



13492 - Hubble Spectroscopy of Sungrazing Comet ISON

Cycle: 21, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. Harold A. Weaver (PI) (Contact)	The Johns Hopkins University Applied Physics Laboratory	hal.weaver@jhuapl.edu
Dr. Michael F. A'Hearn (CoI)	University of Maryland	ma@astro.umd.edu
Dr. Dennis Bodewits (CoI)	University of Maryland	dennis@astro.umd.edu
Dr. Paul D. Feldman (CoI)	The Johns Hopkins University	pdf@pha.jhu.edu
Dr. Neil Dello Russo (CoI)	The Johns Hopkins University Applied Physics Laboratory	neil.dello.russo@jhuapl.edu
Dr. Michael R. Combi (CoI)	University of Michigan	mcombi@engin.umich.edu
Prof. Stephan Robert McCandliss (CoI)	The Johns Hopkins University	stephan@pha.jhu.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>
01	(1) COMET-ISON-EPOCH1	COS/FUV COS/NUV	1	16-Oct-2013 21:41:28.0	yes
02	(1) COMET-ISON-EPOCH1	COS/FUV COS/NUV	1	16-Oct-2013 21:41:37.0	yes
03	(1) COMET-ISON-EPOCH1	STIS/CCD STIS/NUV-MAMA	1	16-Oct-2013 21:41:44.0	yes
A1	(1) COMET-ISON-EPOCH1	COS/FUV COS/NUV	1	16-Oct-2013 21:41:52.0	yes

Proposal 13492 (STScI Edit Number: 0, Created: Wednesday, October 16, 2013 8:43:55 PM EST) - Overview

<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>
A2	(1) COMET-ISON-EPOCH1	COS/FUV COS/NUV	1	16-Oct-2013 21:42:00.0	yes
A3	(1) COMET-ISON-EPOCH1	STIS/CCD STIS/NUV-MAMA	1	16-Oct-2013 21:42:08.0	yes
04	(2) COMET-ISON-EPOCH2	STIS/CCD STIS/NUV-MAMA	1	16-Oct-2013 21:42:13.0	yes
05	(2) COMET-ISON-EPOCH2	COS/FUV COS/NUV	1	16-Oct-2013 21:42:20.0	yes
06	(2) COMET-ISON-EPOCH2	COS/FUV COS/NUV	1	16-Oct-2013 21:42:26.0	yes
07	(2) COMET-ISON-EPOCH2	STIS/CCD STIS/NUV-MAMA	1	16-Oct-2013 21:42:32.0	yes
08	(2) COMET-ISON-EPOCH2	STIS/CCD STIS/FUV-MAMA	1	16-Oct-2013 21:42:39.0	yes
09	(2) COMET-ISON-EPOCH2	STIS/CCD STIS/FUV-MAMA	1	16-Oct-2013 21:42:46.0	yes
10	(2) COMET-ISON-EPOCH2	STIS/CCD STIS/FUV-MAMA	1	16-Oct-2013 21:42:51.0	yes
11	(4) COMET-ISON-EPOCH2-OFFSET	STIS/FUV-MAMA	1	16-Oct-2013 21:42:57.0	yes
12	(3) COMET-ISON-EPOCH3	STIS/CCD STIS/NUV-MAMA	1	16-Oct-2013 21:43:03.0	yes
13	(3) COMET-ISON-EPOCH3	COS/FUV COS/NUV	1	16-Oct-2013 21:43:10.0	yes
14	(3) COMET-ISON-EPOCH3	COS/FUV COS/NUV	1	16-Oct-2013 21:43:16.0	yes
15	(3) COMET-ISON-EPOCH3	STIS/CCD STIS/NUV-MAMA	1	16-Oct-2013 21:43:22.0	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>
16	(3) COMET-ISON-EPOCH3	STIS/CCD STIS/FUV-MAMA	1	16-Oct-2013 21:43:28.0	yes
17	(3) COMET-ISON-EPOCH3	STIS/CCD STIS/FUV-MAMA	1	16-Oct-2013 21:43:34.0	yes
18	(3) COMET-ISON-EPOCH3	STIS/CCD STIS/FUV-MAMA	1	16-Oct-2013 21:43:41.0	yes
19	(5) COMET-ISON-EPOCH3-OFFSET	STIS/FUV-MAMA	1	16-Oct-2013 21:43:47.0	yes

22 Total Orbits Used

ABSTRACT

The recent discovery of Comet ISON (C/2012 S1) at a heliocentric distance of ~6 AU, and its identification as a dynamically new comet passing within two solar radii of the Sun in November 2013, present an exceptional opportunity to investigate the heliocentric evolution of a comet's volatile composition and how that composition responds to an intensive heating event.

C/ISON is predicted to be very bright this fall (naked eye visibility), with large gas production rates enabling higher than usual sensitivities to be achieved. We propose a series of HST observations of C/ISON that aim to:

- (1) monitor the evolution of CO production with heliocentric distance,
- (2) search for compositional changes associated with the intense heating episode during the comet's close approach to the Sun,
- and (3) measure D/H in this comet.

Our focus here is on scientific objectives that are uniquely accomplished via ultraviolet observations with Hubble.

OBSERVING DESCRIPTION

We plan to observe C/ISON at 3 different epochs, comprised of the following:

(1) On 2013-Oct-7, or slightly afterwards: 3 orbits total with 2 orbits of COS/FUV for CO 4PG and 1 orbit for STIS/G230L for OH and CS. This will provide measurements of the volatile abundances at $r \sim 1.54$ AU, although CO Cameron and S2 are long shots at this time.

These 3 orbits should be consecutive.

(2) On 2013-Nov-4, or slightly before: 8 orbits total with 2 orbits of COS/FUV for CO 4PG, 2 orbits for STIS/G230L for OH and CO Cameron, and 4 orbits for STIS/E140H for D/H (3 for D and 1 for H well off the nucleus, where it is optically thin). This will provide measurements of the volatile abundances at $r \sim 0.92$ AU, including pre-perihelion D/H. If possible, we want these 8 orbits to be consecutive.

(3) On 2013-Dec-18, or slightly after: 8 orbits total with 2 orbits of COS/FUV for CO 4PG, 2 orbits for STIS/G230L for OH and CO Cameron, and 4 orbits for STIS/E140H for D/H. This will provide measurements of the volatile abundances and D/H ratio at $r \sim 0.78$ AU, post-perihelion, after the massive heating event. We note that the shedding of substantial mass near perihelion might result in a very different volatile composition post-perihelion, if there is significant variation of the composition with depth in the nucleus.

If possible, we want these 8 orbits to be consecutive.

We have defined 3 different C/ISON targets for the three different epochs (one for each epoch) to reduce confusion because we expect to use different orbital elements for each epoch.

However, in the initial submission the same orbital elements are used for all three epochs.

These latter elements should be good enough for preliminary planning, but should be updated before the final GS selection and bright object checks are made.

There is also an OFFSET target identified for epochs 2 & 3, which will be used for the STIS/E140H orbits when we're offsetting on the sunward side of the nucleus into a region where the H Ly-alpha line should be optically thin.

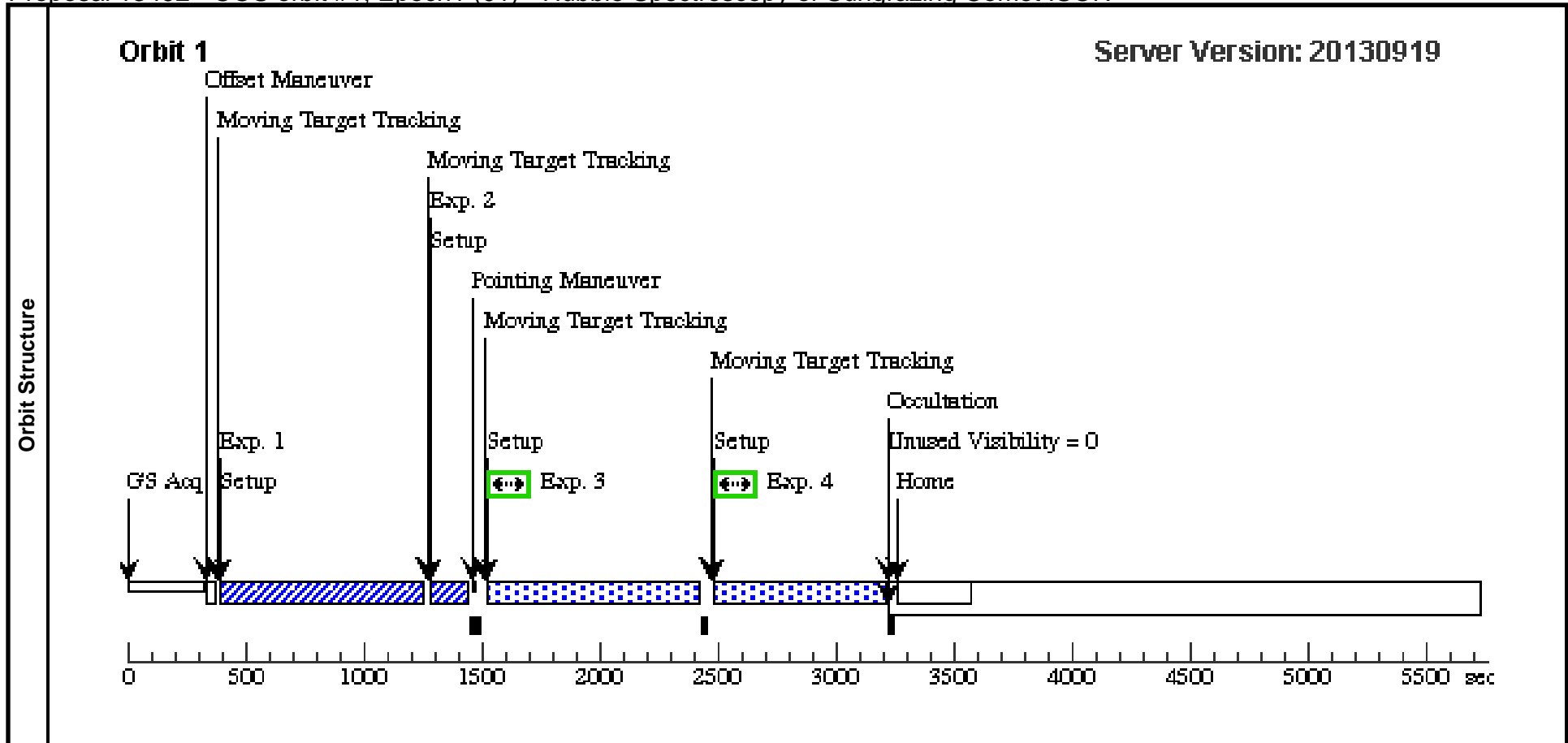
We will use "requires ephemeris correction" commands to perform the final pointing adjustments, roughly 3 days prior to the execution of the observations. We use a different correction ID for

Proposal 13492 (STScI Edit Number: 0, Created: Wednesday, October 16, 2013 8:43:55 PM EST) - Overview
each of the 3 epochs.

Proposal 13492 - COS orbit #1, Epoch1 (01) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:43:56 GMT 2013

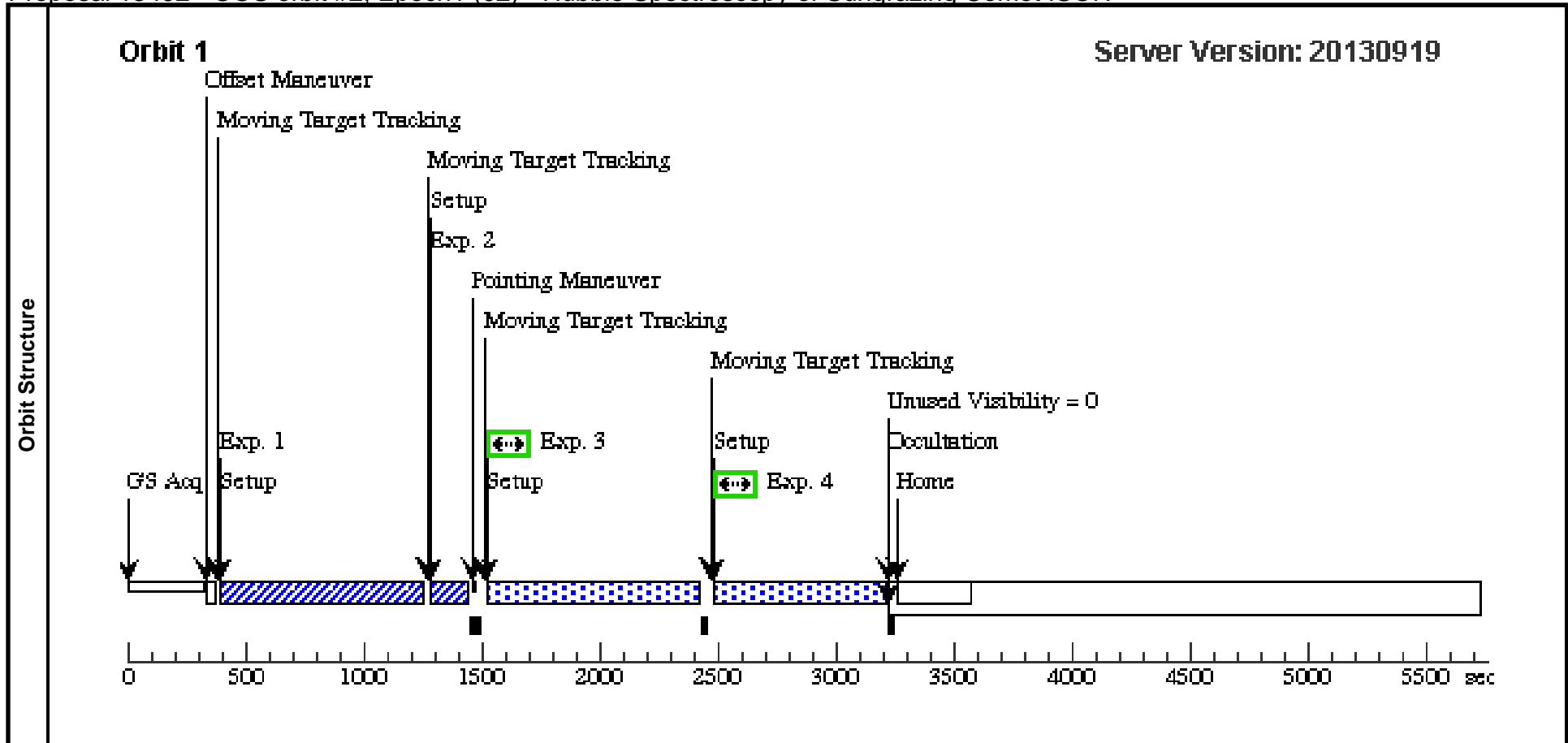
Visit	Proposal 13492, COS orbit #1, Epoch1 (01), failed Diagnostic Status: Warning Scientific Instruments: COS/NUV, COS/FUV Special Requirements: BETWEEN 07-OCT-2013 AND 12-OCT-2013; SEQ 01,02,03 WITHIN 3 Orbits									
	(COS orbit #1, Epoch1 (01)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	COMET-ISON-EPOCH1	TYPE=COMET,Q=0.0124420718853 9975,E=1.000002334241593,I=62.395 99266760140,O=295.6532915725306, W=345.5646847528145,T=28-NOV- 2013:18:36:29,TimeScale=TDB,EQ UINOX=J2000,EPOCH=08-OCT- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH		
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON ACQ SRCH (497995)	(1) COMET-ISON-EPOCH1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	REQ EPHEM CORR ISON01		30 Secs (30 Secs) [==>]	[1]
Comments: Requires ephemeris update										
2	ISON ACQ IMG (497282)	(1) COMET-ISON-EPOCH1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA			REQ EPHEM CORR ISON01		30 Secs (30 Secs) [==>]	[1]
Comments: Requires ephemeris update										
3	ISON COS FP2 (497998)	(1) COMET-ISON-EPOCH1	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=2; EXTENDED=YES	REQ EPHEM CORR ISON01		500 Secs (682 Secs) [==>682.0 Secs]	[1]
Comments: Requires ephemeris correction ISON										
4	ISON COS FP3 (497998)	(1) COMET-ISON-EPOCH1	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=3; EXTENDED=YES	REQ EPHEM CORR ISON01		500 Secs (682 Secs) [==>682.0 Secs]	[1]
Comments: Requires ephemeris correction ISON										



Proposal 13492 - COS orbit #2, Epoch1 (02) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:43:58 GMT 2013

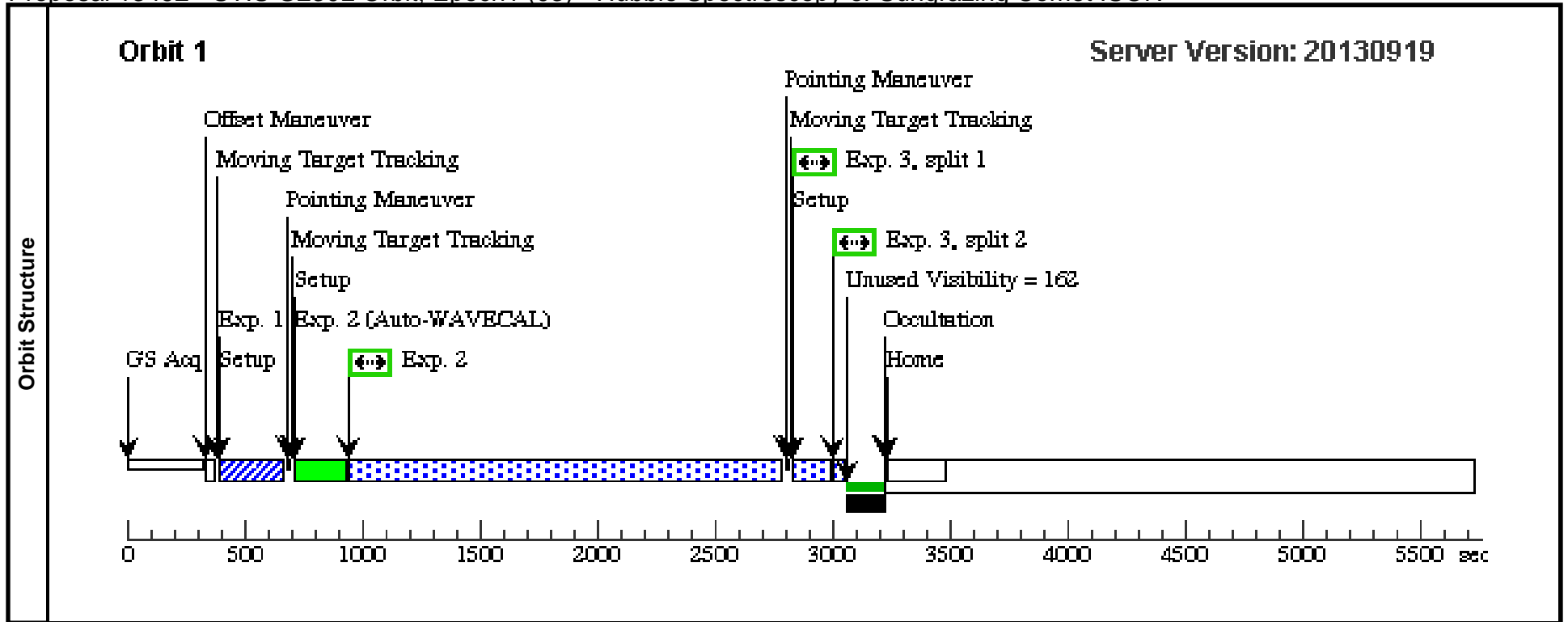
Visit	Proposal 13492, COS orbit #2, Epoch1 (02), failed Diagnostic Status: Warning Scientific Instruments: COS/NUV, COS/FUV Special Requirements: (none)										
	(COS orbit #2, Epoch1 (02)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(1)	COMET-ISON-EPOCH1	TYPE=COMET,Q=0.0124420718853 9975,E=1.000002334241593,I=62.395 99266760140,O=295.6532915725306, W=345.5646847528145,T=28-NOV- 2013:18:36:29,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=08-OCT- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON ACQ SRCH (497995)	(1) COMET-ISON-EPOCH1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	REQ EPHEM CORR ISON02		30 Secs (30 Secs) [==>]	[1]	
	Comments: Requires ephemeris update										
	2	ISON ACQ IMG (497282)	(1) COMET-ISON-EPOCH1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA			REQ EPHEM CORR ISON02		30 Secs (30 Secs) [==>]	[1]
	Comments: Requires ephemeris update										
3	ISON COS FP2 (497998)	(1) COMET-ISON-EPOCH1	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=2; EXTENDED=YES	REQ EPHEM CORR ISON02		500 Secs (682 Secs) [==>682.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											
4	ISON COS FP3 (497998)	(1) COMET-ISON-EPOCH1	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=3; EXTENDED=YES	REQ EPHEM CORR ISON02		500 Secs (682 Secs) [==>682.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											



Proposal 13492 - STIS G230L Orbit, Epoch1 (03) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:43:59 GMT 2013

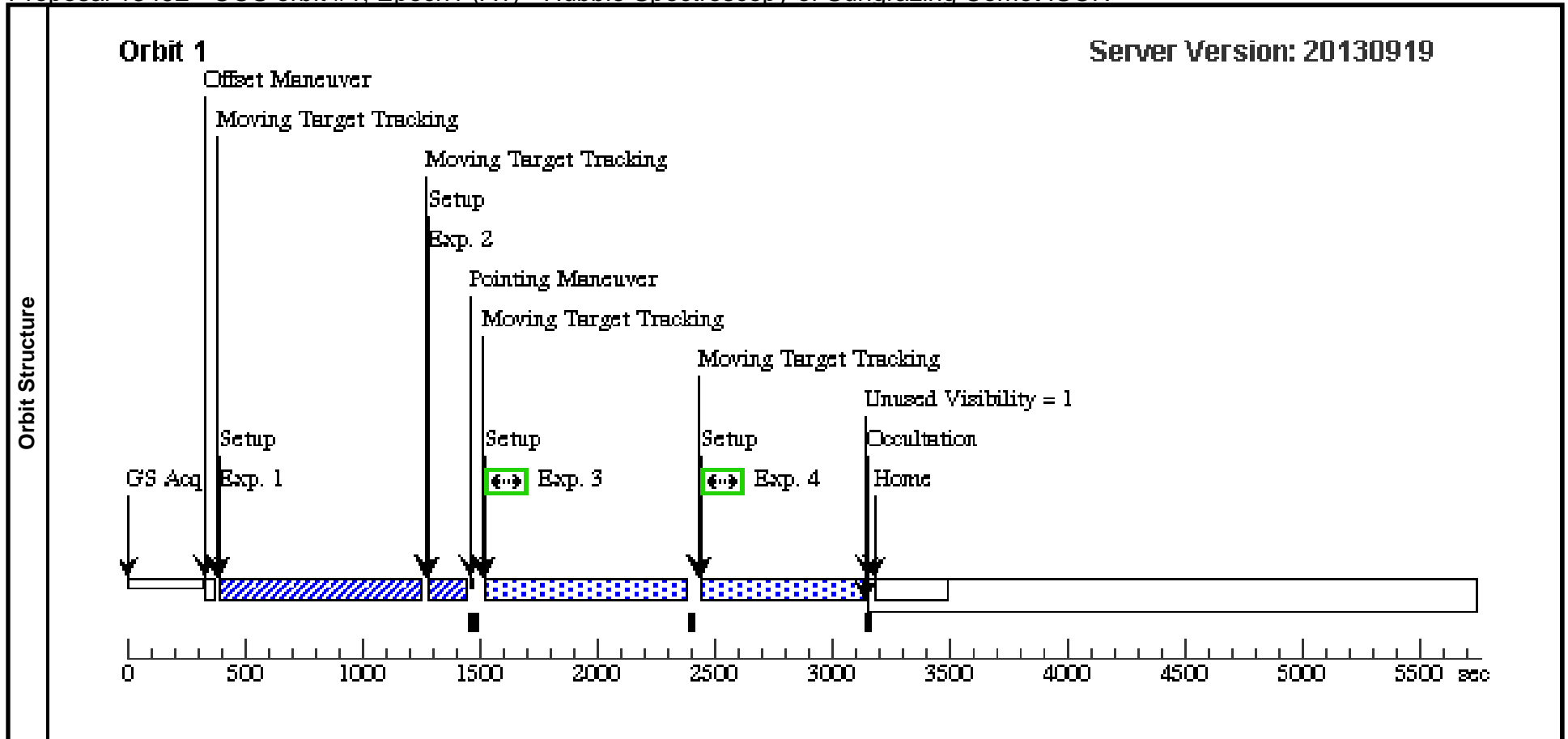
Visit	Proposal 13492, STIS G230L Orbit, Epoch1 (03), failed Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
	(1)	COMET-ISON-EPOCH1	TYPE=COMET,Q=0.0124420718853 9975,E=1.000002334241593,I=62.395 99266760140,O=295.6532915725306, W=345.5646847528145,T=28-NOV-2013:18:36:29,TimeScale=TDB,EQ UINOX=J2000,EPOCH=08-OCT-2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH		
	<i>Comments: JPL #34 solution</i> <i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ (498003)	(1) COMET-ISON-EPOCH1	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON03		1 Secs (1 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									
	2	ISON STIS (498006)	(1) COMET-ISON-EPOCH1	STIS/NUV-MAMA, ACCUM, 52X2	G230L 2376 A		REQ EPHEM CORR ISON03		1800 Secs (1800 Secs) [==>]	[1]
<i>Comments: requires ephemeris correction</i>										
3	ISON STIS IMG (498003)	(1) COMET-ISON-EPOCH1	STIS/CCD, ACCUM, F28X50LP	MIRROR	CR-SPLIT=2; GAIN=1	REQ EPHEM CORR ISON03		20 Secs (20 Secs) [==>(Split 1)] [==>(Split 2)]	[1]	
<i>Comments: requires ephemeris correction</i>										



Proposal 13492 - COS orbit #1, Epoch1 (A1) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:43:59 GMT 2013

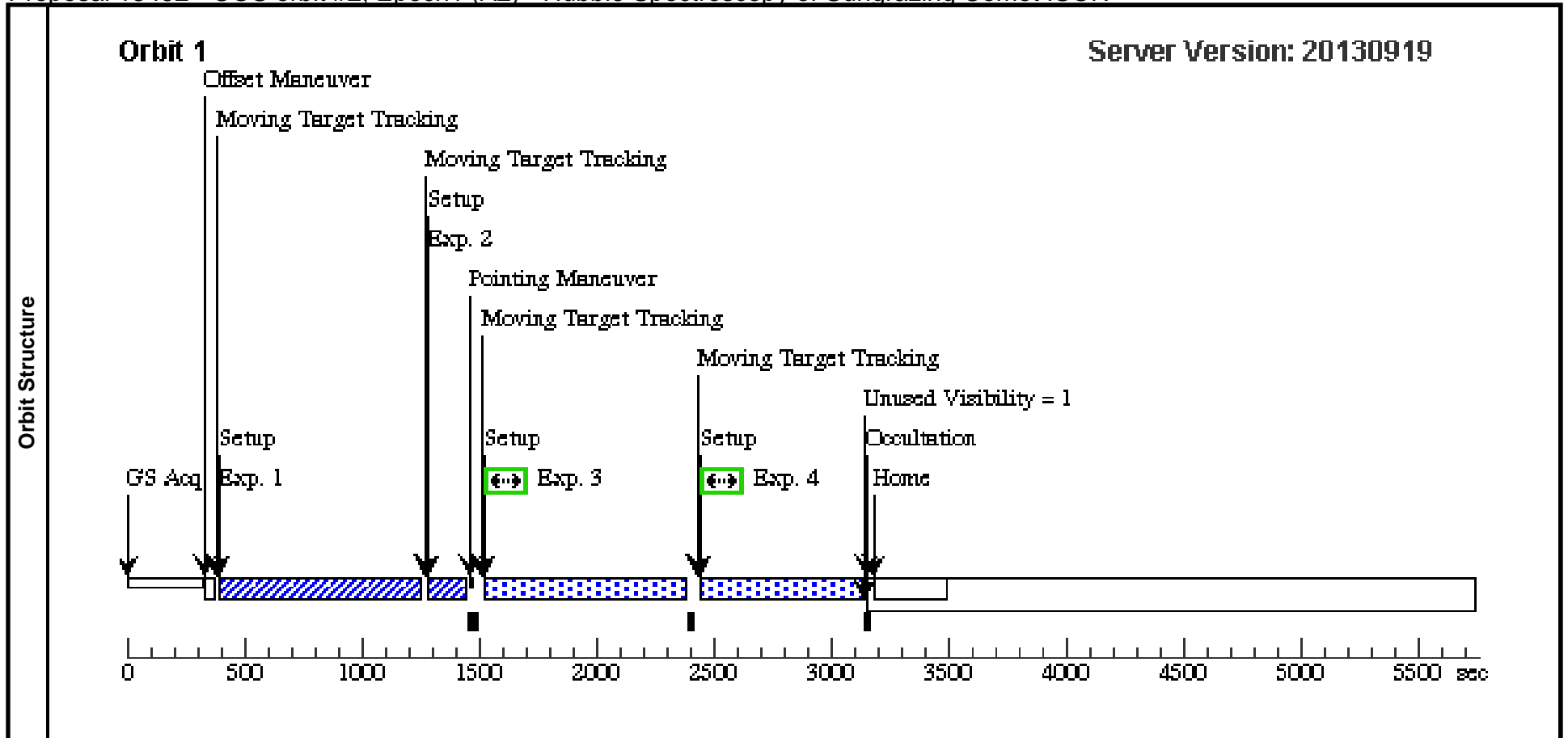
Visit	Proposal 13492, COS orbit #1, Epoch1 (A1), scheduled Diagnostic Status: Warning Scientific Instruments: COS/NUV, COS/FUV Special Requirements: GROUP A1,A2,A3 WITHIN 3 Orbits: VISIBILITY INTERVAL 52.5 M										
	(COS orbit #1, Epoch1 (A1)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(1)	COMET-ISON-EPOCH1	TYPE=COMET,Q=0.0124420718853 9975,E=1.000002334241593,I=62.395 99266760140,O=295.6532915725306, W=345.5646847528145,T=28-NOV- 2013:18:36:29,TimeScale=TDB,EQ UINOX=J2000,EPOCH=08-OCT- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON ACQ SRCH (497995)	(1) COMET-ISON-EPOCH1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	REQ EPHEM CORR ISONA1		30 Secs (30 Secs) [==>]	[1]	
	Comments: Requires ephemeris update										
	2	ISON ACQ IMG (497282)	(1) COMET-ISON-EPOCH1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA			REQ EPHEM CORR ISONA1		30 Secs (30 Secs) [==>]	[1]
	Comments: Requires ephemeris update										
3	ISON COS FP2 (497998)	(1) COMET-ISON-EPOCH1	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=2; EXTENDED=YES	REQ EPHEM CORR ISONA1		500 Secs (642 Secs) [==>642.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											
4	ISON COS FP3 (497998)	(1) COMET-ISON-EPOCH1	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=3; EXTENDED=YES	REQ EPHEM CORR ISONA1		500 Secs (642 Secs) [==>642.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											



Proposal 13492 - COS orbit #2, Epoch1 (A2) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:00 GMT 2013

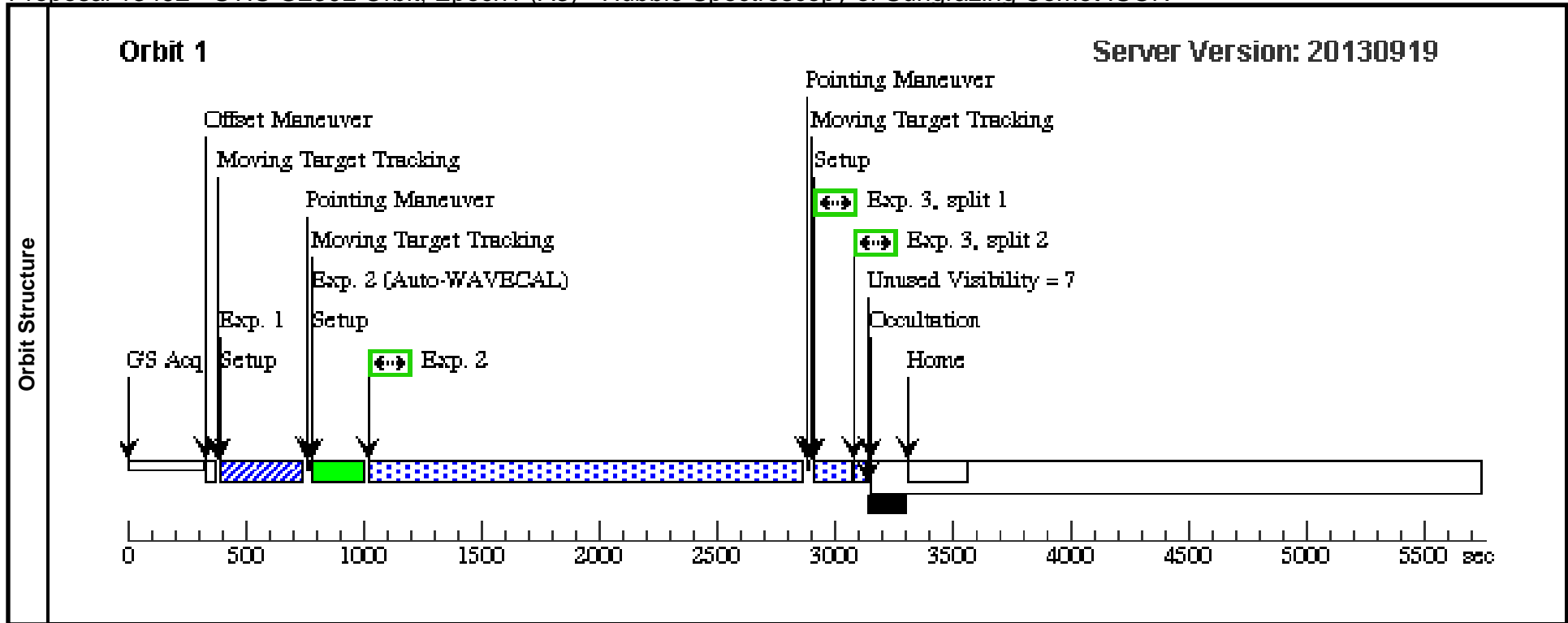
Visit	Proposal 13492, COS orbit #2, Epoch1 (A2), scheduled Diagnostic Status: Warning Scientific Instruments: COS/NUV, COS/FUV Special Requirements: VISIBILITY INTERVAL 52.5 M										
	(COS orbit #2, Epoch1 (A2)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.										
Diagnostics											
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(1)	COMET-ISON-EPOCH1	TYPE=COMET,Q=0.0124420718853 9975,E=1.000002334241593,I=62.395 99266760140,O=295.6532915725306, W=345.5646847528145,T=28-NOV- 2013:18:36:29,TimeScale=TDB,EQ UINOX=J2000,EPOCH=08-OCT- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON ACQ SRCH (497995)	(1) COMET-ISON-EPOCH1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	REQ EPHEM CORR ISONA2		30 Secs (30 Secs) [==>]	[1]	
	Comments: Requires ephemeris update										
	2	ISON ACQ IMG (497282)	(1) COMET-ISON-EPOCH1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA			REQ EPHEM CORR ISONA2		30 Secs (30 Secs) [==>]	[1]
	Comments: Requires ephemeris update										
3	ISON COS FP2 (497998)	(1) COMET-ISON-EPOCH1	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=2; EXTENDED=YES	REQ EPHEM CORR ISONA2		500 Secs (642 Secs) [==>642.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											
4	ISON COS FP3 (497998)	(1) COMET-ISON-EPOCH1	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=3; EXTENDED=YES	REQ EPHEM CORR ISONA2		500 Secs (642 Secs) [==>642.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											



Proposal 13492 - STIS G230L Orbit, Epoch1 (A3) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:01 GMT 2013

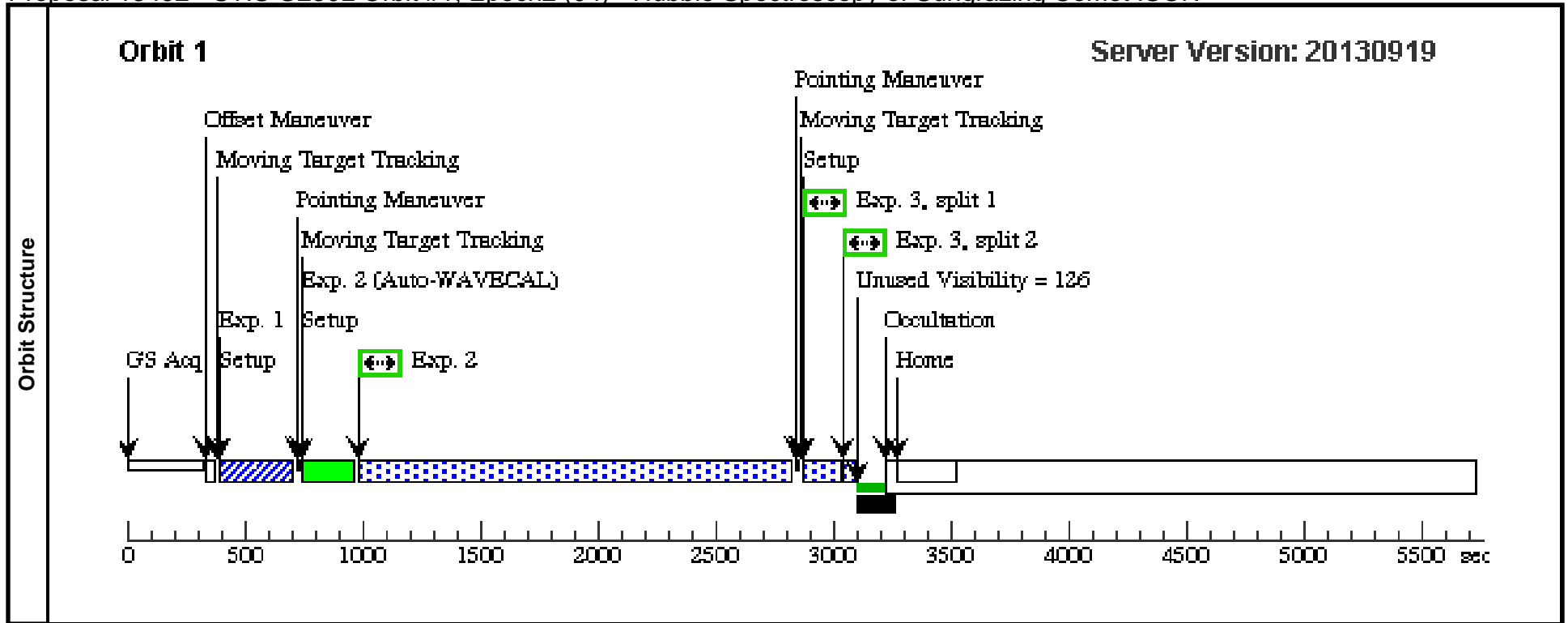
Visit	Proposal 13492, STIS G230L Orbit, Epoch1 (A3), scheduled Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: VISIBILITY INTERVAL 52.5 M									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
	(1)	COMET-ISON-EPOCH1	TYPE=COMET,Q=0.0124420718853 9975.E=1.000002334241593,I=62.395 99266760140,O=295.6532915725306, W=345.5646847528145,T=28-NOV-2013:18:36:29,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=08-OCT-2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH		
	<i>Comments: JPL #34 solution</i> <i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ (498003)	(1) COMET-ISON-EPOCH1	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISONA3		20 Secs (20 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									
	2	ISON STIS (498006)	(1) COMET-ISON-EPOCH1	STIS/NUV-MAMA, ACCUM, 52X2	G230L 2376 A		REQ EPHEM CORR ISONA3		1800 Secs (1800 Secs) [==>]	[1]
<i>Comments: requires ephemeris correction</i>										
3	ISON STIS IMG (498003)	(1) COMET-ISON-EPOCH1	STIS/CCD, ACCUM, F28X50LP	MIRROR	CR-SPLIT=2; GAIN=1	REQ EPHEM CORR ISONA3		20 Secs (20 Secs) [==>(Split 1)] [==>(Split 2)]	[1]	
<i>Comments: requires ephemeris correction</i>										



Proposal 13492 - STIS G230L Orbit #1, Epoch2 (04) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:02 GMT 2013

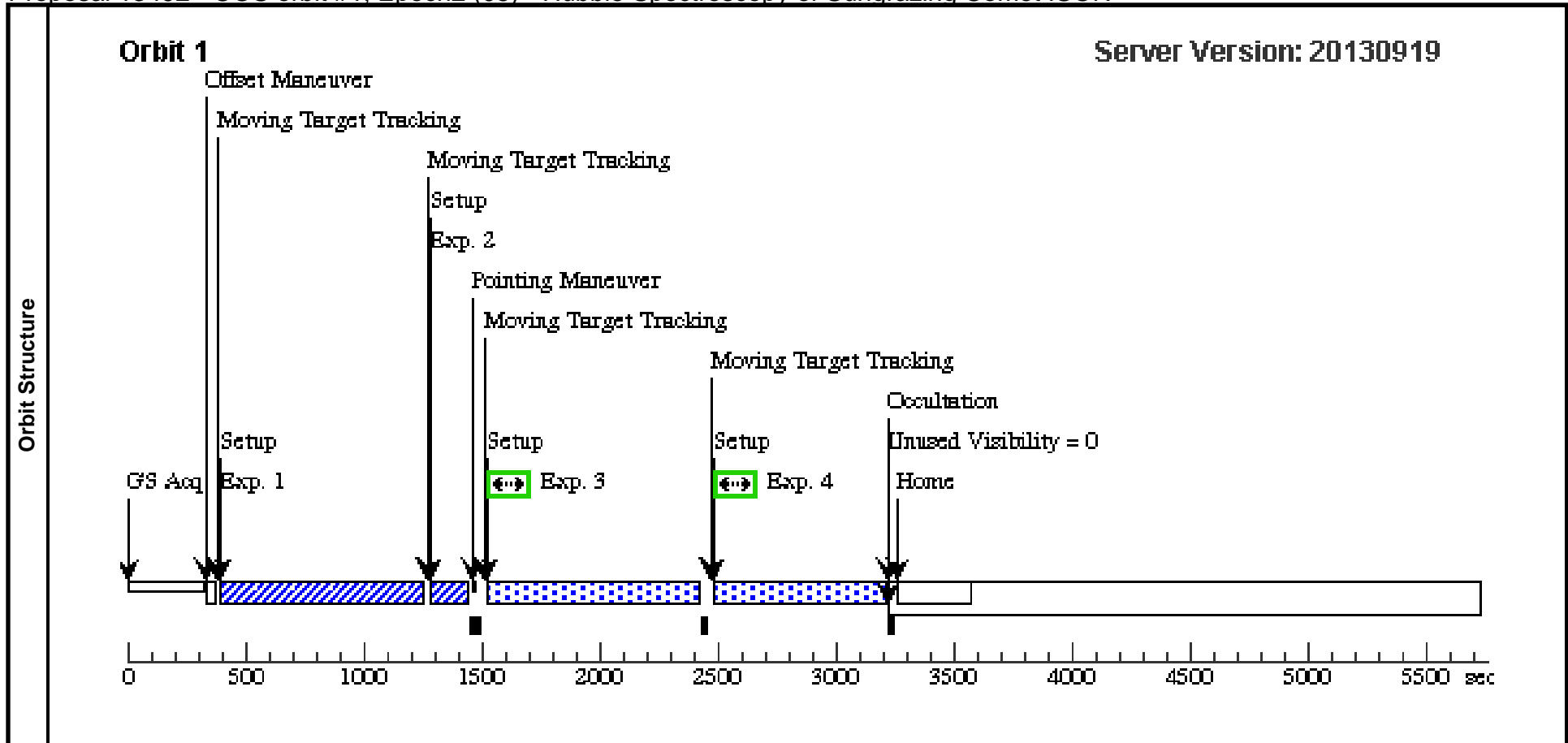
Visit	Proposal 13492, STIS G230L Orbit #1, Epoch2 (04), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: BETWEEN 01-NOV-2013 AND 08-NOV-2013; GROUP 04,05,06,07,08,09,10,11 WITHIN 8 Orbits									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	COMET-ISON-EPOCH2	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV- 2013:18:36:49,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=02-NOV- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH		
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ	(2) COMET-ISON-EPOCH2	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON04		10 Secs (10 Secs) [==>]	[1]
	Comments: requires ephemeris correction									
	2	ISON STIS (498006)	(2) COMET-ISON-EPOCH2	STIS/NUV-MAMA, ACCUM, 52X2	G230L 2376 A		REQ EPHEM CORR ISON04		1800 Secs (1800 Secs) [==>]	[1]
Comments: requires ephemeris correction										
3	ISON STIS IMG (498003)	(2) COMET-ISON-EPOCH2	STIS/CCD, ACCUM, F28X50LP	MIRROR	CR-SPLIT=2; GAIN=1	REQ EPHEM CORR ISON04		20 Secs (20 Secs) [==>(Split 1)] [==>(Split 2)]	[1]	
Comments: requires ephemeris correction										



Proposal 13492 - COS orbit #1, Epoch2 (05) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:03 GMT 2013

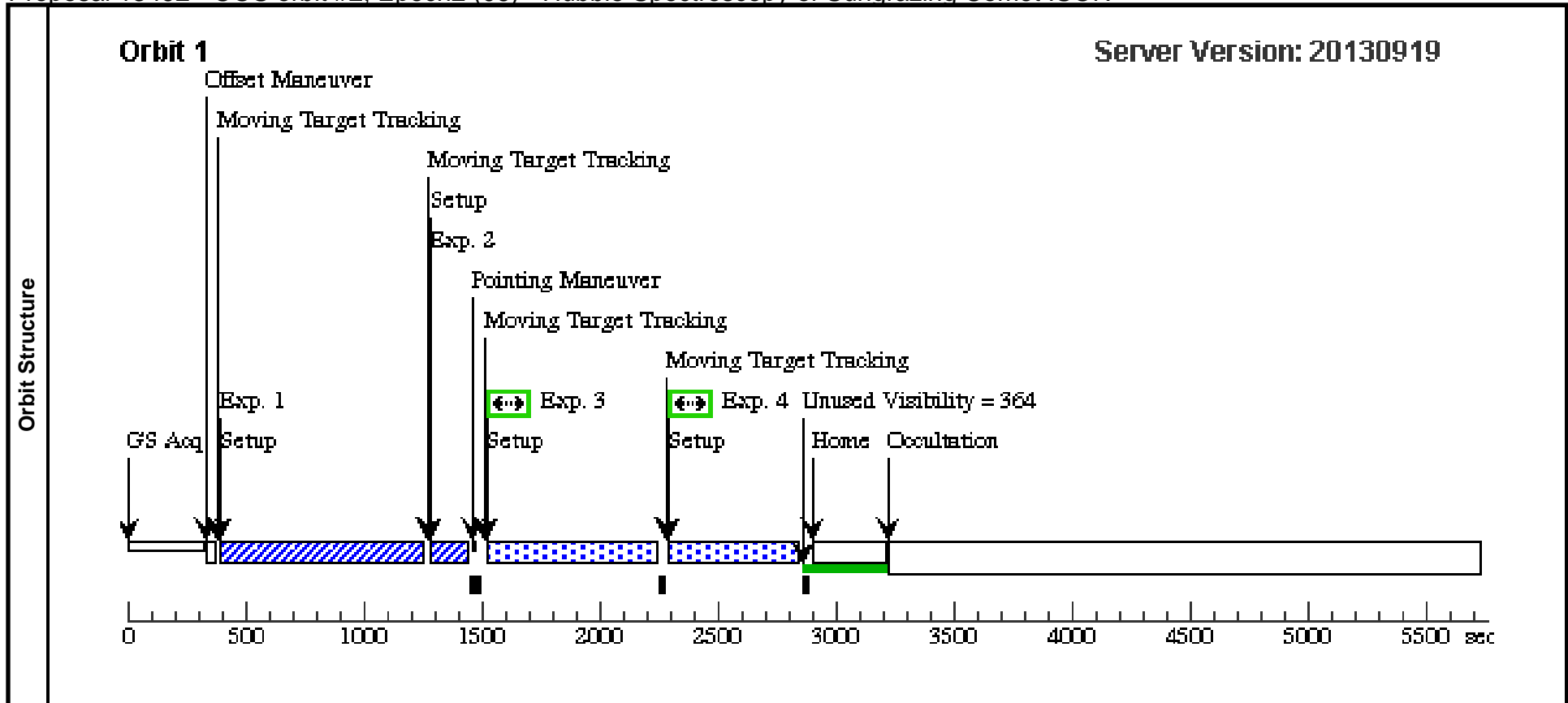
Visit	Proposal 13492, COS orbit #1, Epoch2 (05), scheduling Diagnostic Status: Warning Scientific Instruments: COS/NUV, COS/FUV Special Requirements: (none)										
	(COS orbit #1, Epoch2 (05)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(2)	COMET-ISON-EPOCH2	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV-2013:18:36:49,TTIME=Scale=TDB,EQ UINOX=J2000,EPOCH=02-NOV-2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON ACQ SRCH (497995)	(2) COMET-ISON-EPOCH2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	REQ EPHEM CORR ISON05		30 Secs (30 Secs) [==>]	[1]	
	Comments: Requires ephemeris update										
	2	ISON ACQ IMG (497282)	(2) COMET-ISON-EPOCH2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA			REQ EPHEM CORR ISON05		30 Secs (30 Secs) [==>]	[1]
	Comments: Requires ephemeris update										
3	ISON COS FP2 (497998)	(2) COMET-ISON-EPOCH2	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=2; EXTENDED=YES	REQ EPHEM CORR ISON05		500 Secs (682 Secs) [==>682.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											
4	ISON COS FP3 (497998)	(2) COMET-ISON-EPOCH2	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=3; EXTENDED=YES	REQ EPHEM CORR ISON05		500 Secs (682 Secs) [==>682.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											



Proposal 13492 - COS orbit #2, Epoch2 (06) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:03 GMT 2013

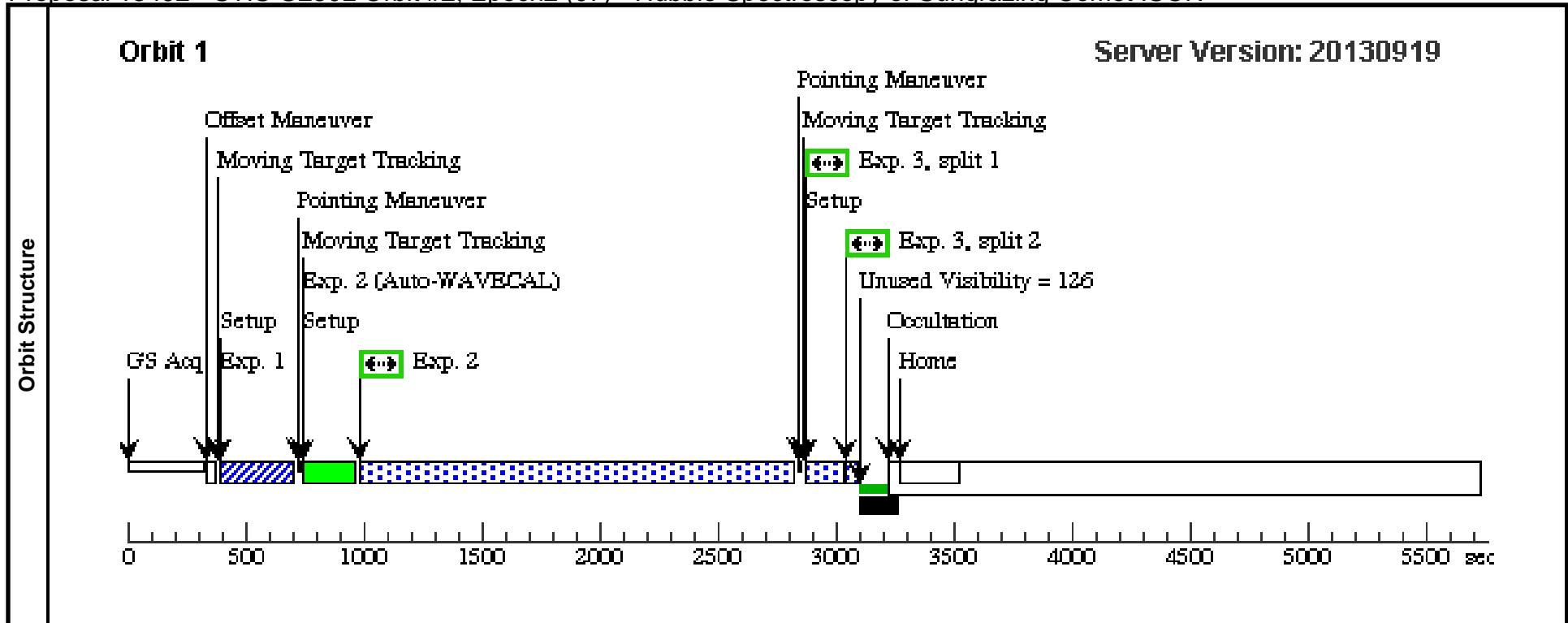
Visit	Proposal 13492, COS orbit #2, Epoch2 (06), scheduling Diagnostic Status: Warning Scientific Instruments: COS/NUV, COS/FUV Special Requirements: (none)										
	(COS orbit #2, Epoch2 (06)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(2)	COMET-ISON-EPOCH2	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV-2013:18:36:49,TTIME=Scale=TDB,EQ UINOX=J2000,EPOCH=02-NOV-2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON ACQ SRCH (497995)	(2) COMET-ISON-EPOCH2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	REQ EPHEM CORR ISON06		30 Secs (30 Secs) [==>]	[1]	
	Comments: Requires ephemeris update										
	2	ISON ACQ IMG (497282)	(2) COMET-ISON-EPOCH2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA			REQ EPHEM CORR ISON06		30 Secs (30 Secs) [==>]	[1]
	Comments: Requires ephemeris update										
3	ISON COS FP2 (497998)	(2) COMET-ISON-EPOCH2	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=2; EXTENDED=YES	REQ EPHEM CORR ISON06		500 Secs (500 Secs) [==>500 Secs]	[1]	
Comments: Requires ephemeris correction ISON											
4	ISON COS FP3 (497998)	(2) COMET-ISON-EPOCH2	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=3; EXTENDED=YES	REQ EPHEM CORR ISON06		500 Secs (500 Secs) [==>500 Secs]	[1]	
Comments: Requires ephemeris correction ISON											



Proposal 13492 - STIS G230L Orbit #2, Epoch2 (07) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:04 GMT 2013

Visit	Proposal 13492, STIS G230L Orbit #2, Epoch2 (07), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
	(2)	COMET-ISON-EPOCH2	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV- 2013:18:36:49,TimeScale=TDB,EQ UINOX=J2000,EPOCH=02-NOV- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH		
	<i>Comments: JPL #34 solution</i> <i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ (498003)	(2) COMET-ISON-EPOCH2	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON07		10 Secs (10 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									
	2	ISON STIS (498006)	(2) COMET-ISON-EPOCH2	STIS/NUV-MAMA, ACCUM, 52X2	G230L 2376 A		REQ EPHEM CORR ISON07		1800 Secs (1800 Secs) [==>]	[1]
<i>Comments: requires ephemeris correction</i>										
3	ISON STIS IMG (498003)	(2) COMET-ISON-EPOCH2	STIS/CCD, ACCUM, F28X50LP	MIRROR		CR-SPLIT=2; GAIN=1	REQ EPHEM CORR ISON07		20 Secs (20 Secs) [==>(Split 1)] [==>(Split 2)]	[1]
<i>Comments: requires ephemeris correction</i>										



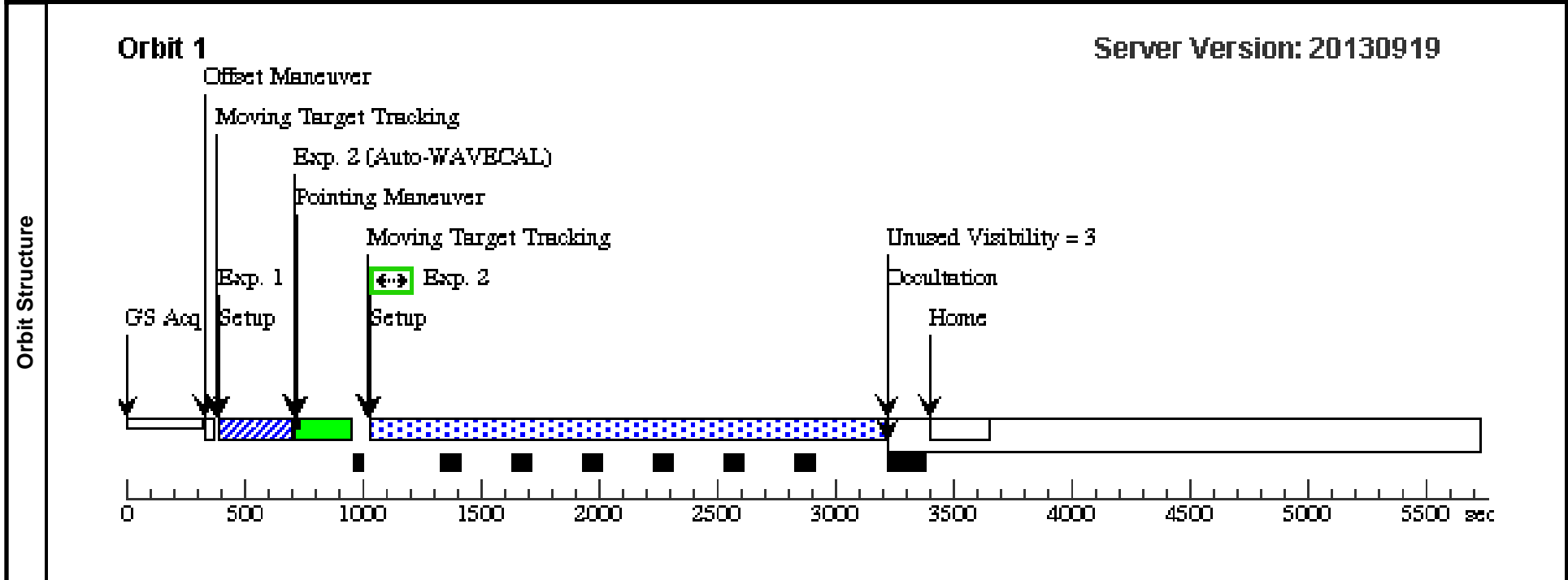
Proposal 13492 - STIS E140H #1, Epoch2 (08) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:05 GMT 2013

Visit	Proposal 13492, STIS E140H #1, Epoch2 (08), scheduling					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center	
	(2)	COMET-ISON-EPOCH2	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV- 2013:18:36:49,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=02-NOV- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH
	<i>Comments: JPL #34 solution</i>							
	<i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>							

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ (498003)	(2) COMET-ISON-EPOCH2	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON08		10 Secs (10 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									
	2	ISON STIS (498006)	(2) COMET-ISON-EPOCH2	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON08		2160 Secs (2160 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									



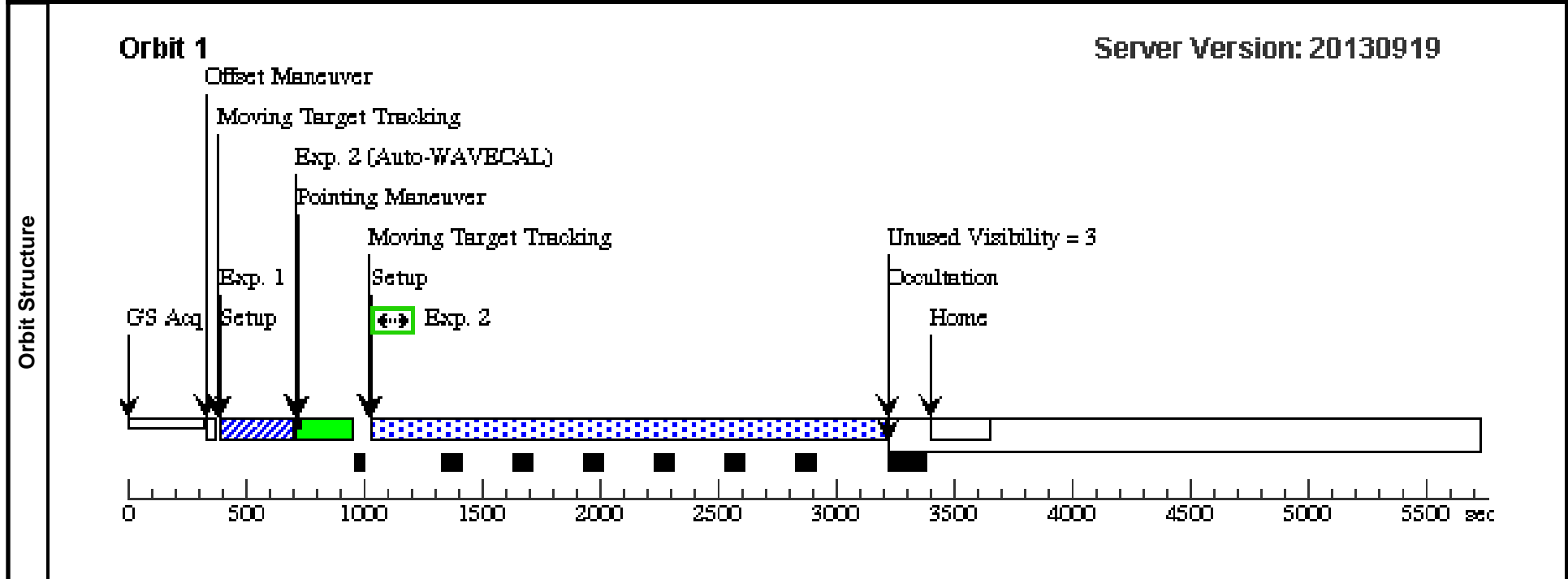
Proposal 13492 - STIS E140H #2, Epoch2 (09) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:05 GMT 2013

Visit	Proposal 13492, STIS E140H #2, Epoch2 (09), scheduling					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(2)	COMET-ISON-EPOCH2	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV- 2013:18:36:49,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=02-NOV- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true EARTH
	<i>Comments: JPL #34 solution</i>						
	<i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>						

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ (498003)	(2) COMET-ISON-EPOCH2	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON09		10 Secs (10 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									
	2	ISON STIS (498006)	(2) COMET-ISON-EPOCH2	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON09		2160 Secs (2160 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									



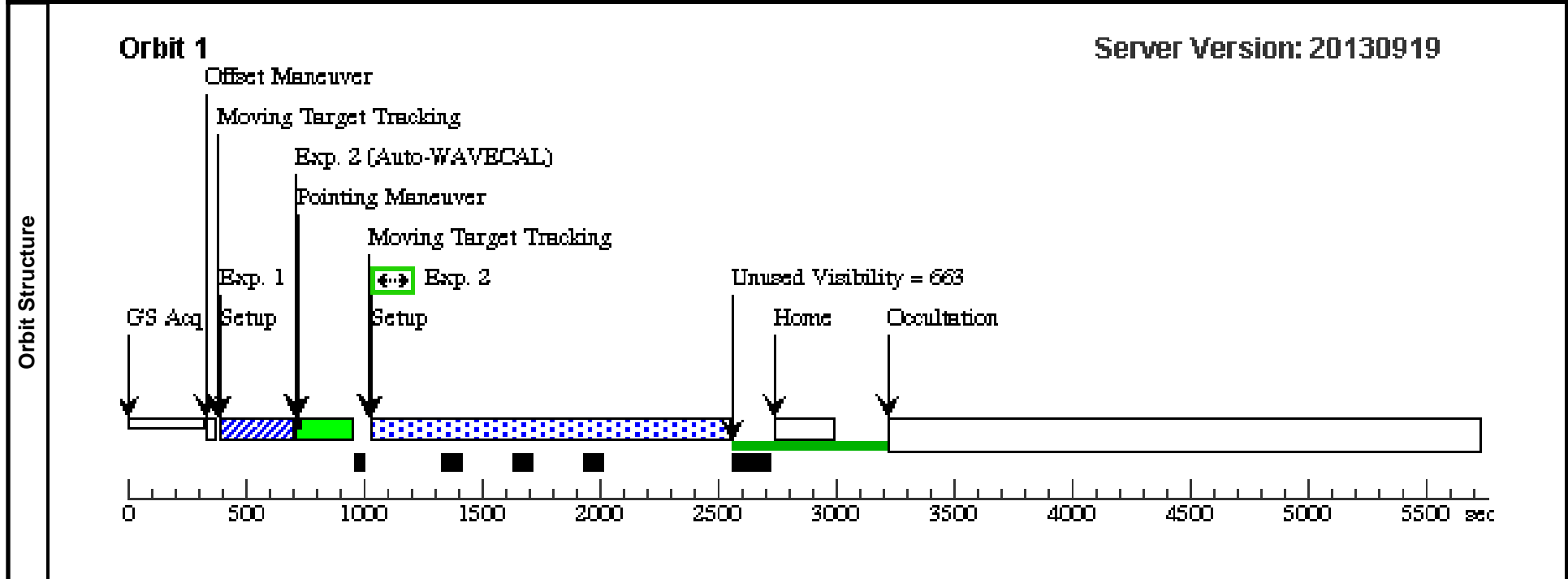
Proposal 13492 - STIS E140H #3, Epoch2 (10) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:06 GMT 2013

Visit	Proposal 13492, STIS E140H #3, Epoch2 (10), scheduling					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(2)	COMET-ISON-EPOCH2	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV- 2013:18:36:49,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=02-NOV- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true EARTH
	<i>Comments: JPL #34 solution</i>						
	<i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>						

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ (498003)	(2) COMET-ISON-EPOCH2	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON10		10 Secs (10 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									
	2	ISON STIS (498006)	(2) COMET-ISON-EPOCH2	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON10		1500 Secs (1500 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									



Proposal 13492 - STIS E140H-OFFSET, Epoch2 (11) - Hubble Spectroscopy of Sungrazing Comet ISON

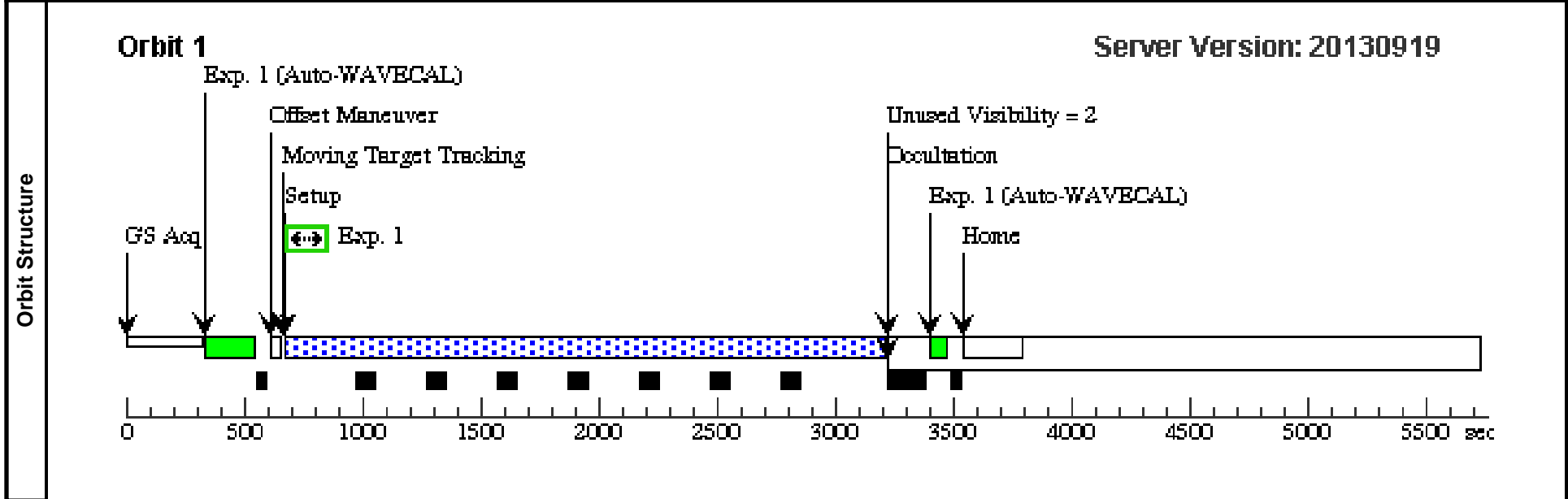
Thu Oct 17 01:44:06 GMT 2013

Visit	Proposal 13492, STIS E140H-OFFSET, Epoch2 (11), scheduling Diagnostic Status: Warning Scientific Instruments: STIS/FUV-MAMA Special Requirements: (none)
--------------	---

Diagnostics	(STIS E140H-OFFSET, Epoch2 (11)) Warning (Form): A target acquisition should probably be performed before doing spectroscopy or coronagraphy with STIS or COS.
--------------------	--

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>(4)</td> <td>COMET-ISON-EPOCH2-OFFSET</td> <td>TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV-2013:18:36:29,TTIME=Scale=TDB,EQ UINOX=J2000,EPOCH=08-OCT-2013:00:00:00,EpochTimeScale=TDB</td> <td>TYPE=POS_ANGLE,RAD=1500,AN G=0,REF=SUN</td> <td></td> <td></td> <td>EARTH</td> </tr> </tbody> </table> <p><i>Comments: JPL #34 solution</i></p> <p><i>Acquisition Uncertainty: 10 Arcsec</i></p> <p><i>Ephemeris Uncertainty: 6600 Kilometers</i></p>	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center	(4)	COMET-ISON-EPOCH2-OFFSET	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV-2013:18:36:29,TTIME=Scale=TDB,EQ UINOX=J2000,EPOCH=08-OCT-2013:00:00:00,EpochTimeScale=TDB	TYPE=POS_ANGLE,RAD=1500,AN G=0,REF=SUN			EARTH
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center									
(4)	COMET-ISON-EPOCH2-OFFSET	TYPE=COMET,Q=0.0124420786660 2880,E=1.000001986478986,I=62.397 02933542672,O=295.6532236206461, W=345.5648150804808,T=28-NOV-2013:18:36:29,TTIME=Scale=TDB,EQ UINOX=J2000,EPOCH=08-OCT-2013:00:00:00,EpochTimeScale=TDB	TYPE=POS_ANGLE,RAD=1500,AN G=0,REF=SUN			EARTH									

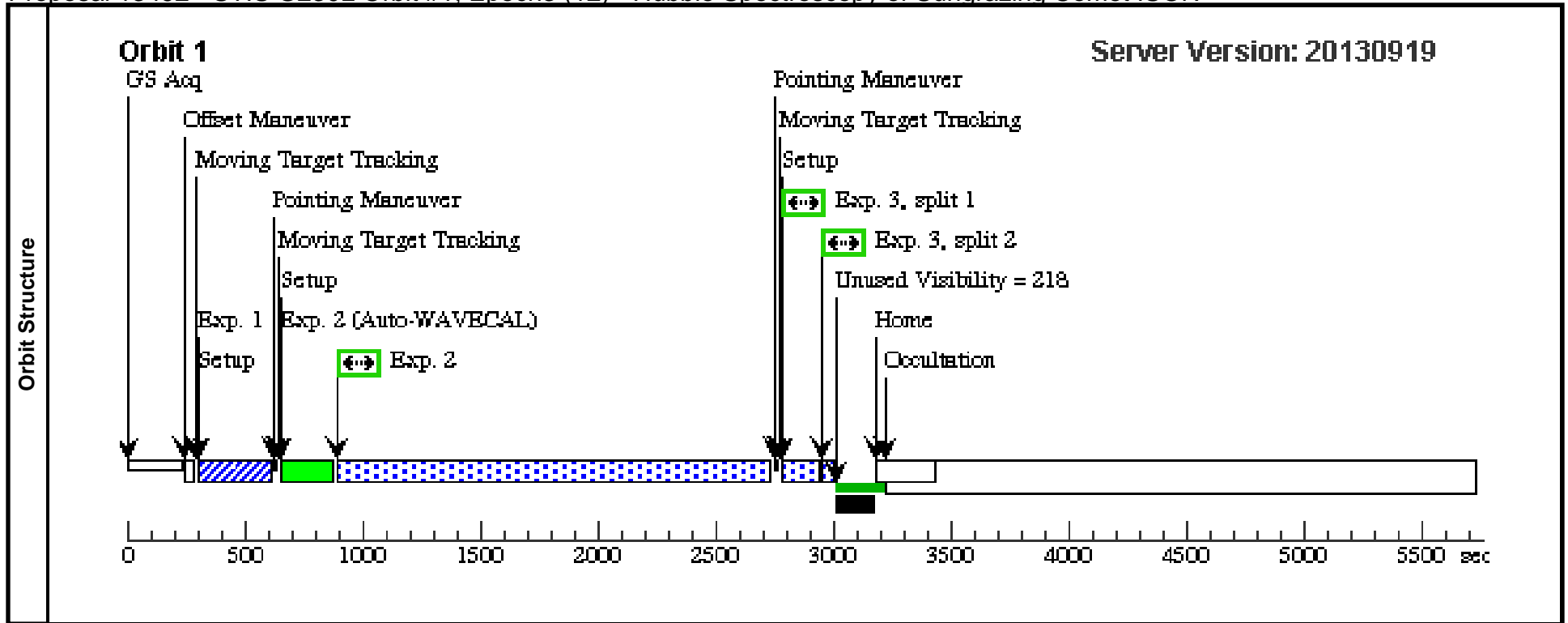
Exposures	<table border="1"> <thead> <tr> <th>#</th> <th>Label (ETC Run)</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time (Total)/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>ISON STIS (498006)</td> <td>(4) COMET-ISON-EPOCH2-OFFSET</td> <td>STIS/FUV-MAMA, TIME-TAG, 6X0.2</td> <td>E140H 1234 A</td> <td>BUFFER-TIME=30 0</td> <td>REQ EPHEM CORR ISON11</td> <td></td> <td>2525 Secs (2525 Secs) [=>]</td> <td>[1]</td> </tr> </tbody> </table> <p><i>Comments: requires ephemeris correction</i></p>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	1	ISON STIS (498006)	(4) COMET-ISON-EPOCH2-OFFSET	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON11		2525 Secs (2525 Secs) [=>]	[1]
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit												
1	ISON STIS (498006)	(4) COMET-ISON-EPOCH2-OFFSET	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON11		2525 Secs (2525 Secs) [=>]	[1]												



Proposal 13492 - STIS G230L Orbit #1, Epoch3 (12) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:07 GMT 2013

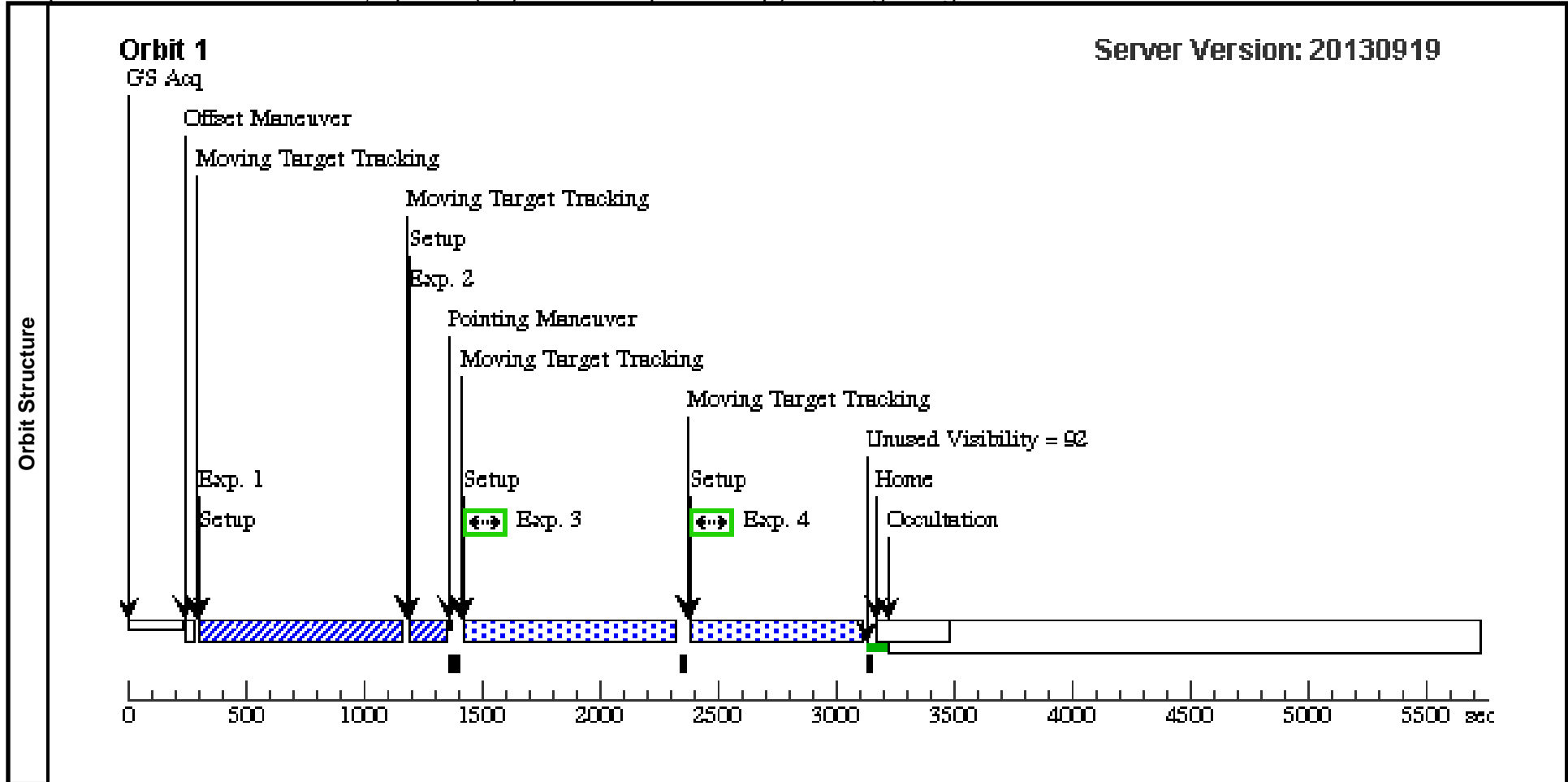
Visit	Proposal 13492, STIS G230L Orbit #1, Epoch3 (12), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: BETWEEN 18-DEC-2013 AND 23-DEC-2013: GROUP 12,13,14,15,16,17,18,19 WITHIN 8 Orbits										
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	COMET-ISON-EPOCH3	TYPE=COMET,Q=0.0124422138654 0501,E=1.000001943801849,I=62.397 76180254751,O=295.6527937876929, W=345.5656162849598,T=28-NOV- 2013:18:36:50,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
	<i>Comments: JPL #34 solution</i> <i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON STIS ACQ	(3) COMET-ISON-EPOCH3	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON12; GS ACQ SCENARI O SINGLE		10 Secs (10 Secs) [==>]	[1]	
	<i>Comments: requires ephemeris correction</i>										
	2	ISON STIS (498006)	(3) COMET-ISON-EPOCH3	STIS/NUV-MAMA, ACCUM, 52X2	G230L 2376 A		REQ EPHEM CORR ISON12		1800 Secs (1800 Secs) [==>]	[1]	
<i>Comments: requires ephemeris correction</i>											
3	ISON STIS IMG (498003)	(3) COMET-ISON-EPOCH3	STIS/CCD, ACCUM, F28X50LP	MIRROR	CR-SPLIT=2; GAIN=1	REQ EPHEM CORR ISON12		20 Secs (20 Secs) [==>(Split 1)] [==>(Split 2)]	[1]		
<i>Comments: reequires ephemeris correction</i>											



Proposal 13492 - COS orbit #1, Epoch3 (13) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:08 GMT 2013

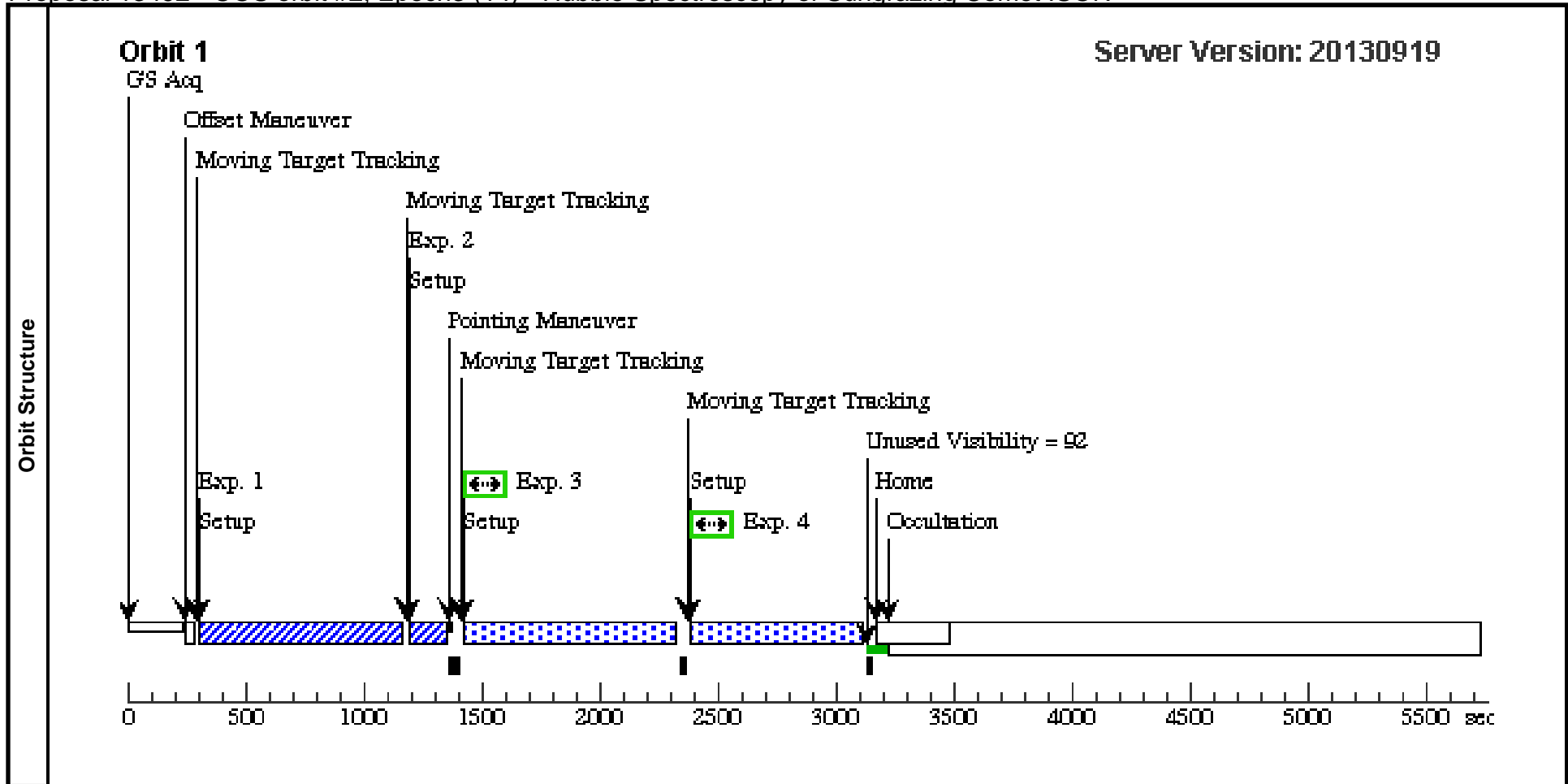
Visit	Proposal 13492, COS orbit #1, Epoch3 (13), implementation Diagnostic Status: Warning Scientific Instruments: COS/NUV, COS/FUV Special Requirements: (none)										
	(COS orbit #1, Epoch3 (13)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(3)	COMET-ISON-EPOCH3	TYPE=COMET,Q=0.0124422138654 0501,E=1.000001943801849,I=62.397 76180254751,O=295.6527937876929, W=345.5656162849598,T=28-NOV- 2013:18:36:50,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON ACQ SRCH (497995)	(3) COMET-ISON-EPOCH3	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	REQ EPHEM CORR ISON13; GS ACQ SCENARI O SINGLE		30 Secs (30 Secs) [==>]	[1]	
	Comments: Requires ephemeris update										
	2	ISON ACQ IMG (497282)	(3) COMET-ISON-EPOCH3	COS/NUV, ACQ/IMAGE, PSA	MIRRORA			REQ EPHEM CORR ISON13		30 Secs (30 Secs) [==>]	[1]
	Comments: Requires ephemeris update										
3	ISON COS FP2 (497998)	(3) COMET-ISON-EPOCH3	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=2; EXTENDED=YES	REQ EPHEM CORR ISON13		500 Secs (682 Secs) [==>682.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											
4	ISON COS FP3 (497998)	(3) COMET-ISON-EPOCH3	COS/FUV, TIME-TAG, PSA	G160M 1589 A		BUFFER-TIME=10000; FP-POS=3; EXTENDED=YES	REQ EPHEM CORR ISON13		500 Secs (682 Secs) [==>682.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON											



Proposal 13492 - COS orbit #2, Epoch3 (14) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:08 GMT 2013

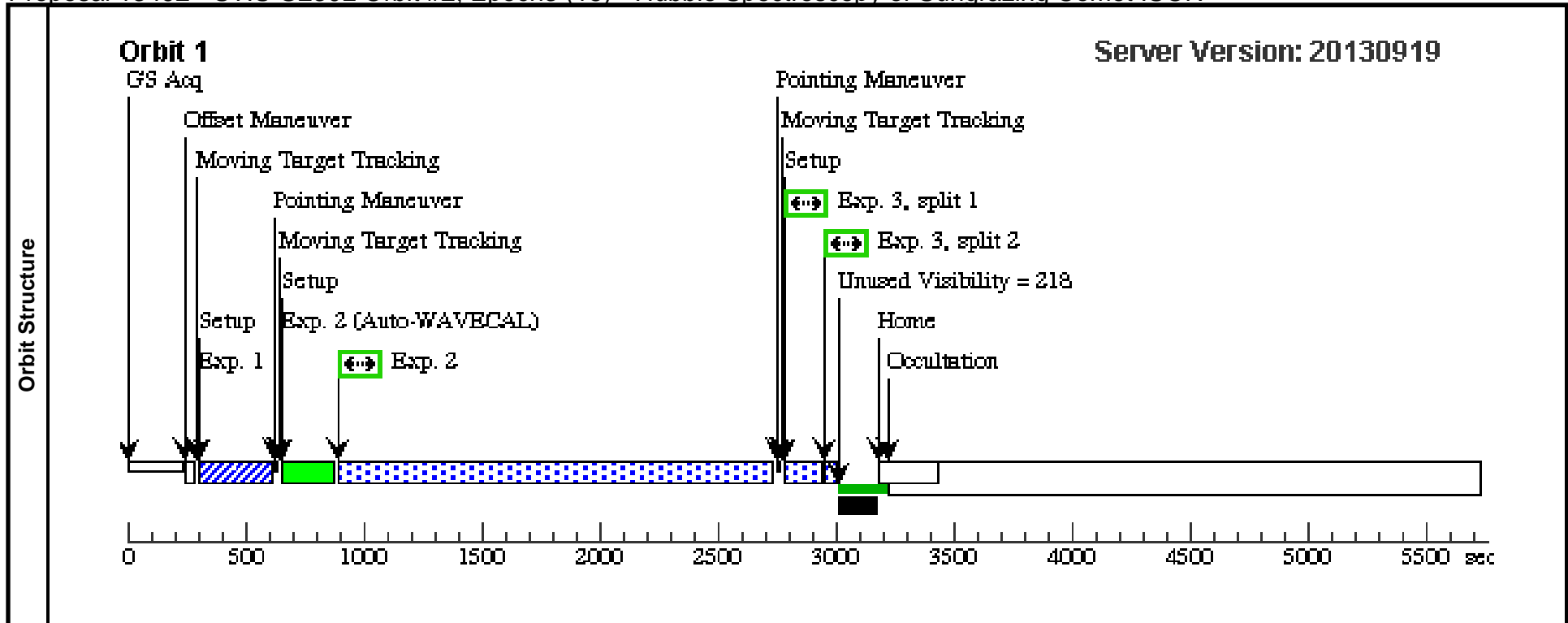
Visit	Proposal 13492, COS orbit #2, Epoch3 (14), implementation Diagnostic Status: Warning Scientific Instruments: COS/NUV, COS/FUV Special Requirements: (none)									
	(COS orbit #2, Epoch3 (14)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	COMET-ISON-EPOCH3	TYPE=COMET,Q=0.0124422138654 0501,E=1.000001943801849,I=62.397 76180254751,O=295.6527937876929, W=345.5656162849598,T=28-NOV- 2013:18:36:50,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH		
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON ACQ SRCH (497995)	(3) COMET-ISON-EPOCH3	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	REQ EPHEM CORR ISON14; GS ACQ SCENARI O SINGLE		30 Secs (30 Secs) [==>]	[1]
Comments: Requires ephemeris update										
2	ISON ACQ IMG (497282)	(3) COMET-ISON-EPOCH3	COS/NUV, ACQ/IMAGE, PSA	MIRRORA		REQ EPHEM CORR ISON14		30 Secs (30 Secs) [==>]	[1]	
Comments: Requires ephemeris update										
3	ISON COS FP2 (497998)	(3) COMET-ISON-EPOCH3	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=10000; FP-POS=2; EXTENDED=YES	REQ EPHEM CORR ISON14		500 Secs (682 Secs) [==>682.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON										
4	ISON COS FP3 (497998)	(3) COMET-ISON-EPOCH3	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=10000; FP-POS=3; EXTENDED=YES	REQ EPHEM CORR ISON14		500 Secs (682 Secs) [==>682.0 Secs]	[1]	
Comments: Requires ephemeris correction ISON										



Proposal 13492 - STIS G230L Orbit #2, Epoch3 (15) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:09 GMT 2013

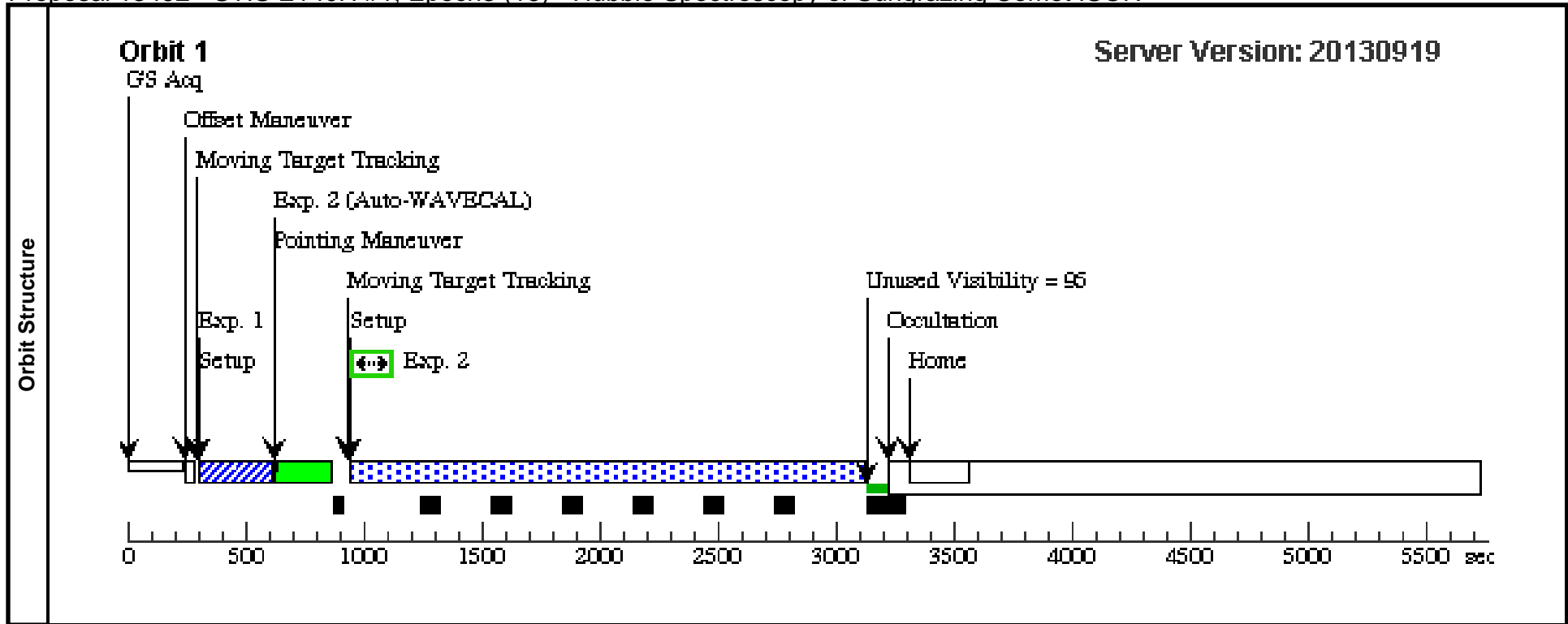
Visit	Proposal 13492, STIS G230L Orbit #2, Epoch3 (15), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
	(3)	COMET-ISON-EPOCH3	TYPE=COMET,Q=0.0124422138654 0501,E=1.000001943801849,I=62.397 76180254751,O=295.6527937876929, W=345.5656162849598,T=28-NOV- 2013:18:36:50,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH		
	<i>Comments: JPL #34 solution</i> <i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ (498003)	(3) COMET-ISON-EPOCH3	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON15; GS ACQ SCENARI O SINGLE		10 Secs (10 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									
	2	ISON STIS (498006)	(3) COMET-ISON-EPOCH3	STIS/NUV-MAMA, ACCUM, 52X2	G230L 2376 A		REQ EPHEM CORR ISON15		1800 Secs (1800 Secs) [==>]	[1]
<i>Comments: requires ephemeris correction</i>										
3	ISON STIS IMG (498003)	(3) COMET-ISON-EPOCH3	STIS/CCD, ACCUM, F28X50LP	MIRROR		CR-SPLIT=2; GAIN=1	REQ EPHEM CORR ISON15		20 Secs (20 Secs) [==>(Split 1)] [==>(Split 2)]	[1]
<i>Comments: reequires ephemeris correction</i>										



Proposal 13492 - STIS E140H #1, Epoch3 (16) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:09 GMT 2013

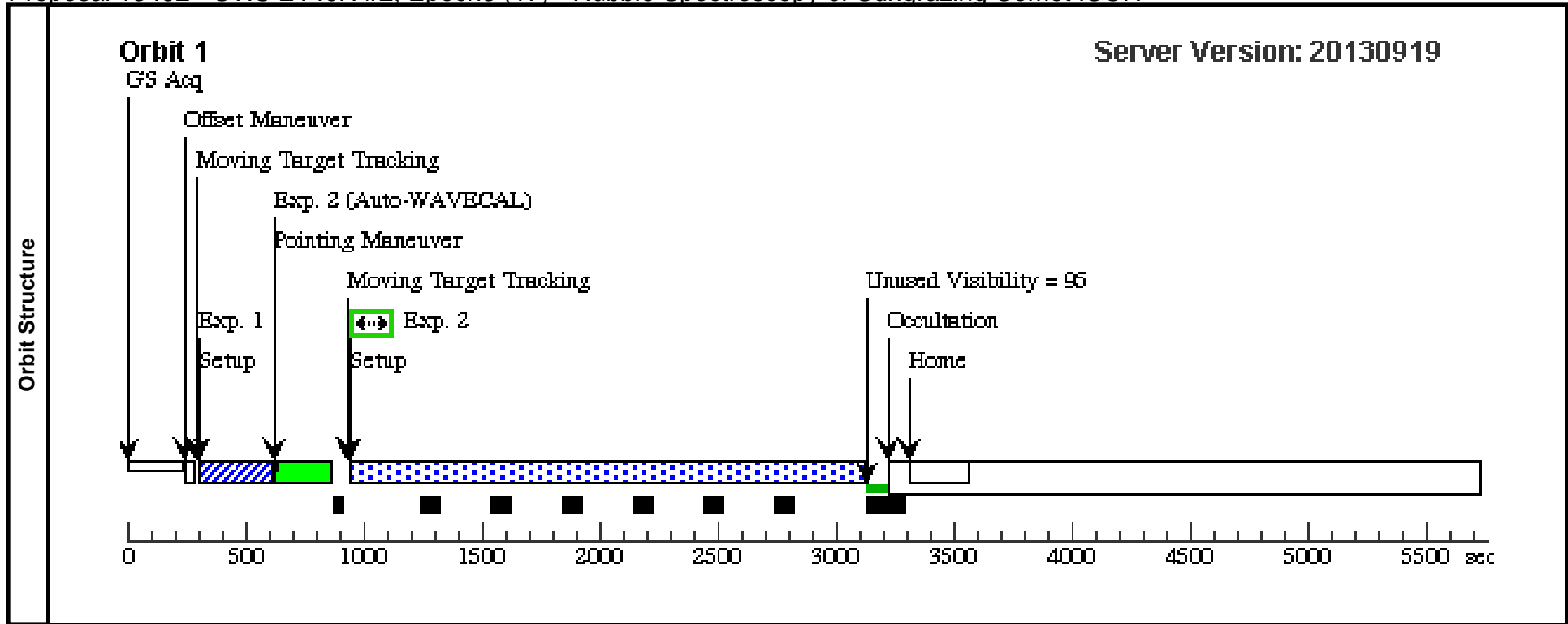
Visit	Proposal 13492, STIS E140H #1, Epoch3 (16), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(3)	COMET-ISON-EPOCH3	TYPE=COMET,Q=0.0124422138654 0501,E=1.000001943801849,I=62.397 76180254751,O=295.6527937876929, W=345.5656162849598,T=28-NOV- 2013:18:36:50,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
	<i>Comments: JPL #34 solution</i> <i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON STIS ACQ (498003)	(3) COMET-ISON-EPOCH3	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON16; GS ACQ SCENARI O SINGLE		10 Secs (10 Secs) [==>]	[1]	
	<i>Comments: requires ephemeris correction</i>										
	2	ISON STIS (498006)	(3) COMET-ISON-EPOCH3	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON16		2160 Secs (2160 Secs) [==>]	[1]	
<i>Comments: requires ephemeris correction</i>											



Proposal 13492 - STIS E140H #2, Epoch3 (17) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:10 GMT 2013

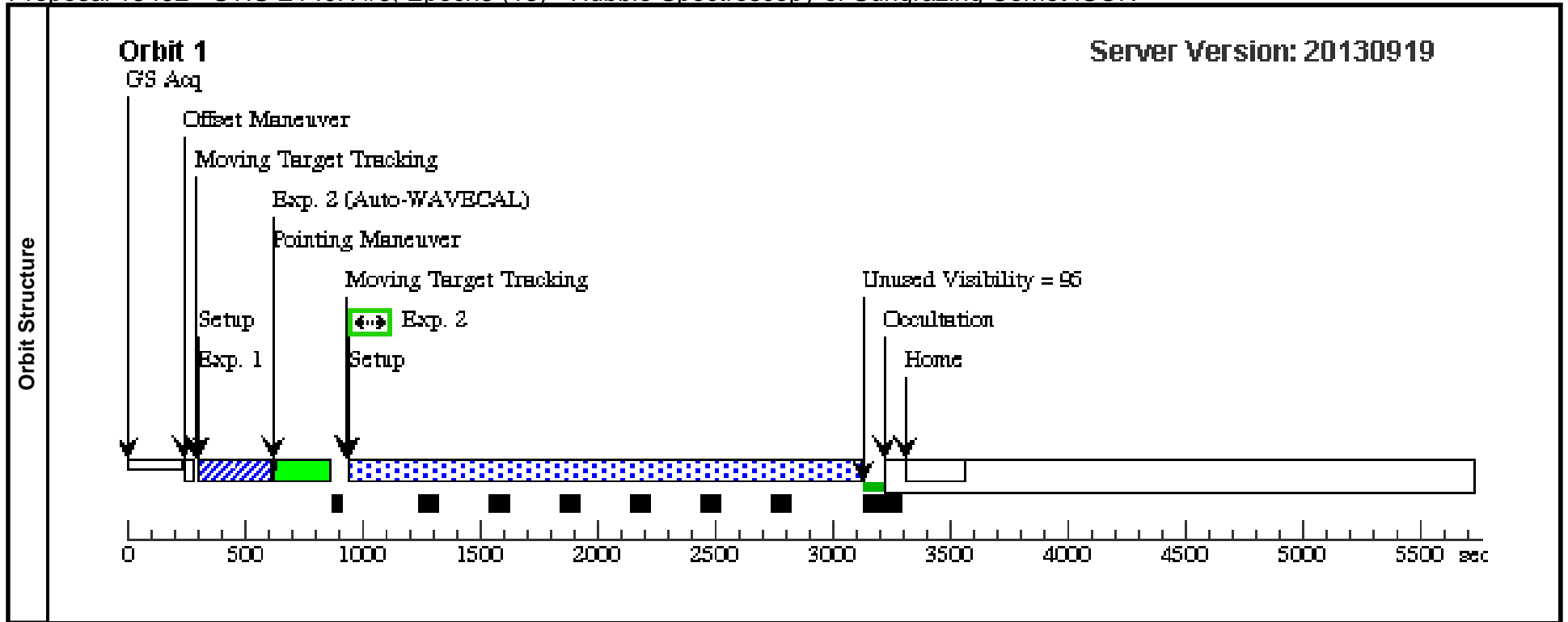
Visit	Proposal 13492, STIS E140H #2, Epoch3 (17), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(3)	COMET-ISON-EPOCH3	TYPE=COMET,Q=0.0124422138654 0501,E=1.000001943801849,I=62.397 76180254751,O=295.6527937876929, W=345.5656162849598,T=28-NOV- 2013:18:36:50,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH			
<i>Comments: JPL #34 solution</i> <i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	ISON STIS ACQ (498003)	(3) COMET-ISON-EPOCH3	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON17; GS ACQ SCENARI O SINGLE		10 Secs (10 Secs) [==>]	[1]	
	<i>Comments: requires ephemeris correction</i>										
	2	ISON STIS (498006)	(3) COMET-ISON-EPOCH3	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON17		2160 Secs (2160 Secs) [==>]	[1]	
<i>Comments: requires ephemeris correction</i>											



Proposal 13492 - STIS E140H #3, Epoch3 (18) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:10 GMT 2013

Visit	Proposal 13492, STIS E140H #3, Epoch3 (18), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
	(3)	COMET-ISON-EPOCH3	TYPE=COMET,Q=0.0124422138654 0501,E=1.000001943801849,I=62.397 76180254751,O=295.6527937876929, W=345.5656162849598,T=28-NOV- 2013:18:36:50,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-DEC- 2013:00:00:00,EpochTimeScale=TDB				MOSS Show Windows: true	EARTH		
	<i>Comments: JPL #34 solution</i> <i>Acquisition Uncertainty: 10 Arcsec</i> <i>Ephemeris Uncertainty: 6600 Kilometers</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS ACQ (498003)	(3) COMET-ISON-EPOCH3	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	REQ EPHEM CORR ISON18; GS ACQ SCENARI O SINGLE		10 Secs (10 Secs) [==>]	[1]
	<i>Comments: requires ephemeris correction</i>									
2	ISON STIS (498006)	(3) COMET-ISON-EPOCH3	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON18		2160 Secs (2160 Secs) [==>]	[1]	
	<i>Comments: requires ephemeris correction</i>									



Proposal 13492 - STIS E140H-OFFSET, Epoch3 (19) - Hubble Spectroscopy of Sungrazing Comet ISON

Thu Oct 17 01:44:11 GMT 2013

Visit	Proposal 13492, STIS E140H-OFFSET, Epoch3 (19), implementation Diagnostic Status: Warning Scientific Instruments: STIS/FUV-MAMA Special Requirements: (none)									
	(STIS E140H-OFFSET, Epoch3 (19)) Warning (Form): A target acquisition should probably be performed before doing spectroscopy or coronagraphy with STIS or COS.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(5)	COMET-ISON-EPOCH3-OFFSET	TYPE=COMET,Q=0.1244221386540 501,E=1.000001943801849,I=62.3977 6180254751,O=295.6527937876929, W=345.5656162849598,T=28-NOV- 2013:18:36:50,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-DEC- 2013:00:00:00,EpochTimeScale=TDB	TYPE=POS_ANGLE,RAD=1500,AN G=0,REF=SUN				EARTH		
Comments: JPL #34 solution Acquisition Uncertainty: 10 Arcsec Ephemeris Uncertainty: 6600 Kilometers										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ISON STIS (498006)	(5) COMET-ISON-EPOCH3-OFFSET	STIS/FUV-MAMA, TIME-TAG, 6X0.2	E140H 1234 A	BUFFER-TIME=30 0	REQ EPHEM CORR ISON19; GS ACQ SCENARI O SINGLE		2525 Secs (2525 Secs) [=>]	[1]
Comments: requires ephemeris correction										

