]	[1]				
	4	A502	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-Int	16.0 Secs [==>]	[1]				
	5	A953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-Int	20.0 Secs [==>]	[1]				
	6	B300	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-Int	20.0 Secs [==>]	[1]				
	7	B410	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-Int	8.0 Secs [==>]	[1]				
	8	B673	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-Int	4.0 Secs [==>]	[1]				

Proposal 10468 - Visit 31 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	9	B953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-Int	20.0 Secs [==>]	[1]

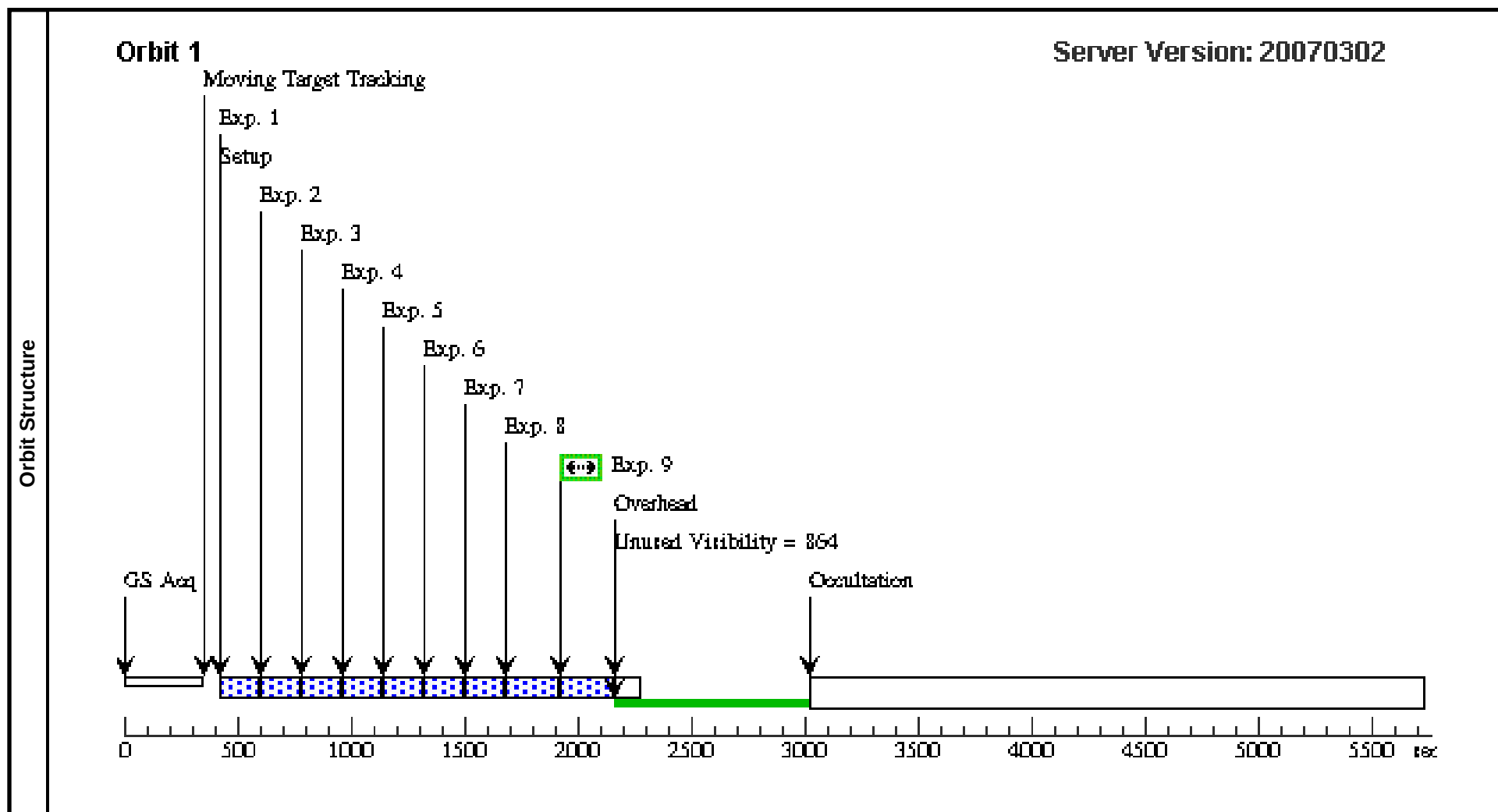


Proposal 10468 - Visit 32 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Visit	Proposal 10468, Visit 32, withdrawn										Fri Mar 30 01:04:42 GMT 2007
	Diagnostic Status: Error										
	Scientific Instruments: WFPC2										
Diagnostics	Special Requirements: SCHED 100%; BETWEEN 02-APR-2007:10:40:00 AND 02-APR-2007:10:53:00; BETWEEN 09-APR-2007:14:22:00 AND 09-APR-2007:14:35:00; BETWEEN 16-APR-2007:17:59:00 AND 16-APR-2007:18:12:00; BETWEEN 23-APR-2007:21:31:00 AND 23-APR-2007:21:44:00; BETWEEN 01-MAY-2007:01:10:00 AND 01-MAY-2007:01:23:00; BETWEEN 08-MAY-2007:04:24:00 AND 08-MAY-2007:04:37:00										
	Comments: The middle of the disappearance of Ganymede should happen between exposures A502 and B410.										
	(C890 (32.008)) Error: This attribute cannot have this value due to other choices: Wavelength=8930.0 The combination of attributes chosen is illegal.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window					
	(1)	JUPITER+GANYMED E	STD=JUPITER	TYPE=POS_ANGLE,RAD=10.0,ANG=20 0.0,REF=NORTH							
	Comments: Southern part of Jupiter including Ganymede.										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	A336	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F336W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-In t	12.0 Secs [==>]	[1]	
	2	A502	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-In t	16.0 Secs [==>]	[1]	
	3	A953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-In t	20.0 Secs [==>]	[1]	
	4	B300	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-In t	20.0 Secs [==>]	[1]	
	5	B410	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-In t	8.0 Secs [==>]	[1]	
	6	B673	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-In t	4.0 Secs [==>]	[1]	
	7	B953	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-In t	20.0 Secs [==>]	[1]	
	8	C890	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	FQCH4P15 8930.0 A	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-9 Non-In t	40.0 Secs [==>]	[1]	

Proposal 10468 - Visit 32 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Req.	Groups	Exp. Time/[Actual Dur.]	Orbit
	9	C255	(1) JUPITER+GAN YMEDE	WFPC2, IMAGE, FQCH4P15	F255W	ATD-GAIN=7; CR-SPLIT=NO		Sequence 1-9 Non-Int	160.0 Secs [==>]	[1]

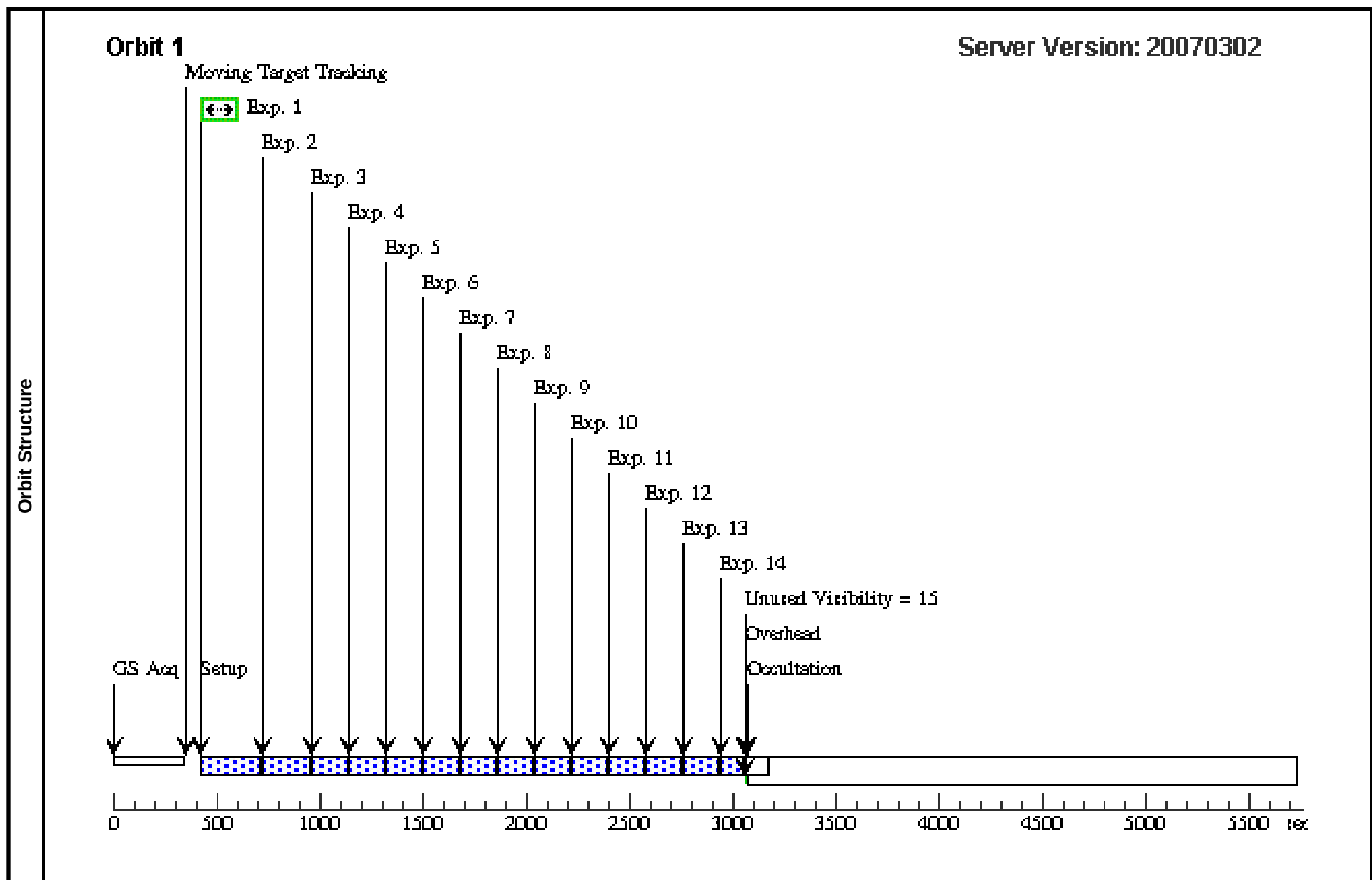


Proposal 10468 - Visit 41 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Visit	Proposal 10468, Visit 41, withdrawn										Fri Mar 30 01:04:44 GMT 2007
	Diagnostic Status: Error										
	Scientific Instruments: WFPC2										
	Special Requirements: SCHED 80%; BETWEEN 02-APR-2007:12:15:00 AND 02-APR-2007:12:33:00; BETWEEN 09-APR-2007:15:57:00 AND 09-APR-2007:16:15:00; BETWEEN 16-APR-2007:19:33:00 AND 16-APR-2007:19:51:00; BETWEEN 23-APR-2007:23:05:00 AND 23-APR-2007:23:23:00; BETWEEN 01-MAY-2007:02:34:00 AND 01-MAY-2007:02:52:00; BETWEEN 08-MAY-2007:05:58:00 AND 08-MAY-2007:06:16:00; BETWEEN 15-MAY-2007:09:21:00 AND 15-MAY-2007:09:39:00; BETWEEN 22-MAY-2007:12:40:00 AND 22-MAY-2007:12:58:00; BETWEEN 29-MAY-2007:15:58:00 AND 29-MAY-2007:16:16:00										
Comments: The middle of the reappearance of Ganymede should happen between exposures B300 and C953.											
Diagnostics	(A890 (41.002)) Error: This attribute cannot have this value due to other choices: Wavelength=8930.0 The combination of attributes chosen is illegal.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window					
	(6)	GANYMEDE+JUPITER	STD=JUPITER	TYPE=POS_ANGLE,RAD=14.0,ANG=13							
R											
5.0,REF=NORTH											
Comments: Southern part of Jupiter including Ganymede.											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	A255	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F255W	ATD-GAIN=7;		Sequence 1-14 Non-Int	160.0 Secs		
						CR-SPLIT=NO			[==>]	[1]	
	2	A890	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	FQCH4P15	ATD-GAIN=15;		Sequence 1-14 Non-Int	40.0 Secs		
					8930.0 A	CR-SPLIT=NO			[==>]	[1]	
	3	A336	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F336W	ATD-GAIN=15;		Sequence 1-14 Non-Int	12.0 Secs		
						CR-SPLIT=NO			[==>]	[1]	
	4	A502	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15;		Sequence 1-14 Non-Int	16.0 Secs		
						CR-SPLIT=NO			[==>]	[1]	
	5	A953	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15;		Sequence 1-14 Non-Int	20.0 Secs		
						CR-SPLIT=NO			[==>]	[1]	
	6	B300	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15;		Sequence 1-14 Non-Int	20.0 Secs		
						CR-SPLIT=NO			[==>]	[1]	
	7	B410	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15;		Sequence 1-14 Non-Int	8.0 Secs		
						CR-SPLIT=NO			[==>]	[1]	
	8	B673	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15;		Sequence 1-14 Non-Int	4.0 Secs		
					CR-SPLIT=NO			[==>]	[1]		

Proposal 10468 - Visit 41 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	9	B953	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]
	10	C300	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]
	11	C410	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	8.0 Secs [==>]	[1]
	12	C673	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	4.0 Secs [==>]	[1]
	13	C953	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]
	14	D502	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	16.0 Secs [==>]	[1]



Proposal 10468 - Visit 42 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Visit	Proposal 10468, Visit 42, withdrawn										Fri Mar 30 01:04:45 GMT 2007
	Diagnostic Status: Error										
	Scientific Instruments: WFPC2 Special Requirements: SCHED 80%; BETWEEN 02-APR-2007:12:30:00 AND 02-APR-2007:12:55:00; BETWEEN 09-APR-2007:16:12:00 AND 09-APR-2007:16:37:00; BETWEEN 16-APR-2007:19:48:00 AND 16-APR-2007:20:13:00; BETWEEN 23-APR-2007:23:20:00 AND 23-APR-2007:23:45:00; BETWEEN 01-MAY-2007:02:49:00 AND 01-MAY-2007:03:14:00; BETWEEN 08-MAY-2007:06:13:00 AND 08-MAY-2007:06:38:00; BETWEEN 15-MAY-2007:09:36:00 AND 15-MAY-2007:10:01:00; BETWEEN 22-MAY-2007:12:55:00 AND 22-MAY-2007:13:20:00; BETWEEN 29-MAY-2007:16:13:00 AND 29-MAY-2007:16:38:00 Comments: The middle of the reappearance of Ganymede should happen between exposures A502 and C673.										
Diagnostics	(D890 (42.013)) Error: This attribute cannot have this value due to other choices: Wavelength=8930.0 The combination of attributes chosen is illegal.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window					
	(6)	GANYMEDE+JUPITER	STD=JUPITER	TYPE=POS_ANGLE,RAD=14.0,ANG=13							
		R		5.0,REF=NORTH							
	Comments: Southern part of Jupiter including Ganymede.										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	A336	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F336W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	12.0 Secs [==>]	[1]	
	2	A502	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	16.0 Secs [==>]	[1]	
	3	A953	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]	
	4	B300	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]	
	5	B410	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	8.0 Secs [==>]	[1]	
	6	B673	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	4.0 Secs [==>]	[1]	
	7	B953	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]	
	8	C300	(6) GANYMEDE+JUPITER	WFPC2, IMAGE, FQCH4P15	F300W	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-Int	20.0 Secs [==>]	[1]	

Proposal 10468 - Visit 42 - Jupiter's Upper Stratospheric Hazes Probed with Ganymede

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	9	C410	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F410M	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	8.0 Secs [==>]	[1]
	10	C673	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F673N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	4.0 Secs [==>]	[1]
	11	C953	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F953N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	20.0 Secs [==>]	[1]
	12	D502	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F502N	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	16.0 Secs [==>]	[1]
	13	D890	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	FQCH4P15 8930.0 A	ATD-GAIN=15; CR-SPLIT=NO		Sequence 1-14 Non-I nt	40.0 Secs [==>]	[1]
	14	D255	(6) GANYMEDE+J UPITER	WFPC2, IMAGE, FQCH4P15	F255W	ATD-GAIN=7; CR-SPLIT=NO		Sequence 1-14 Non-I nt	160.0 Secs [==>]	[1]

