



13934 - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Cycle: 22, Proposal Category: GO
(Availability Mode: AVAILABLE)

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>
11	(1) C2013A1	WFC3/UVIS	1	01-Oct-2014 21:08:52.0	yes
12	(1) C2013A1	WFC3/UVIS	1	01-Oct-2014 21:08:57.0	yes
13	(1) C2013A1	WFC3/UVIS	1	01-Oct-2014 21:09:02.0	yes
14	(1) C2013A1	WFC3/UVIS	1	01-Oct-2014 21:09:09.0	yes
15	(1) C2013A1	WFC3/UVIS	1	01-Oct-2014 21:09:16.0	yes
16	(3) MARS-ACS-SBC	ACS/SBC	1	01-Oct-2014 21:09:18.0	yes
17	(1) C2013A1	WFC3/UVIS	1	01-Oct-2014 21:09:21.0	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>
18	(3) MARS-ACS-SBC	ACS/SBC	1	01-Oct-2014 21:09:23.0	yes
19	(1) C2013A1	WFC3/UVIS	1	01-Oct-2014 21:09:27.0	yes
20	(1) C2013A1	WFC3/UVIS	1	01-Oct-2014 21:09:31.0	yes

10 Total Orbits Used

ABSTRACT

Comet Siding Spring's extremely close approach to Mars (within 138,000 km, or 1/3 the Earth-Moon distance) on 19 Oct 2014 offers us the first opportunity in the Chandra era to study the interaction between the solar wind, a comets extended atmosphere, and a planets exosphere. Chandra and Hubble will also be able to support the observations of the comet by the NASA and ESA Mars spacecraft as they study the comet during its close flyby. X-ray imagery, photometric lightcurves, and x-ray emission spectra obtained during the encounter will be compared to the Chandra comet database of 12 comets to determine the solar wind flux at Mars, the draping of the solar wind around the planet, and the input of comet gases into the Martian exosphere.

OBSERVING DESCRIPTION

On Oct 19 2014, circa 18:30 UT, dynamically new Oort Cloud comet C/2013 A1 (Siding Spring) will fly within 138,000 km of the planet Mars. This distance is so small (1/3 the mean Earth-Moon distance, and 10 times closer than any comet has approached the Earth in the modern spaceflight era) that Mars will be moving through the comet's outer atmosphere, or coma, carrying Mars, and its orbiting and ground based roving spacecraft fleet with it. In this way the Mars fleet will be participating in a close comet flyby. Both Mars and comets are known soft X-ray emitters, and the encounter will provide an opportunity for Chandra to observe a comet immersed in a planet's exosphere + draped magnetic field, and how a comet can affect a planet's exosphere. Coincident with our 19 Oct 2014 14:30 to 20 Oct 2014 05:30 UT Chandra measurements, we also request 10 orbits of HST time in order to accurately map out the comets neutral gas coma as it interacts with the solar wind to create the X-rays observed by Chandra. On our team is Dr Jian-Yang Li, PI of the HST program 13610 that has characterized the coma and tail of comet Siding Spring in Oct 2013 and Jan and Mar 2014. Observations of the Mars and Comet system will be feasible if we place Mars just outside the camera FOV. We require simultaneous HST observations because of the need for deep, continuous monitoring of the neutral gas around the comet and Mars, as we expect large changes in the comets coma structure as it flies through near-Mars space. The goal for these coordinated HST observations is to provide simultaneous measurement of the distribution of neutral gas species in the coma during the close encounter of C/Siding Spring with Mars. We plan to use the large FOV provided by the WFC3 camera. The V-band magnitude of Mars will be 0.9, while the total magnitude for C/Siding Spring will be 10.7. Despite the large brightness contrast between Mars and the comet, analysis of the scattered light from Mars shows that, as long as Mars is outside of the FOV by

Proposal 13934 (STScI Edit Number: 43, Created: Wednesday, October 1, 2014 8:09:33 PM EST) - Overview

several hundred pixels (a few tens of arcsecond), the scattered light from Mars is sufficiently low and will not interfere with the observations of the cometary coma. This condition is easily satisfied with the 89 arcsec closest apparent angular separation between Mars and the comet as viewed from Earth. Lacking appropriate narrowband filters that are specifically designed to capture gas emission from comets, we will use the wideband Johnson B filter F438W to capture many strong gas emissions from several possible gas species in cometary coma (Feldman et al., 2004), and use a broadband R filter F775W to characterize the brightness distribution from dust coma for subtraction from B-band images. The subtraction also facilitates the removal of any possible low-level scattered light from Mars.

Working in concert with John Clarke's HST program 13795 we have converted two of our comet visits into copies of his ACS/SBC Mars imaging visits. In strategizing with all the HST teams involved in this observing campaign, we felt this would optimize the overall 22-orbit campaign. This change was made in cooperation with John Clarke, and a change request has been submitted.

Proposal 13934 - Comet, all full frame (11) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Visit	Proposal 13934, Comet, all full frame (11), implementation Thu Oct 02 01:09:33 GMT 2014						
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 19-OCT-2014:00:30:00 AND 19-OCT-2014:01:30:00; VISIBILITY INTERVAL 52.5 M						
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(1)	C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014
<i>Comments: JPL orbit solution #85. Updated Oct-01, 2014.</i>							

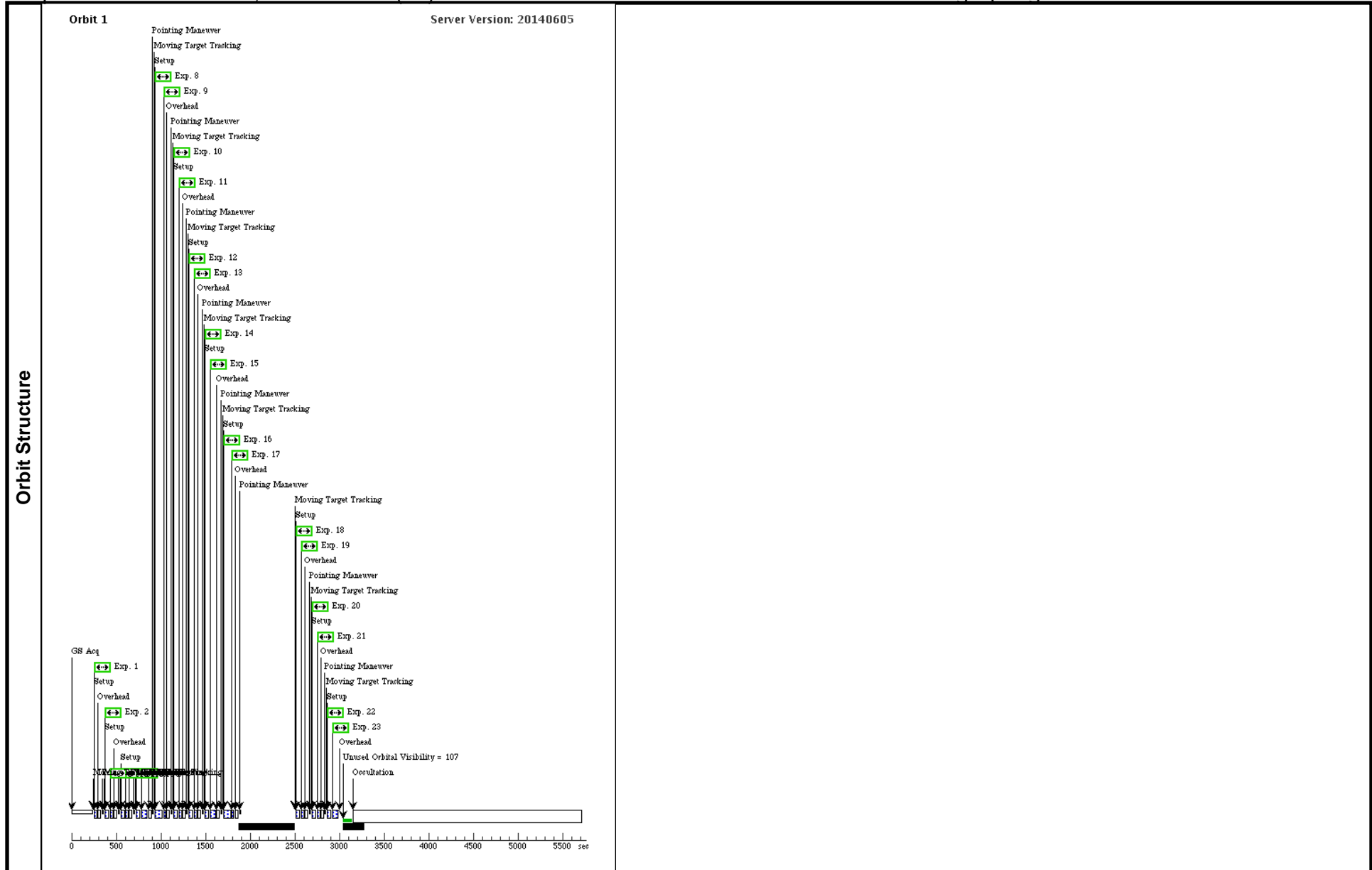
Proposal 13934 - Comet, all full frame (11) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; GS ACQ SCENARI O SINGLE		3 Secs (3 Secs) [==>]	[1]
	2	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	3	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33		4 Secs (4 Secs) [==>]	[1]
	4	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30		4 Secs (4 Secs) [==>]	[1]
	5	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30		3 Secs (3 Secs) [==>]	[1]
	6	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	7	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33		38 Secs (38 Secs) [==>]	[1]
	8	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30		38 Secs (38 Secs) [==>]	[1]
	9	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30		3 Secs (3 Secs) [==>]	[1]
	10	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	11	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33		4 Secs (4 Secs) [==>]	[1]
	12	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30		4 Secs (4 Secs) [==>]	[1]
	13	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30		3 Secs (3 Secs) [==>]	[1]
	14	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]

Proposal 13934 - Comet, all full frame (11) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

15	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33	38 Secs (38 Secs)	[1]
16	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30	38 Secs (38 Secs)	[1]
17	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30	3 Secs (3 Secs)	[1]
18	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33	3 Secs (3 Secs)	[1]
19	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33	4 Secs (4 Secs)	[1]
20	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30	4 Secs (4 Secs)	[1]
21	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30	3 Secs (3 Secs)	[1]
22	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33	3 Secs (3 Secs)	[1]
23	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33	36 Secs (36 Secs)	[1]

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Proposal 13934 - Comet, full frame + quad CN (12) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

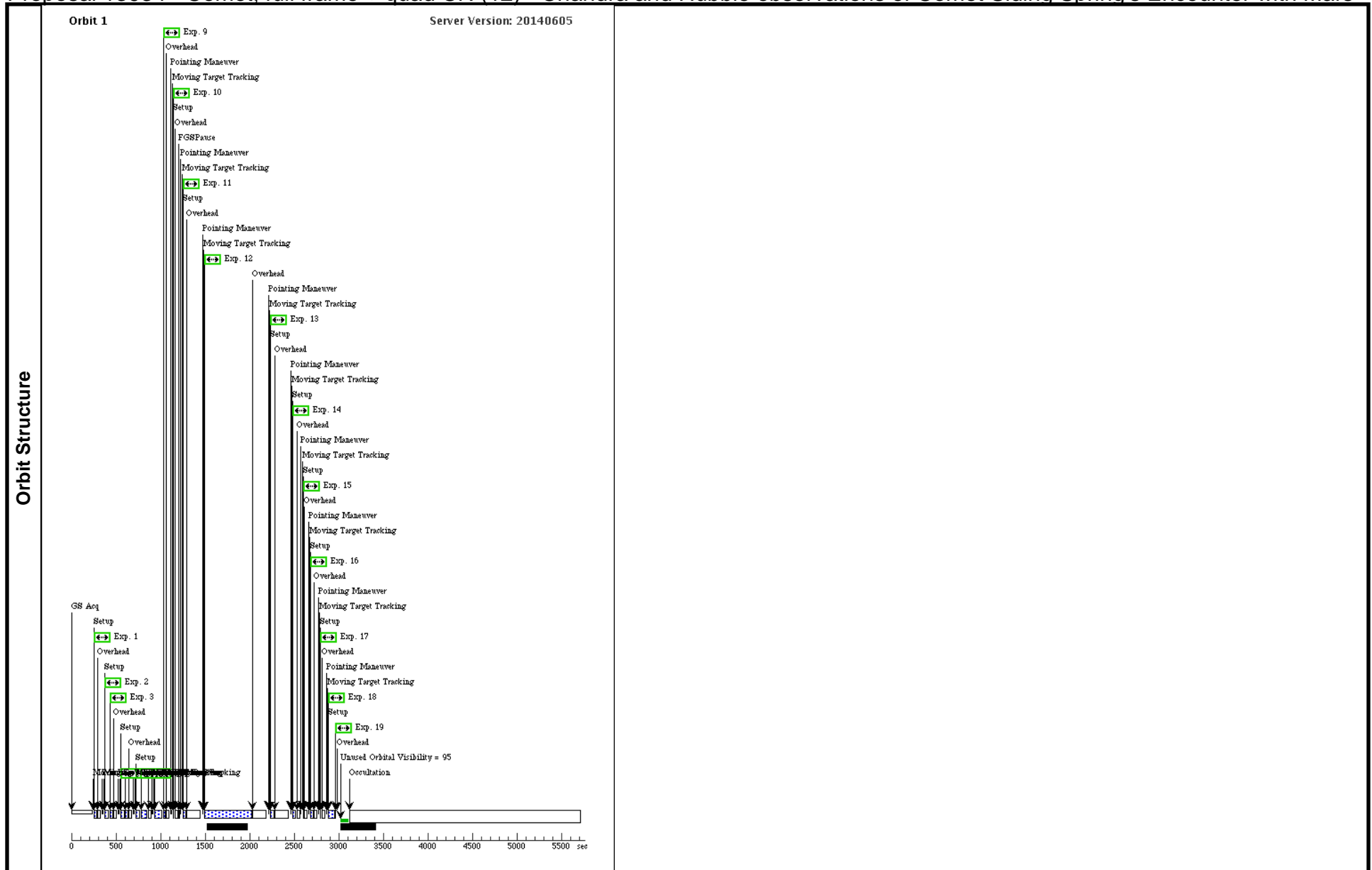
Visit	Proposal 13934, Comet, full frame + quad CN (12), implementation Thu Oct 02 01:09:34 GMT 2014																			
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Diagnostics	(Exposure 12 (Comet, full frame + quad CN (12))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp or WFC3 quad filters as central wavelengths & transmission efficiencies vary within the apertures.																			
Solar System Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Window</th> <th>Ephem Center</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>C2013A1</td> <td>TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB</td> <td></td> <td></td> <td>MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014</td> <td>EARTH</td> </tr> </tbody> </table>						#	Name	Level 1	Level 2	Level 3	Window	Ephem Center	(1)	C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB			MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014	EARTH
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<i>Comments: JPL orbit solution #85. Updated Oct-01, 2014.</i>																				

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Exposures	1	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; GS ACQ SCENARI O SINGLE		3 Secs (3 Secs) [==>]	[1]
	2	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	3	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33		4 Secs (4 Secs) [==>]	[1]
	4	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30		4 Secs (4 Secs) [==>]	[1]
	5	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30		3 Secs (3 Secs) [==>]	[1]
	6	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	7	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33		38 Secs (38 Secs) [==>]	[1]
	8	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30		38 Secs (38 Secs) [==>]	[1]
	9	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30		3 Secs (3 Secs) [==>]	[1]
	10	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	11	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F689M	CR-SPLIT=NO	POS TARG 18,17; EXP PCS MODE G YRO		15 Secs (15 Secs) [==>]	[1]
	12	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ387N	CR-SPLIT=NO; FLASH=3	POS TARG 9.5,-9.5; EXP PCS MODE G YRO		505 Secs (505 Secs) [==>]	[1]
	13	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F845M	CR-SPLIT=NO	POS TARG 17,18; EXP PCS MODE G YRO		20 Secs (20 Secs) [==>]	[1]
	14	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; EXP PCS MODE G YRO		3 Secs (3 Secs) [==>]	[1]
	15	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; EXP PCS MODE G YRO		3 Secs (3 Secs) [==>]	[1]

Proposal 13934 - Comet, full frame + quad CN (12) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

16	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; EXP PCS MODE G YRO	4 Secs (4 Secs)	
						[==>]	[1]
17	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; EXP PCS MODE G YRO	4 Secs (4 Secs)	
						[==>]	[1]
18	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; EXP PCS MODE G YRO	3 Secs (3 Secs)	
						[==>]	[1]
19	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; EXP PCS MODE G YRO	3 Secs (3 Secs)	
						[==>]	[1]



Proposal 13934 - Comet, all full frame (13) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

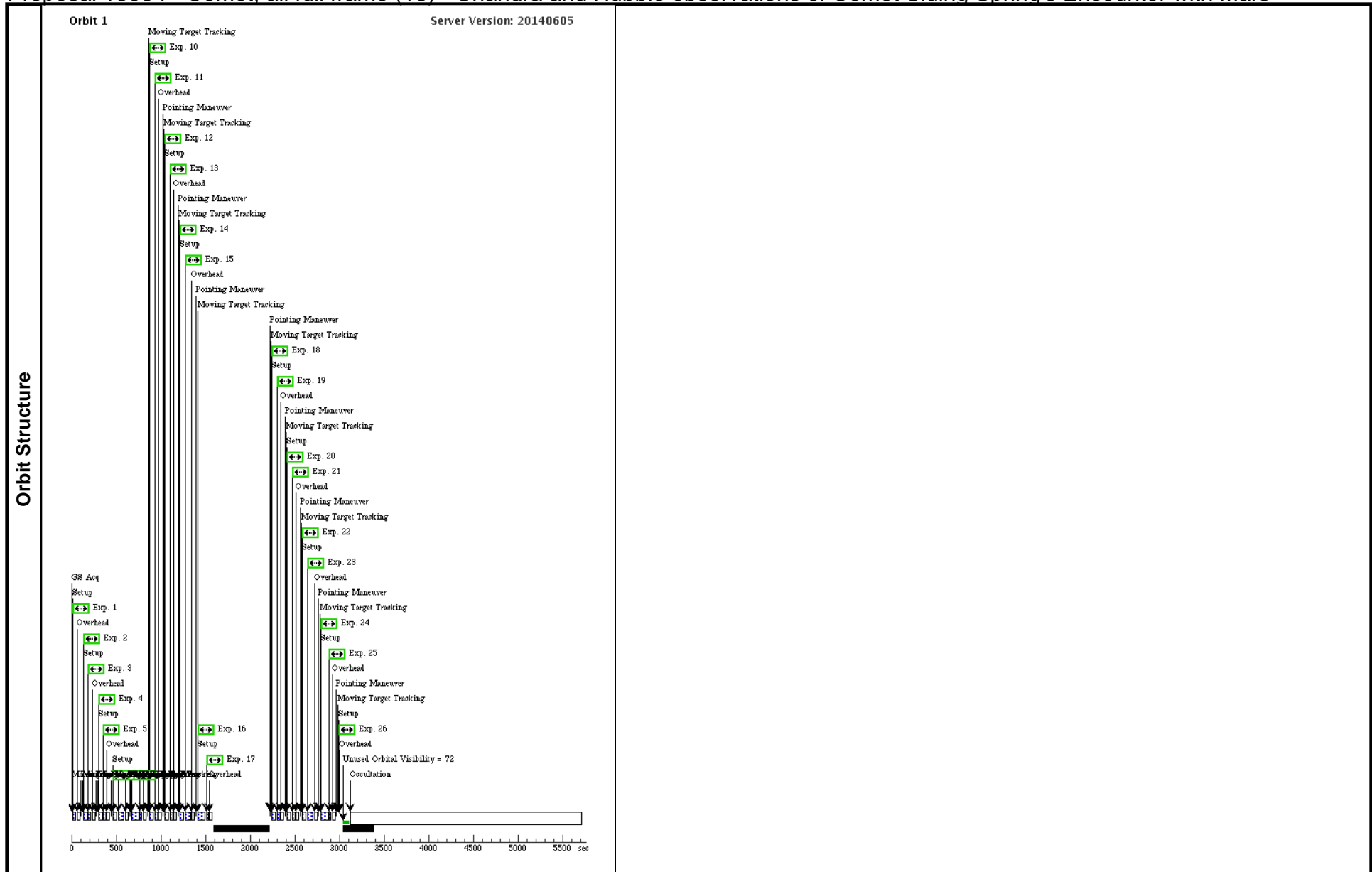
Visit	Proposal 13934, Comet, all full frame (13), implementation Thu Oct 02 01:09:34 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE GYRO; AFTER 12 BY 1.8 Orbits TO 2.2 Orbits; VISIBILITY INTERVAL 52 M						
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window
(1)		C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014
<i>Comments: JPL orbit solution #85. Updated Oct-01, 2014.</i>							

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#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	2	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	3	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11		4 Secs (4 Secs) [==>]	[1]
	4	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11		4 Secs (4 Secs) [==>]	[1]
	5	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	6	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	7	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11		38 Secs (38 Secs) [==>]	[1]
	8	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11		38 Secs (38 Secs) [==>]	[1]
	9	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	10	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	11	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11		4 Secs (4 Secs) [==>]	[1]
	12	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11		4 Secs (4 Secs) [==>]	[1]
	13	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	14	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]

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15	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
16	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
17	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
18	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
19	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs) [==>]	[1]
20	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs) [==>]	[1]
21	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
22	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
23	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
24	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
25	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
26	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]



Proposal 13934 - Comet, all full frame (14) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

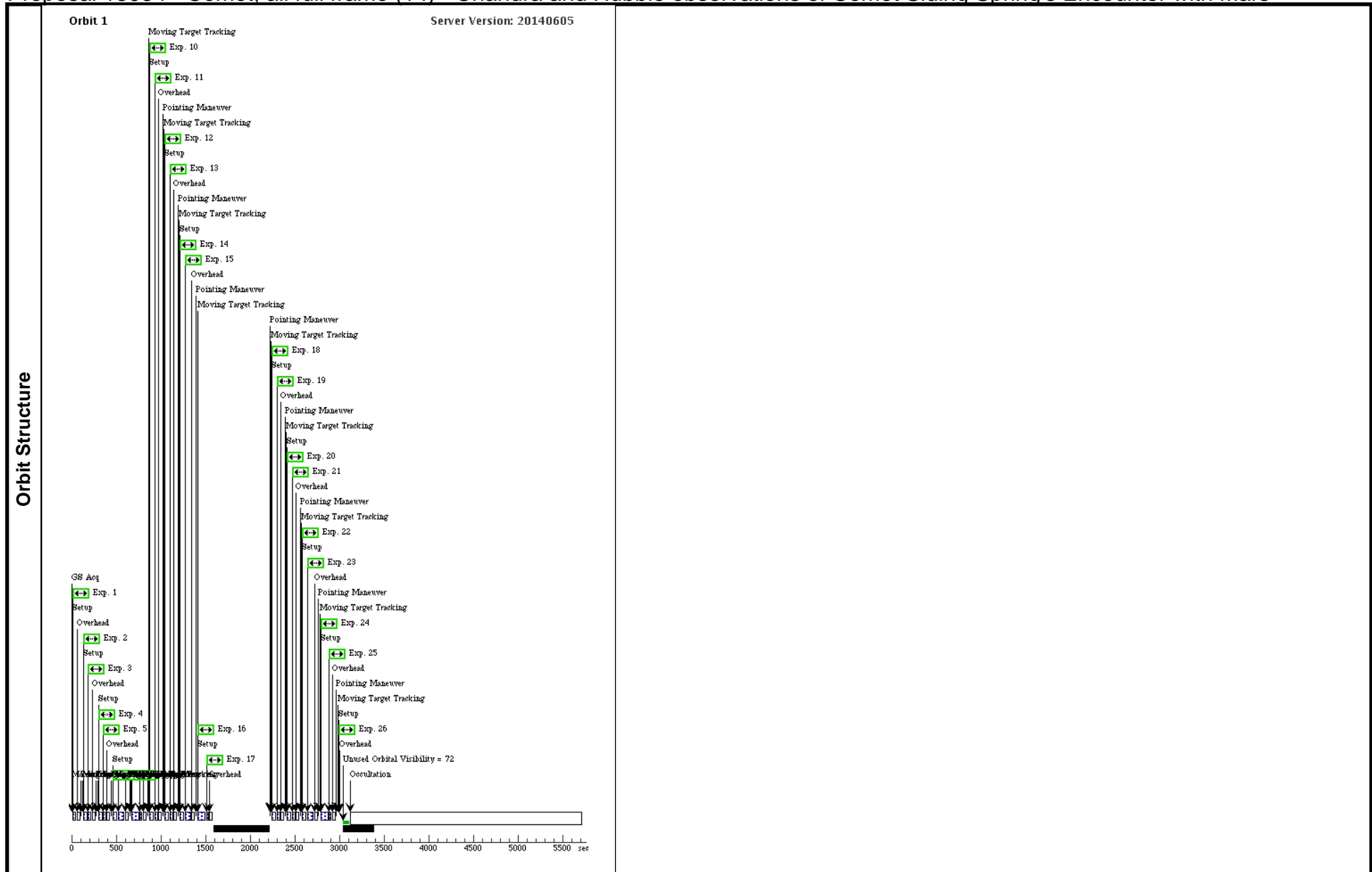
Visit	Proposal 13934, Comet, all full frame (14), implementation Thu Oct 02 01:09:34 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE GYRO; AFTER 13 BY 0.8 Orbits TO 1.2 Orbits; VISIBILITY INTERVAL 52 M						
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window
(1)		C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014
	<i>Comments: JPL orbit solution #85. Updated Oct-01, 2014.</i>						

Proposal 13934 - Comet, all full frame (14) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	2	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	3	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	
	4	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	
	5	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	6	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	7	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs)	[==>]	[1]	
	8	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs)	[==>]	[1]	
	9	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	10	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	11	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	
	12	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	
	13	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
14	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]		

Proposal 13934 - Comet, all full frame (14) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

15	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
16	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
17	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
18	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
19	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs) [==>]	[1]
20	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs) [==>]	[1]
21	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
22	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
23	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
24	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
25	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
26	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]



Proposal 13934 - Comet, full frame + quad CN (15) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Visit	Proposal 13934, Comet, full frame + quad CN (15), implementation Thu Oct 02 01:09:35 GMT 2014						
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE GYRO; AFTER 14 BY 1.8 Orbits TO 2.2 Orbits; VISIBILITY INTERVAL 50 M						
Diagnostics	(Exposure 12 (Comet, full frame + quad CN (15))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp or WFC3 quad filters as central wavelengths & transmission efficiencies vary within the apertures.						
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(1)	C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB			MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014	EARTH
<i>Comments: JPL orbit solution #85. Updated Oct-01, 2014.</i>							

Proposal 13934 - Comet, full frame + quad CN (15) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	2	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	3	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	
	4	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	
	5	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	6	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	7	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs)	[==>]	[1]	
	8	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs)	[==>]	[1]	
	9	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	10	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	11	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F689M	CR-SPLIT=NO	POS TARG 17,18; SAA CONTOUR 11	15 Secs (15 Secs)	[==>]	[1]	
	12	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ387N	CR-SPLIT=NO; FLASH=4	POS TARG 8.5,-8.5; SAA CONTOUR 11	510 Secs (510 Secs)	[==>]	[1]	
	13	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F845M	CR-SPLIT=NO	POS TARG 18,17; SAA CONTOUR 11	20 Secs (20 Secs)	[==>]	[1]	
	14	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
15	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]		

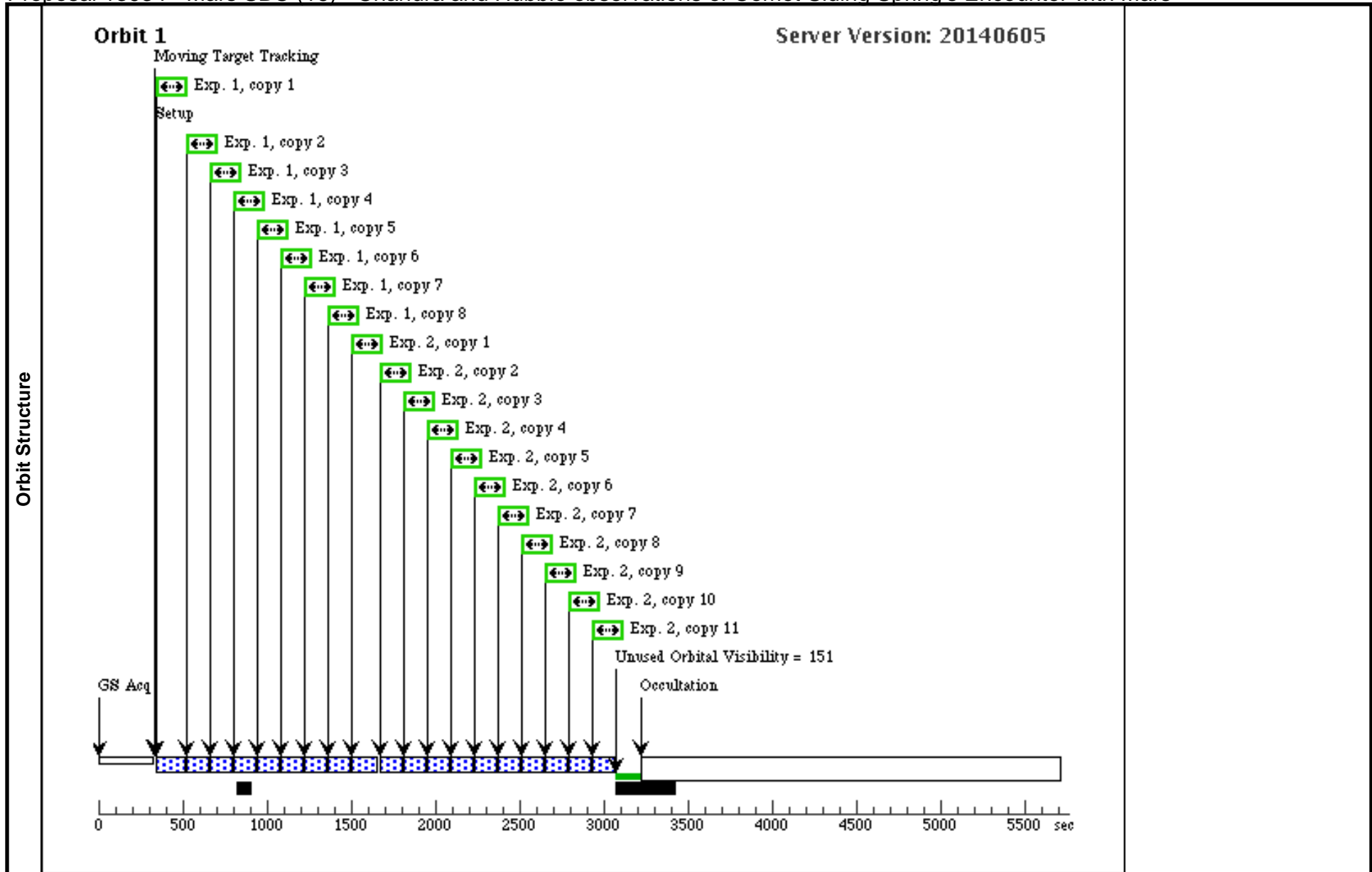
Proposal 13934 - Comet, full frame + quad CN (15) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

16	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs)	
						[==>]	[1]
17	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs)	
						[==>]	[1]
18	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	
						[==>]	[1]
19	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	
						[==>]	[1]
20	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs)	
						[==>]	[1]
21	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs)	
						[==>]	[1]

Proposal 13934 - Mars SBC (16) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Thu Oct 02 01:09:35 GMT 2014

Visit	Proposal 13934, Mars SBC (16), implementation Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: ORIENT 93D TO 95 D; AFTER 15 BY 8.8 Orbits TO 9.2 Orbits									
	(Exposure 1 (Mars SBC (16))) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Mars SBC (16))) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	MARS-ACS-SBC	STD=MARS	TYPE=POS_ANGLE,RAD=13,ANG=320,REF=NORTH			EARTH			
<i>Comments: Offset Mars disc to corner of ACS/SBC field of view to image extended H Lyman alpha coronal emission</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) MARS-ACS-SB C	ACS/SBC, ACCUM, SBC-FIX	F140LP		GS ACQ SCENARI O BASE1B3		100 Secs X 8 (800 Secs)	
	[=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)] [=>(Copy 7)] [=>(Copy 8)]									[1]
2		(3) MARS-ACS-SB C	ACS/SBC, ACCUM, SBC-FIX	F115LP					100 Secs X 11 (1100 Secs)	
[=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)] [=>(Copy 7)] [=>(Copy 8)] [=>(Copy 9)] [=>(Copy 10)] [=>(Copy 11)]									[1]	



Proposal 13934 - Comet, full frame + quad CN (17) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

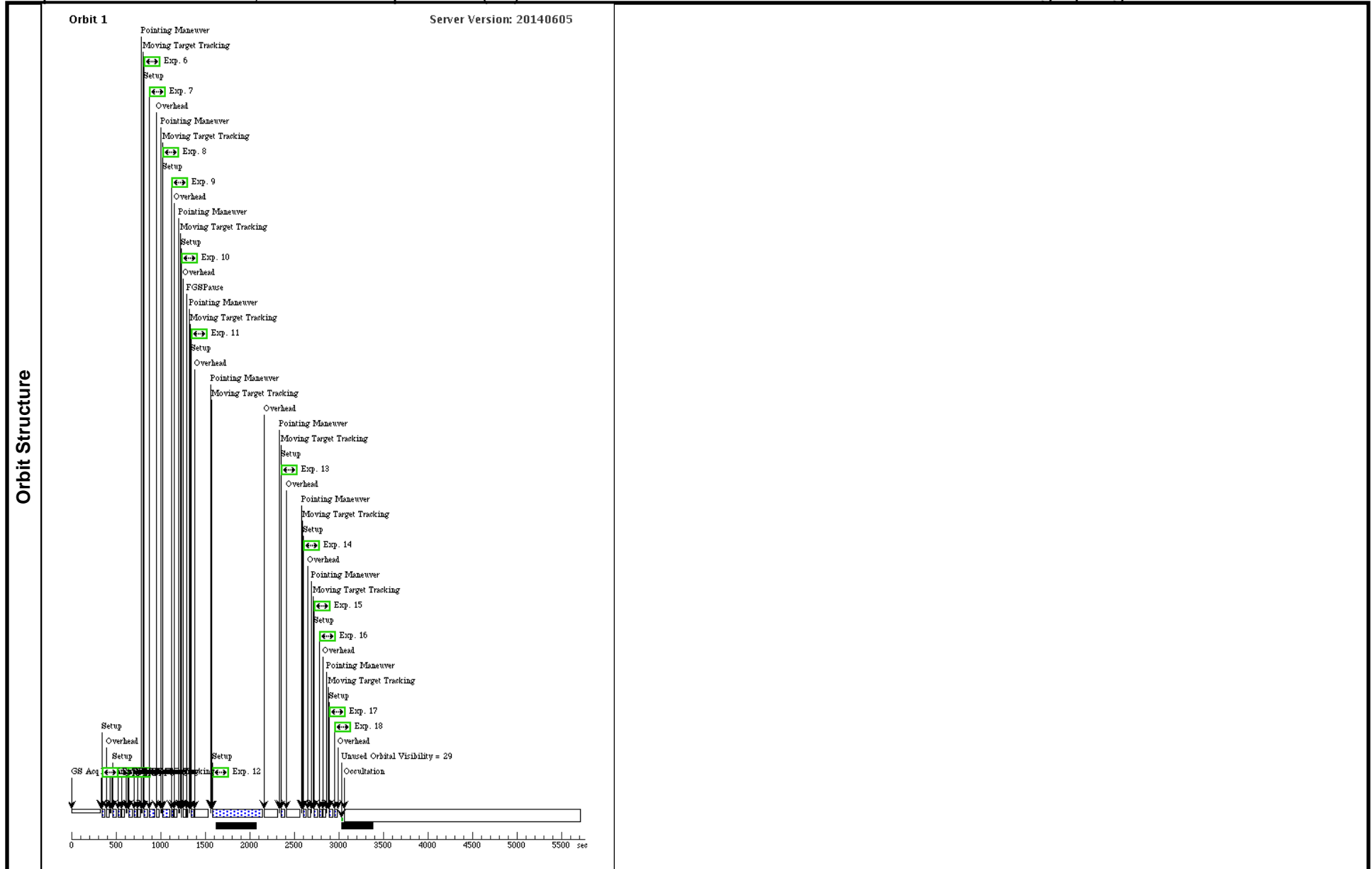
Visit	Proposal 13934, Comet, full frame + quad CN (17), implementation Thu Oct 02 01:09:35 GMT 2014																			
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 16 BY 0.8 Orbits TO 1.2 Orbits; VISIBILITY INTERVAL 51 M																			
Diagnostics	(Exposure 12 (Comet, full frame + quad CN (17))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp or WFC3 quad filters as central wavelengths & transmission efficiencies vary within the apertures.																			
Solar System Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Window</th> <th>Ephem Center</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>C2013A1</td> <td>TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB</td> <td></td> <td></td> <td>MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014</td> <td>EARTH</td> </tr> </tbody> </table>						#	Name	Level 1	Level 2	Level 3	Window	Ephem Center	(1)	C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB			MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014	EARTH
	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center													
(1)	C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB			MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014	EARTH														
<i>Comments: JPL orbit solution #85. Updated Oct-01, 2014.</i>																				

Proposal 13934 - Comet, full frame + quad CN (17) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30		3 Secs (3 Secs) [==>]	[1]
	2	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	3	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33		4 Secs (4 Secs) [==>]	[1]
	4	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30		4 Secs (4 Secs) [==>]	[1]
	5	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30		3 Secs (3 Secs) [==>]	[1]
	6	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	7	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33		38 Secs (38 Secs) [==>]	[1]
	8	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30		38 Secs (38 Secs) [==>]	[1]
	9	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30		3 Secs (3 Secs) [==>]	[1]
	10	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33		3 Secs (3 Secs) [==>]	[1]
	11	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F689M	CR-SPLIT=NO	POS TARG 17,18; EXP PCS MODE G YRO		15 Secs (15 Secs) [==>]	[1]
	12	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ387N	CR-SPLIT=NO; FLASH=4	POS TARG 9.5,-9.5; EXP PCS MODE G YRO		535 Secs (535 Secs) [==>]	[1]
	13	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F845M	CR-SPLIT=NO	POS TARG 18,17; EXP PCS MODE G YRO		20 Secs (20 Secs) [==>]	[1]
	14	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; EXP PCS MODE G YRO		3 Secs (3 Secs) [==>]	[1]
	15	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; EXP PCS MODE G YRO		3 Secs (3 Secs) [==>]	[1]

Proposal 13934 - Comet, full frame + quad CN (17) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

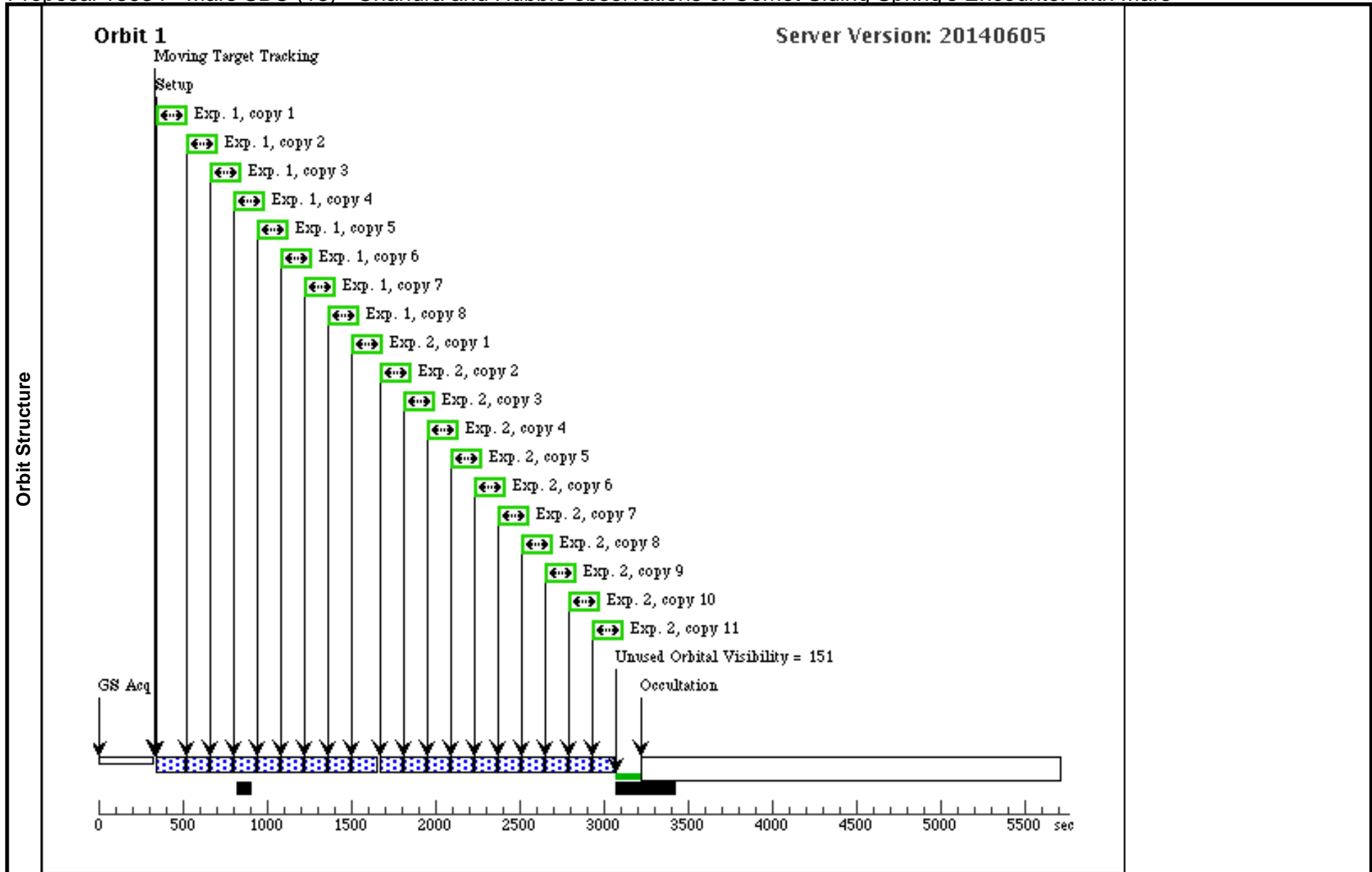
16	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; EXP PCS MODE G YRO	4 Secs (4 Secs)	
						[==>]	[1]
17	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; EXP PCS MODE G YRO	4 Secs (4 Secs)	
						[==>]	[1]
18	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; EXP PCS MODE G YRO	3 Secs (3 Secs)	
						[==>]	[1]



Proposal 13934 - Mars SBC (18) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Thu Oct 02 01:09:35 GMT 2014

Visit	Proposal 13934, Mars SBC (18), implementation Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: ORIENT 93D TO 95 D; AFTER 17 BY 0.8 Orbits TO 1.2 Orbits									
	(Exposure 1 (Mars SBC (18))) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Mars SBC (18))) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	MARS-ACS-SBC	STD=MARS	TYPE=POS_ANGLE,RAD=13,ANG=320,REF=NORTH			EARTH			
<i>Comments: Offset Mars disc to corner of ACS/SBC field of view to image extended H Lyman alpha coronal emission</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) MARS-ACS-SB C	ACS/SBC, ACCUM, SBC-FIX	F140LP		GS ACQ SCENARI O BASE1B3		100 Secs X 8 (800 Secs)	
	[=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)] [=>(Copy 7)] [=>(Copy 8)]									[1]
2		(3) MARS-ACS-SB C	ACS/SBC, ACCUM, SBC-FIX	F115LP					100 Secs X 11 (1100 Secs)	
[=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)] [=>(Copy 7)] [=>(Copy 8)] [=>(Copy 9)] [=>(Copy 10)] [=>(Copy 11)]									[1]	



Proposal 13934 - Comet, full frame + quad CN (19) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

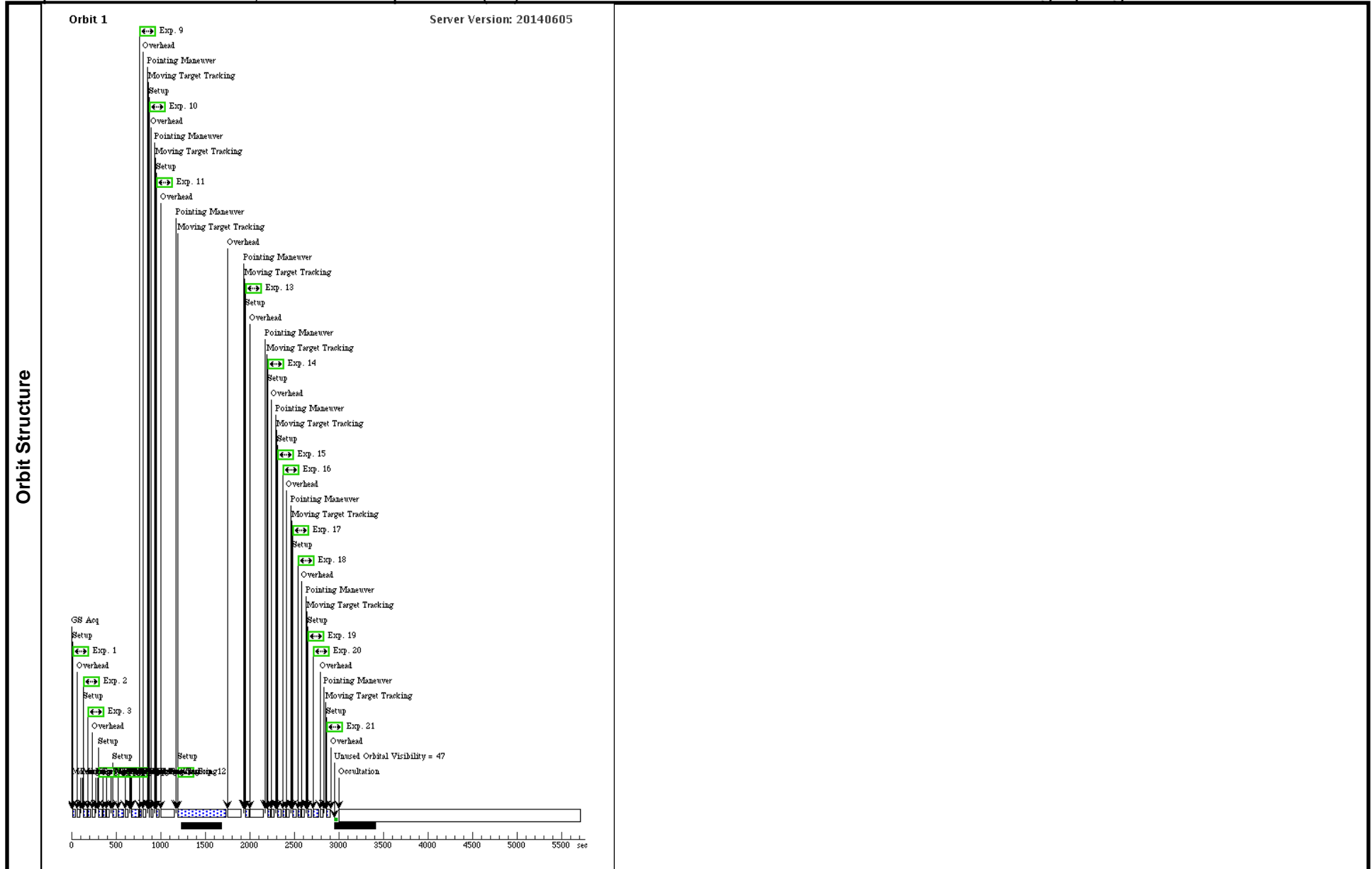
Visit	Proposal 13934, Comet, full frame + quad CN (19), implementation Thu Oct 02 01:09:35 GMT 2014						
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE GYRO; AFTER 18 BY 0.8 Orbits TO 1.2 Orbits; VISIBILITY INTERVAL 50 M						
Diagnostics	(Exposure 12 (Comet, full frame + quad CN (19))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp or WFC3 quad filters as central wavelengths & transmission efficiencies vary within the apertures.						
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(1)	C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014
<i>Comments: JPL orbit solution #85. Updated Oct-01, 2014.</i>							

Proposal 13934 - Comet, full frame + quad CN (19) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	2	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	3	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	
	4	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	
	5	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	6	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	7	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs)	[==>]	[1]	
	8	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs)	[==>]	[1]	
	9	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	10	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	11	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F689M	CR-SPLIT=NO	POS TARG 17,18; SAA CONTOUR 11	15 Secs (15 Secs)	[==>]	[1]	
	12	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ387N	CR-SPLIT=NO; FLASH=3	POS TARG 8.5,-8.5; SAA CONTOUR 11	515 Secs (515 Secs)	[==>]	[1]	
	13	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F845M	CR-SPLIT=NO	POS TARG 18,17; SAA CONTOUR 11	20 Secs (20 Secs)	[==>]	[1]	
	14	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	15	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	[==>]	[1]	
	16	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs)	[==>]	[1]	

Proposal 13934 - Comet, full frame + quad CN (19) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

17	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs)	
						[==>]	[1]
18	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs)	
						[==>]	[1]
19	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs)	
						[==>]	[1]
20	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs)	
						[==>]	[1]
21	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs)	
						[==>]	[1]



Proposal 13934 - Comet, all full frame (20) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

Visit	Proposal 13934, Comet, all full frame (20), implementation Thu Oct 02 01:09:36 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE GYRO; AFTER 19 BY 2.8 Orbits TO 3.2 Orbits; VISIBILITY INTERVAL 52 M						
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window
(1)		C2013A1	TYPE=COMET,Q=1.3986474103895 88,E=1.000688626405008,I=129.0273 584753412,O=300.9763462911545,W =2.442757978652319,T=25-OCT- 2014:08:09:09,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Planning Start: 19-OCT-2014 MOSS Planning End: 21-OCT-2014
<i>Comments: JPL orbit solution #85. Updated Oct-01, 2014.</i>							

Proposal 13934 - Comet, all full frame (20) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	2	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	3	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11		4 Secs (4 Secs) [==>]	[1]
	4	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11		4 Secs (4 Secs) [==>]	[1]
	5	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	6	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	7	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11		38 Secs (38 Secs) [==>]	[1]
	8	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11		38 Secs (38 Secs) [==>]	[1]
	9	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	10	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	11	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11		4 Secs (4 Secs) [==>]	[1]
	12	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11		4 Secs (4 Secs) [==>]	[1]
	13	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]
	14	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11		3 Secs (3 Secs) [==>]	[1]

Proposal 13934 - Comet, all full frame (20) - Chandra and Hubble observations of Comet Siding Spring's Encounter with Mars

15	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
16	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
17	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
18	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
19	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	4 Secs (4 Secs) [==>]	[1]
20	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F547M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	4 Secs (4 Secs) [==>]	[1]
21	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
22	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
23	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 36,33; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
24	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO; BIN=3; FLASH=7	POS TARG 39,30; SAA CONTOUR 11	38 Secs (38 Secs) [==>]	[1]
25	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 39,30; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]
26	(1) C2013A1	WFC3/UVIS, ACCUM, UVIS	F775W	CR-SPLIT=NO; BIN=3; FLASH=6	POS TARG 36,33; SAA CONTOUR 11	3 Secs (3 Secs) [==>]	[1]

