



15625 - Composition and physical processes of the inner coma of Comet

46P/Wirtanen

Cycle: 26, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) 46P-WIRTANEN	COS/FUV COS/NUV	1	21-Dec-2018 11:01:49.0	yes
02	(1) 46P-WIRTANEN	COS/FUV COS/NUV	1	21-Dec-2018 11:01:50.0	yes
03	(2) 46P-WIRTANEN-OFFSET1	COS/FUV COS/NUV	1	21-Dec-2018 11:01:51.0	yes

Proposal 15625 (STScI Edit Number: 2, Created: Friday, December 21, 2018 at 11:02:13 AM Eastern Standard Time) - 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>
04	(2) 46P-WIRTANEN-OFFSET1	COS/FUV COS/NUV	1	21-Dec-2018 11:01:51.0	yes
05	(1) 46P-WIRTANEN	STIS/CCD STIS/NUV-MAMA	1	21-Dec-2018 11:01:52.0	yes
06	(1) 46P-WIRTANEN	STIS/CCD STIS/NUV-MAMA	1	21-Dec-2018 11:01:53.0	yes
07	(2) 46P-WIRTANEN-OFFSET1	STIS/CCD STIS/NUV-MAMA	1	21-Dec-2018 11:01:54.0	yes
08	(2) 46P-WIRTANEN-OFFSET1	STIS/CCD STIS/NUV-MAMA	1	21-Dec-2018 11:01:54.0	yes
09	(1) 46P-WIRTANEN	COS/FUV COS/NUV	1	21-Dec-2018 11:01:55.0	yes
10	(1) 46P-WIRTANEN	COS/FUV COS/NUV	1	21-Dec-2018 11:01:56.0	yes
11	(1) 46P-WIRTANEN	COS/FUV COS/NUV	1	21-Dec-2018 11:01:56.0	yes
12	(1) 46P-WIRTANEN	COS/FUV COS/NUV	1	21-Dec-2018 11:01:57.0	yes
13	(2) 46P-WIRTANEN-OFFSET1	COS/FUV COS/NUV	1	21-Dec-2018 11:01:58.0	yes
14	(2) 46P-WIRTANEN-OFFSET1	COS/FUV COS/NUV	1	21-Dec-2018 11:01:58.0	yes
15	(2) 46P-WIRTANEN-OFFSET1	COS/FUV COS/NUV	1	21-Dec-2018 11:01:59.0	yes
16	(2) 46P-WIRTANEN-OFFSET1	COS/FUV COS/NUV	1	21-Dec-2018 11:01:59.0	yes
17	(1) 46P-WIRTANEN	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:00.0	yes

Proposal 15625 (STScI Edit Number: 2, Created: Friday, December 21, 2018 at 11:02:13 AM Eastern Standard Time) - 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>
18	(1) 46P-WIRTANEN	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:01.0	yes
19	(1) 46P-WIRTANEN	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:02.0	yes
20	(1) 46P-WIRTANEN	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:02.0	yes
21	(2) 46P-WIRTANEN-OFFSET1	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:03.0	yes
22	(2) 46P-WIRTANEN-OFFSET1	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:04.0	yes
23	(2) 46P-WIRTANEN-OFFSET1	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:04.0	yes
24	(2) 46P-WIRTANEN-OFFSET1	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:05.0	yes
25	(3) 46P-WIRTANEN-OFFSET2	COS/FUV COS/NUV	1	21-Dec-2018 11:02:06.0	yes
26	(3) 46P-WIRTANEN-OFFSET2	COS/FUV COS/NUV	1	21-Dec-2018 11:02:06.0	yes
27	(3) 46P-WIRTANEN-OFFSET2	STIS/CCD STIS/NUV-MAMA	1	21-Dec-2018 11:02:07.0	yes
28	(3) 46P-WIRTANEN-OFFSET2	STIS/CCD STIS/NUV-MAMA	1	21-Dec-2018 11:02:08.0	yes
29	(3) 46P-WIRTANEN-OFFSET2	COS/FUV COS/NUV	1	21-Dec-2018 11:02:08.0	yes
30	(3) 46P-WIRTANEN-OFFSET2	COS/FUV COS/NUV	1	21-Dec-2018 11:02:09.0	yes
31	(3) 46P-WIRTANEN-OFFSET2	COS/FUV COS/NUV	1	21-Dec-2018 11:02:09.0	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>
32	(3) 46P-WIRTANEN-OFFSET2	COS/FUV COS/NUV	1	21-Dec-2018 11:02:10.0	yes
33	(3) 46P-WIRTANEN-OFFSET2	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:11.0	yes
34	(3) 46P-WIRTANEN-OFFSET2	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:11.0	yes
35	(3) 46P-WIRTANEN-OFFSET2	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:12.0	yes
36	(3) 46P-WIRTANEN-OFFSET2	STIS/CCD STIS/FUV-MAMA	1	21-Dec-2018 11:02:13.0	yes

36 Total Orbits Used

ABSTRACT

Comet 46P/Wirtanen passes Earth with an historic closest approach distance of 0.077 au (12 million km) on 16 Dec. 2018. Its apparition is widely anticipated by planetary scientists and is the target of an organized world-wide observing campaign. We request HST STIS and COS observations of comet 46P/Wirtanen to create a comprehensive picture of the comet. We will measure its chemical composition (including H₂O, CO₂, CO, O₂, and S₂), investigate its hyperactivity by mapping the gas distribution, and to use the comet as a natural laboratory to study plasma processes that affect the gas in its coma. The unique close proximity of 46P allows us to study the inner part of the coma (within 100 km of the nucleus), a region rarely accessible to remote observations. These observations will allow us to detect the emission of short-lived species (such as S₂, O₂), of molecules not accessible from the ground (CO₂), and to investigate the transitions between regions where either electrons or photons drive most of the chemistry in the coma. Finally, studies of comet Wirtanen around the time of its close approach to Earth will have spatial resolutions high enough to permit valuable comparisons to the Rosetta observations of 67P/Churyumov-Gerasimenko and the Deep Impact/EPOXI fly-by results of 103P/Hartley 2.

HST's sensitivity and spectroscopic abilities in the Far Ultraviolet makes it uniquely capable to simultaneously measure the highly diagnostics FUV gas emission features in the coma. HST cycle 26 offers the rare opportunity to measure the spatial profiles of these emission features at very small distances from the nucleus due to the close approach of 46P at perihelion.

OBSERVING DESCRIPTION

1. Overall observational strategy

We plan to observe the comet in four instrument settings for three pointings each, making a total of 12 instrument-pointing combination. The four instrument settings and their science goals are listed below:

- 4 orbits with the COS instrument and the G130M grating, center wavelength at 1096 Å, to capture emission from the Lyman-beta hydrogen emission feature.
- 2 orbits with the COS instrument and the G130M grating, center wavelength at 1291 Å, to capture dissociative electron impact emission from OI 1304 and 1356 Å, as well as the CII 1335 Å emission feature.
- 4 orbits with the STIS/FUVMAMA instrument/detector, the 52x0.5 aperture, and the G140L grating to measure CO Fourth Positive group emission features.
- 2 orbits with the STIS/FUVMAMA instrument/detector, the 52x0.5 aperture, and the G230L grating to measure OH emission features.

For each setting, we will repeat the observations for three pointings to study the 2D spatial distribution of various gas species:

P1 - the optocenter of the comet

P2 - 2.5" offset towards the Sun

P3 - 8" offset towards the Sun

We organize our observations in a total of 12 visits, with each visit for one instrument-pointing combination listed above.

The science priority order for the instrument-pointing combination is:

1. COS G130M (1291) for P1 and P2
2. STIS G230L (2376) for P1 and P2
3. COS G130M (1096) for P1 and P2, and STIS G140L (1425) for P1 and P2
4. COS G130M (1096) and (1291), STIS G140L (1425) and STIS G230L (2376) for P3

The science priority grossly reflects the order of visits to be executed. There is no strong time link and/or restrictions between these orbits, as long as they are executed as close to each other as possible.

2. Comet position uncertainty and acquisition:

Assuming continuous collection of astrometric data of 46P with two nights of optical data every week at 1 arcsec uncertainty through December 23, we expect a worst case 3-sigma uncertainty range of 5" for the comet's sky position after January 7. This positional uncertainty puts the comet right into the acquisition box of STIS, and allow us to use 3x3 ACQ/SEARCH scheme for COS. The actual positional uncertainty could be smaller than the current prediction. We plan to update the comet's orbital elements two weeks before the observations, to confirm the ephemerides and adjust the search box of COS accordingly if needed.

3. Observing sequence

For STIS, each visit starts with an ACQ with CCD, then spectral observations with either G140L or G230L, and conclude by a CCD imaging in the end to confirm the observations and provide context.

For COS, each visit starts with an ACQ/SEARCH in the NUV with MIRROR A and search box 3x3, followed by an ACQ/IMAGE to confirm acquisition. The spectral observations will follow with the spectral element and central wavelength as selected. We will split each spectral observation to put in all four FP-POS.

The exposure time calculation is based on the corresponding ETC. All exposures have ETC IDs provided for reference.

4. Constraints

There is no specific time constraints to our observations, except to perform the observations as early as possible once the window opens on or about January 7, 2019. All visits do not have to be consecutive, although close in time would definitely benefit the interpretations of data.

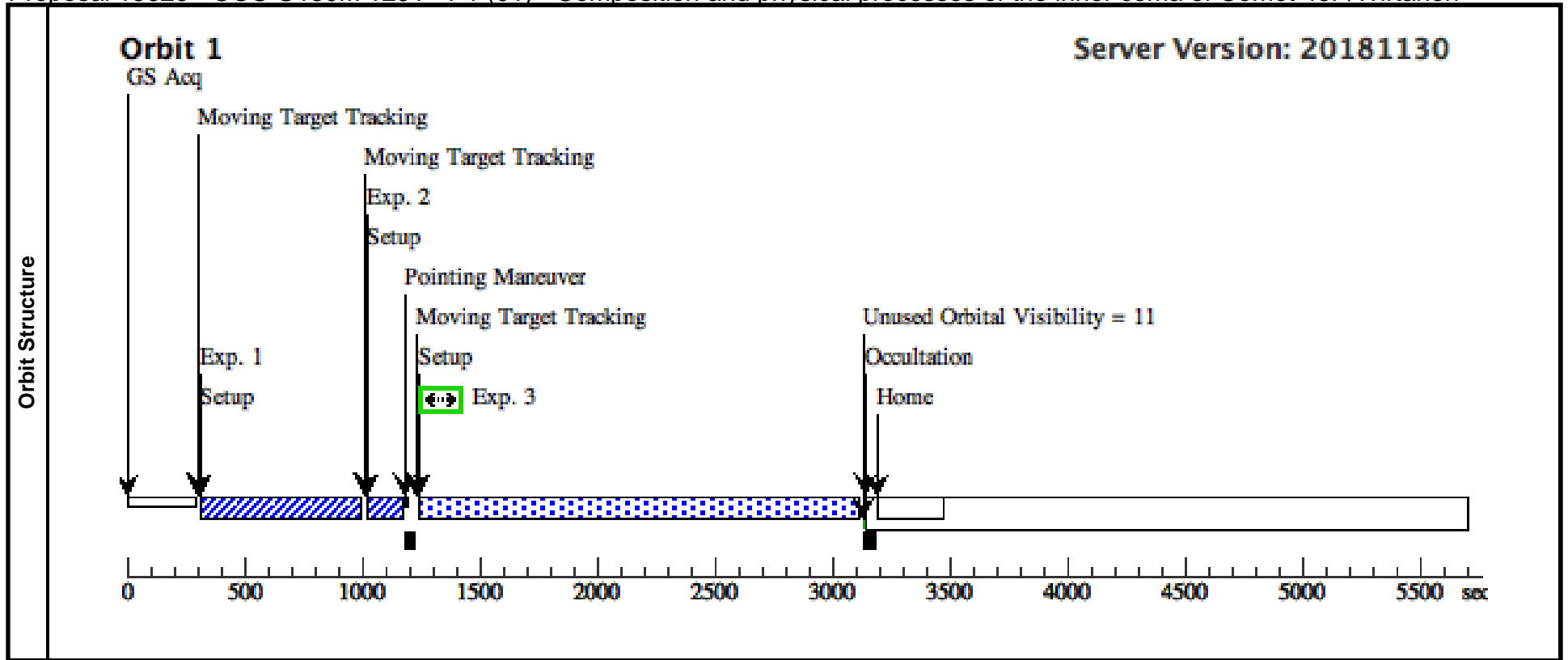
We do not need to put constraints on the orientation of STIS slit, as the available slit orientation in our observing window will be near the center of the sun-comet line and the perpendicular direction. The three pointing offsets will allow us to map out the spatial distribution of species of interest

Proposal 15625 (STScI Edit Number: 2, Created: Friday, December 21, 2018 at 11:02:13 AM Eastern Standard Time) - Overview
serving our science goals.

Proposal 15625 - COS G130M 1291 - P1 (01) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:13 GMT 2018

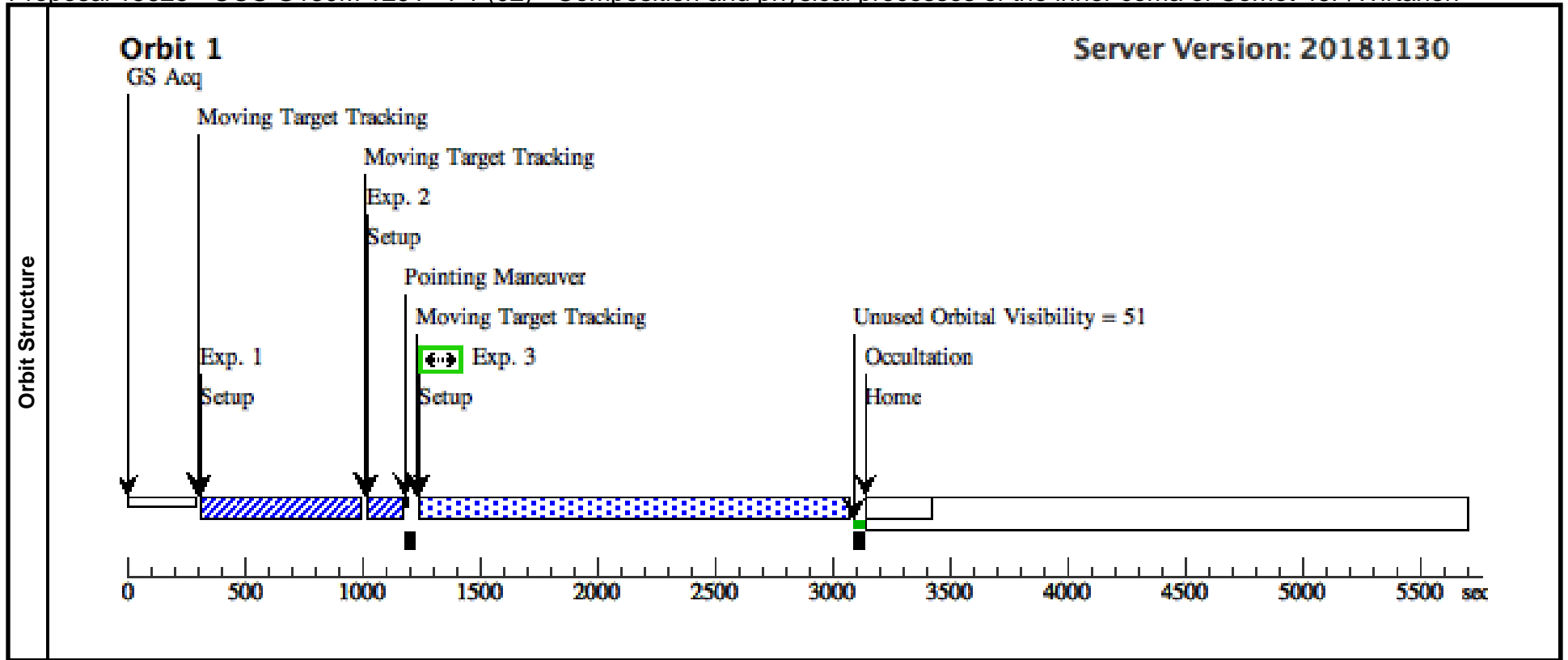
Visit	Proposal 15625, COS G130M 1291 - P1 (01), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: OI 1304 & 1356, and CII 1335: COS, G130M, 1291 A, x2 orbits</i>									
	(COS G130M 1291 - P1 (01)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 3 (01.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Diagnosics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9					EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR CH (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1BE		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 3 (COS.sp.129 6762)	(1) 46P-WIRTANE N	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; BUFFER-TIME=50 00			1700 Secs (1700 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1291 - P1 (02) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

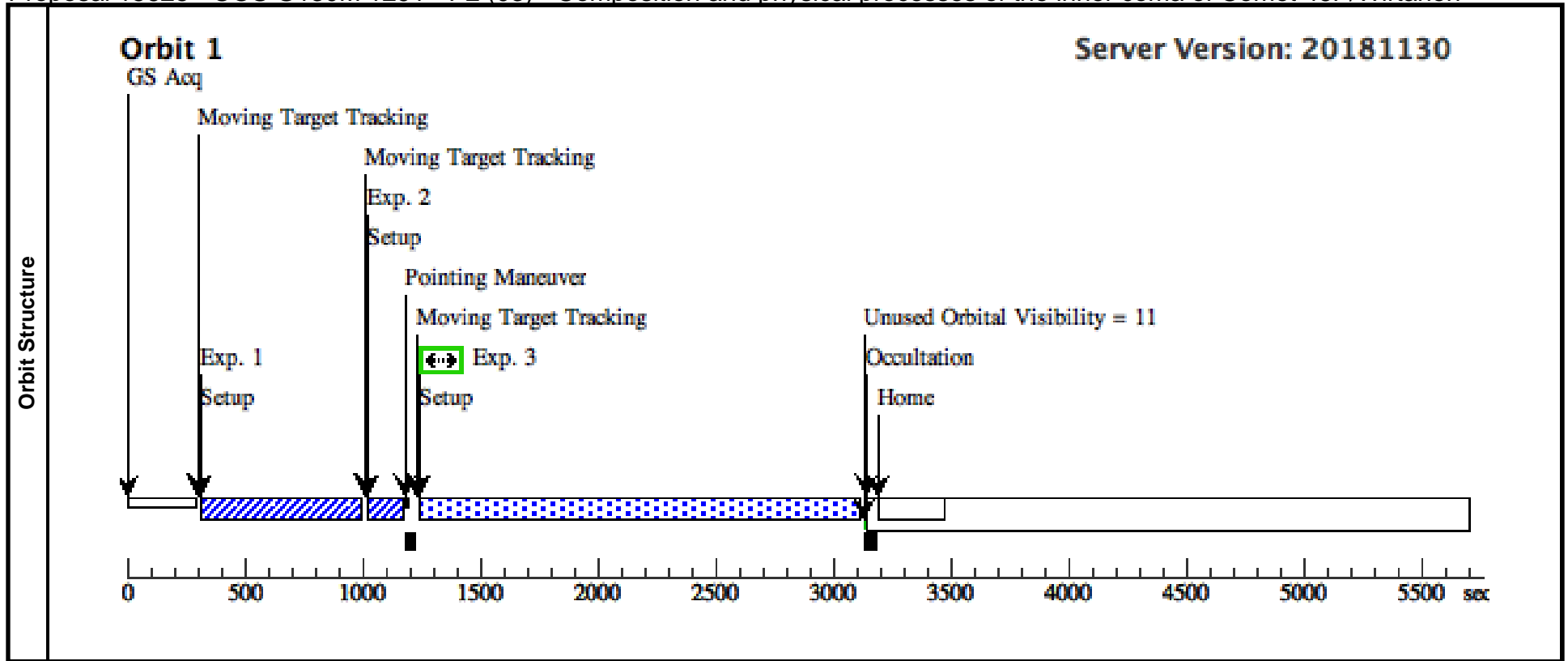
Visit	Proposal 15625, COS G130M 1291 - P1 (02), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: OI 1304 & 1356, and CII 1335: COS, G130M, 1291 A, x2 orbits</i>									
	(COS G130M 1291 - P1 (02)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 4 (02.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Diagnosics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9					EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR CH (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1BE		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 4 (COS.sp.129 6762)	(1) 46P-WIRTANE N	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; BUFFER-TIME=50 00			1660 Secs (1660 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1291 - P2 (03) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

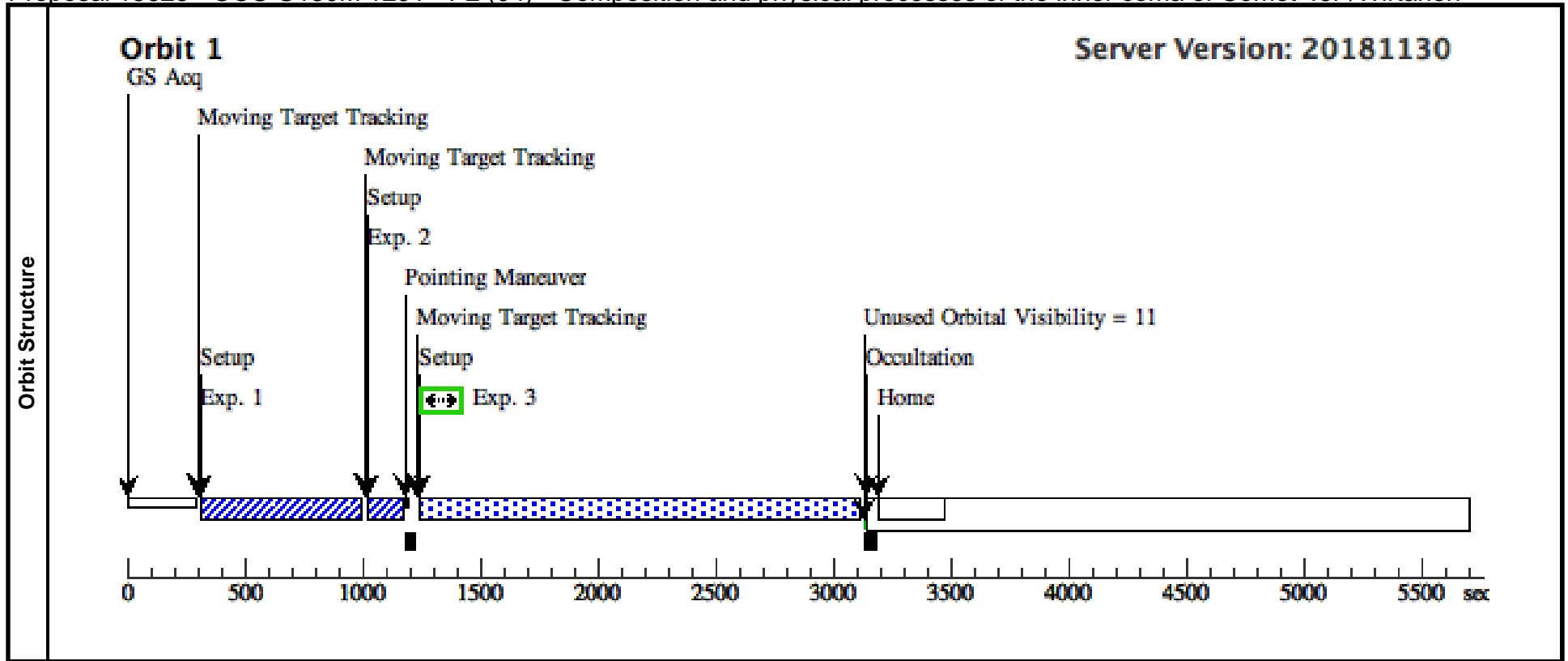
Visit	Proposal 15625, COS G130M 1291 - P2 (03), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: OI 1304 & 1356, and CII 1335: COS, G130M, 1291 A, x2 orbits</i>									
	Diagnosics (COS G130M 1291 - P2 (03)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 3 (03.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR CH (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1BE		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 3 (COS.sp.129 6762)	(2) 46P-WIRTANE N-OFFSET1	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; BUFFER-TIME=50 00			1700 Secs (1700 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1291 - P2 (04) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

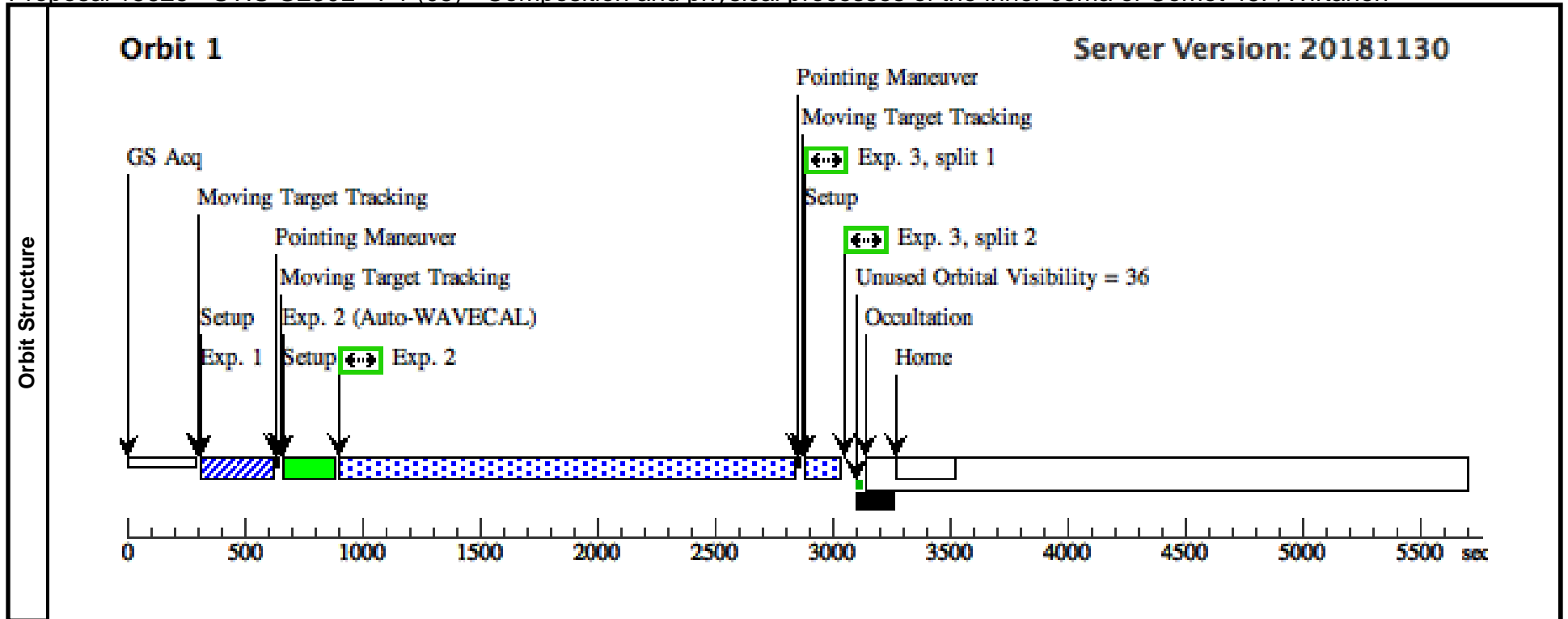
Visit	Proposal 15625, COS G130M 1291 - P2 (04), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: OI 1304 & 1356, and CII 1335: COS, G130M, 1291 A, x2 orbits</i>									
	Diagnosics (COS G130M 1291 - P2 (04)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 4 (04.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR CH (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1BE		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 4 (COS.sp.129 6762)	(2) 46P-WIRTANE N-OFFSET1	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; BUFFER-TIME=50 00			1700 Secs (1700 Secs) [==>]	[1]



Proposal 15625 - STIS G230L - P1 (05) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

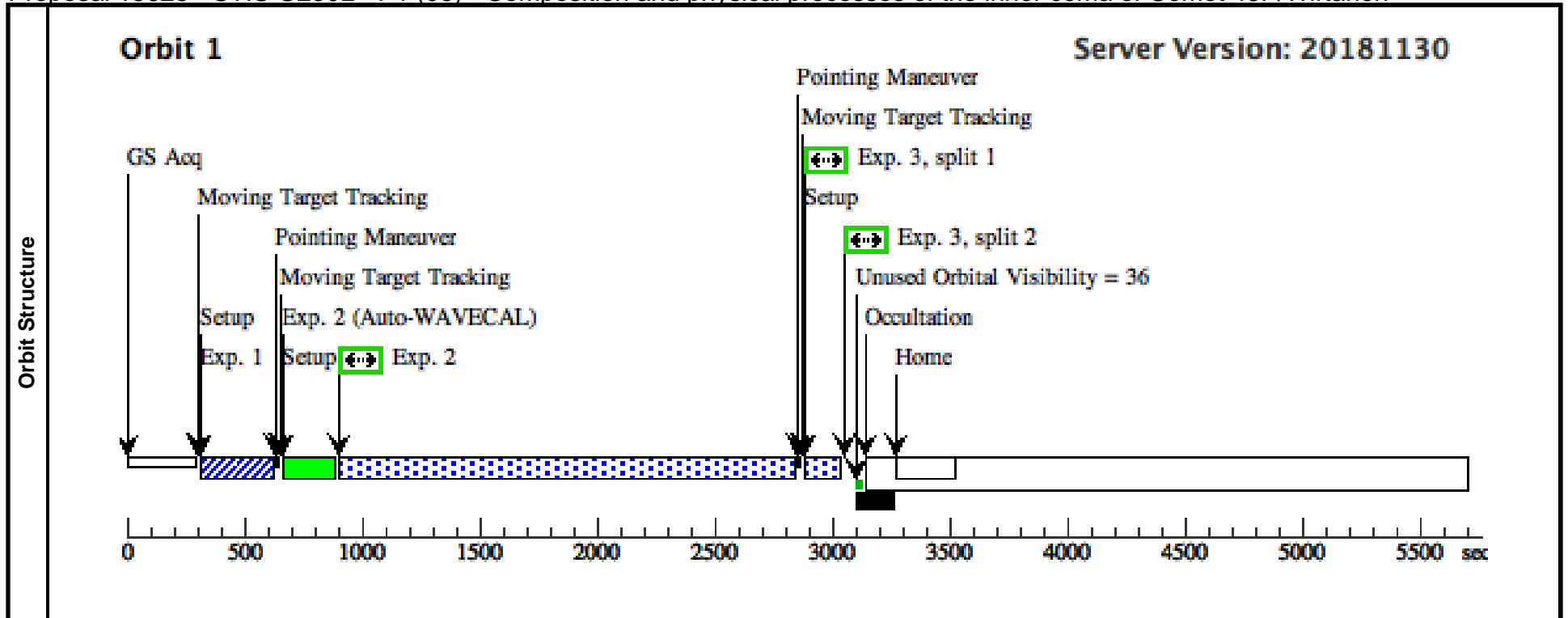
Visit	Proposal 15625, STIS G230L - P1 (05), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: (none) <i>Comments: OH emission: STIS/FUVMAMA, 52x0.5 slit, G230L grating, x2 orbits</i>									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
		(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9					EARTH	
	<i>Comments: Description=Comet 46P/Wirtanen</i> <i>Extended=YES</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 N 7953)	(1) 46P-WIRTANE N	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97603)	(1) 46P-WIRTANE N	STIS/NUV-MAMA, ACCUM, 52X0.5	G230L 2376 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 N 7953)	(1) 46P-WIRTANE N	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G230L - P1 (06) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

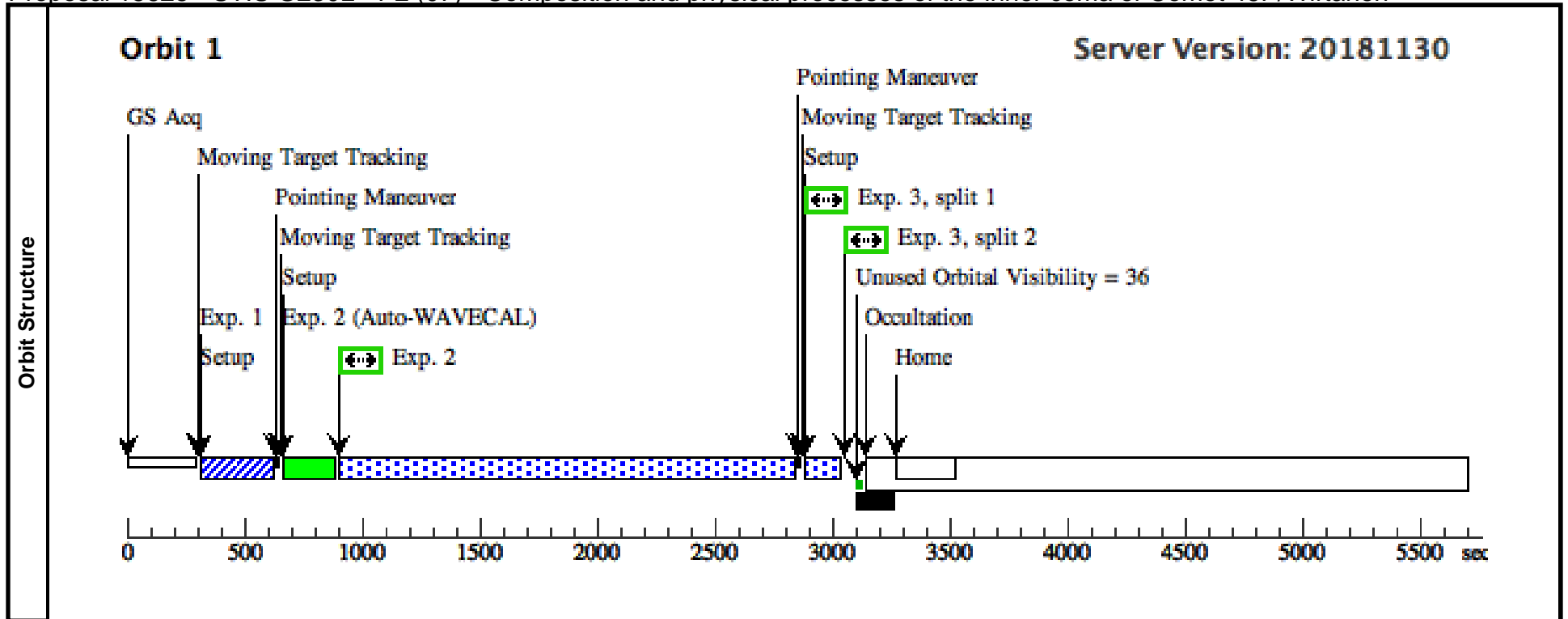
Visit	Proposal 15625, STIS G230L - P1 (06), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: (none) <i>Comments: OH emission: STIS/FUVMAMA, 52x0.5 slit, G230L grating, x2 orbits</i>									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
		(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9					EARTH	
	<i>Comments: Description=Comet 46P/Wirtanen</i> <i>Extended=YES</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 N 7953)	(1) 46P-WIRTANE N	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97603)	(1) 46P-WIRTANE N	STIS/NUV-MAMA, ACCUM, 52X0.5	G230L 2376 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 N 7953)	(1) 46P-WIRTANE N	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G230L - P2 (07) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

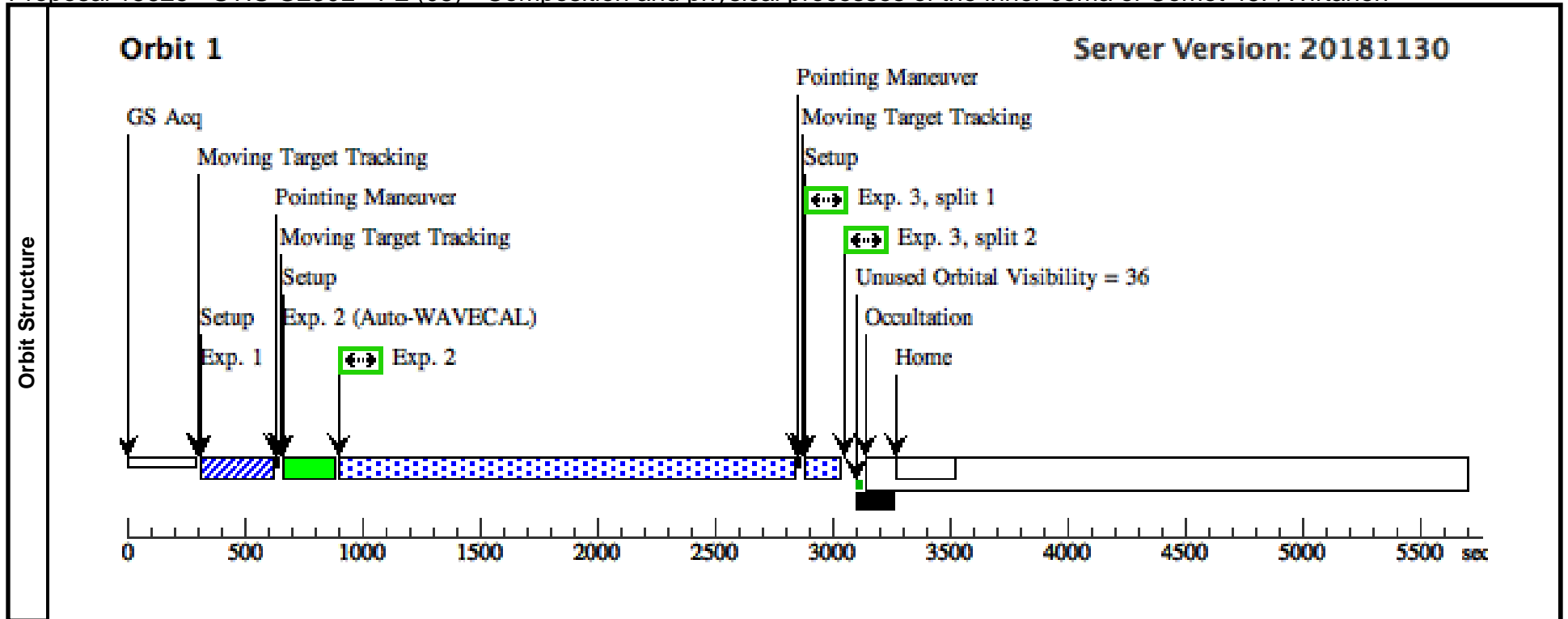
Visit	Proposal 15625, STIS G230L - P2 (07), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: (none) <i>Comments: OH emission: STIS/FUVMAMA, 52x0.5 slit, G230L grating, x2 orbits</i>									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen</i> <i>Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97603)	(2) 46P-WIRTANE N-OFFSET1	STIS/NUV-MAMA, ACCUM, 52X0.5	G230L 2376 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G230L - P2 (08) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

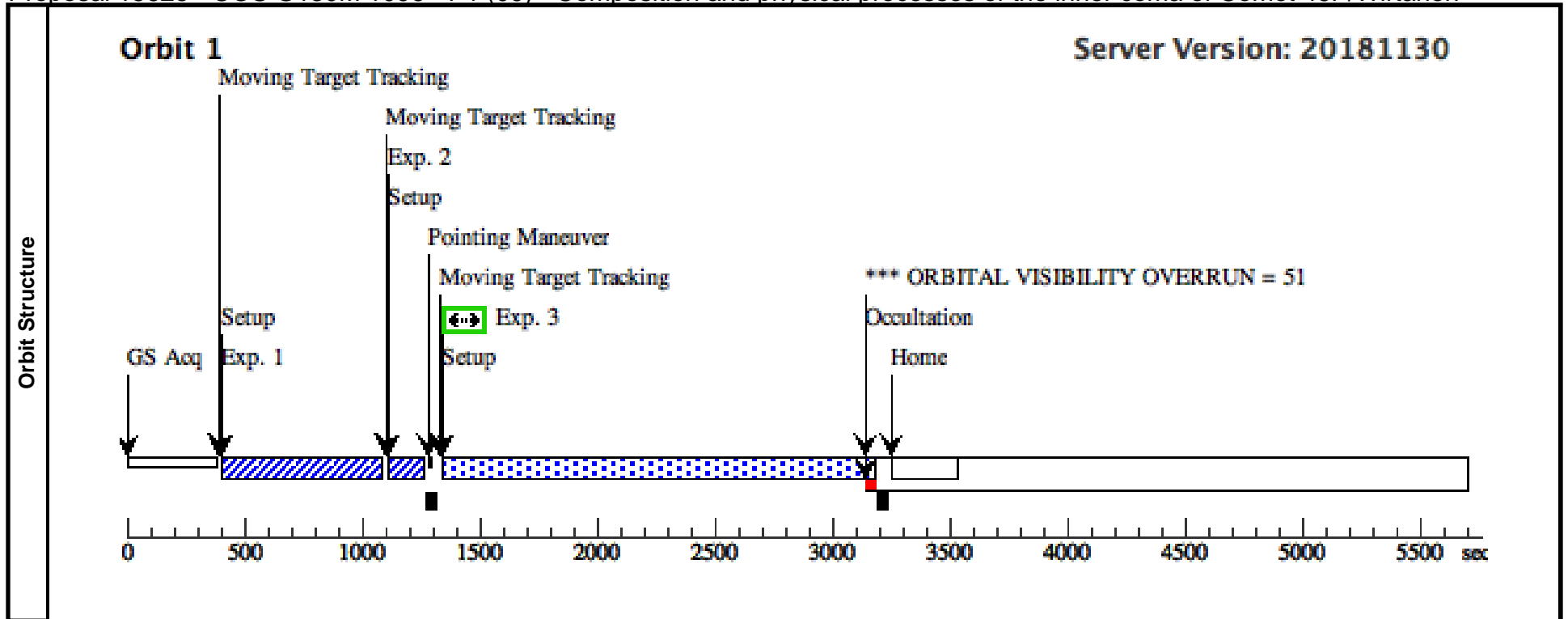
Visit	Proposal 15625, STIS G230L - P2 (08), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: (none) <i>Comments: OH emission: STIS/FUVMAMA, 52x0.5 slit, G230L grating, x2 orbits</i>									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
		(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH	
	<i>Comments: Description=Comet 46P/Wirtanen</i> <i>Extended=YES</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97603)	(2) 46P-WIRTANE N-OFFSET1	STIS/NUV-MAMA, ACCUM, 52X0.5	G230L 2376 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - COS G130M 1096 - P1 (09) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

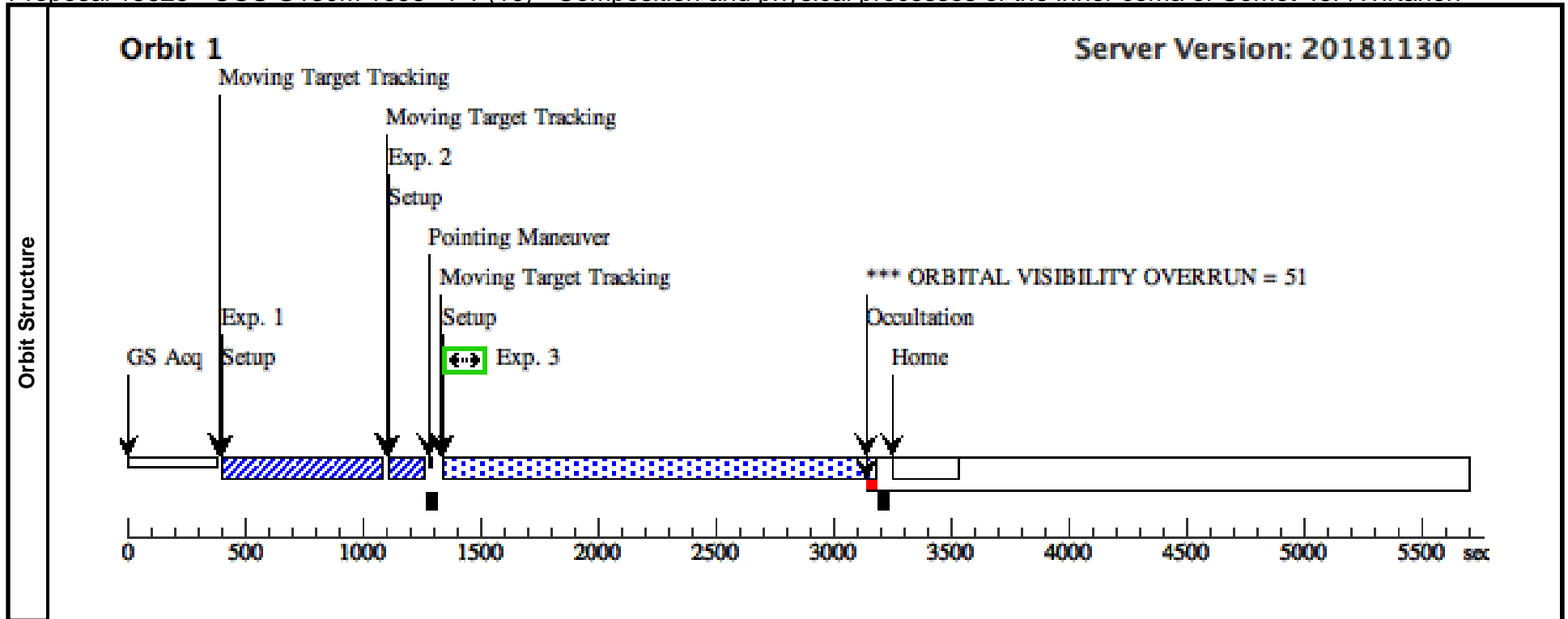
Visit	<p>Proposal 15625, COS G130M 1096 - P1 (09), implementation</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: (none)</p> <p><i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i></p>									
	<p>(COS G130M 1096 - P1 (09)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.</p> <p>(COS G130M 1096 - P1 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN</p> <p>(FP POS 1 (09.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9					EARTH		
<p><i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i></p>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 1 (COS.sp.129 6771)	(1) 46P-WIRTANE N	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=1; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P1 (10) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

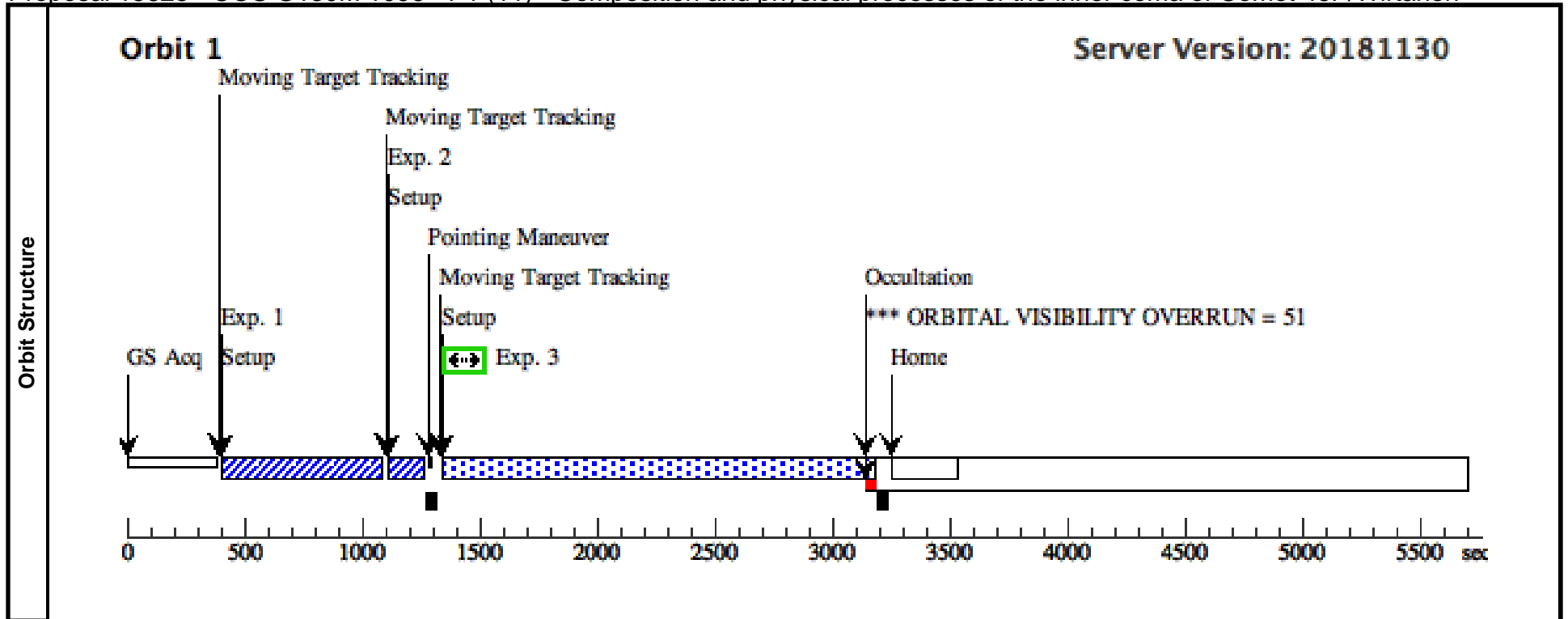
Visit	Proposal 15625, COS G130M 1096 - P1 (10), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	(COS G130M 1096 - P1 (10)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (COS G130M 1096 - P1 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (FP POS 2 (10.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Diagnosics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9					EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 2 (COS.sp.129 6771)	(1) 46P-WIRTANE N	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=2; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P1 (11) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

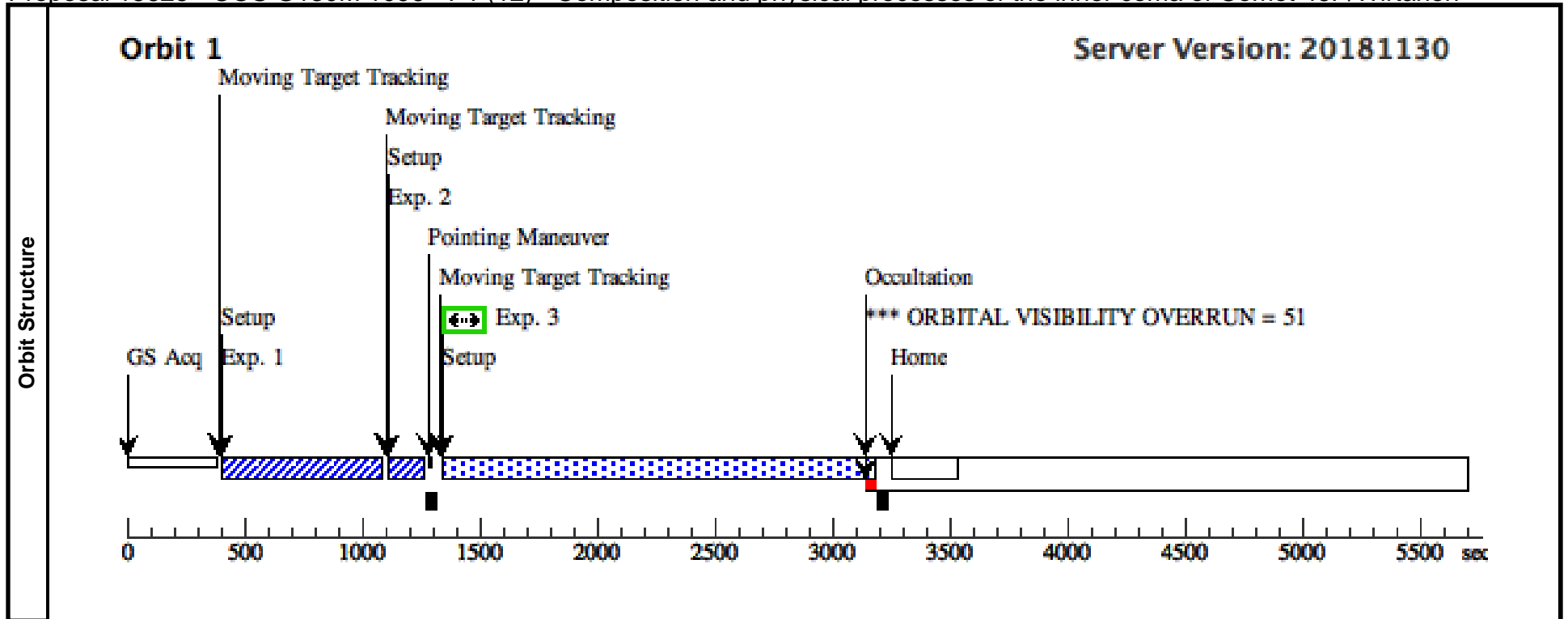
Visit	Proposal 15625, COS G130M 1096 - P1 (11), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	Diagnosics (COS G130M 1096 - P1 (11)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (COS G130M 1096 - P1 (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (FP POS 3 (11.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9					EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 3 (COS.sp.129 6771)	(1) 46P-WIRTANE N	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=3; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P1 (12) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

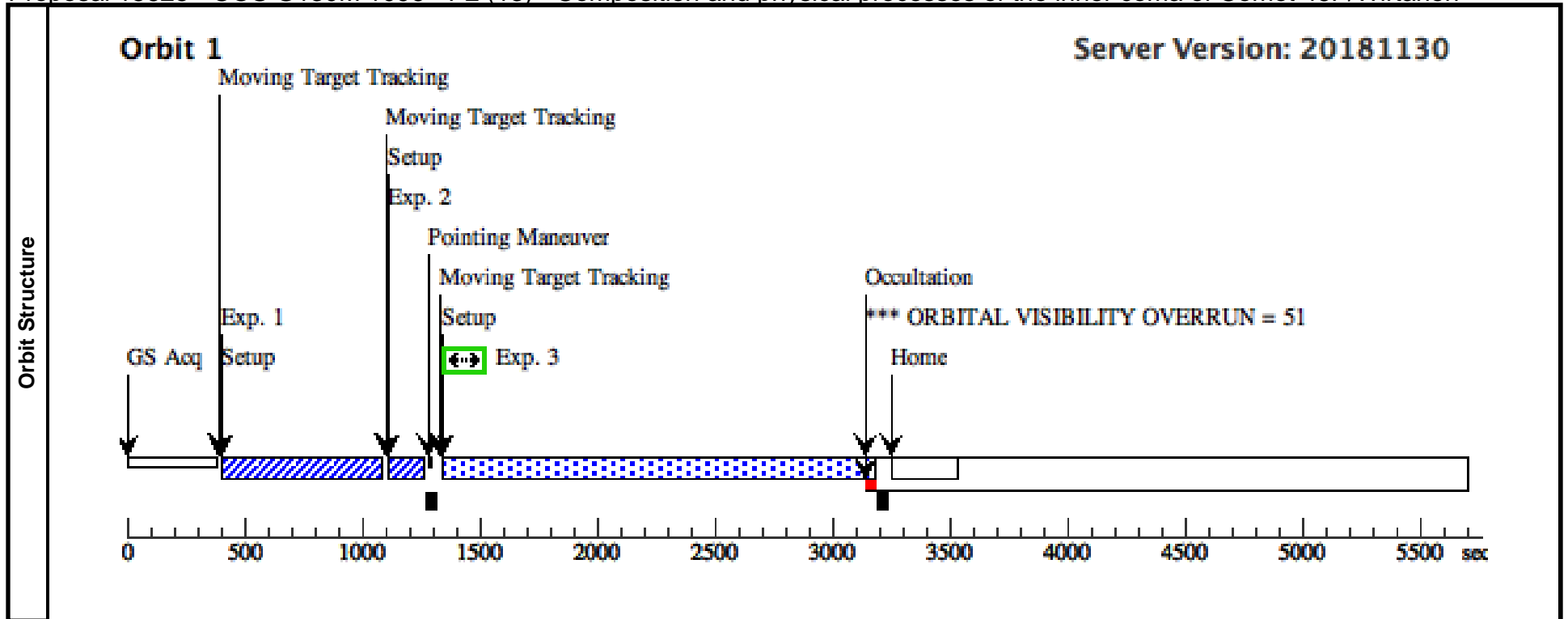
Visit	Proposal 15625, COS G130M 1096 - P1 (12), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	Diagnosics (COS G130M 1096 - P1 (12)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (COS G130M 1096 - P1 (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (FP POS 4 (12.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9					EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(1) 46P-WIRTANE N	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 4 (COS.sp.129 6771)	(1) 46P-WIRTANE N	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=4; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P2 (13) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

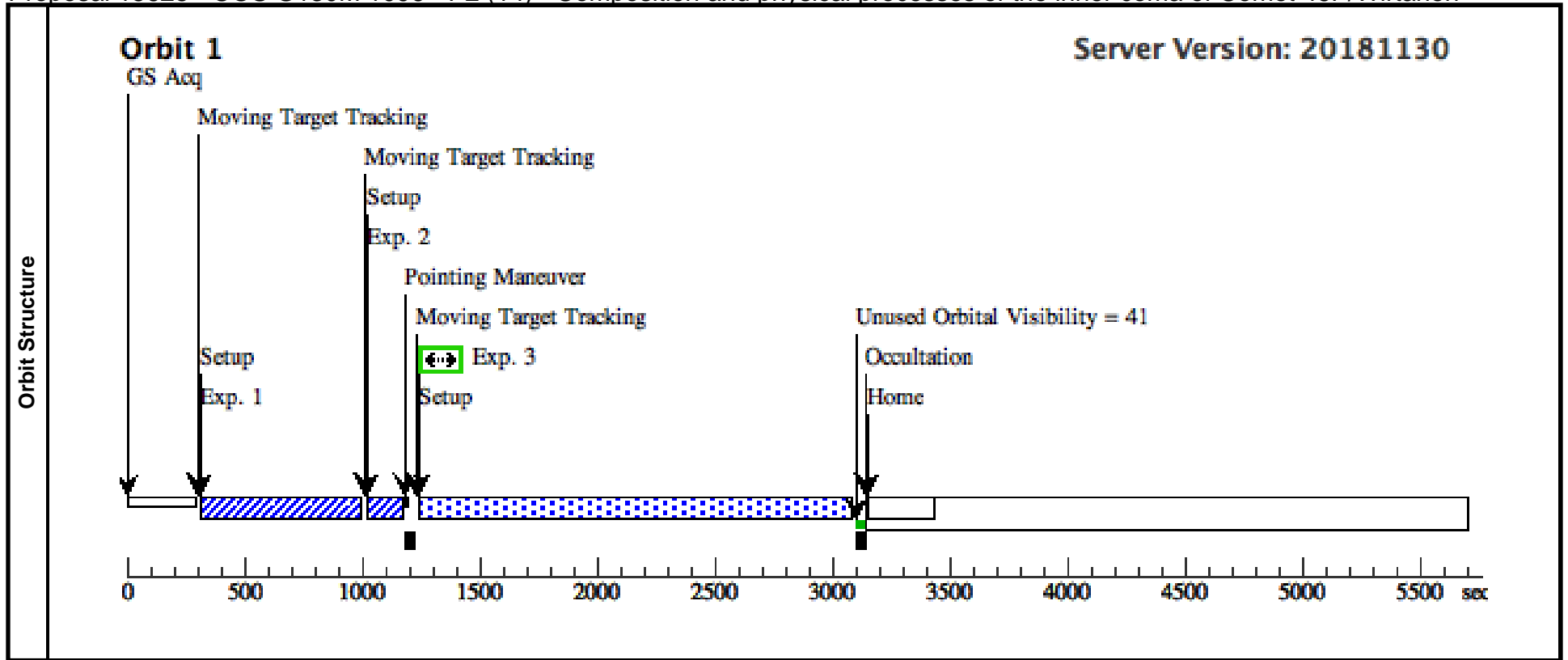
Visit	<p>Proposal 15625, COS G130M 1096 - P2 (13), implementation</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: (none)</p> <p><i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i></p>									
	<p>(COS G130M 1096 - P2 (13)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.</p> <p>(COS G130M 1096 - P2 (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN</p> <p>(FP POS 1 (13.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<p><i>Comments: Description=Comet 46P/Wirtanen</i></p> <p><i>Extended=YES</i></p>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 1 (COS.sp.129 6771)	(2) 46P-WIRTANE N-OFFSET1	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=1; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P2 (14) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

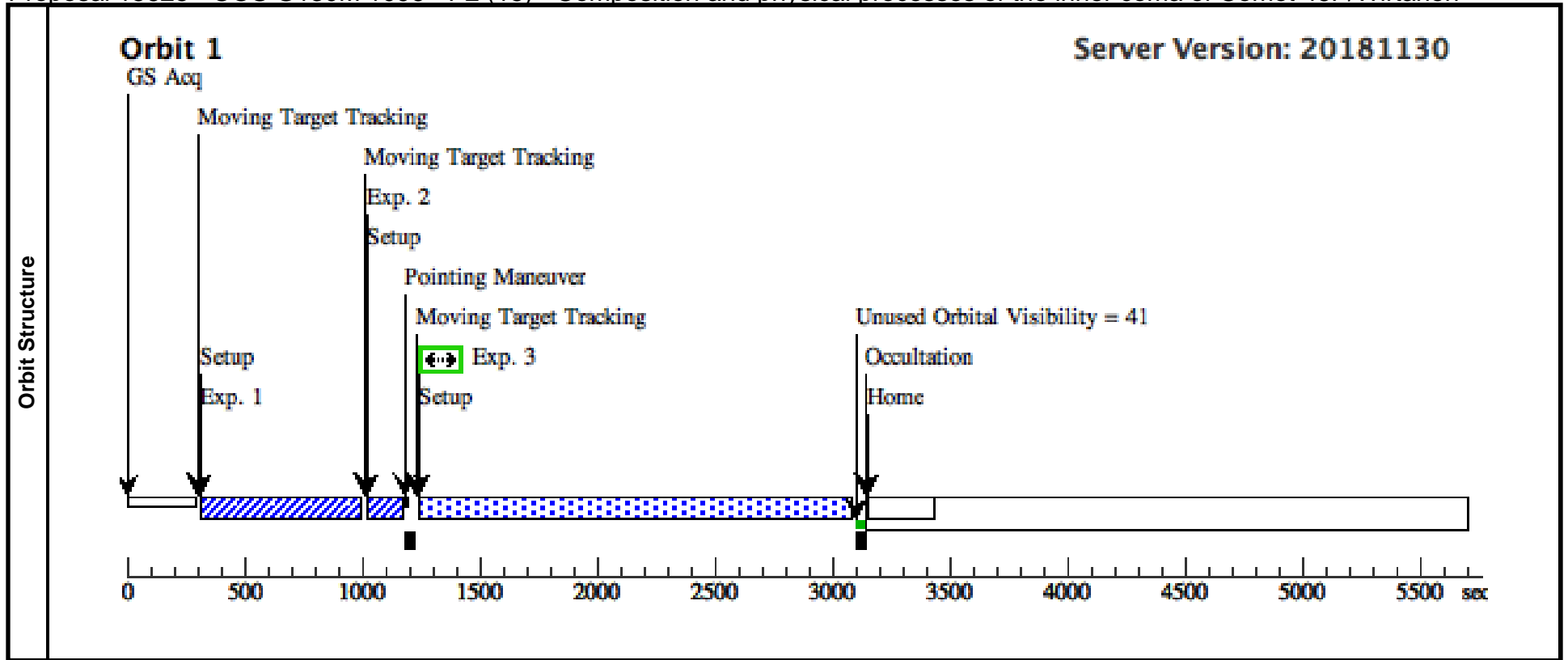
Visit	Proposal 15625, COS G130M 1096 - P2 (14), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	(COS G130M 1096 - P2 (14)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 2 (14.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Diagnosics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1BE		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 2 (COS.sp.129 6771)	(2) 46P-WIRTANE N-OFFSET1	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=2; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P2 (15) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

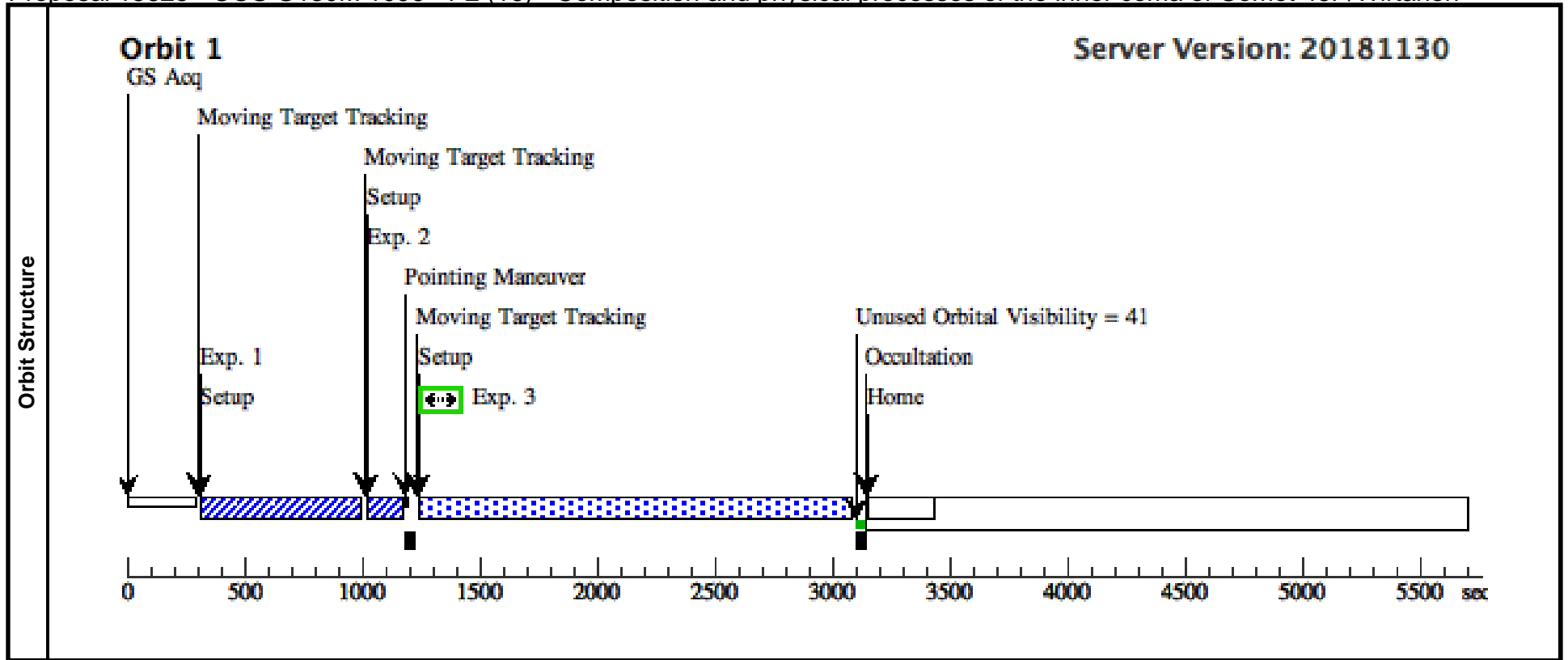
Visit	Proposal 15625, COS G130M 1096 - P2 (15), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	(COS G130M 1096 - P2 (15)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 3 (15.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Diagnosics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1BE		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 3 (COS.sp.129 6771)	(2) 46P-WIRTANE N-OFFSET1	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=3; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P2 (16) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:14 GMT 2018

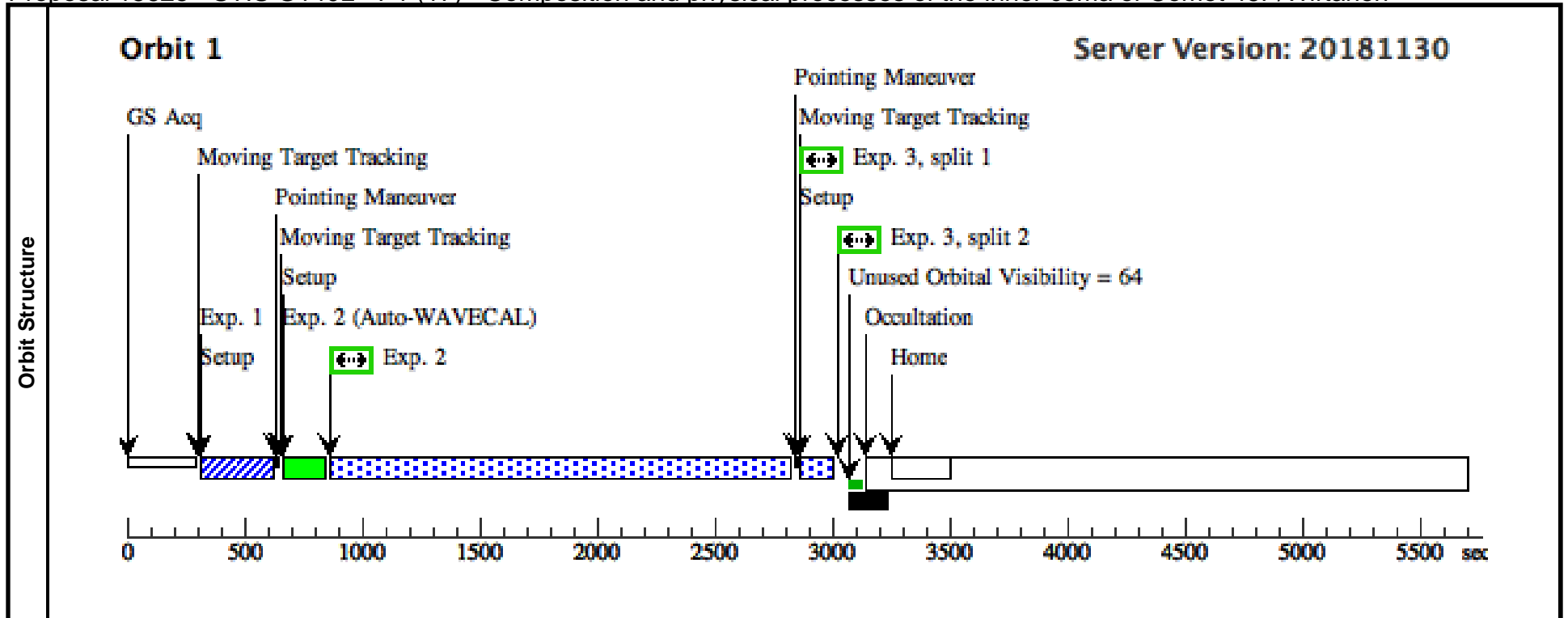
Visit	Proposal 15625, COS G130M 1096 - P2 (16), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	(COS G130M 1096 - P2 (16)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 4 (16.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Diagnosics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1BE		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(2) 46P-WIRTANE N-OFFSET1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 4 (COS.sp.129 6771)	(2) 46P-WIRTANE N-OFFSET1	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=4; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - STIS G140L - P1 (17) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

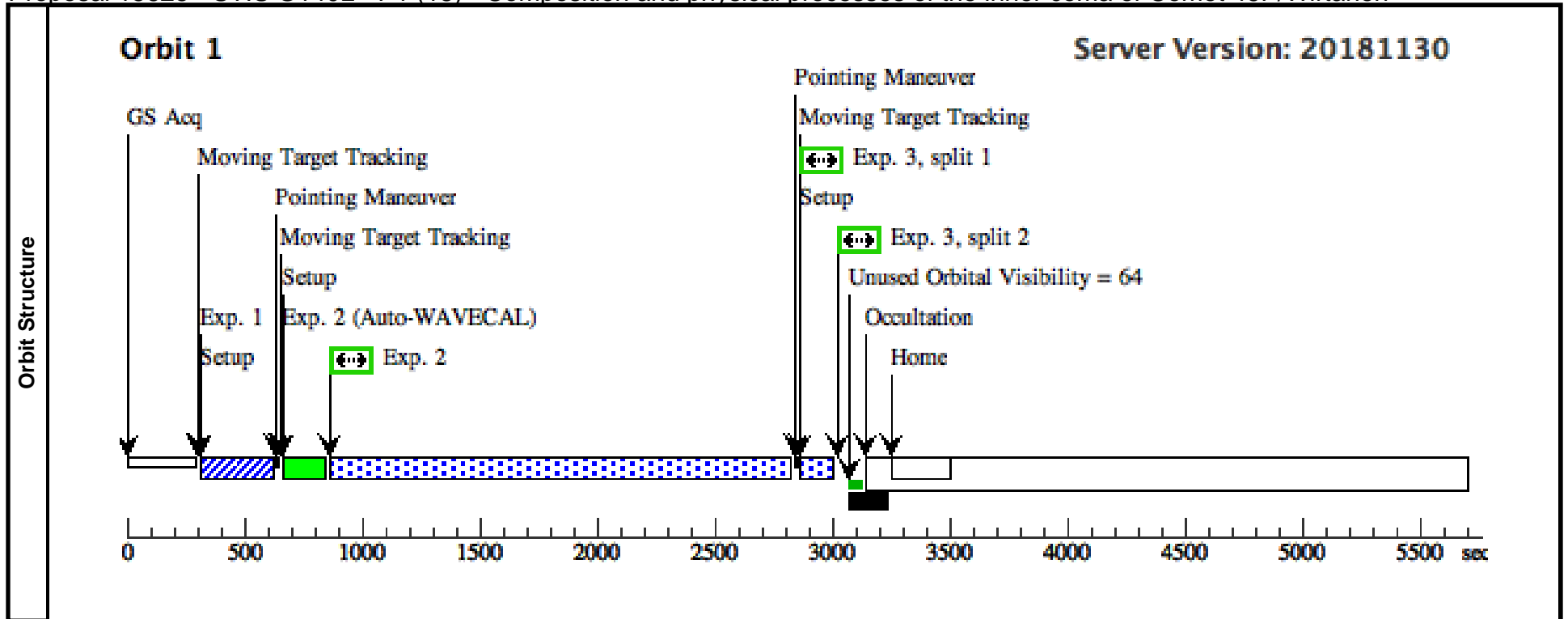
Visit	Proposal 15625, STIS G140L - P1 (17), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Solar System Targets									
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9				EARTH				
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 N 7953)	(1) 46P-WIRTANE	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(1) 46P-WIRTANE	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 N 7953)	(1) 46P-WIRTANE	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P1 (18) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

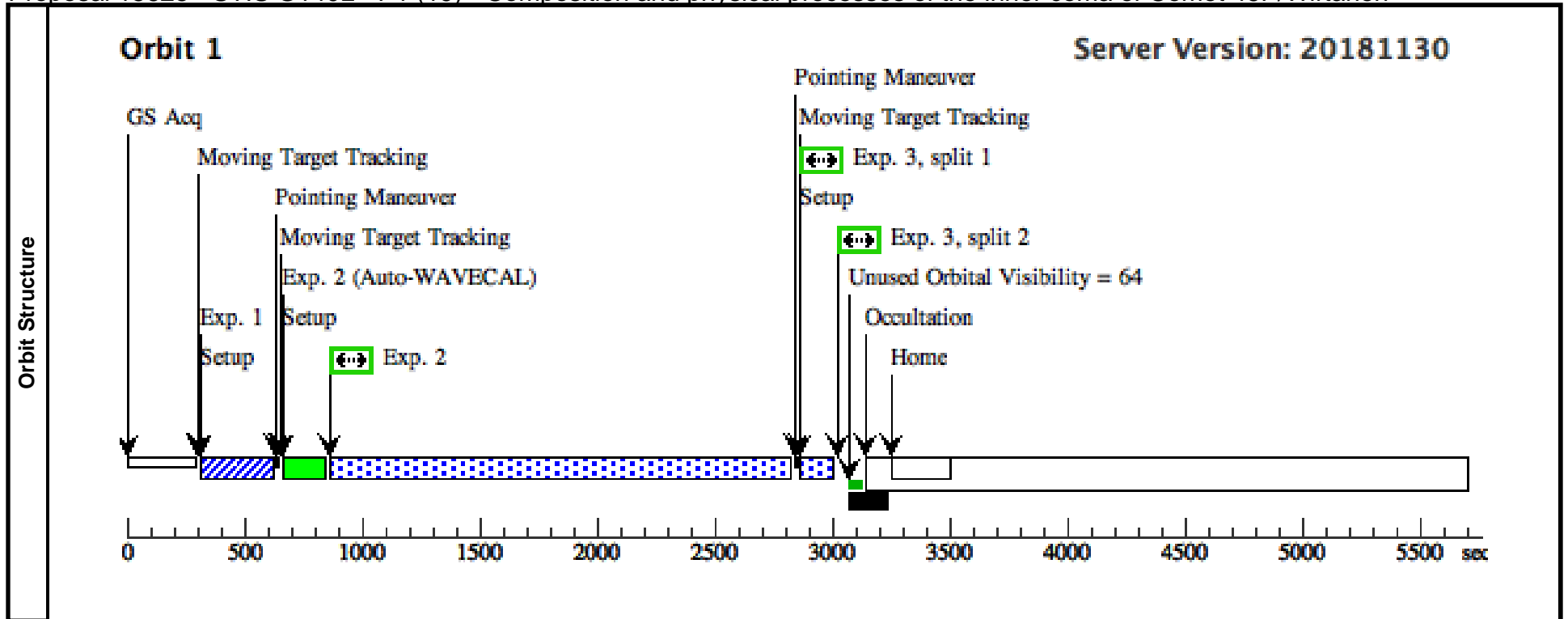
Visit	Proposal 15625, STIS G140L - P1 (18), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Solar System Targets									
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9				EARTH				
<i>Comments: Description=Comet 46P/Wirtanen</i> <i>Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 N 7953)	(1) 46P-WIRTANE	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(1) 46P-WIRTANE	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 N 7953)	(1) 46P-WIRTANE	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P1 (19) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

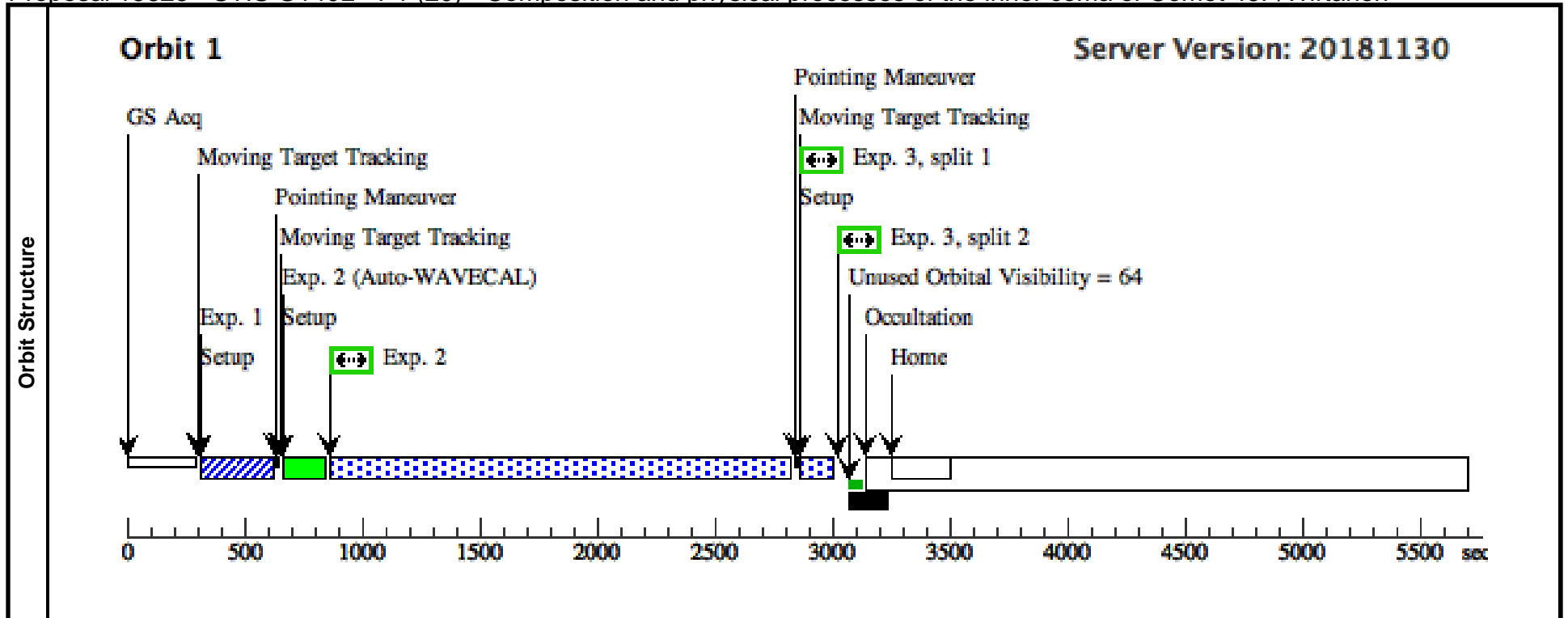
Visit	Proposal 15625, STIS G140L - P1 (19), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits									
	Solar System Targets									
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9				EARTH				
Comments: Description=Comet 46P/Wirtanen Extended=YES										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 N 7953)	(1) 46P-WIRTANE N	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(1) 46P-WIRTANE N	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 N 7953)	(1) 46P-WIRTANE N	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P1 (20) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

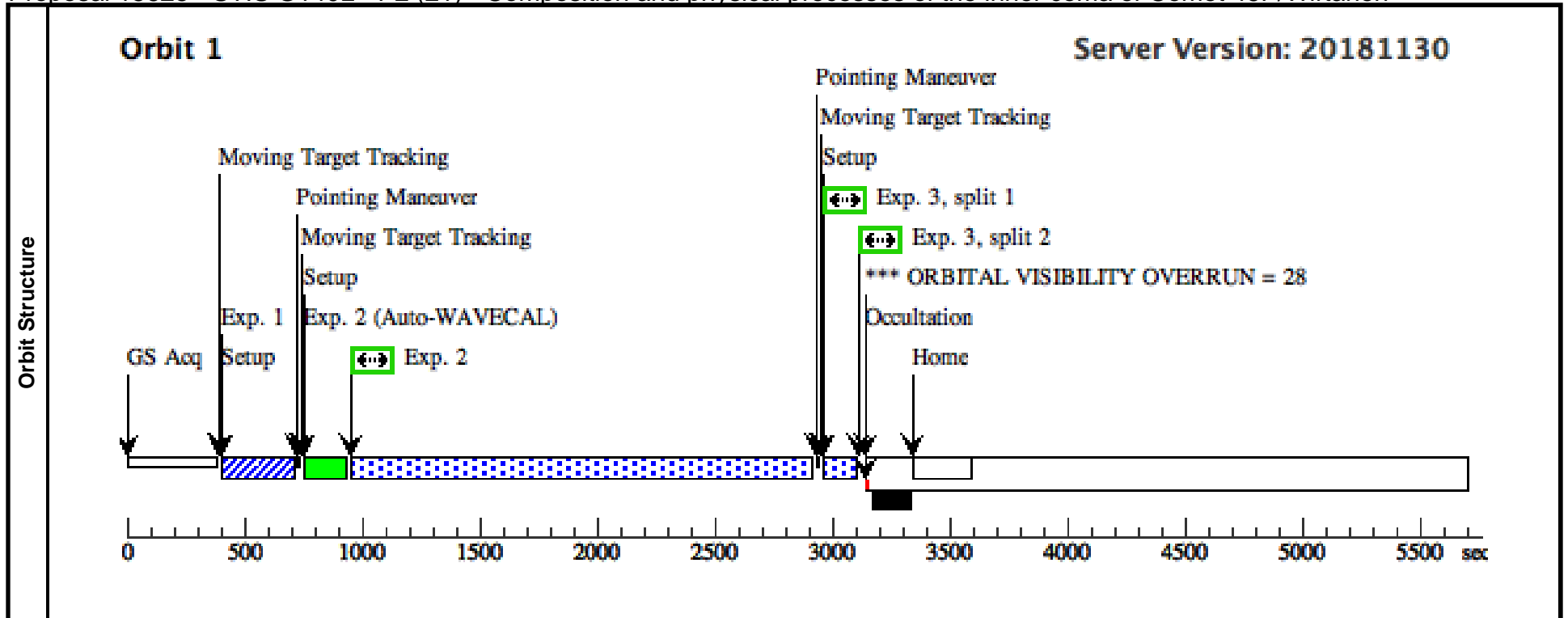
Visit	Proposal 15625, STIS G140L - P1 (20), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Solar System Targets									
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
(1)	46P-WIRTANEN	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9				EARTH				
<i>Comments: Description=Comet 46P/Wirtanen</i> <i>Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 N 7953)	(1) 46P-WIRTANE N	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(1) 46P-WIRTANE N	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 N 7953)	(1) 46P-WIRTANE N	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P2 (21) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

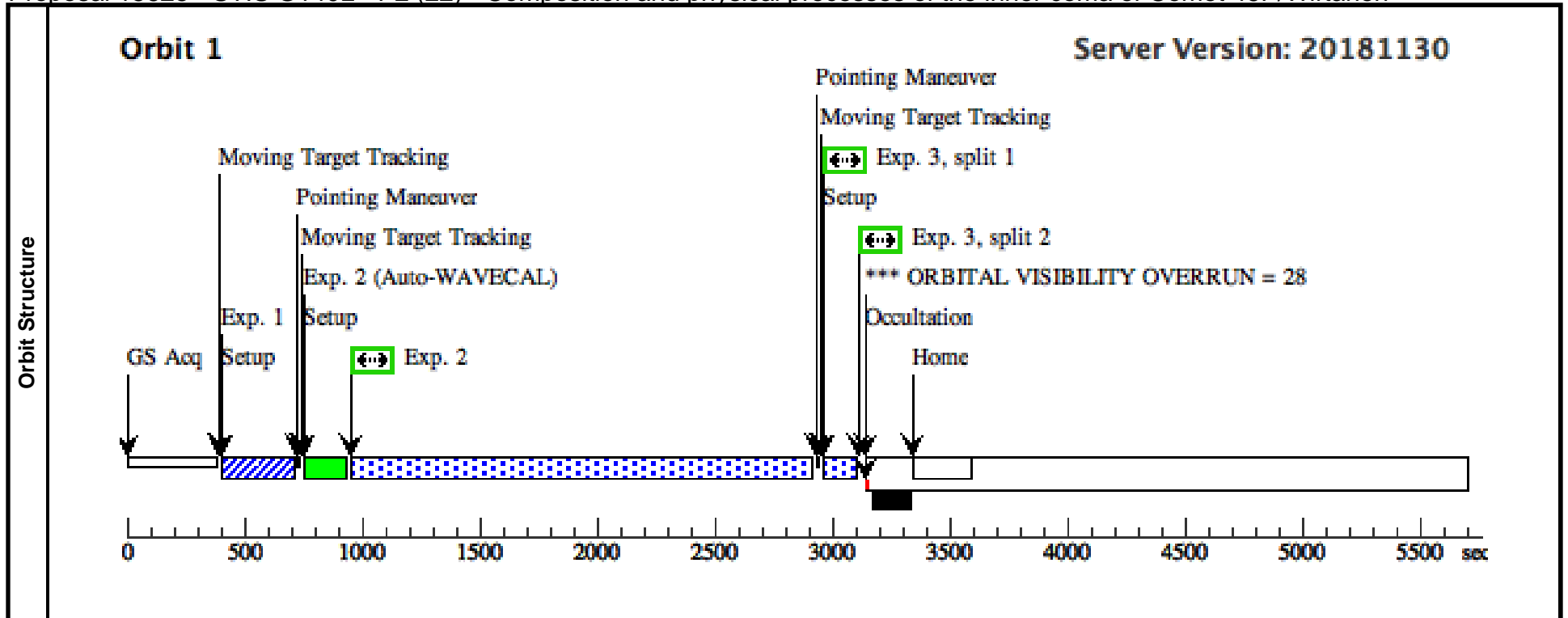
Visit	Proposal 15625, STIS G140L - P2 (21), implementation Diagnostic Status: Warning Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Diagnosics (STIS G140L - P2 (21)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(2) 46P-WIRTANE N-OFFSET1	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P2 (22) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

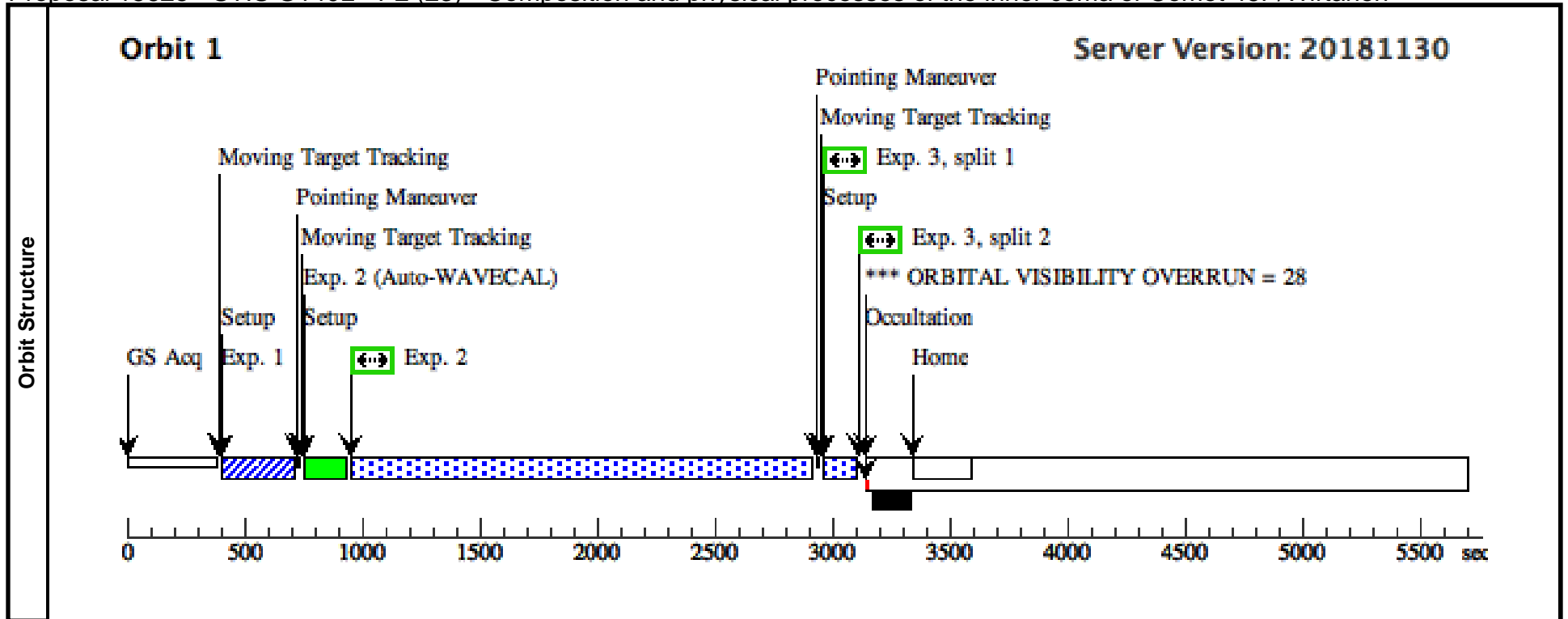
Visit	Proposal 15625, STIS G140L - P2 (22), implementation Diagnostic Status: Warning Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Diagnosics (STIS G140L - P2 (22)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(2) 46P-WIRTANE N-OFFSET1	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P2 (23) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

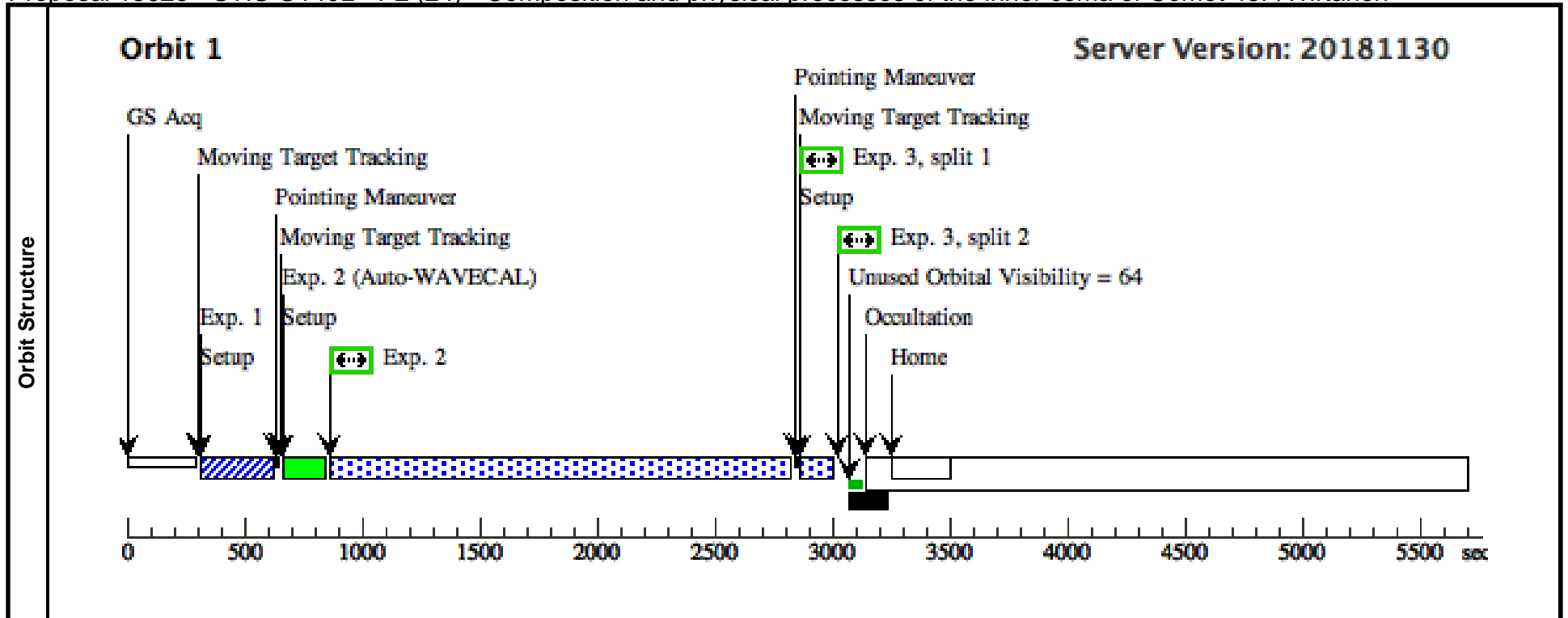
Visit	Proposal 15625, STIS G140L - P2 (23), implementation Diagnostic Status: Warning Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Diagnosics (STIS G140L - P2 (23)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(2) 46P-WIRTANE N-OFFSET1	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P2 (24) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

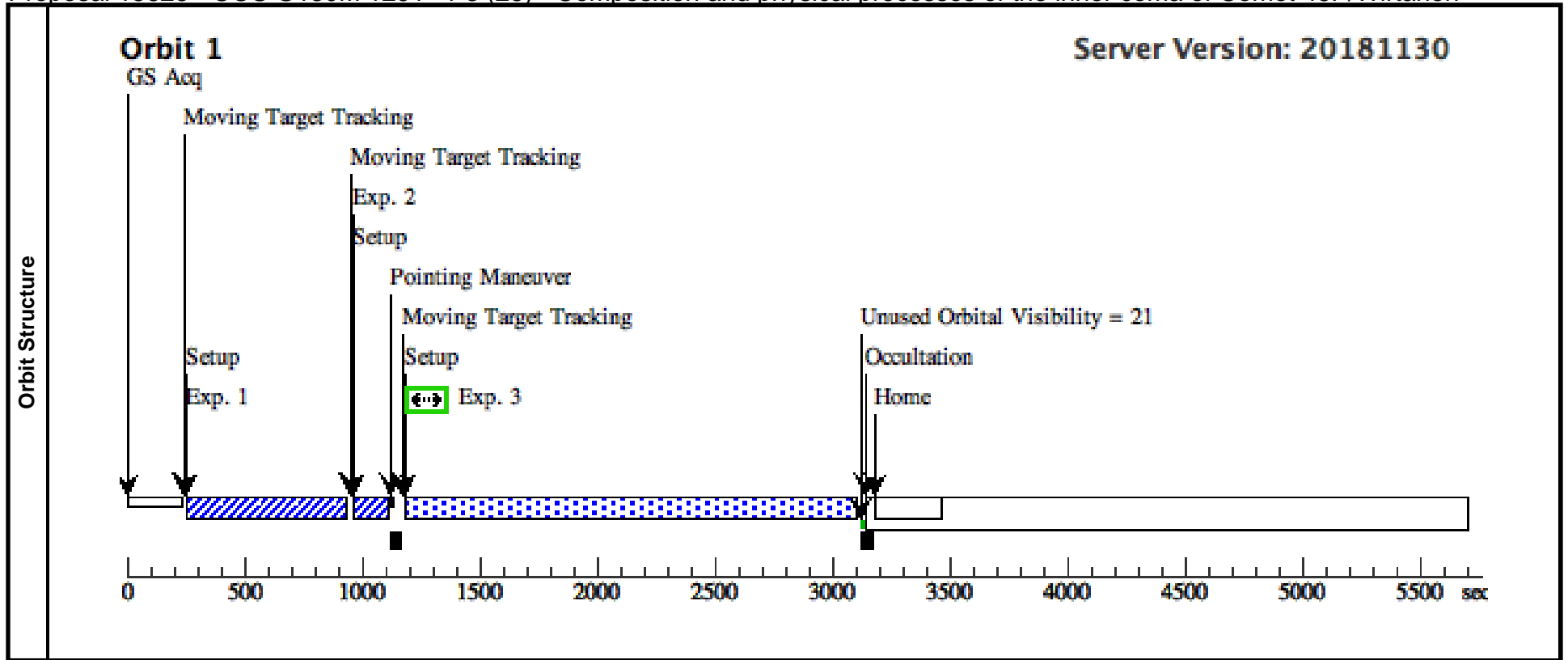
Visit	Proposal 15625, STIS G140L - P2 (24), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>										
	Solar System Targets										
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center					
(2)	46P-WIRTANEN-OFFSET1	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=2.5,ANG =0,REF=SUN			EARTH					
<i>Comments: Description=Comet 46P/Wirtanen</i> <i>Extended=YES</i>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	ACQ (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1BE		10 Secs (10 Secs) [==>]		[1]
	2	(STIS.sp.12 97664)	(2) 46P-WIRTANE N-OFFSET1	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]		[1]
	3	IMAGE (STIS.ta.129 7953)	(2) 46P-WIRTANE N-OFFSET1	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]		[1]



Proposal 15625 - COS G130M 1291 - P3 (25) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

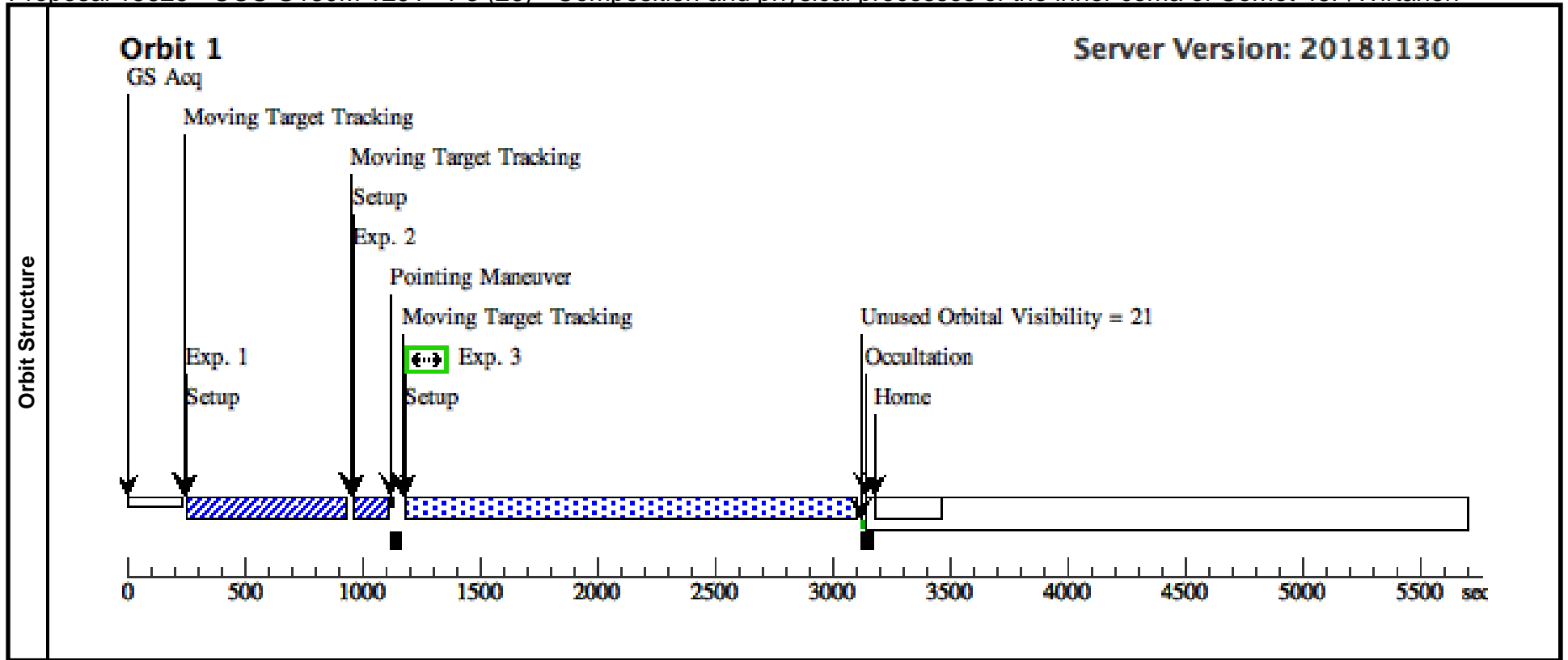
Visit	Proposal 15625, COS G130M 1291 - P3 (25), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: OI 1304 & 1356, and CII 1335: COS, G130M, 1291 A, x2 orbits</i>									
	Diagnosics (COS G130M 1291 - P3 (25)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 3 (25.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR CH (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1B3		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 3 (COS.sp.129 6762)	(3) 46P-WIRTANE N-OFFSET2	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; BUFFER-TIME=50 00			1750 Secs (1750 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1291 - P3 (26) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

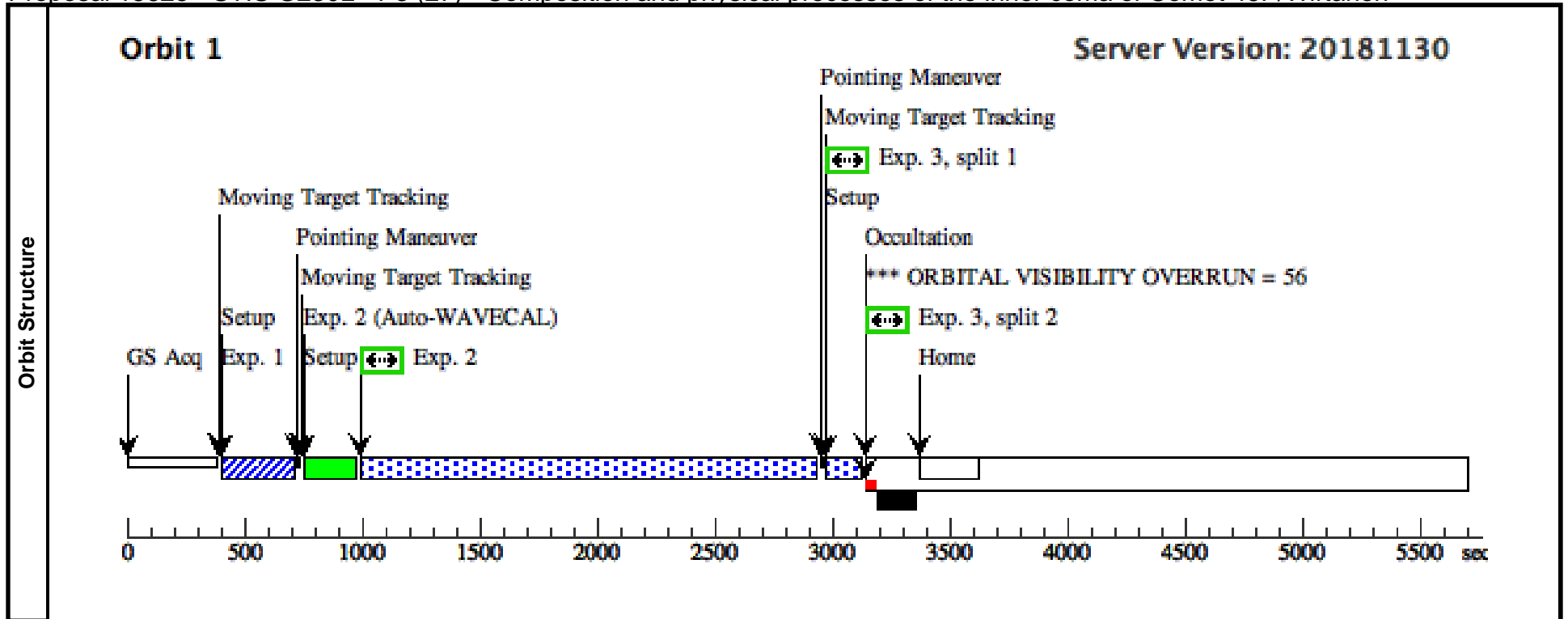
Visit	Proposal 15625, COS G130M 1291 - P3 (26), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: OI 1304 & 1356, and CII 1335: COS, G130M, 1291 A, x2 orbits</i>									
	Diagnosics (COS G130M 1291 - P3 (26)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (FP POS 4 (26.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR CH (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3	GS ACQ SCENARI O ONEB1B3		30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 4 (COS.sp.129 6762)	(3) 46P-WIRTANE N-OFFSET2	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; BUFFER-TIME=50 00			1750 Secs (1750 Secs) [==>]	[1]



Proposal 15625 - STIS G230L - P3 (27) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

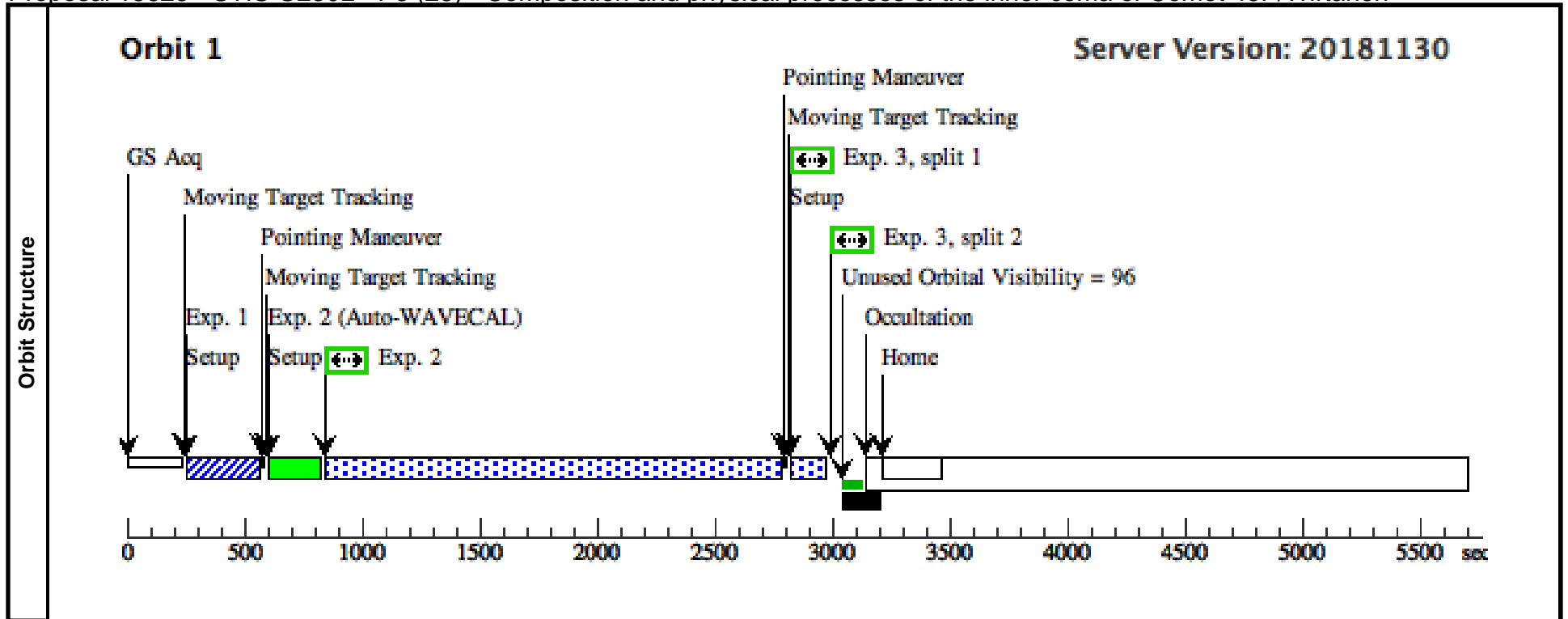
Visit	Proposal 15625, STIS G230L - P3 (27), implementation Diagnostic Status: Warning Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: (none) <i>Comments: OH emission: STIS/FUVMAMA, 52x0.5 slit, G230L grating, x2 orbits</i>									
	Diagnosics (STIS G230L - P3 (27)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97603)	(3) 46P-WIRTANE N-OFFSET2	STIS/NUV-MAMA, ACCUM, 52X0.5	G230L 2376 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G230L - P3 (28) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

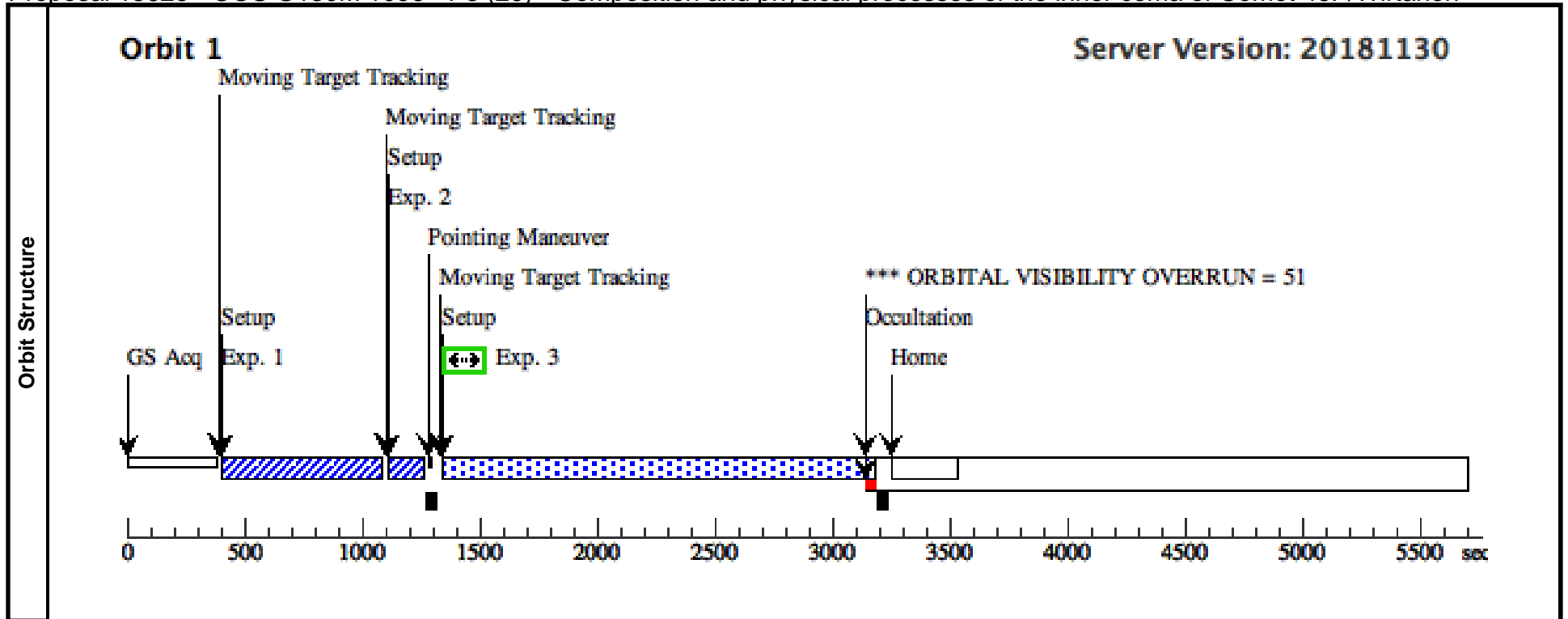
Visit	Proposal 15625, STIS G230L - P3 (28), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: (none) <i>Comments: OH emission: STIS/FUVMAMA, 52x0.5 slit, G230L grating, x2 orbits</i>									
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
		(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH	
	<i>Comments: Description=Comet 46P/Wirtanen</i> <i>Extended=YES</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O ONEB1B3		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97603)	(3) 46P-WIRTANE N-OFFSET2	STIS/NUV-MAMA, ACCUM, 52X0.5	G230L 2376 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - COS G130M 1096 - P3 (29) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

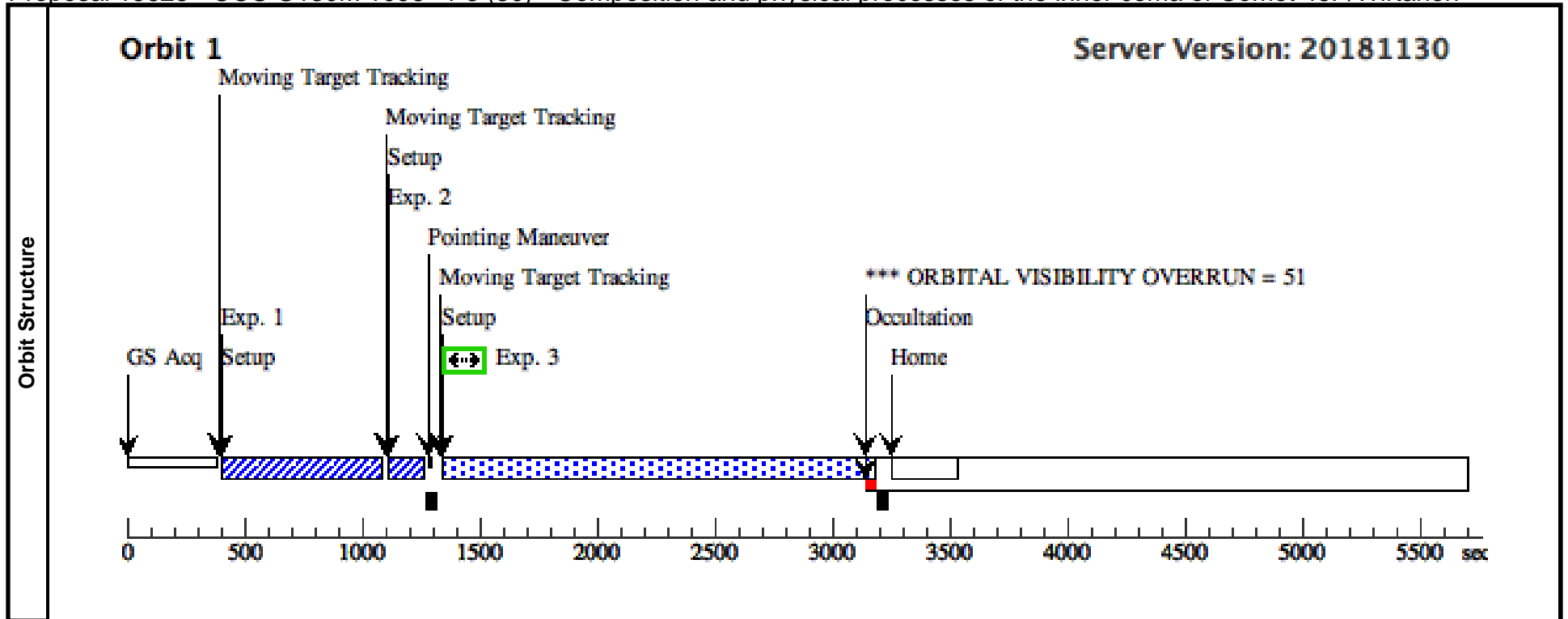
Visit	Proposal 15625, COS G130M 1096 - P3 (29), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	Diagnosics (COS G130M 1096 - P3 (29)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (COS G130M 1096 - P3 (29)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (FP POS 1 (29.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 1 (COS.sp.129 6771)	(3) 46P-WIRTANE N-OFFSET2	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=1; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P3 (30) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

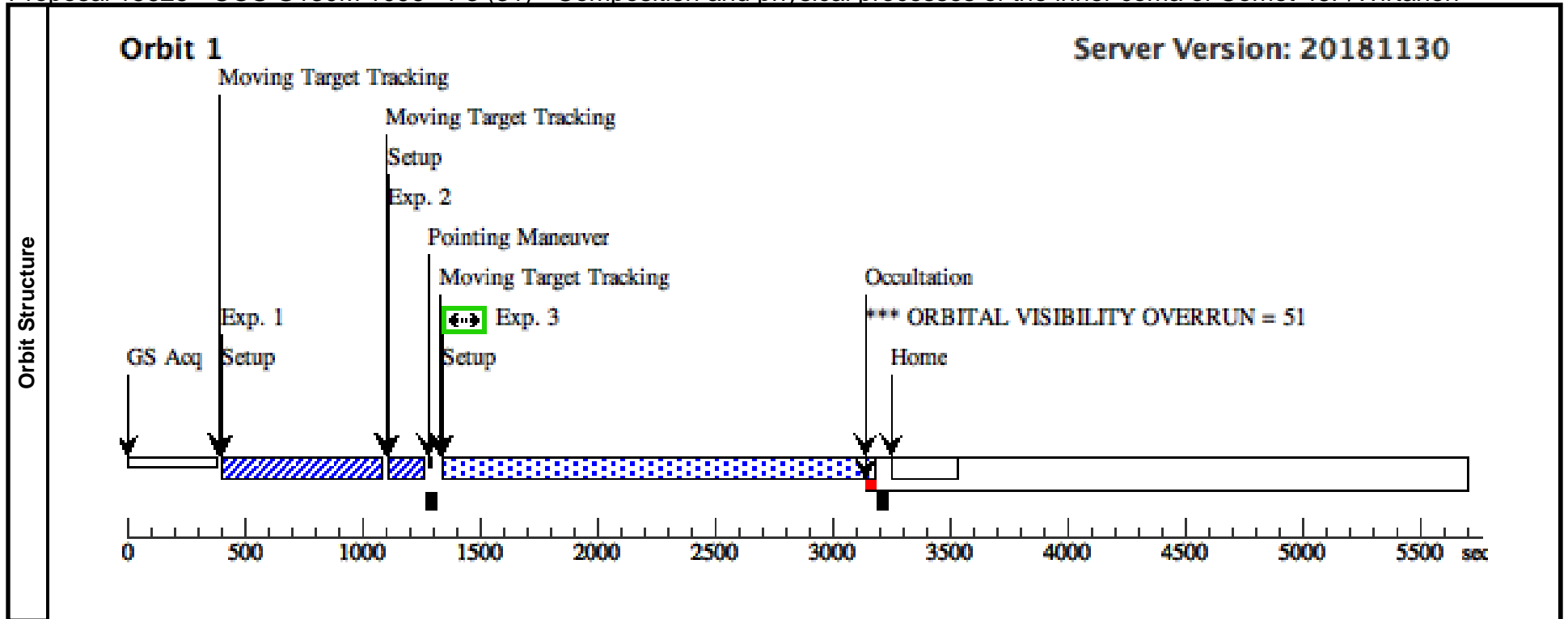
Visit	Proposal 15625, COS G130M 1096 - P3 (30), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	(COS G130M 1096 - P3 (30)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (COS G130M 1096 - P3 (30)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (FP POS 2 (30.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Diagnosics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 .O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 2 (COS.sp.129 6771)	(3) 46P-WIRTANE N-OFFSET2	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=2; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P3 (31) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

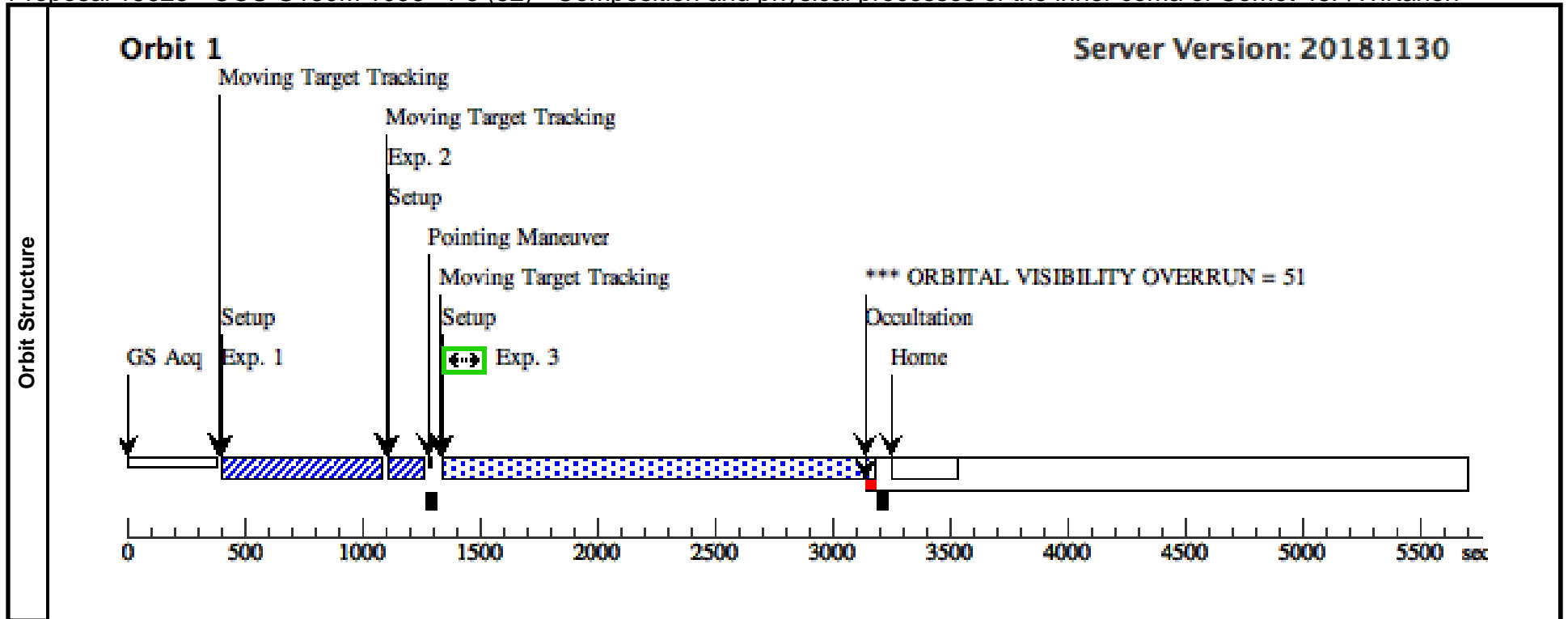
Visit	<p>Proposal 15625, COS G130M 1096 - P3 (31), implementation</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: (none)</p> <p><i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i></p>									
	<p>(COS G130M 1096 - P3 (31)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.</p> <p>(COS G130M 1096 - P3 (31)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN</p> <p>(FP POS 3 (31.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<p><i>Comments: Description=Comet 46P/Wirtanen</i></p> <p><i>Extended=YES</i></p>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 3 (COS.sp.129 6771)	(3) 46P-WIRTANE N-OFFSET2	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=3; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - COS G130M 1096 - P3 (32) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

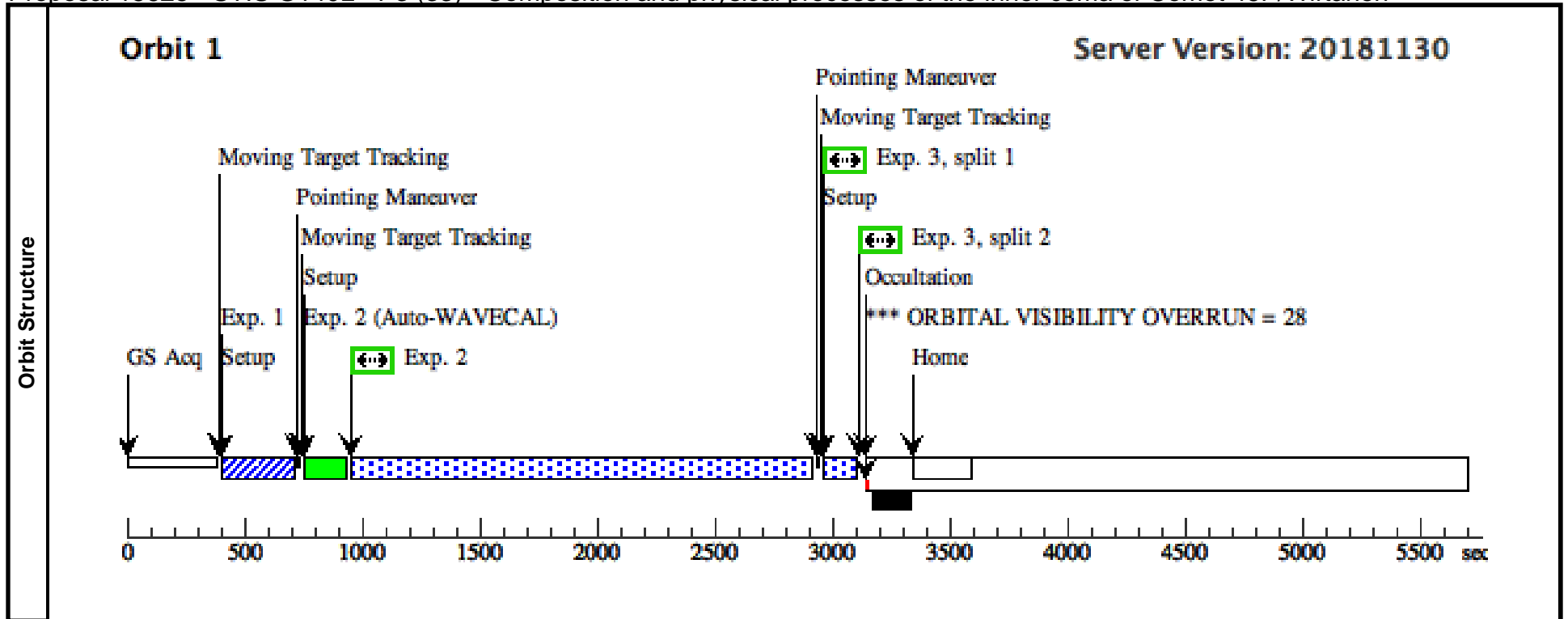
Visit	Proposal 15625, COS G130M 1096 - P3 (32), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Lyman-beta emission: COS, G130M grating, 1096 A, x4 orbits</i>									
	Diagnosics (COS G130M 1096 - P3 (32)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (COS G130M 1096 - P3 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (FP POS 4 (32.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ SEAR TH (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3			30 Secs (30 Secs) [==>]	[1]
	2	ACQ IMAG E (COS.ta.129 7961)	(3) 46P-WIRTANE N-OFFSET2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	3	FP POS 4 (COS.sp.129 6771)	(3) 46P-WIRTANE N-OFFSET2	COS/FUV, TIME-TAG, PSA	G130M 1096 A	FP-POS=4; BUFFER-TIME=60 00			1630 Secs (1630 Secs) [==>]	[1]



Proposal 15625 - STIS G140L - P3 (33) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

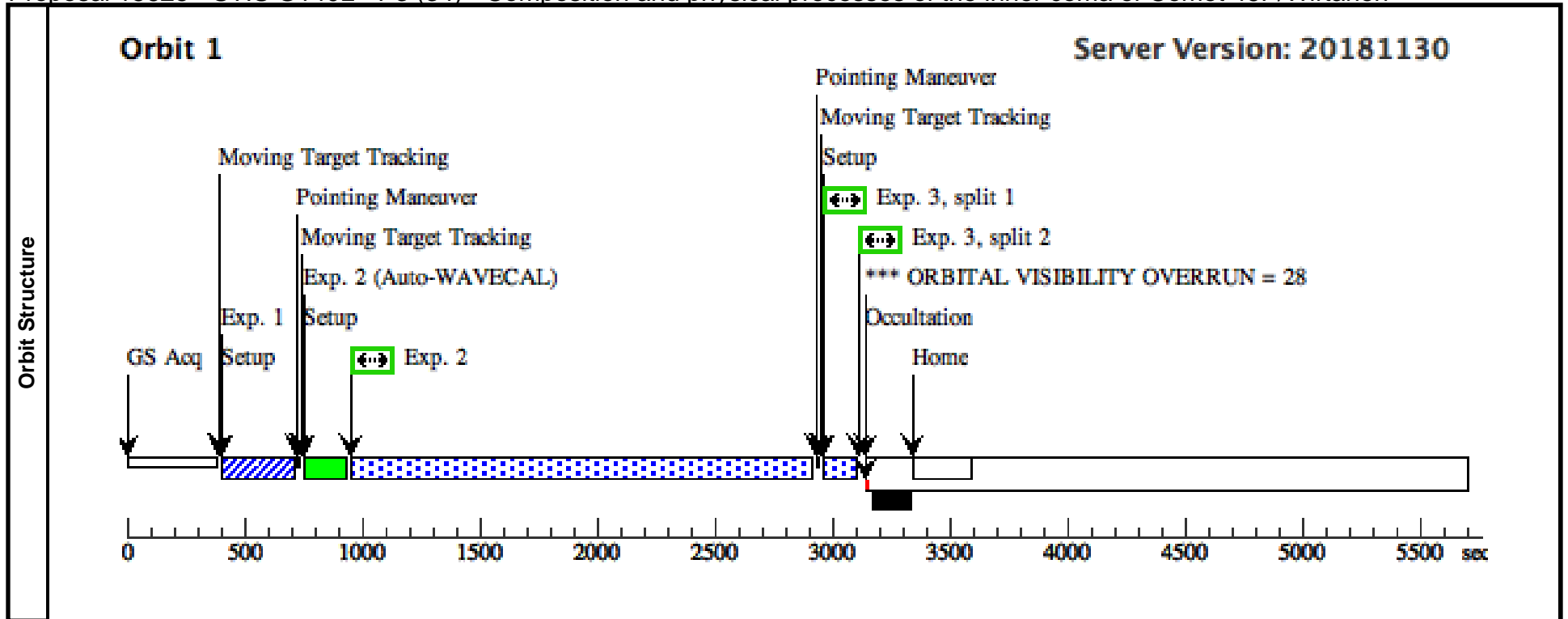
Visit	Proposal 15625, STIS G140L - P3 (33), implementation Diagnostic Status: Warning Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Diagnosics (STIS G140L - P3 (33)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(3) 46P-WIRTANE N-OFFSET2	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P3 (34) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

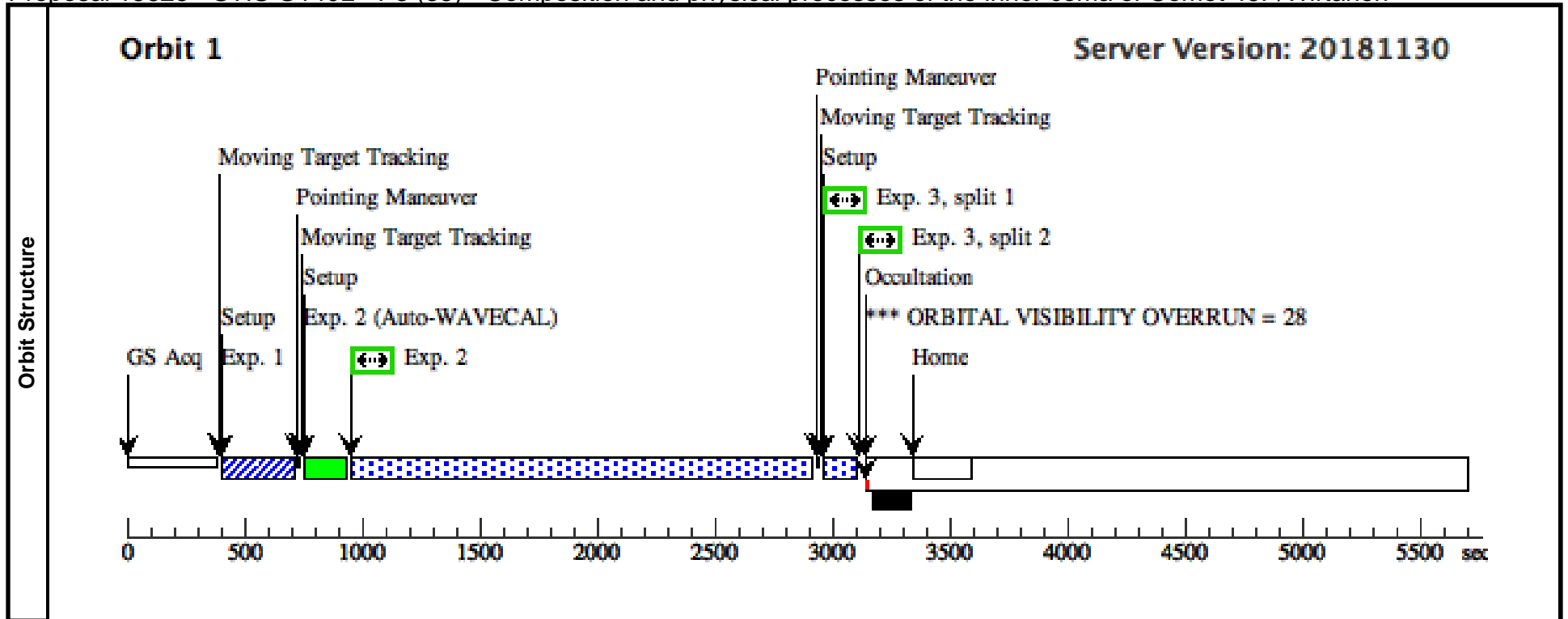
Visit	Proposal 15625, STIS G140L - P3 (34), implementation Diagnostic Status: Warning Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Diagnosics (STIS G140L - P3 (34)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O BASE1BE		10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(3) 46P-WIRTANE N-OFFSET2	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P3 (35) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:15 GMT 2018

Visit	Proposal 15625, STIS G140L - P3 (35), implementation Diagnostic Status: Warning Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Diagnosics (STIS G140L - P3 (35)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(3) 46P-WIRTANE N-OFFSET2	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]



Proposal 15625 - STIS G140L - P3 (36) - Composition and physical processes of the inner coma of Comet 46P/Wirtanen

Fri Dec 21 16:02:16 GMT 2018

Visit	Proposal 15625, STIS G140L - P3 (36), implementation Diagnostic Status: Warning Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) <i>Comments: CO Forth Positive group emission: STIS/FUVMAMA, 52x0.5 slit, G140L grating, x4 orbits</i>									
	Diagnosics (STIS G140L - P3 (36)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	46P-WIRTANEN-OFFSET2	TYPE=COMET,Q=1.0553783323812 98,E=0.6587501255046055,I=11.7456 3830919623 ,O=82.15500849791734,W=356.35833 89334793,T=12-DEC- 2018:22:38:18,TimeScale=TDB,EQ UINOX=J2000,EPOCH=14-JAN- 2019:00:00:00,EpochTimeScale=TDB, A1=4.999982714653E-9,A2=- 2.47746527195E- 9,A3=1.160315871239E-9	TYPE=POS_ANGLE,RAD=8,ANG=0 ,REF=SUN				EARTH		
<i>Comments: Description=Comet 46P/Wirtanen Extended=YES</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQ (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2	(STIS.sp.12 97664)	(3) 46P-WIRTANE N-OFFSET2	STIS/FUV-MAMA, ACCUM, 52X0.5	G140L 1425 A				1900 Secs (1900 Secs) [==>]	[1]
	3	IMAGE (STIS.ta.129 7953)	(3) 46P-WIRTANE N-OFFSET2	STIS/CCD, ACCUM, F28X50LP	MIRROR				10 Secs (10 Secs) [==>(Split 1)] [==>(Split 2)]	[1]

