



17780 - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Cycle: 32, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Dr. John W Noonan (PI) (Contact)	Auburn University
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Dr. Martin A. Cordiner (CoI)	Catholic University of America
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Dr. Davide Farnocchia (CoI)	Jet Propulsion Laboratory
Dr. Marco Micheli (CoI) (ESA Member)	ESA, SSA-NEO Coordination Centre

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) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:23.0	yes
02	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:24.0	yes
03	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:24.0	yes

Proposal 17780 (STScI Edit Number: 13, Created: Friday, December 19, 2025, 8:00:37PM 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	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:25.0	yes
05	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:25.0	yes
06	(1) 3IATLAS	STIS/CCD STIS/NUV-MAMA	1	19-Dec-2025 20:00:25.0	yes
07	(1) 3IATLAS	STIS/CCD STIS/NUV-MAMA	1	19-Dec-2025 20:00:26.0	yes
20	(3) 3IATLAS-JPL44	COS/FUV COS/NUV	1	19-Dec-2025 20:00:27.0	yes
21	(3) 3IATLAS-JPL44	COS/FUV COS/NUV	1	19-Dec-2025 20:00:27.0	yes
22	(3) 3IATLAS-JPL44	COS/FUV COS/NUV	1	19-Dec-2025 20:00:27.0	yes
23	(3) 3IATLAS-JPL44	COS/FUV COS/NUV	1	19-Dec-2025 20:00:28.0	yes
24	(3) 3IATLAS-JPL44	COS/FUV COS/NUV	1	19-Dec-2025 20:00:29.0	yes
25	(3) 3IATLAS-JPL44	STIS/CCD STIS/NUV-MAMA	1	19-Dec-2025 20:00:29.0	yes
26	(3) 3IATLAS-JPL44	STIS/CCD STIS/NUV-MAMA	1	19-Dec-2025 20:00:30.0	yes
08	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:30.0	yes
09	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:31.0	yes
10	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:31.0	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>
11	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:32.0	yes
12	(1) 3IATLAS	COS/FUV COS/NUV	1	19-Dec-2025 20:00:32.0	yes
13	(1) 3IATLAS	STIS/CCD STIS/NUV-MAMA	1	19-Dec-2025 20:00:32.0	yes
14	(1) 3IATLAS	STIS/CCD STIS/NUV-MAMA	1	19-Dec-2025 20:00:33.0	yes
15	(3) 3IATLAS-JPL44	COS/FUV COS/NUV	1	19-Dec-2025 20:00:34.0	yes
16	(3) 3IATLAS-JPL44	COS/FUV COS/NUV	1	19-Dec-2025 20:00:34.0	yes
17	(3) 3IATLAS-JPL44	COS/FUV COS/NUV	1	19-Dec-2025 20:00:35.0	yes
18	(3) 3IATLAS-JPL44	STIS/CCD STIS/NUV-MAMA	1	19-Dec-2025 20:00:35.0	yes
19	(3) 3IATLAS-JPL44	STIS/CCD STIS/NUV-MAMA	1	19-Dec-2025 20:00:36.0	yes

26 Total Orbits Used

ABSTRACT

Comets are the leftovers of the era of solar system formation and, as such contain some of the most primitive materials available for study. Interstellar comets allow us to probe the volatile and organic composition of a protoplanetary disk's cold midplane, where sub-mm and IR observations cannot penetrate. Within those disks, sulfur reservoirs are currently a major source of interest in the astrophysics community as less than 0.1% of the cosmic abundance of sulfur can be traced in gas species. Recent studies imply that the missing sulfur is trapped in refractory components, but which minerals are not yet clear. Ejected icy planetesimals offer unique opportunities to investigate sulfur-bearing species that would be locked in ice or dust in the midplane of these protoplanetary disks, revealed by an interstellar object's heating as it enters our solar system. With the imminent first light of LSST it is highly anticipated that several more will be discovered in the next few years. The time domain observations measured with

HST COS during the apparition of the first active interstellar comet, 2I/Borisov, resulted in a first picture of the chemical composition of those volatiles present in another planetary system, but were not sensitive to sulfur or sulfur-bearing species. We propose a Target of Opportunity program to observe the next active interstellar object, which has yet to be discovered. We will quantify its CS, S₂, and atomic sulfur reservoirs, a combination of species that is unique to HST's far-ultraviolet (FUV) capability, and measure the sulfur-to-oxygen ratio while providing unparalleled sensitivity to the commonly occurring cometary species CO and OH.

OBSERVING DESCRIPTION

1. Overall observational strategy

We plan to observe the next active interstellar object with $V < 15$ with two instrument settings, COS G160M CENWAVE 1589 A and STIS G230L, in two temporally separated epochs. The FOV will be centered at the comet. Therefore, we will use the same 4 visit (7 orbit) observing sequence (3 COS visits and one STIS visit) for each epoch.

The sequence in each 2-orbit COS visit is:

ACQ/IMAGE in NUV MIRROR A with PSA setting, 30 s exposure

G160M FP-POS# 1794 s

G160M FP-POS# 1794 s

ACQ/IMAGE in NUV MIRROR A with PSA setting, 30 s exposure

We will alternate the FP positions to cycle through all four FP-POS in each epoch. The first 2 visits in an epoch will cycle through FP-POS 1-4, one FP per orbit.

For the third COS visit in each epoch the sequence is:

ACQ/IMAGE in NUV MIRROR A with PSA setting, 30 s exposure

G160M FP-POS1 897 s

G160M FP-POS# 897 s

The 3rd visit cycles FP-POS=1 and FP-POS=2 in a single orbit. The trailing ACQ/IMAGE used in for the first and second COS visits is eliminated to

improve science overhead.

This leads to a total exposure time in FP 1 and 2 each of 2691 s and 1794 s for each FP 3 and 4, for a total exposure time of 8970 s over 5 orbits. The exposure time is based on COS ETC run #COS.sp.1928787.

The sequence for each 2-orbit STIS G230L visit is:

ACQ in MIRROR with F28X50LP, 3 s exposure

G230L with 52X0.5, 1900 s exposure

IMAGE in MIRROR with F28X50LP, 3 s

G230L with 52X0.5, 19000 s exposure

IMAGE in MIRROR with F28X50LP

This leads to a total exposure time of 3800s over two orbits. The exposure time is based on STIS ETC run #STIS.sp.1928799

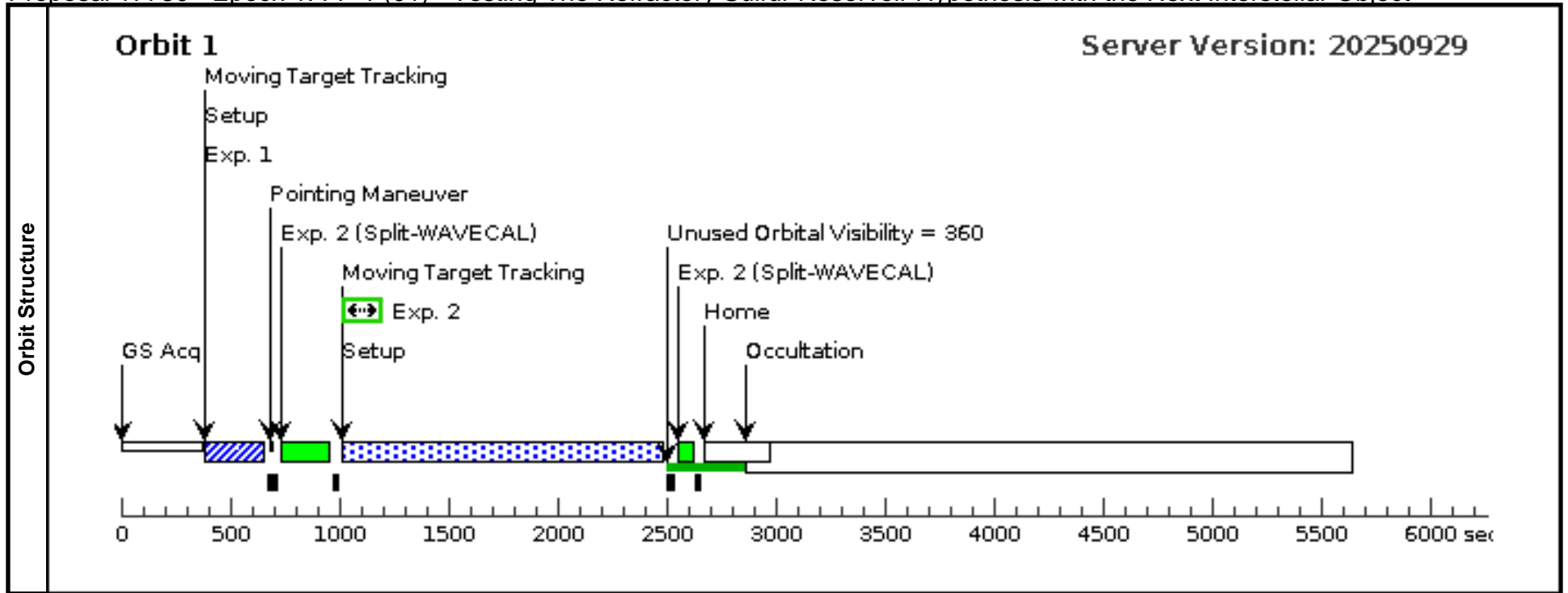
2. Comet position uncertainty and acquisition:

Upon discovery the next active interstellar object we will work rapidly to improve the ephemerides uncertainties. If it becomes clear that we should expect a 3-sigma uncertainty in RA or DEC in the range of 1.5" we will replace the primary ACQ/IMAGE in each COS visit with an ACQ/SEARCH pattern to ensure detection.

Proposal 17780 - Epoch 1: FP 1 (01) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

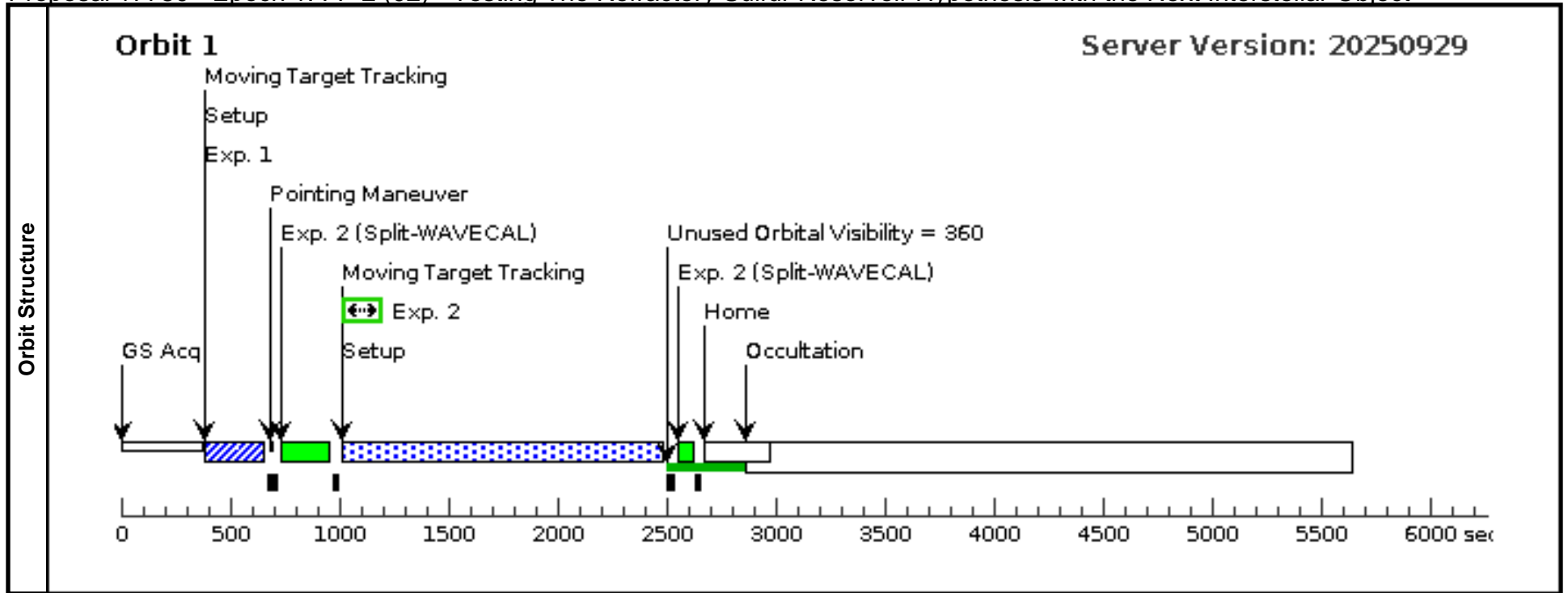
Visit	<p>Proposal 17780, Epoch 1: FP 1 (01), completed</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 01,02,03,04,05,06,07 WITHIN 7D; TOO RESPONSE TIME 21.0D</p>									
	<p>(Epoch 1: FP 1 (01)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.</p> <p>(COS-G160M (01.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p> <p>(Epoch 1: FP 1 (01)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.139356333373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=1; BUFFER-TIME=10 000			1200 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1: FP 2 (02) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

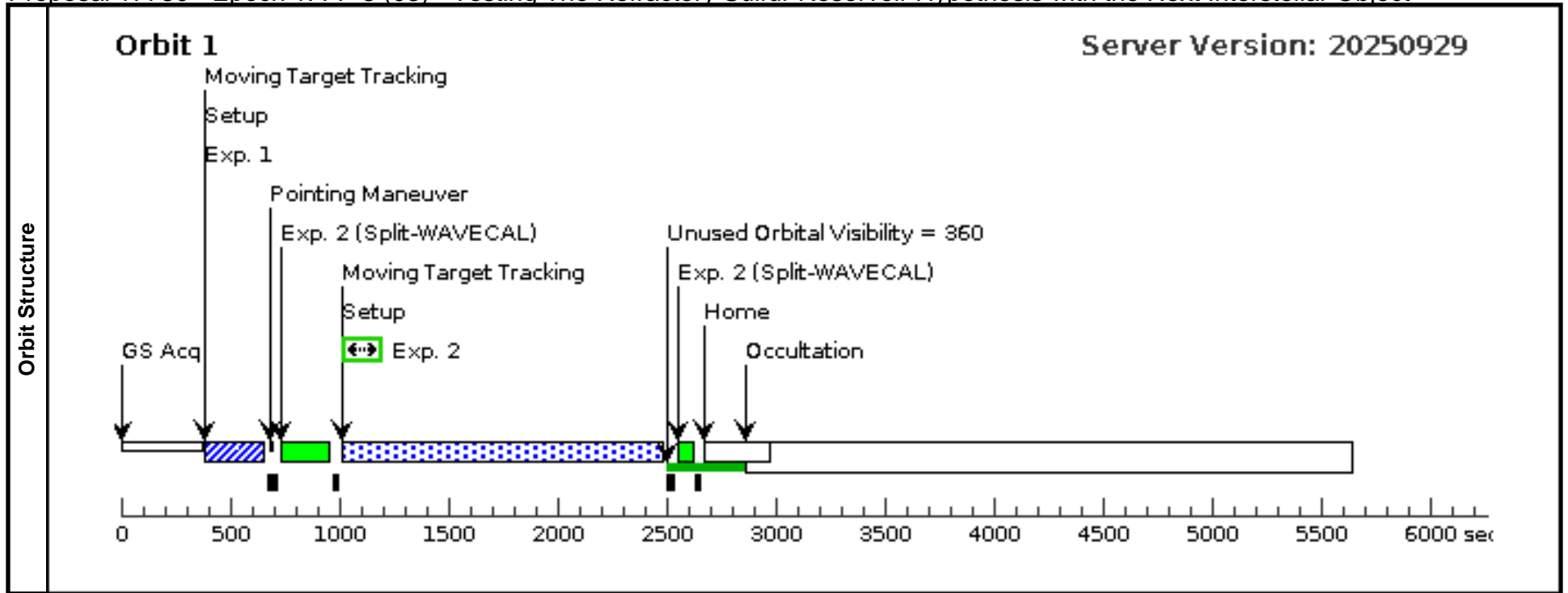
Visit	<p>Proposal 17780, Epoch 1: FP 2 (02), completed</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 02,01,03,04,05,06,07 WITHIN 7D; TOO RESPONSE TIME 21.0D</p>										
	<p>(Epoch 1: FP 2 (02)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.</p> <p>(COS-G160M (02.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p> <p>(Epoch 1: FP 2 (02)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>										
Diagnostics											
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.13935633373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH			
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs)	[==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=2; BUFFER-TIME=10 000			500 Secs (1423 Secs)	[==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1: FP 3 (03) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

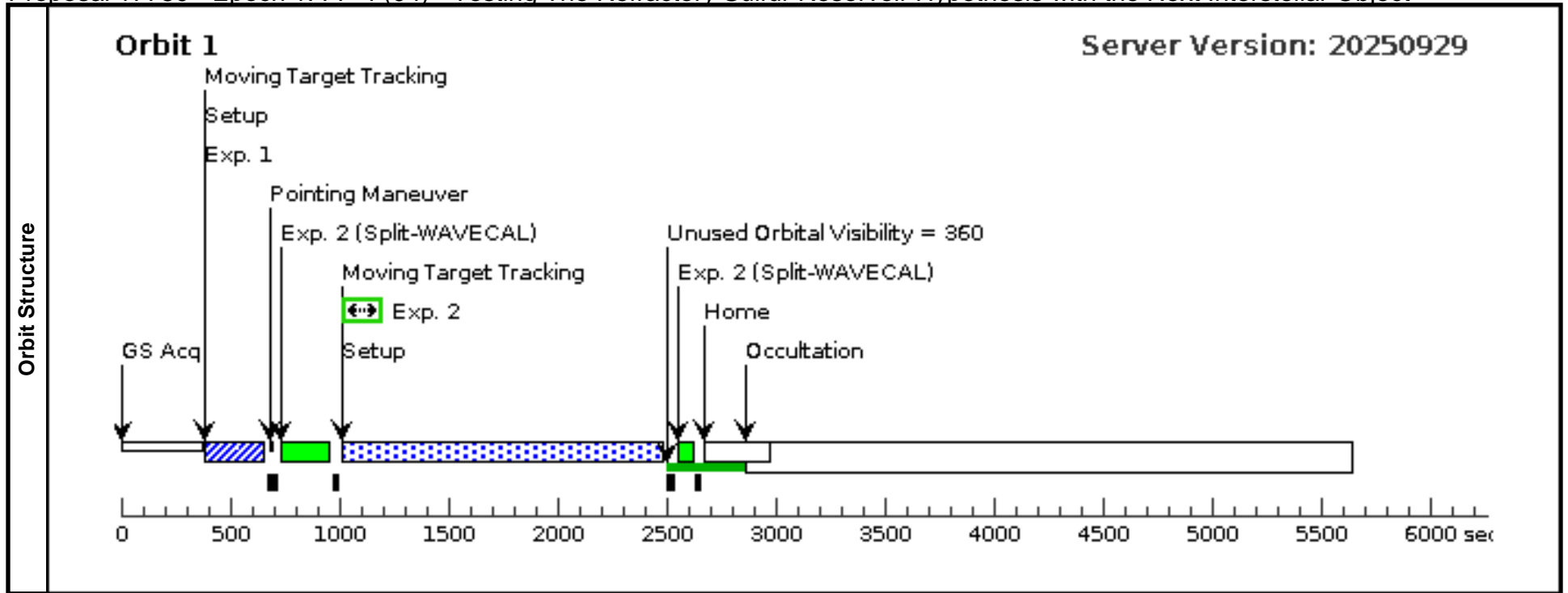
Visit	<p>Proposal 17780, Epoch 1: FP 3 (03), completed</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 03,01,02,04,05,06,07 WITHIN 7D; TOO RESPONSE TIME 21.0D</p>									
	<p>(Epoch 1: FP 3 (03)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.</p> <p>(COS-G160M (03.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p> <p>(Epoch 1: FP 3 (03)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.139356333373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1: FP 4 (04) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

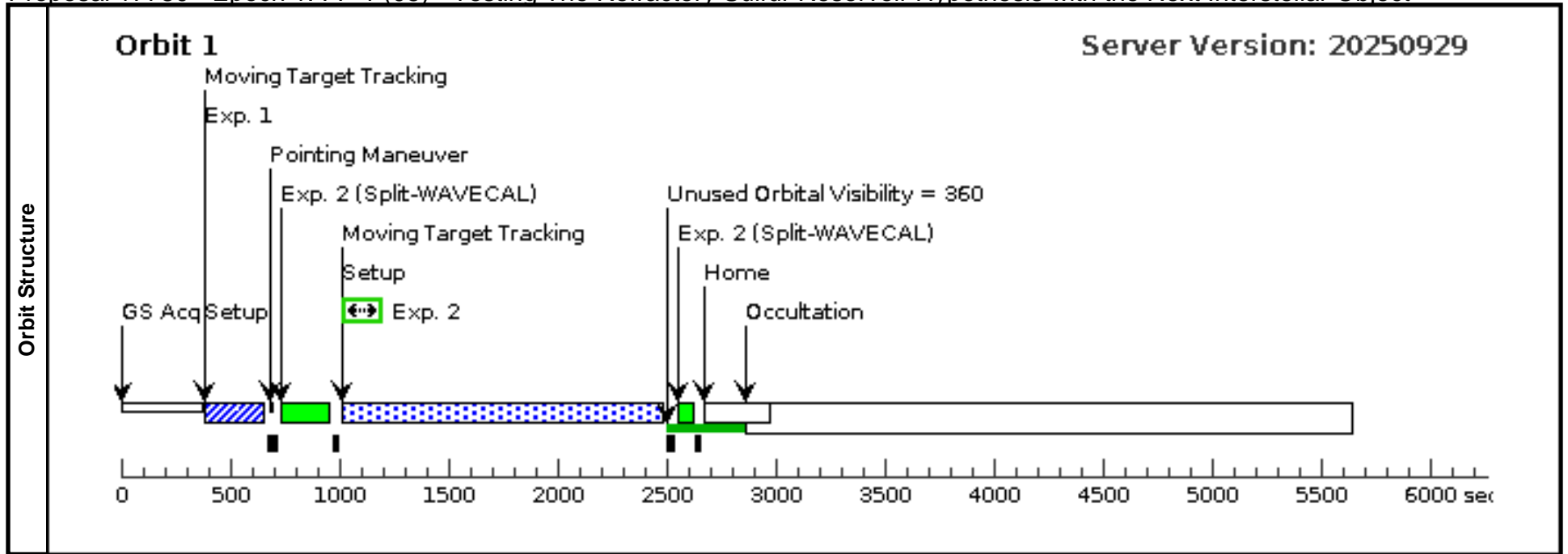
Visit	<p>Proposal 17780, Epoch 1: FP 4 (04), completed</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 04.01,02,03,05,06,07 WITHIN 7D; TOO RESPONSE TIME 21.0D</p>									
	<p>(Epoch 1: FP 4 (04)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.</p> <p>(COS-G160M (04.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p> <p>(Epoch 1: FP 4 (04)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.13935633373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1: FP 1 (05) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

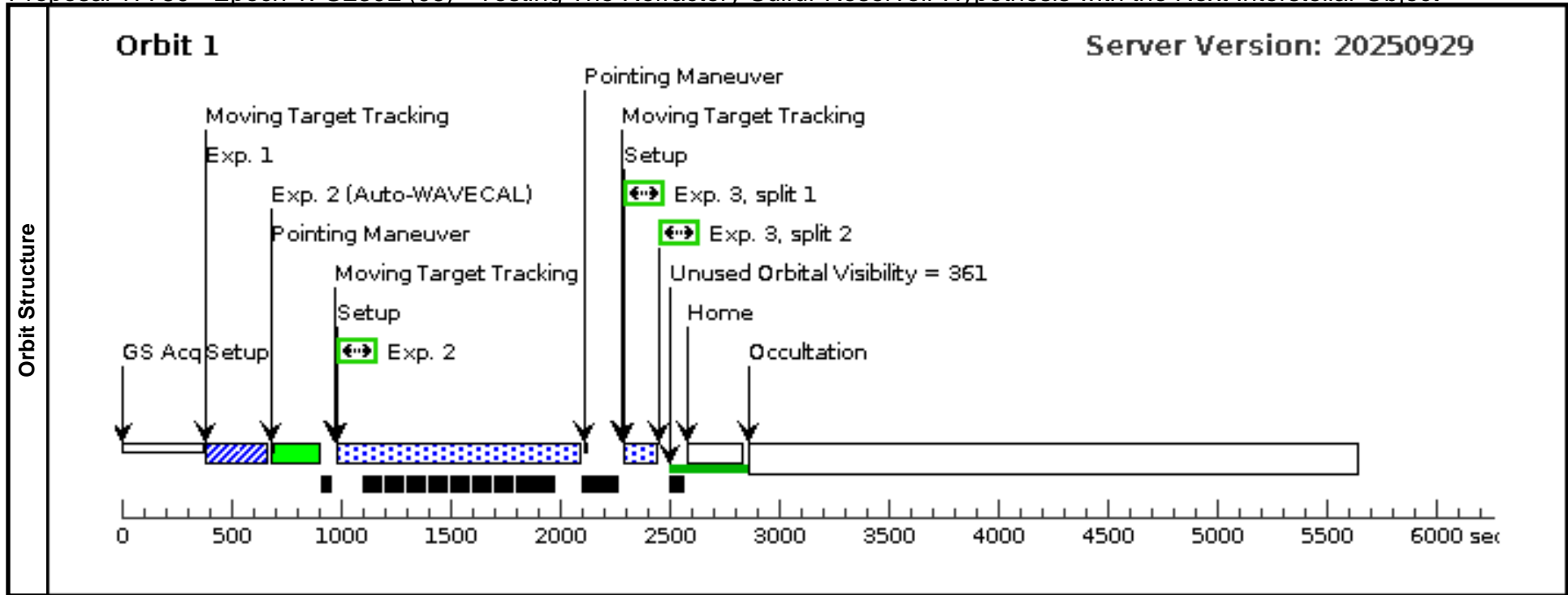
Visit	<p>Proposal 17780, Epoch 1: FP 1 (05), completed</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 05,01,02,03,04,06,07 WITHIN 7D; TOO RESPONSE TIME 21.0D</p>									
	<p>(Epoch 1: FP 1 (05)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.</p> <p>(COS-G160M (05.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p> <p>(Epoch 1: FP 1 (05)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.139356333373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=1; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1: G230L (06) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

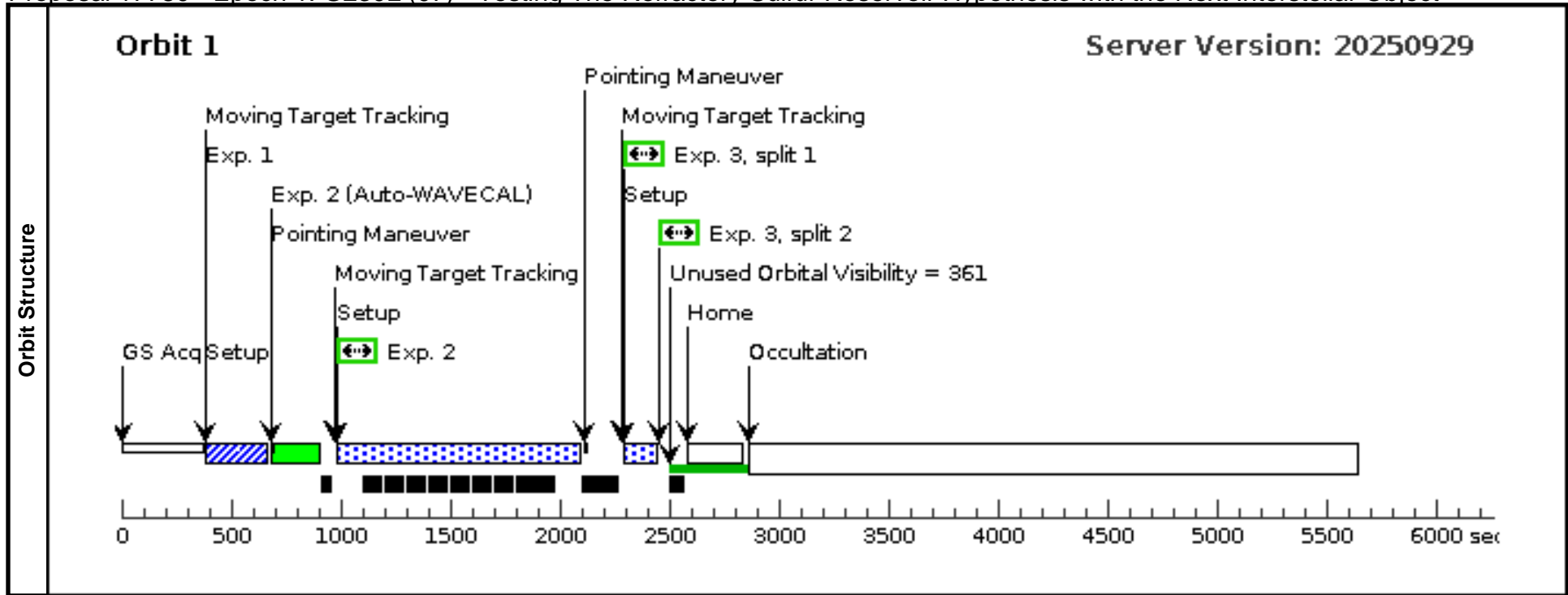
Visit	<p>Proposal 17780, Epoch 1: G230L (06), completed</p> <p>Diagnostic Status: Informational</p> <p>Scientific Instruments: STIS/NUV-MAMA, STIS/CCD</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 06,01,02,03,04,05,07 WITHIN 7D; TOO RESPONSE TIME 21.0D</p>									
	<p>(Epoch 1: G230L (06)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.13935633373651,I=175.1130 738297457 .O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 .DT=0. .A1=4.586562347412E- 7,.A2=2.042488479614E-7,A3=0. .ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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	(1) 3IATLAS	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs)	
									[==>]	[1]
	2	G230L (STIS.sp.19 28799)	(1) 3IATLAS	STIS/NUV-MAMA, TIME-TAG, 52X0.5	G230L 2376 A	BUFFER-TIME=99			1100 Secs (1073 Secs)	
								[==>1073.0 Secs]	[1]	
3	IMAGE (COS.ta.192 8813)	(1) 3IATLAS	STIS/CCD, ACCUM, F28X50LP	MIRROR				3 Secs (0.2 Secs)		
								[==>0.1 Secs (Split 1)]		
								[==>0.1 Secs (Split 2)]	[1]	



Proposal 17780 - Epoch 1: G230L (07) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

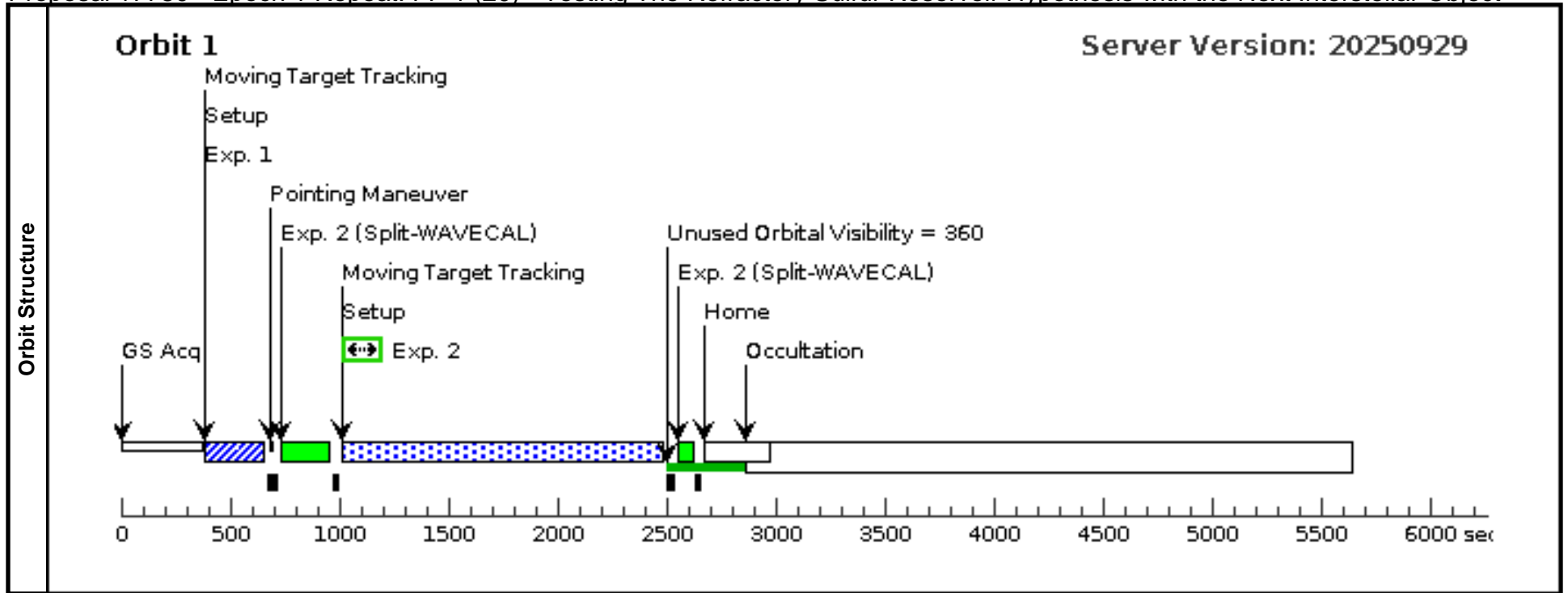
Visit	Proposal 17780, Epoch 1: G230L (07), completed Diagnostic Status: Informational Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 07,01,02,03,04,05,06 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	(Epoch 1: G230L (07)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.13935633373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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	(1) 3IATLAS	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs)	
									[==>]	[1]
	2	G230L (STIS.sp.19 28799)	(1) 3IATLAS	STIS/NUV-MAMA, TIME-TAG, 52X0.5	G230L 2376 A	BUFFER-TIME=99			1100 Secs (1073 Secs)	
								[==>1073.0 Secs]	[1]	
3	IMAGE (COS.ta.192 8813)	(1) 3IATLAS	STIS/CCD, ACCUM, F28X50LP	MIRROR				3 Secs (0.2 Secs)		
								[==>0.1 Secs (Split 1)]		
								[==>0.1 Secs (Split 2)]	[1]	



Proposal 17780 - Epoch 1 Repeat: FP 1 (20) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

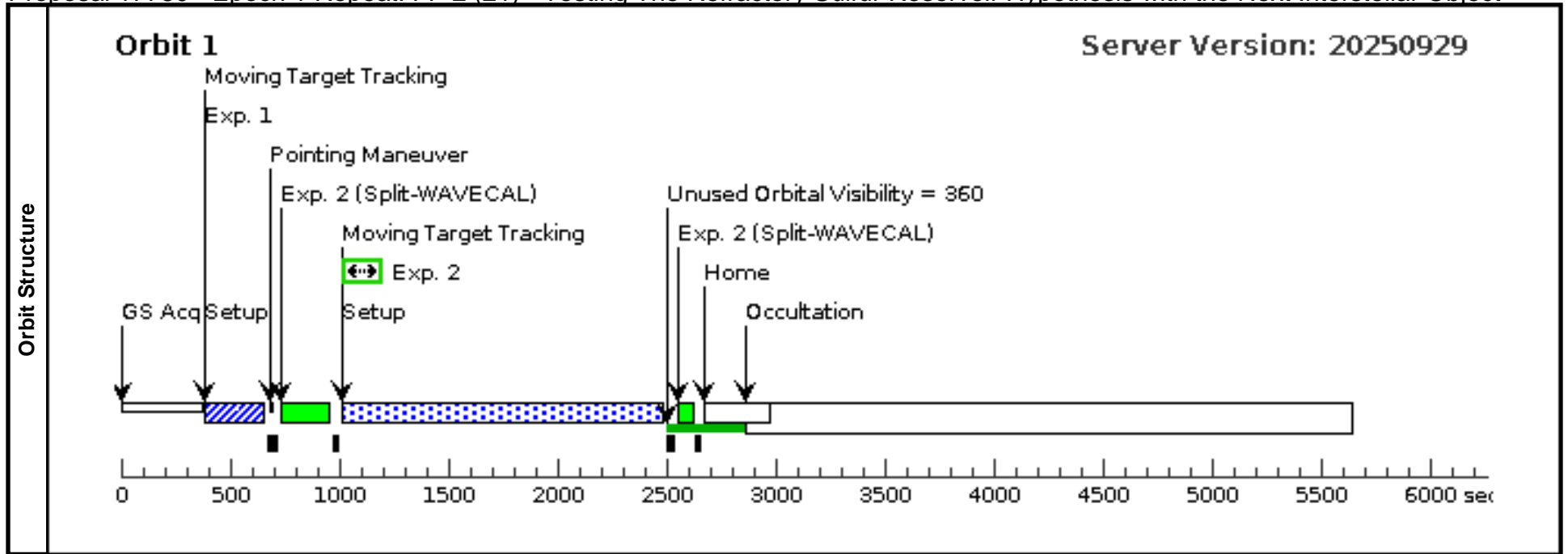
Visit	Proposal 17780, Epoch 1 Repeat: FP 1 (20), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BEFORE 15-JAN-2026:00:00:00; GROUP 20,21,22,23,24,25,26 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	Diagnosics (Epoch 1 Repeat: FP 1 (20)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (20.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 1 Repeat: FP 1 (20)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TimeScale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(3) 3IATLAS-JPL44	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(3) 3IATLAS-JPL44	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=1; BUFFER-TIME=10 000			1200 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1 Repeat: FP 2 (21) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

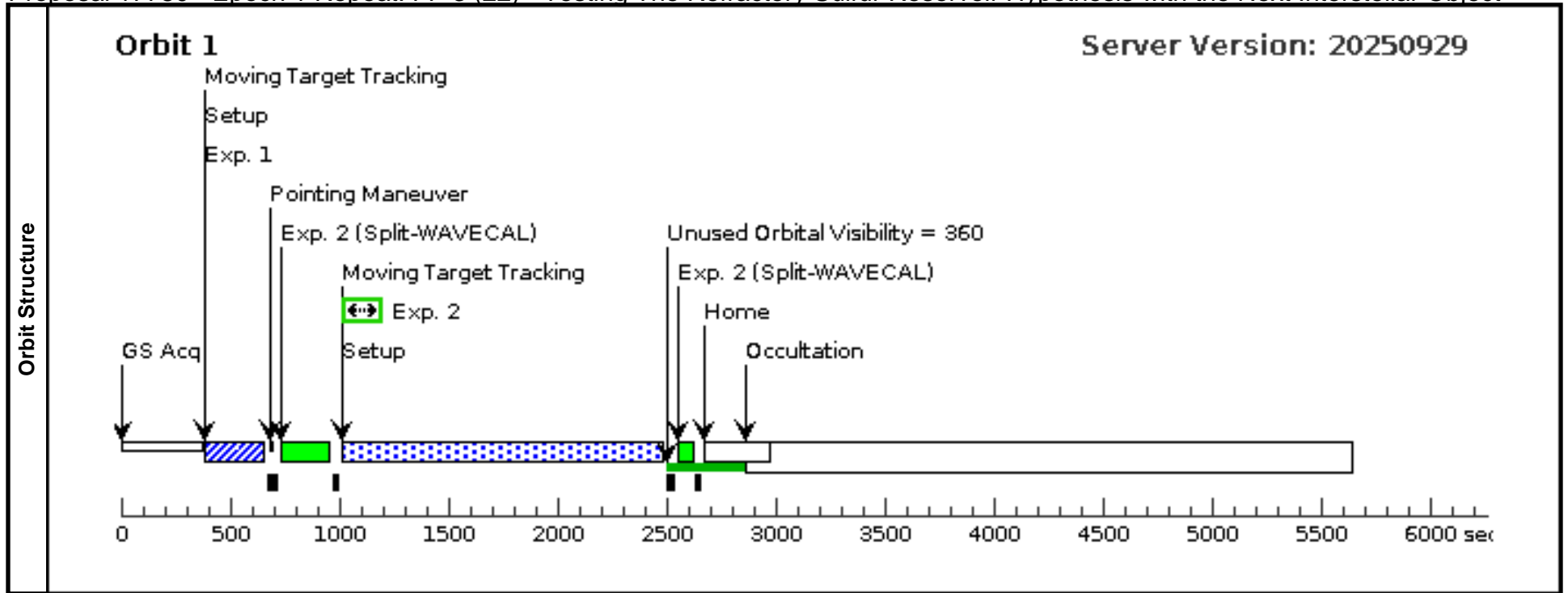
Visit	Proposal 17780, Epoch 1 Repeat: FP 2 (21), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BEFORE 15-JAN-2026:00:00:00; GROUP 21,20,22,23,24,25,26 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	Diagnostics	(Epoch 1 Repeat: FP 2 (21)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (21.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 1 Repeat: FP 2 (21)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.								
Solar System Targets		#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(3) 3IATLAS-JPL44	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(3) 3IATLAS-JPL44	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=2; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1 Repeat: FP 3 (22) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

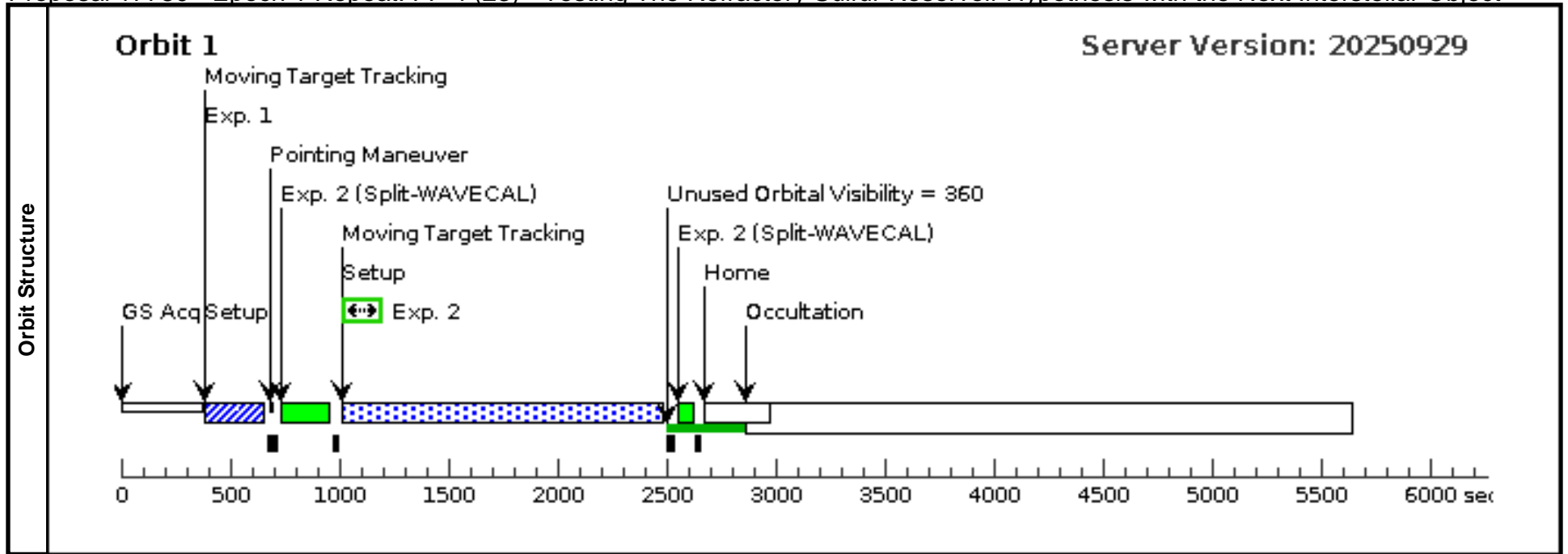
Visit	Proposal 17780, Epoch 1 Repeat: FP 3 (22), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BEFORE 15-JAN-2026:00:00:00; GROUP 22,20,21,23,24,25,26 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	Diagnostics	(Epoch 1 Repeat: FP 3 (22)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (22.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 1 Repeat: FP 3 (22)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.								
Solar System Targets		#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TimeScale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(3) 3IATLAS-JPL44	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(3) 3IATLAS-JPL44	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1 Repeat: FP 4 (23) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

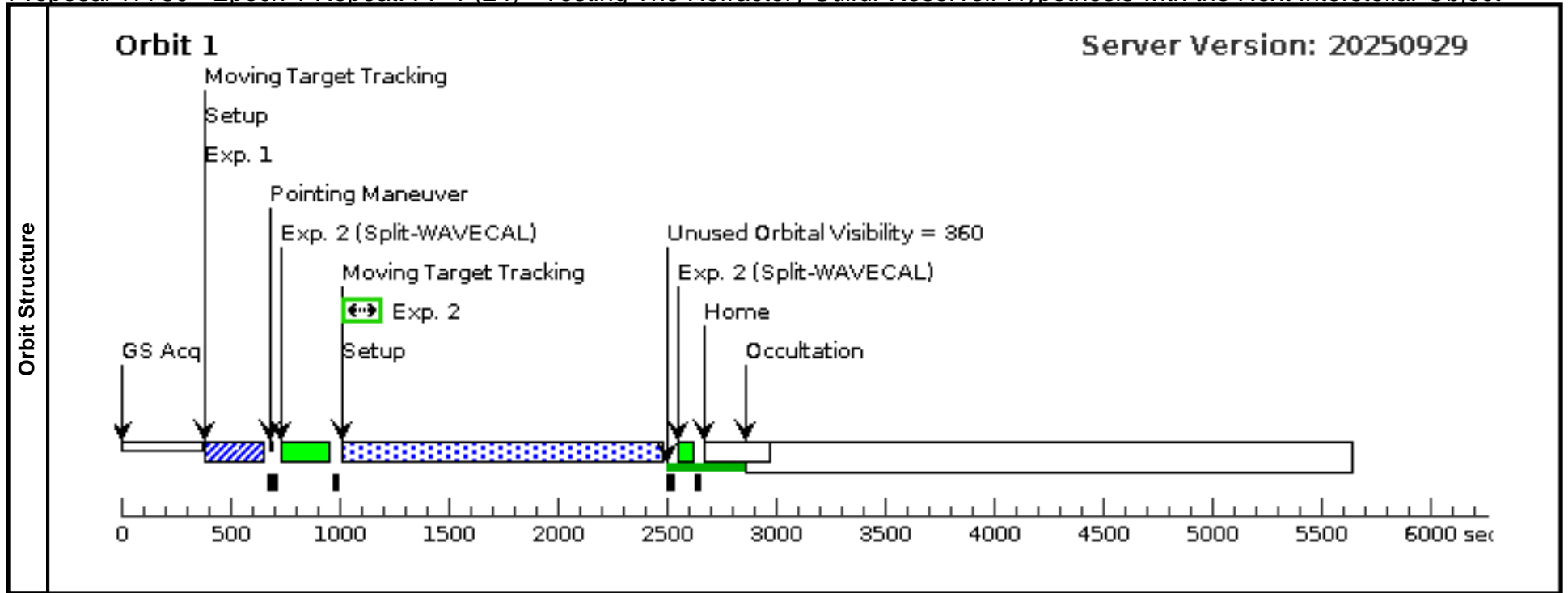
Visit	Proposal 17780, Epoch 1 Repeat: FP 4 (23), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BEFORE 15-JAN-2026:00:00:00; GROUP 23,20,21,22,24,25,26 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	Diagnosics (Epoch 1 Repeat: FP 4 (23)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (23.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 1 Repeat: FP 4 (23)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 ,O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TimeScale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. ,DT=0. ,A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(3) 3IATLAS-JPL44	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(3) 3IATLAS-JPL44	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1 Repeat: FP 1 (24) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

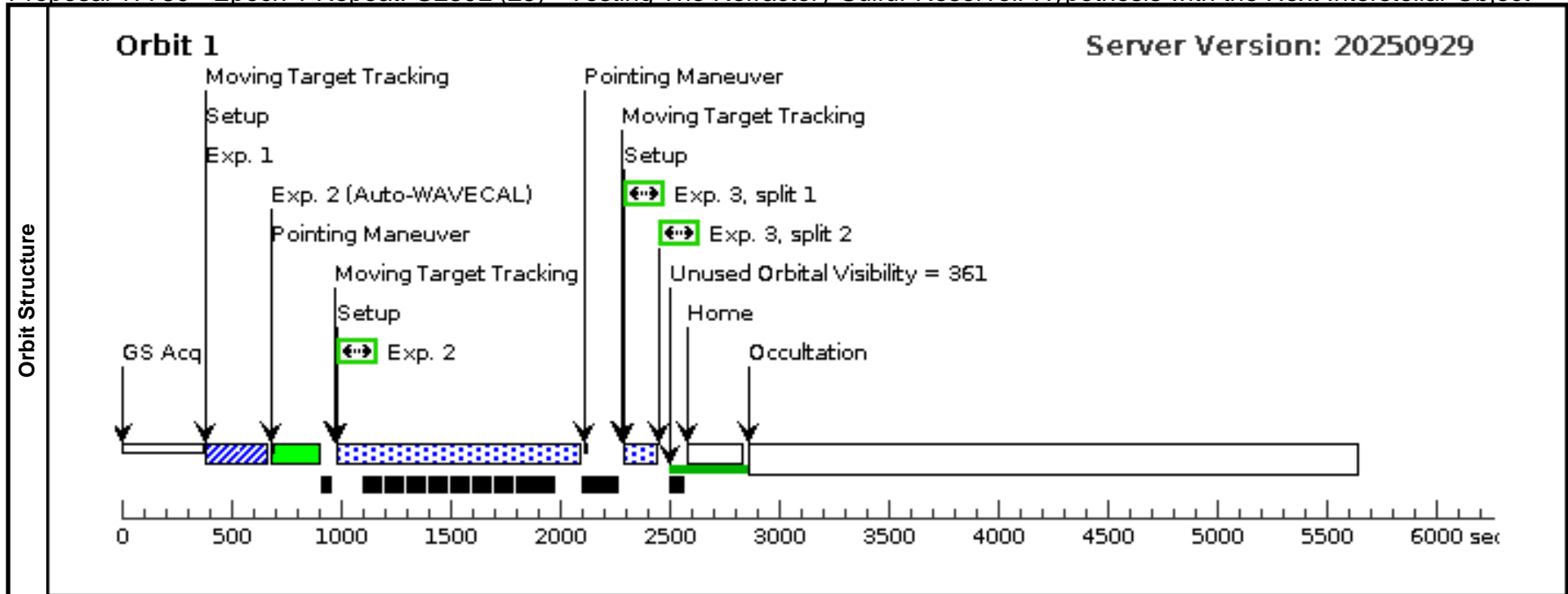
Visit	Proposal 17780, Epoch 1 Repeat: FP 1 (24), implementation Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BEFORE 15-JAN-2026:00:00:00; GROUP 24,20,21,22,23,25,26 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	Diagnostics	(Epoch 1 Repeat: FP 1 (24)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (24.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 1 Repeat: FP 1 (24)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.								
Solar System Targets		#	Name	Level 1	Level 2	Level 3	Window	Ephem Center		
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TimeScale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(3) 3IATLAS-JPL44	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(3) 3IATLAS-JPL44	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=1; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 1 Repeat: G230L (25) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

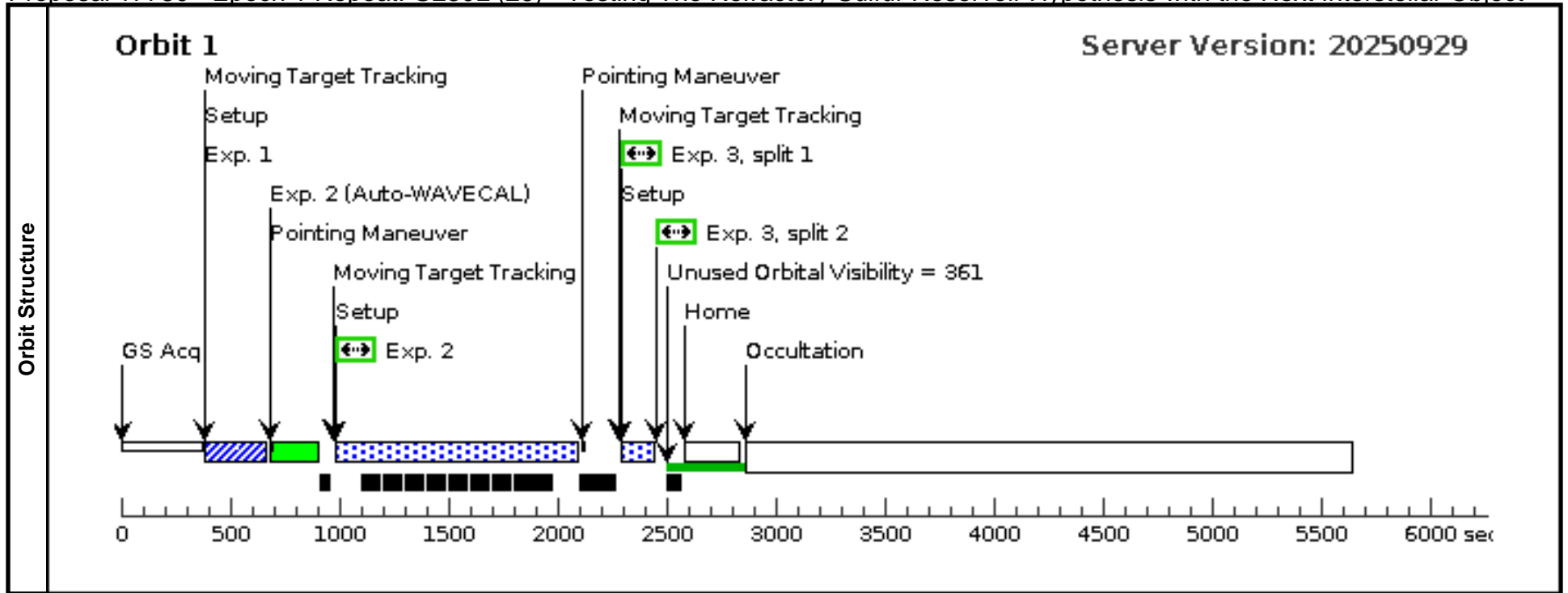
Visit	Proposal 17780, Epoch 1 Repeat: G230L (25), implementation Diagnostic Status: Informational Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: SCHED 100%; BEFORE 15-JAN-2026:00:00:00; GROUP 25,20,21,22,23,24,26 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	(Epoch 1 Repeat: G230L (25)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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	(3) 3IATLAS-JPL44	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs)	
									[==>]	[1]
	2	G230L (STIS.sp.19 28799)	(3) 3IATLAS-JPL44	STIS/NUV-MAMA, TIME-TAG, 52X0.5	G230L 2376 A	BUFFER-TIME=99			1100 Secs (1073 Secs)	
								[==>1073.0 Secs]	[1]	
3	IMAGE (COS.ta.192 8813)	(3) 3IATLAS-JPL44	STIS/CCD, ACCUM, F28X50LP	MIRROR				3 Secs (0.2 Secs)		
								[==>0.1 Secs (Split 1)]		
								[==>0.1 Secs (Split 2)]	[1]	



Proposal 17780 - Epoch 1 Repeat: G230L (26) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

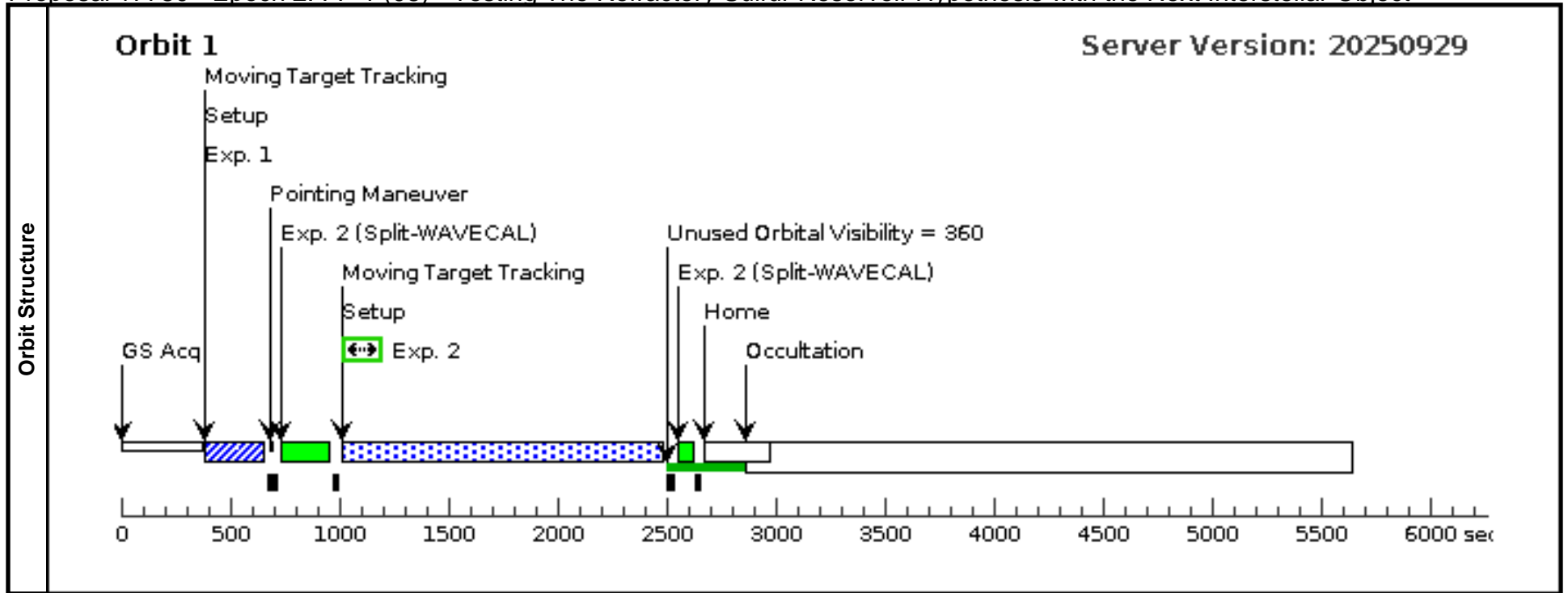
Visit	Proposal 17780, Epoch 1 Repeat: G230L (26), implementation Diagnostic Status: Informational Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: SCHED 100%; BEFORE 15-JAN-2026:00:00:00; GROUP 26,20,21,22,23,24,25 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	(Epoch 1 Repeat: G230L (26)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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	(3) 3IATLAS-JPL44	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs)	
									[==>]	[1]
	2	G230L (STIS.sp.19 28799)	(3) 3IATLAS-JPL44	STIS/NUV-MAMA, TIME-TAG, 52X0.5	G230L 2376 A	BUFFER-TIME=99			1100 Secs (1073 Secs)	
								[==>1073.0 Secs]	[1]	
3	IMAGE (COS.ta.192 8813)	(3) 3IATLAS-JPL44	STIS/CCD, ACCUM, F28X50LP	MIRROR				3 Secs (0.2 Secs)		
								[==>0.1 Secs (Split 1)]		
								[==>0.1 Secs (Split 2)]	[1]	



Proposal 17780 - Epoch 2: FP 1 (08) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

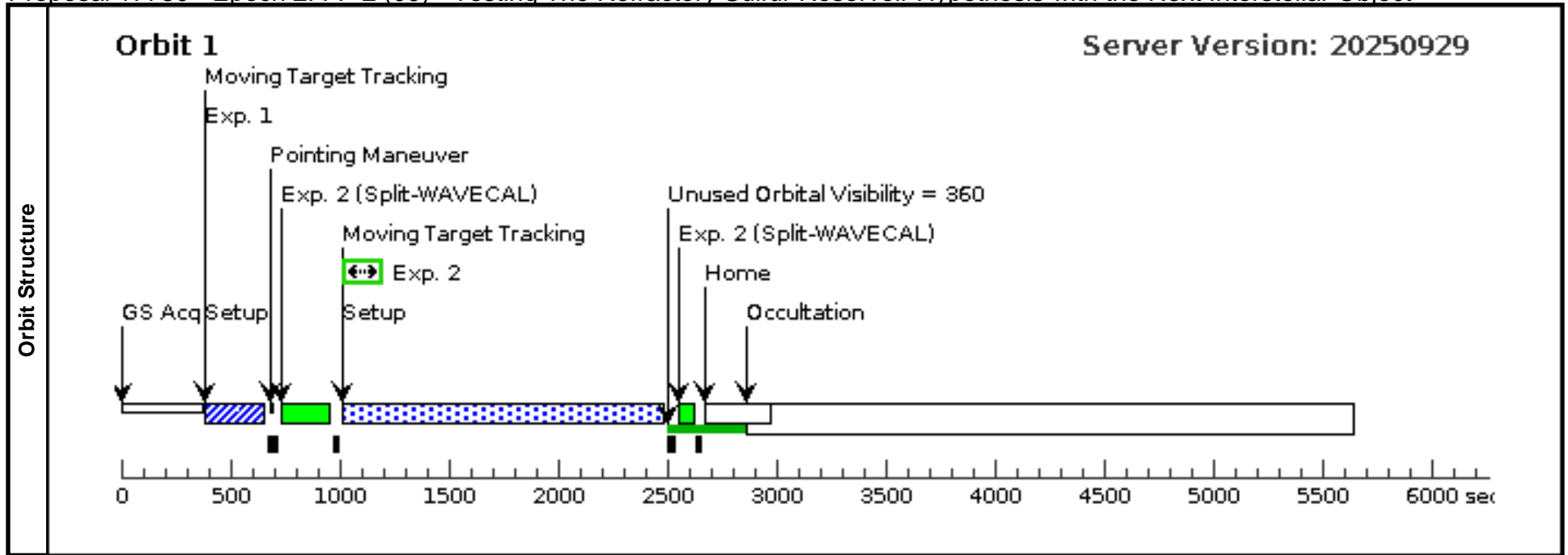
Visit	Proposal 17780, Epoch 2: FP 1 (08), scheduled Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 08,09,10,11,12,13,14 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	(Epoch 2: FP 1 (08)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (08.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 2: FP 1 (08)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.139356333373651,I=175.1130 738297457 .O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 .DT=0. .A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. .ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=1; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 2: FP 2 (09) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

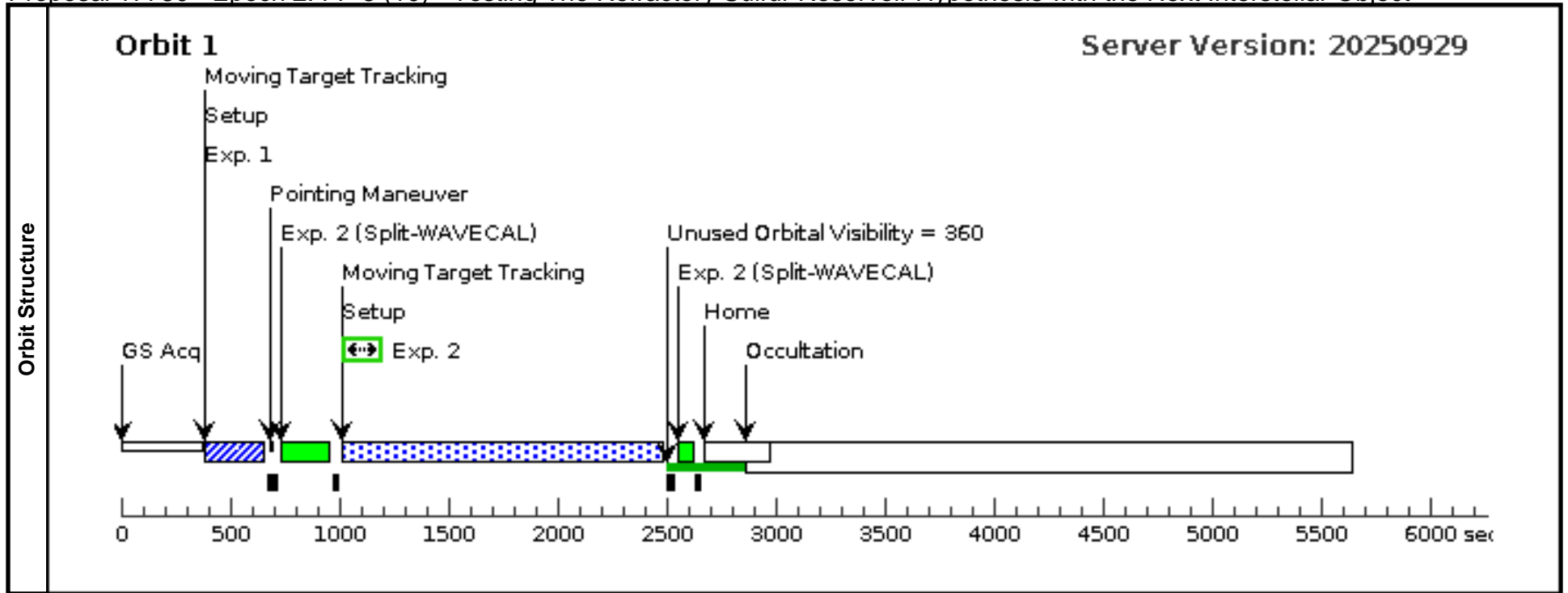
Visit	<p>Proposal 17780, Epoch 2: FP 2 (09), scheduled</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 09,08,10,11,12,13,14 WITHIN 7D; TOO RESPONSE TIME 21.0D</p>									
	<p>(Epoch 2: FP 2 (09)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.</p> <p>(COS-G160M (09.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p> <p>(Epoch 2: FP 2 (09)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.139356333373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=2; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 2: FP 3 (10) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

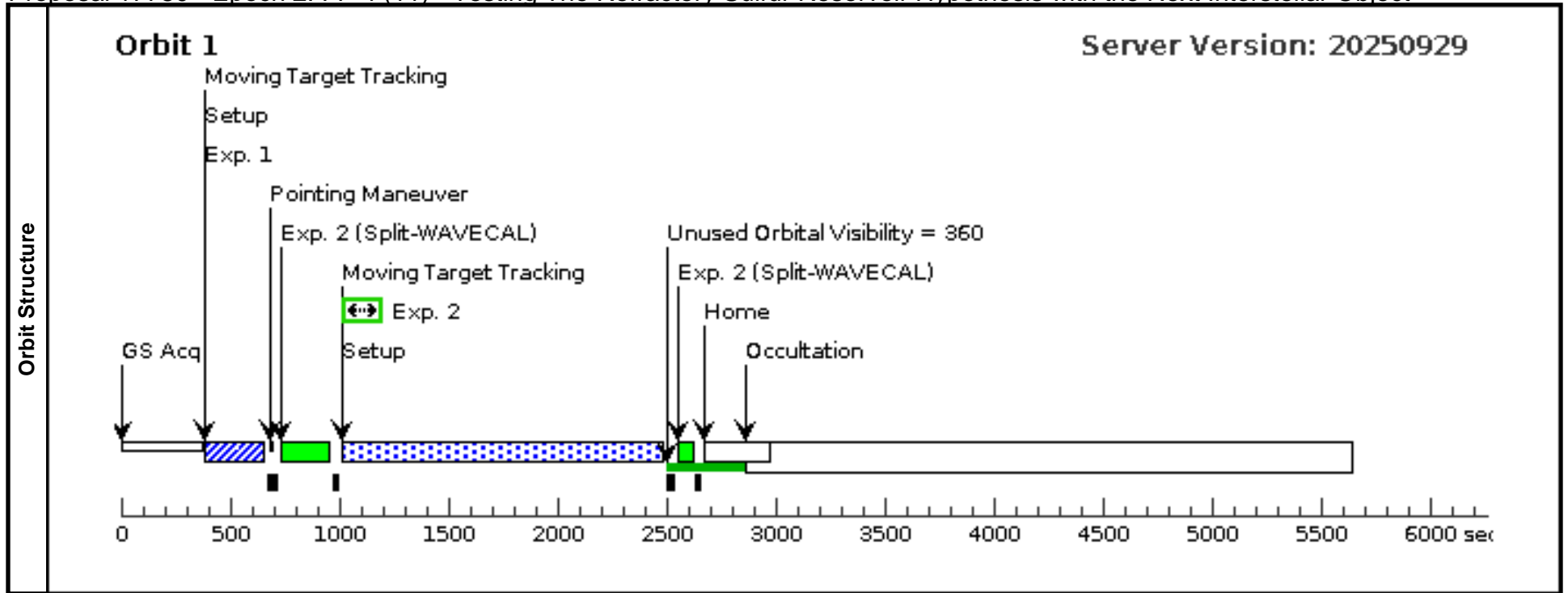
Visit	Proposal 17780, Epoch 2: FP 3 (10), scheduling Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 10,08,09,11,12,13,14 WITHIN 7D; SEQ 08,09,10,11,12,13,14 WITHIN 7 D; TOO RESPONSE TIME 21.0D																																				
	Diagnosics (Epoch 2: FP 3 (10)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (10.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 2: FP 3 (10)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.																																				
Solar System Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Window</th> <th>Ephem Center</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>3IATLAS</td> <td>TYPE=COMET,Q=1.3564025686409 83,E=6.139356333373651,I=175.1130 738297457 .O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TTTimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 .DT=0. .A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. .ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.</td> <td></td> <td></td> <td></td> <td>EARTH</td> </tr> </tbody> </table>	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.139356333373651,I=175.1130 738297457 .O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TTTimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 .DT=0. .A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. .ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.				EARTH	<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <i>Extended=YES</i></p>																					
	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center																														
(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.139356333373651,I=175.1130 738297457 .O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TTTimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 .DT=0. .A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. .ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.				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>ACQ/IMAG E (COS.ta.192 8813)</td> <td>(1) 3IATLAS</td> <td>COS/NUV, ACQ/IMAGE, PSA</td> <td>MIRRORA</td> <td></td> <td></td> <td></td> <td>30 Secs (30 Secs) [==>]</td> <td>[1]</td> </tr> <tr> <td>2</td> <td>COS-G160 M (COS.sp.192 8787)</td> <td>(1) 3IATLAS</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G160M 1589 A</td> <td>FP-POS=3; BUFFER-TIME=10 000</td> <td></td> <td></td> <td>500 Secs (1423 Secs) [==>1423.0 Secs]</td> <td>[1]</td> </tr> </tbody> </table>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	1	ACQ/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]	2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]						
	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																											
1	ACQ/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]																												
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]																												



Proposal 17780 - Epoch 2: FP 4 (11) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

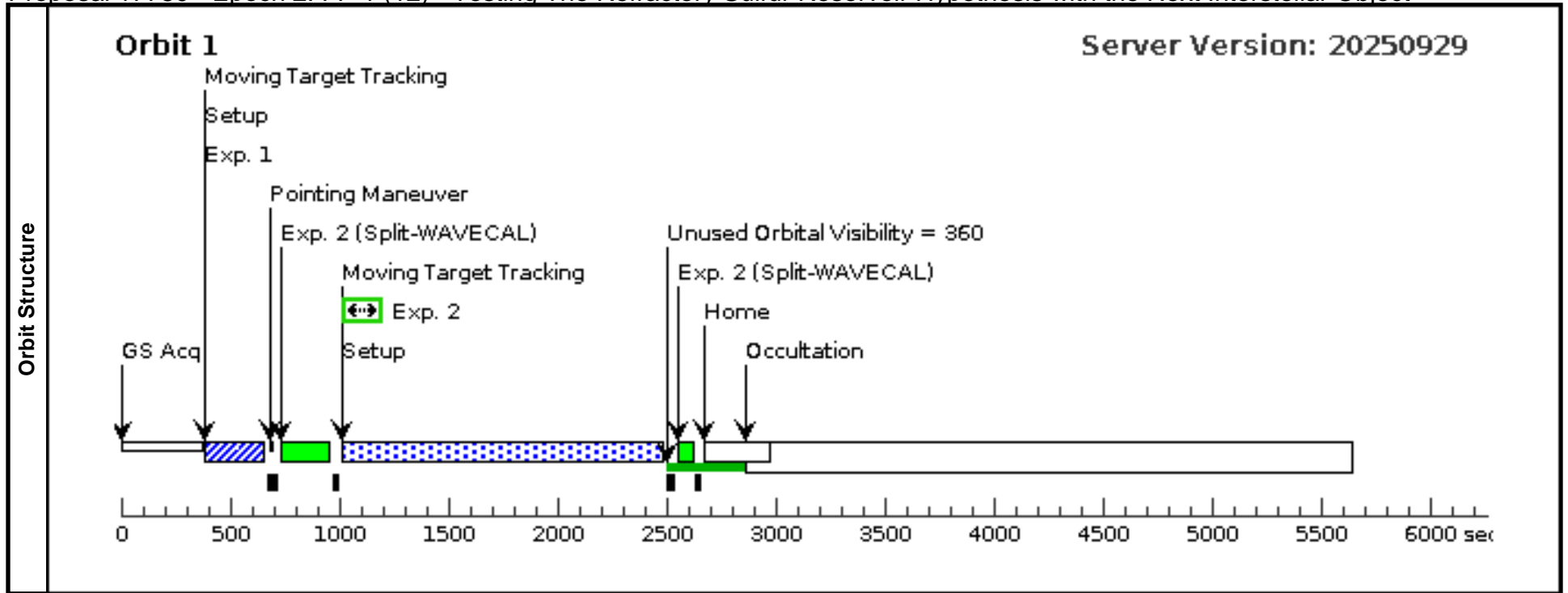
Visit	Proposal 17780, Epoch 2: FP 4 (11), scheduling Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 11,08,09,10,12,13,14 WITHIN 7D; TOO RESPONSE TIME 21.0D										
	Diagnosics (Epoch 2: FP 4 (11)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (11.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 2: FP 4 (11)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.13935633373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH			
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs)		
									[==>]		[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=10 000				500 Secs (1423 Secs)		
								[==>1423.0 Secs]		[1]	



Proposal 17780 - Epoch 2: FP 1 (12) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

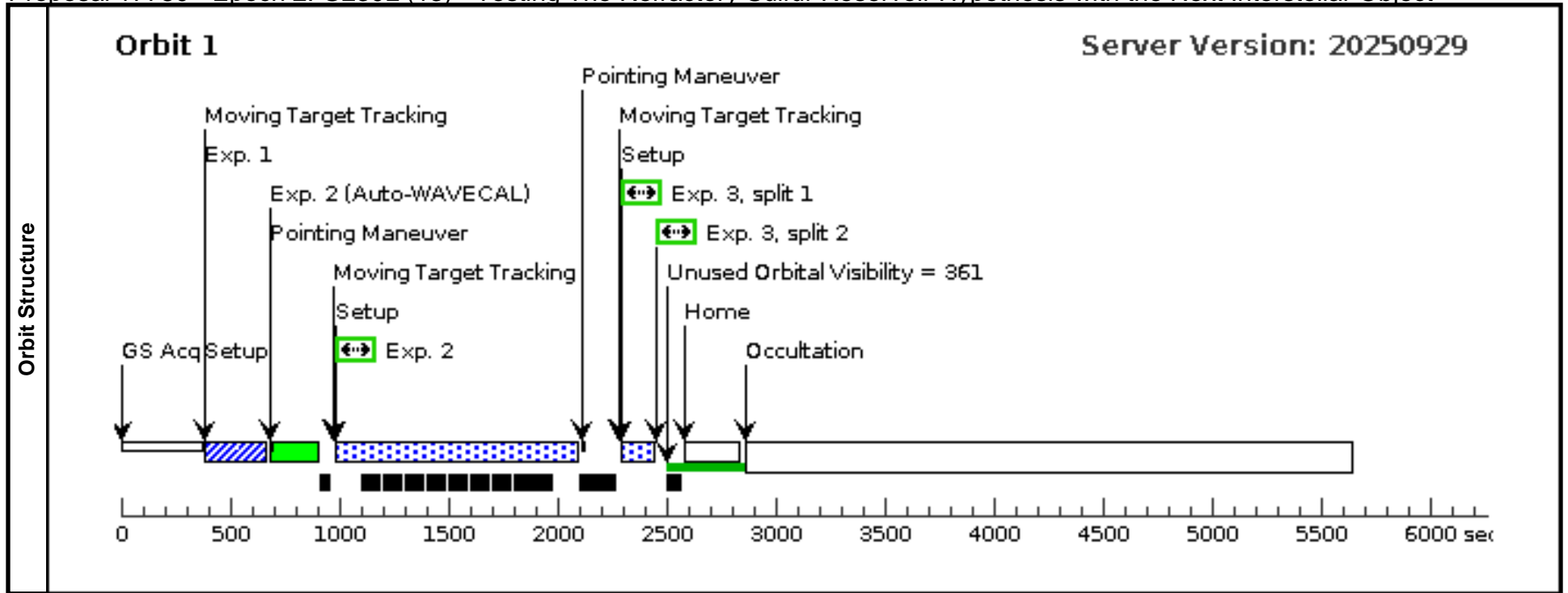
Visit	Proposal 17780, Epoch 2: FP 1 (12), scheduling Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 12,08,09,10,11,13,14 WITHIN 7D; TOO RESPONSE TIME 21.0D										
	Diagnosics (Epoch 2: FP 1 (12)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (12.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 2: FP 1 (12)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.13935633373651,I=175.1130 738297457 ,O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 ,DT=0. ,A1=4.586562347412E- 7,A2=2.042488479614E-7,A3=0. ,ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH			
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(1) 3IATLAS	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs)		
									[==>]		[1]
2	COS-G160 M (COS.sp.192 8787)	(1) 3IATLAS	COS/FUV, TIME-TAG, PSA	G160M 1589 A		FP-POS=1; BUFFER-TIME=10 000			500 Secs (1423 Secs)		
									[==>1423.0 Secs]		[1]



Proposal 17780 - Epoch 2: G230L (13) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

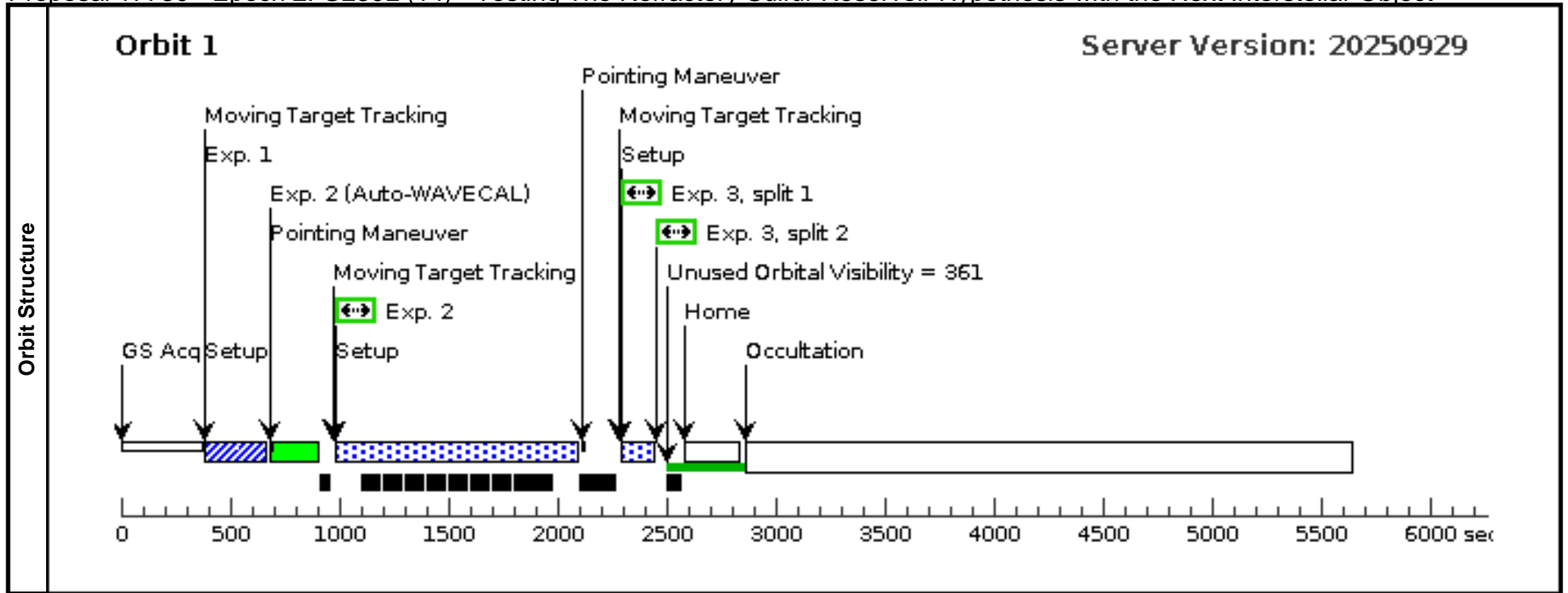
Visit	Proposal 17780, Epoch 2: G230L (13), scheduling Diagnostic Status: Informational Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 13,08,09,10,11,12,14 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	(Epoch 2: G230L (13)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.13935633373651,I=175.1130 738297457 .O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 .DT=0. .A1=4.586562347412E- 7,.A2=2.042488479614E-7,A3=0. .ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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	(1) 3IATLAS	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs)	
									[==>]	[1]
	2	G230L (STIS.sp.19 28799)	(1) 3IATLAS	STIS/NUV-MAMA, TIME-TAG, 52X0.5	G230L 2376 A	BUFFER-TIME=99			1100 Secs (1073 Secs)	
								[==>1073.0 Secs]	[1]	
3	IMAGE (COS.ta.192 8813)	(1) 3IATLAS	STIS/CCD, ACCUM, F28X50LP	MIRROR				3 Secs (0.2 Secs)		
								[==>0.1 Secs (Split 1)]		
								[==>0.1 Secs (Split 2)]	[1]	



Proposal 17780 - Epoch 2: G230L (14) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

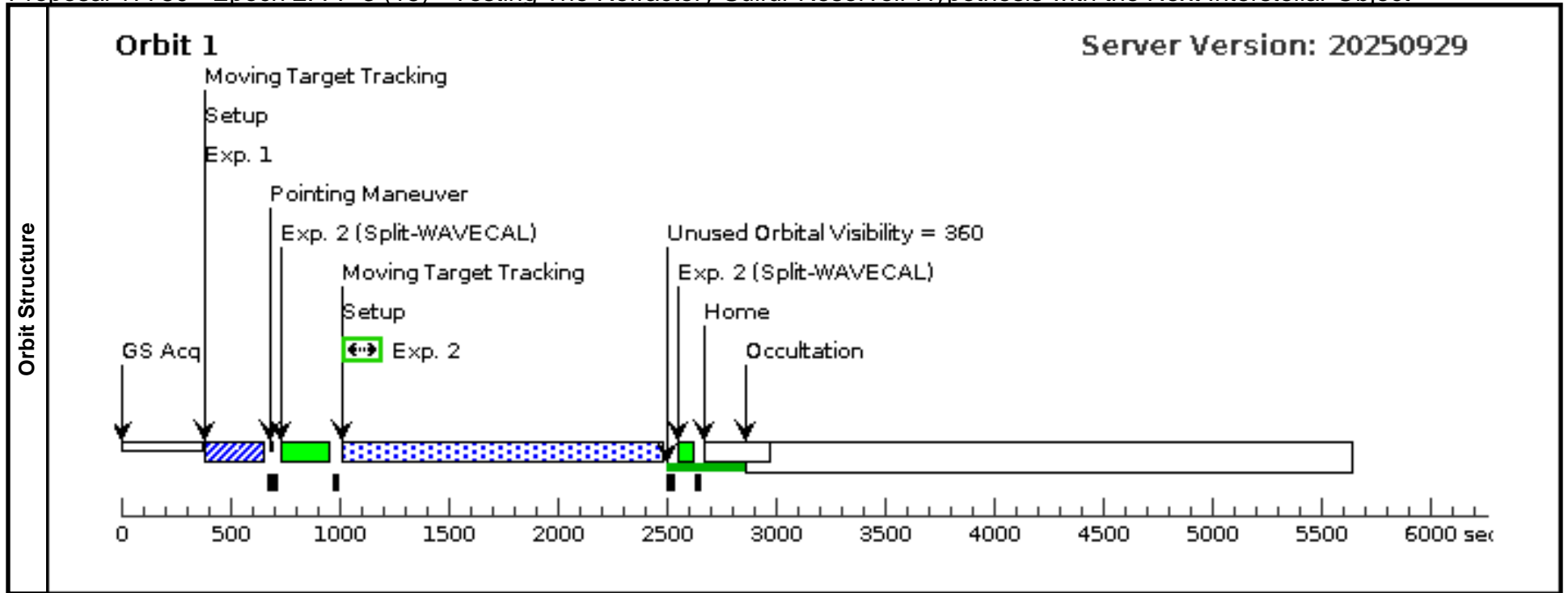
Visit	Proposal 17780, Epoch 2: G230L (14), scheduling Diagnostic Status: Informational Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; GROUP 14,08,09,10,11,12,13 WITHIN 7D; TOO RESPONSE TIME 21.0D									
	(Epoch 2: G230L (14)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	3IATLAS	TYPE=COMET,Q=1.3564025686409 83,E=6.13935633373651,I=175.1130 738297457 .O=322.1563556123334,W=128.00972 8549728,T=29-OCT- 2025:11:34:20,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=26-JUL- 2025:00:00:00,EpochTimeScale=TDB, R0=2.808 .DT=0. .A1=4.586562347412E- 7,.A2=2.042488479614E-7,A3=0. .ALN=0.1112620426,NM=2.15,NN=5. 093,NK=4.6142,AMRAT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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	(1) 3IATLAS	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs)	
									[==>]	[1]
	2	G230L (STIS.sp.19 28799)	(1) 3IATLAS	STIS/NUV-MAMA, TIME-TAG, 52X0.5	G230L 2376 A	BUFFER-TIME=99			1100 Secs (1073 Secs)	
								[==>1073.0 Secs]	[1]	
3	IMAGE	(1) 3IATLAS	STIS/CCD, ACCUM, F28X50LP	MIRROR				3 Secs (0.2 Secs)		
								[==>0.1 Secs (Split 1)]		
								[==>0.1 Secs (Split 2)]	[1]	



Proposal 17780 - Epoch 2: FP 3 (15) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

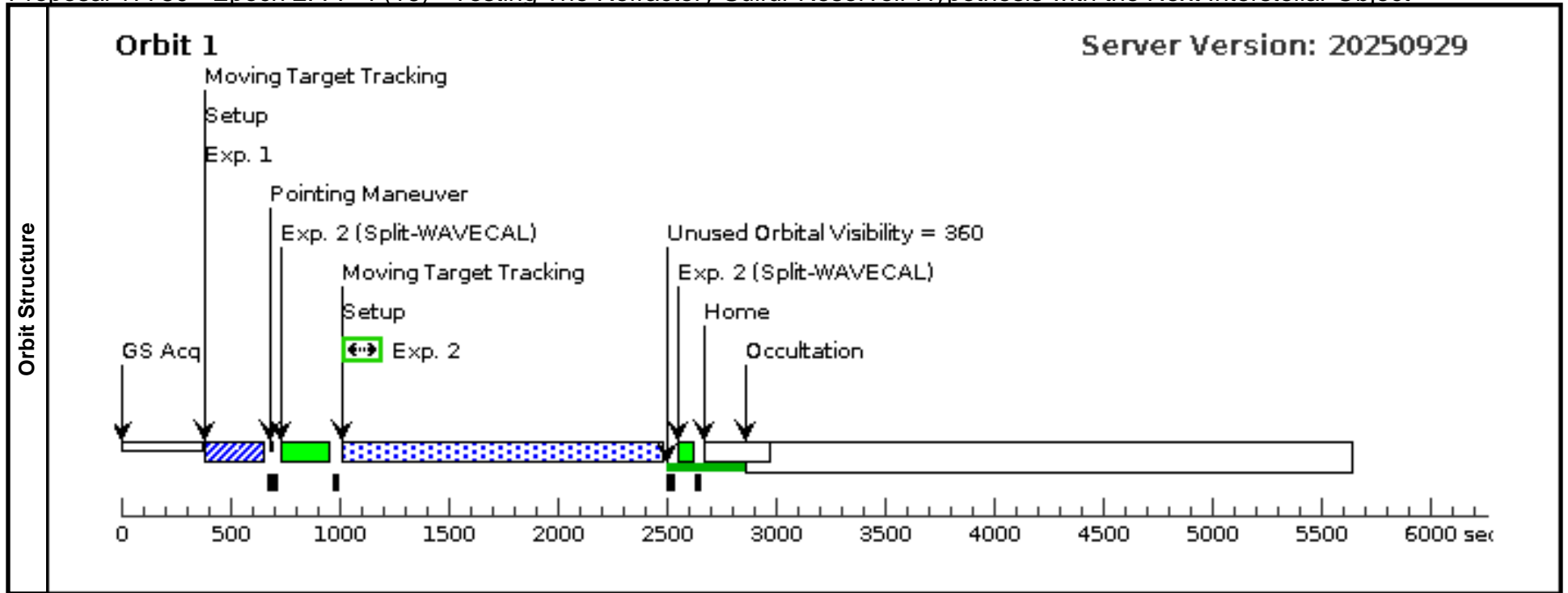
Visit	<p>Proposal 17780, Epoch 2: FP 3 (15), scheduled</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; TOO RESPONSE TIME 21.0D</p>									
	<p>(Epoch 2: FP 3 (15)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.</p> <p>(COS-G160M (15.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p> <p>(Epoch 2: FP 3 (15)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TimeScale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(3) 3IATLAS-JPL44	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	2	COS-G160 M (COS.sp.192 8787)	(3) 3IATLAS-JPL44	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]



Proposal 17780 - Epoch 2: FP 4 (16) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

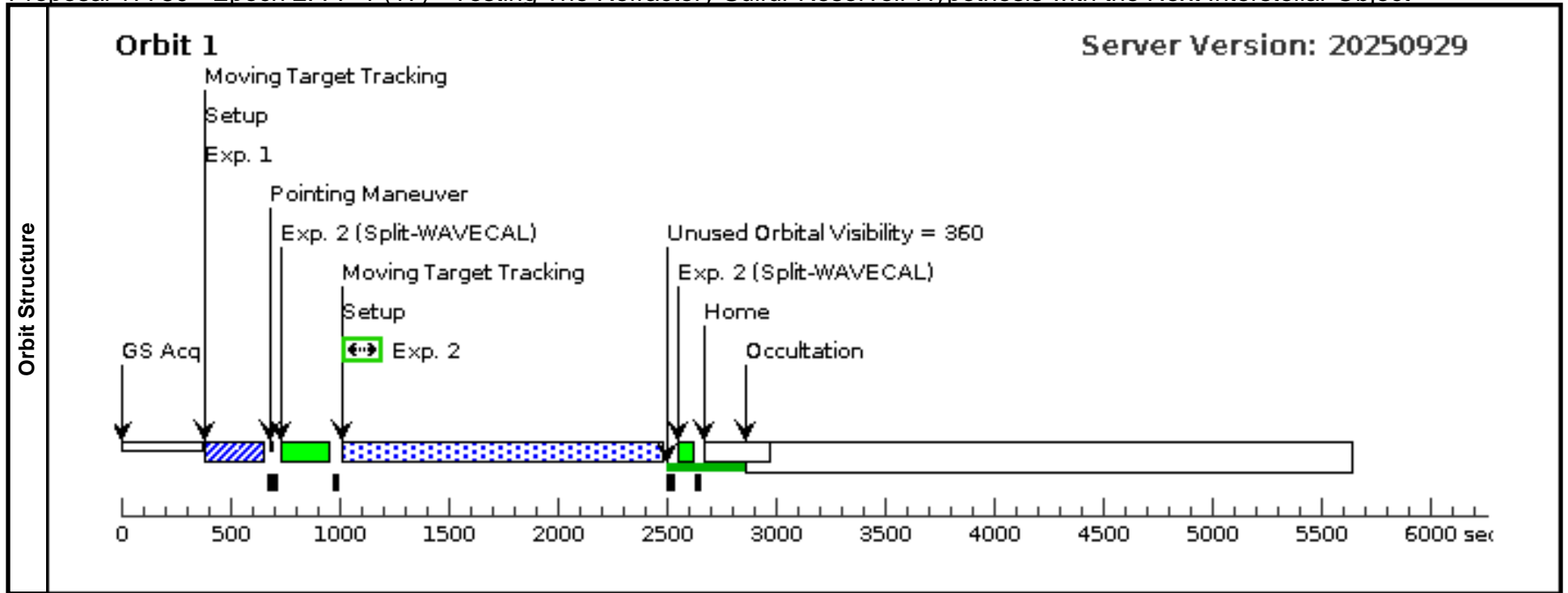
Visit	Proposal 17780, Epoch 2: FP 4 (16), scheduled Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; TOO RESPONSE TIME 21.0D									
	Diagnosics (Epoch 2: FP 4 (16)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (COS-G160M (16.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (Epoch 2: FP 4 (16)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TimeScale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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/IMAG E (COS.ta.192 8813)	(3) 3IATLAS-JPL44	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(3) 3IATLAS-JPL44	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 2: FP 1 (17) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

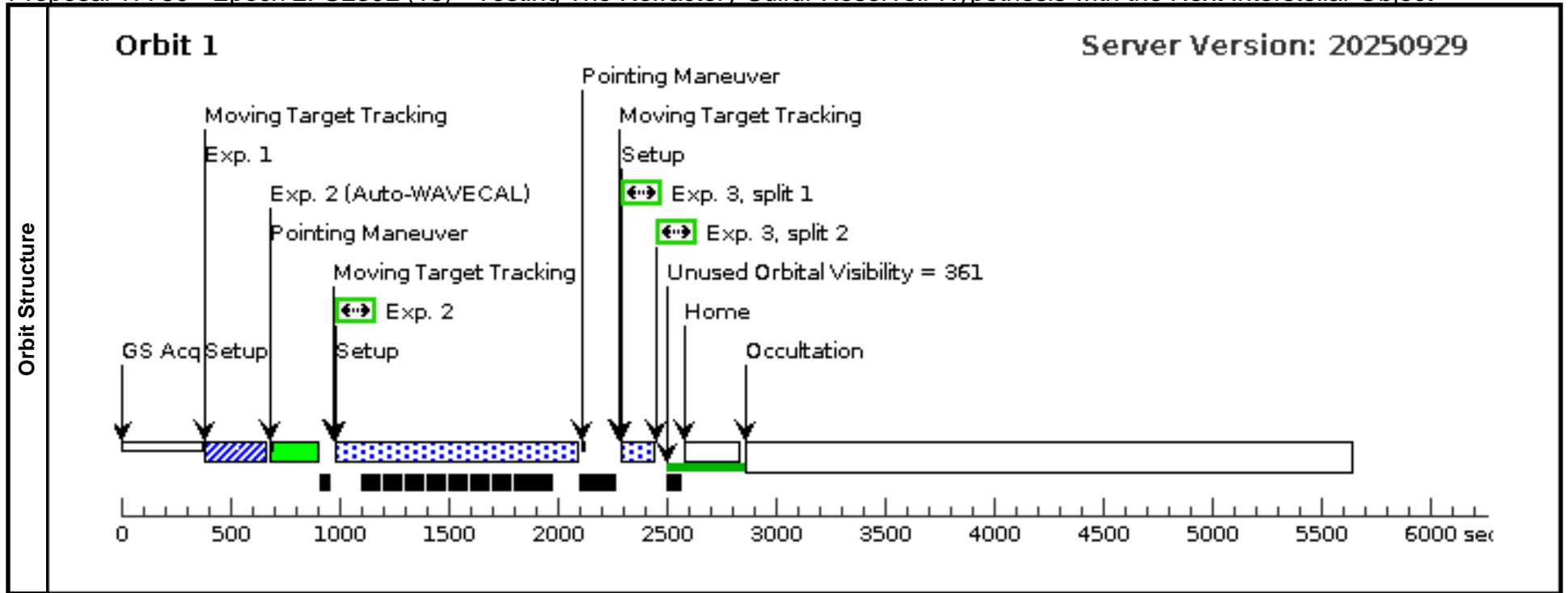
Visit	<p>Proposal 17780, Epoch 2: FP 1 (17), scheduled</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; TOO RESPONSE TIME 21.0D</p>									
	<p>(Epoch 2: FP 1 (17)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.</p> <p>(COS-G160M (17.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.</p> <p>(Epoch 2: FP 1 (17)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</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/IMAG E (COS.ta.192 8813)	(3) 3IATLAS-JPL44	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
2	COS-G160 M (COS.sp.192 8787)	(3) 3IATLAS-JPL44	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=1; BUFFER-TIME=10 000			500 Secs (1423 Secs) [==>1423.0 Secs]	[1]	



Proposal 17780 - Epoch 2: G230L (18) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

Visit	Proposal 17780, Epoch 2: G230L (18), scheduled Diagnostic Status: Informational Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; TOO RESPONSE TIME 21.0D									
	(Epoch 2: G230L (18)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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	(3) 3IATLAS-JPL44	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs)	
									[==>]	[1]
	2	G230L (STIS.sp.19 28799)	(3) 3IATLAS-JPL44	STIS/NUV-MAMA, TIME-TAG, 52X0.5	G230L 2376 A	BUFFER-TIME=99			1100 Secs (1073 Secs)	
								[==>1073.0 Secs]	[1]	
3	IMAGE (COS.ta.192 8813)	(3) 3IATLAS-JPL44	STIS/CCD, ACCUM, F28X50LP	MIRROR				3 Secs (0.2 Secs)		
								[==>0.1 Secs (Split 1)]		
								[==>0.1 Secs (Split 2)]	[1]	



Proposal 17780 - Epoch 2: G230L (19) - Testing The Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object

Sat Dec 20 01:00:37 GMT 2025

Visit	Proposal 17780, Epoch 2: G230L (19), scheduled Diagnostic Status: Informational Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: SCHED 100%; BETWEEN 27-NOV-2025:00:00:00 AND 31-DEC-2025:00:00:00; TOO RESPONSE TIME 21.0D									
	(Epoch 2: G230L (19)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Diagnostics										
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(3)	3IATLAS-JPL44	TYPE=COMET,Q=1.3564187619953 81,E=6.139422831829797,I=175.1130 917268881 .O=322.1566239181344,W=128.00969 24001076,T=29-OCT- 2025:11:34:23,TTIMEscale=TDB,EQ UINOX=J2000,EPOCH=07-AUG- 2025:00:00:00,EpochTimeScale=TDB, R0=1. .DT=0. .A1=4.572104930878E- 8,A2=1.862444758415E-8,A3=- 5.019464492798E-9 .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<p><i>Comments: We will trigger our ToO upon the detection of an active ISO, that is, with an hyperbolic orbit with a barycentric eccentricity significantly greater than unity as reported by the JPL Small-body Database, that has a perihelion within 2 au and reaches at least V=15. Activity will be defined as having a distinct coma upon detection that manifests as a nonstellar point spread function in discovery images and that persists in all follow-up observations. We will coordinate with the JWST ToO team to trigger on the same object and focus HST's capability near perihelion, where JWST may not be able to observe depending on the object's path through the solar system.</i></p> <p><i>On July 1, 2025 a new active ISO was discovered inbound; 3I/ATLAS. It was discovered at a V magnitude of ~18 and is expected to reach V~13 just prior to entering the solar keepout zone.</i></p> <p><i>Description=Interstellar Object</i> <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	(3) 3IATLAS-JPL44	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs)	
									[==>]	[1]
	2	G230L (STIS.sp.19 28799)	(3) 3IATLAS-JPL44	STIS/NUV-MAMA, TIME-TAG, 52X0.5	G230L 2376 A	BUFFER-TIME=99			1100 Secs (1073 Secs)	
								[==>1073.0 Secs]	[1]	
3	IMAGE	(3) 3IATLAS-JPL44	STIS/CCD, ACCUM, F28X50LP	MIRROR				3 Secs (0.2 Secs)		
								[==>0.1 Secs (Split 1)]		
								[==>0.1 Secs (Split 2)]	[1]	

