



18050 - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Cycle: 33, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
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Dr. Jessica Kay Werk (CoI)	University of Washington

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) GALEX-J173114.5+323248	COS/FUV COS/NUV	4	05-Nov-2025 07:00:16.0	yes
02	(2) GALEX-J173107.5+322809	COS/FUV COS/NUV	2	05-Nov-2025 07:00:17.0	yes
03	(3) GALEX-J172901.5+320719	COS/FUV COS/NUV	3	05-Nov-2025 07:00:17.0	yes
04	(4) GALEX-J173027.0+323458	COS/FUV COS/NUV	3	05-Nov-2025 07:00:18.0	yes
05	(5) GALEX-J165551.3+214602	COS/FUV COS/NUV	5	05-Nov-2025 07:00:19.0	yes
06	(6) GALEX-J165056.9+220744	COS/FUV COS/NUV	2	05-Nov-2025 07:00:19.0	yes

Proposal 18050 (STScI Edit Number: 0, Created: Wednesday, November 5, 2025, 7:00:32AM 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>
07	(7) GALEX-J165751.9+213845	COS/FUV COS/NUV	3	05-Nov-2025 07:00:20.0	yes
08	(8) GALEX-J165855.6+213857	COS/FUV COS/NUV	1	05-Nov-2025 07:00:20.0	yes
09	(9) GALEX-J203413.3-040529	COS/FUV COS/NUV	2	05-Nov-2025 07:00:21.0	yes
10	(10) GALEX-J203424.5-032202	COS/FUV COS/NUV	3	05-Nov-2025 07:00:21.0	yes
11	(11) GALEX-J203253.8-030625	COS/FUV COS/NUV	2	05-Nov-2025 07:00:22.0	yes
12	(12) GALEX-J213850.6-225323	COS/FUV COS/NUV	3	05-Nov-2025 07:00:22.0	yes
13	(12) GALEX-J213850.6-225323	COS/FUV COS/NUV	3	05-Nov-2025 07:00:23.0	yes
14	(13) GALEX-J214044.0-230938	COS/FUV COS/NUV	4	05-Nov-2025 07:00:23.0	yes
15	(14) GALEX-J214049.5-230450	COS/FUV COS/NUV	3	05-Nov-2025 07:00:24.0	yes
16	(15) GALEX-J141655.8-252413	COS/FUV COS/NUV	1	05-Nov-2025 07:00:24.0	yes
17	(16) GALEX-J142022.7-251856	COS/FUV COS/NUV	2	05-Nov-2025 07:00:25.0	yes
18	(17) GALEX-J141955.9-251027	COS/FUV COS/NUV	2	05-Nov-2025 07:00:25.0	yes
19	(18) GALEX-J141520.1-243401	COS/FUV COS/NUV	1	05-Nov-2025 07:00:26.0	yes
20	(29) GALEX-J125706.4-443519	COS/FUV COS/NUV	3	05-Nov-2025 07:00:26.0	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>
21	(29) GALEX-J125706.4-443519	COS/FUV COS/NUV	3	05-Nov-2025 07:00:27.0	yes
22	(30) GALEX-J125205.7-460035	COS/FUV COS/NUV	1	05-Nov-2025 07:00:27.0	yes
23	(31) GALEX-J125556.1-453541	COS/FUV COS/NUV	1	05-Nov-2025 07:00:28.0	yes
24	(32) GALEX-J125833.6-434413	COS/FUV COS/NUV	2	05-Nov-2025 07:00:28.0	yes
25	(23) GALEX-J211030.5-635814	COS/FUV COS/NUV	3	05-Nov-2025 07:00:29.0	yes
26	(23) GALEX-J211030.5-635814	COS/FUV COS/NUV	2	05-Nov-2025 07:00:29.0	yes
27	(24) GALEX-J210220.3-641817	COS/FUV COS/NUV	3	05-Nov-2025 07:00:30.0	yes
28	(25) GALEX-J211036.6-622517	COS/FUV COS/NUV	1	05-Nov-2025 07:00:30.0	yes
29	(26) GALEX-J194202.2-513609	COS/FUV COS/NUV	5	05-Nov-2025 07:00:31.0	yes
30	(27) GALEX-J194448.7-515828	COS/FUV COS/NUV	1	05-Nov-2025 07:00:31.0	yes
31	(28) GALEX-J195024.2-520009	COS/FUV COS/NUV	1	05-Nov-2025 07:00:32.0	yes

75 Total Orbits Used

ABSTRACT

Star formation in spiral galaxies like the Milky Way is powered by accreted gas. However, we have yet to detect the gas flows that must be powering the region of our Galaxy with the most star formation -- the inner disk. Observing the gas that is likely cooling and accreting directly onto the inner disk is key, but extremely challenging because these diffuse inflows must be measured in absorption. In external galaxies sightlines are sparse, which

makes the Milky Way the ideal laboratory for detecting this gas because of its abundance of potential sightlines. However, from our vantage point absorption signatures of inflowing and outflowing gas become blended with absorption signatures of rotating gas at the disk-halo interface. Therefore, if we wish to detect and understand these vertical flows we must also understand the expected absorption signature from rotating gas above the disk, which is influenced by Galactocentric radius-dependent effects from lag that have never before been measured directly. To break the degeneracy between the absorption signatures of rotation and inflow/outflow, we propose to observe 8 quasars, paired with 20 stars at small angular separation, to measure the velocities, and, crucially, the distances to the gas in each sightline segment. These sightlines will probe above regions both with and without active star formation and determine the velocities associated with star formation-driven outflows. This program will yield the first measurements of halo gas rotation in the inner Galaxy as a function of distance, and provide insight into the connection between inflows, outflows, and star formation in this region.

OBSERVING DESCRIPTION

We will observe 8 QSOs and 20 BHB stars that lie close to Galactic center at $|l| < 56$ deg and $|b| < 47$ deg with HST/COS G160M to look for the observational signatures of gas inflow/outflow and halo lag near Galactic center. The sightlines were selected so that two sightlines fall in each of the four quadrants that lie at Northern/Southern Galactic latitudes and on either side of Galactic center. Each quasar is closely paired with multiple stellar sightlines at small angular separation. Each target requires between 1 and 6 orbits, amounting to 75 orbits in total for the program.

S/N Requirements:

Our primary science goal requires the measurement of absorption features from the doublets SiIV (1393, 1402) and CIV (1548, 1550), the highest ionization state transitions available with COS at $z = 0$. Our experiment requires us to measure both gas kinematics (absorption-line profiles as a function of velocity, e.g. Doppler b widths, velocity centroids) and gas column densities for these features. We require a minimum S/N of ~ 10 at the wavelengths of the CIV (1548, 1550) doublet in our COS G160M spectra in order to achieve our science goals. The S/N at the wavelengths of the SiIV doublet (1393, 1402) is > 13 under this requirement for the same targets.

Instrument Set-up:

In order to adequately model the absorption features and detect their component structure, we choose the highest spectral resolution of COS (G160M) with a central wavelength of 1577 Å. In addition to detecting CIV and SiIV, other transitions we probe will be SiII (1526), FeII (1608, 1611), AlII (1670), and CI (1656). Saturation of the higher ionization state transitions should not be a problem at these Galactic coordinates.

Exposure times:

The exposure times for the QSOs and stars were estimated using the COS ETC (e.g. COS.sp.1919662, COS.sp.1919961, COS.sp.1919680). Our targets have NUV magnitudes of 14.0 - 17.4. The final selected stars have distances ranging from 1.8 - 10.5 kpc. Quasar redshifts range from 0.1 - 0.65, ensuring that they are distant enough to be point sources in the COS aperture. Once the QSO and stellar candidates were identified, we performed a crossmatch with GALEX using the GUVmatch MAST data product to ensure that we have FUV magnitudes for our targets to enable accurate exposure time calculations. Using the COS Spectroscopic ETC, we model the QSOs as COS-based QSOs for science exposures and the BHBs as Pickles A0III stars, adding in the appropriate extinction for each sightline, and normalizing the spectra to the target's GALEX FUV AB magnitude (e.g. COS.sp.2022024, COS.sp.2022048). To achieve a minimum S/N of ~ 10 at 1550 Angstroms and at 1400, our targets require between 1 and 6 orbits each in G160M with a central wavelength of 1577 A. We have no timing or orientation constraints.

Phase II Strategy:

We will observe all QSO and stellar targets with the HST/COS G160M grating centered at 1577 Angstroms. We require only one CENWAVE setting for this experiment since we are targeting specific absorption lines that will not fall near the gap between segments nor will they fall in the regions of significant gain sag with this set up in LP4. Because we have coordinates that are accurate to within 0.4" from GALEX, we skip the ACQ/SEARCH step. For our faint, non-extended targets, we use a NUV ACQ/IMAGE target acquisition strategy which maximizes the science exposure times for these faint sources. To calculate acquisition exposure times using the ETC, we require a S/N of 20 in these NUV acquisition images (S/N of 30 in the two cases where the BOA is used), and model the QSOs as SDSS-based QSOs to be sure our input spectrum covers the full instrument throughput band. For sources that trigger the BOT, we use ACQ/IMAGE with the BOA instead of the PSA, and MIRRORA instead of MIRRORB. Our QSO targets are at $z \sim 0.1$, and are effectively point sources in the FUV.

We generally split our observations of each target into visits each of 3 orbits or fewer. However, in a few cases splitting up a 4- or 5-orbit visit does not allow for enough exposure time to reach our S/N goals. We have added an additional justification to these visits, explaining that our total exposure time required can only be achieved with this schedule to reduce the overheads and help us achieve our sensitivity requirement. Being able to carry out one visit instead of two buys us significantly more on-source exposure time compared to other visit arrangements.

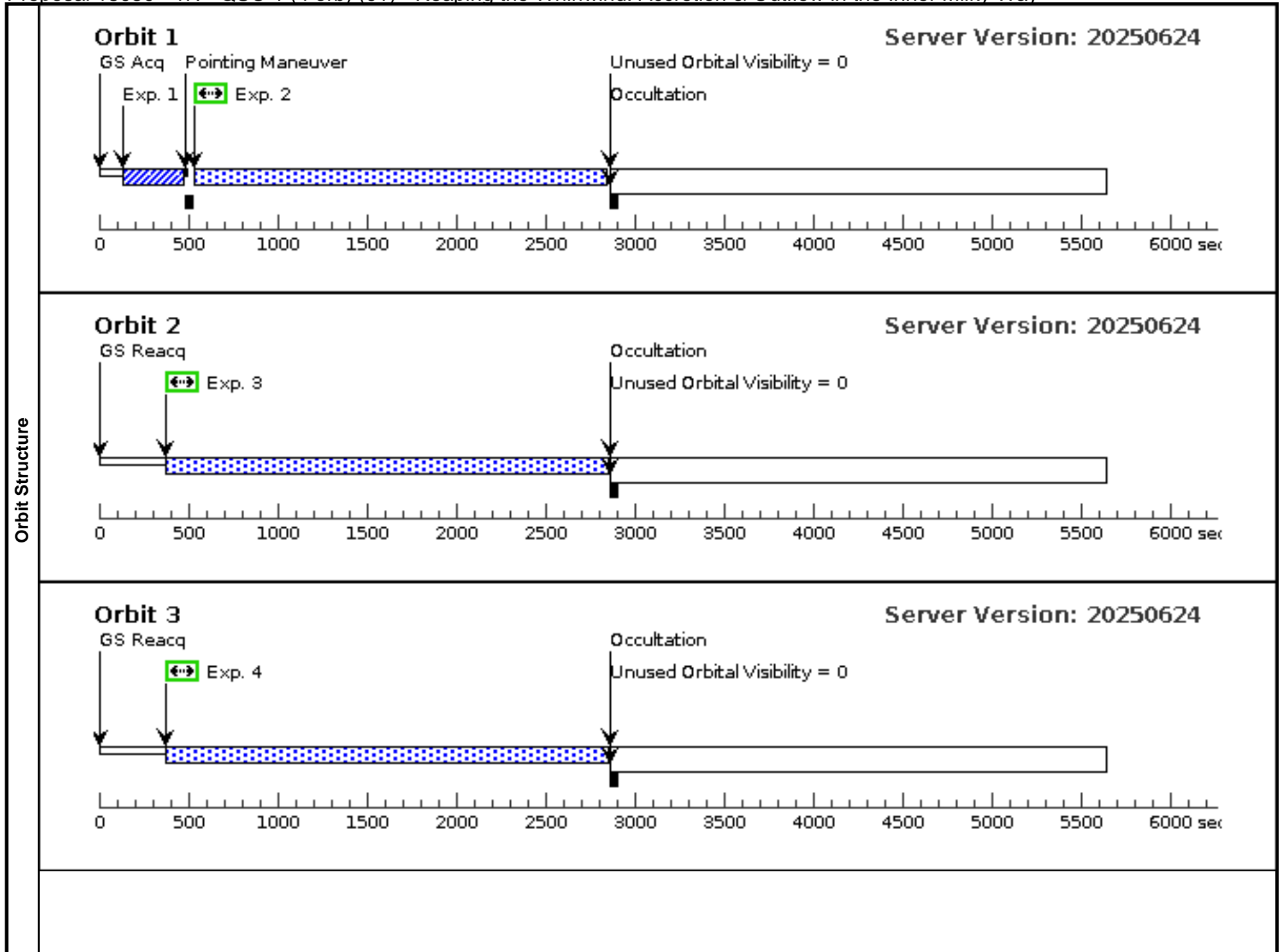
Proposal 18050 (STScI Edit Number: 0, Created: Wednesday, November 5, 2025, 7:00:32AM Eastern Standard Time) - Overview

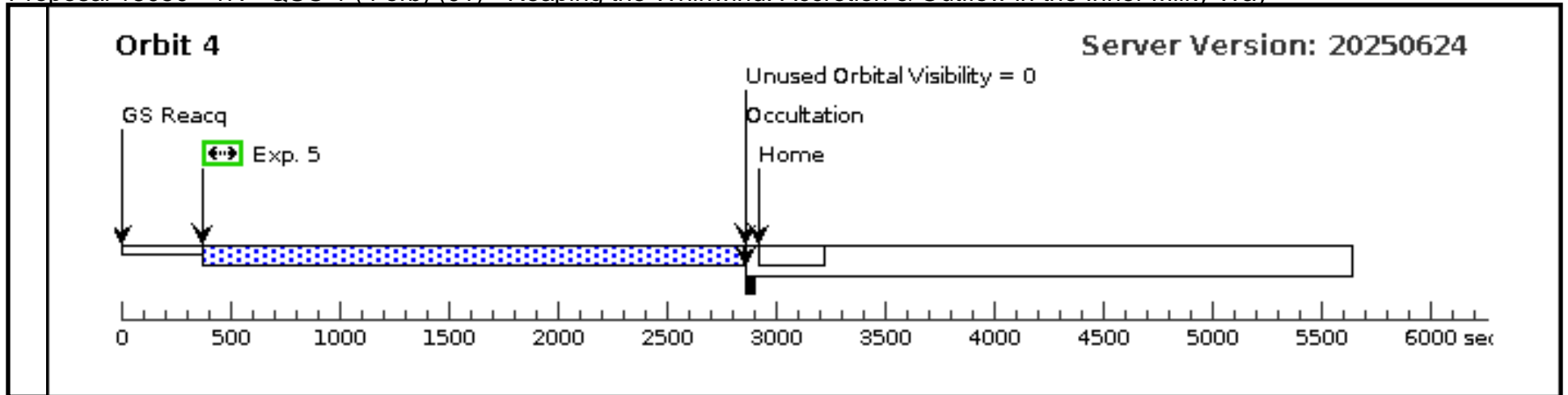
We have no timing or orientation constraints. We set the buffer time in the exposure to be $2/3$ of the buffer fill time reported by the ETC. We proceed by attempting to maximize exposure times while keeping to a minimum of four FP-POS settings per visit.

Proposal 18050 - 1N - QSO 1 (4 orb) (01) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:32 GMT 2025

Visit	Proposal 18050, 1N - QSO 1 (4 orb) (01), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: 5 orbits initially allocated.</i> <i>To maximize the amount of on-source time, we configure the exposures into one visit of 4 orbits. If this visit is split into two, the additional overheads will prevent us from reaching the S/N required for our science goals.</i>																					
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>GALEX-J173114.5+323248 Alt Name1: UVQS-J173114.58+323248.7 Alt Name2: 4C-32.53</td> <td>RA: 17 31 14.5322 (262.8105508d) Dec: +32 32 48.50 (32.54681d) Equinox: J2000</td> <td>Proper Motion RA: 0.14304014913208538 mas/yr Proper Motion Dec: 0.19983642248822098 mas/yr Epoch of Position: 2000 Redshift: 0.376</td> <td>V=16.6 GALEX FUV = 17.5</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: NUV = 16.92124</i> <i>e(b-v) = 0.0314</i> <i>acq ETC: COS.ta.2023875 (15 sec)</i> <i>spec ETC: COS.sp.2022007 (9,486 sec)</i> --- <i>Category=GALAXY</i> <i>Description=[QSO, QUASAR]</i> <i>Extended=NO</i></p>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	GALEX-J173114.5+323248 Alt Name1: UVQS-J173114.58+323248.7 Alt Name2: 4C-32.53	RA: 17 31 14.5322 (262.8105508d) Dec: +32 32 48.50 (32.54681d) Equinox: J2000	Proper Motion RA: 0.14304014913208538 mas/yr Proper Motion Dec: 0.19983642248822098 mas/yr Epoch of Position: 2000 Redshift: 0.376	V=16.6 GALEX FUV = 17.5
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																
(1)	GALEX-J173114.5+323248 Alt Name1: UVQS-J173114.58+323248.7 Alt Name2: 4C-32.53	RA: 17 31 14.5322 (262.8105508d) Dec: +32 32 48.50 (32.54681d) Equinox: J2000	Proper Motion RA: 0.14304014913208538 mas/yr Proper Motion Dec: 0.19983642248822098 mas/yr Epoch of Position: 2000 Redshift: 0.376	V=16.6 GALEX FUV = 17.5	Reference Frame: ICRS																	
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit												
	1	acq (COS.ta.2023875)	(1) GALEX-J173114.5+323248	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				15 Secs (15 Secs) [==>]	[1]												
	2	FP1 (COS.sp.2022007)	(1) GALEX-J173114.5+323248	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=73 66; FP-POS=1; SEGMENT=BOTH			2098 Secs (2098 Secs) [==>]	[1]												
	3	FP2 (COS.sp.2022007)	(1) GALEX-J173114.5+323248	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=2; BUFFER-TIME=73 66; SEGMENT=BOTH			2423 Secs (2423 Secs) [==>]	[2]												
	4	FP3 (COS.sp.2022007)	(1) GALEX-J173114.5+323248	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=73 66; SEGMENT=BOTH			2423 Secs (2423 Secs) [==>]	[3]												
	5	FP4 (COS.sp.2022007)	(1) GALEX-J173114.5+323248	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=4; BUFFER-TIME=73 66; SEGMENT=BOTH			2423 Secs (2423 Secs) [==>]	[4]												

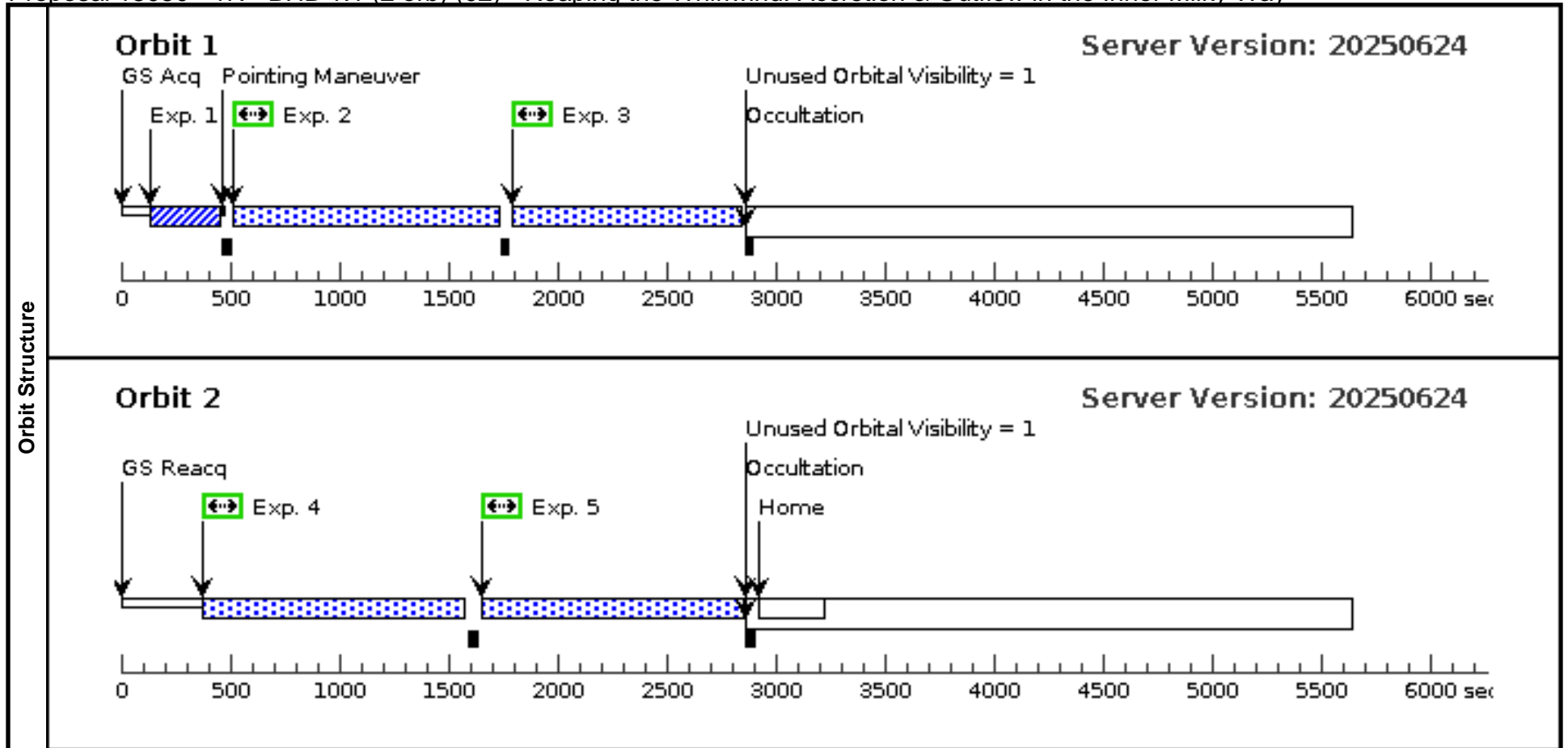




Proposal 18050 - 1N - BHB 1.1 (2 orb) (02) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:32 GMT 2025

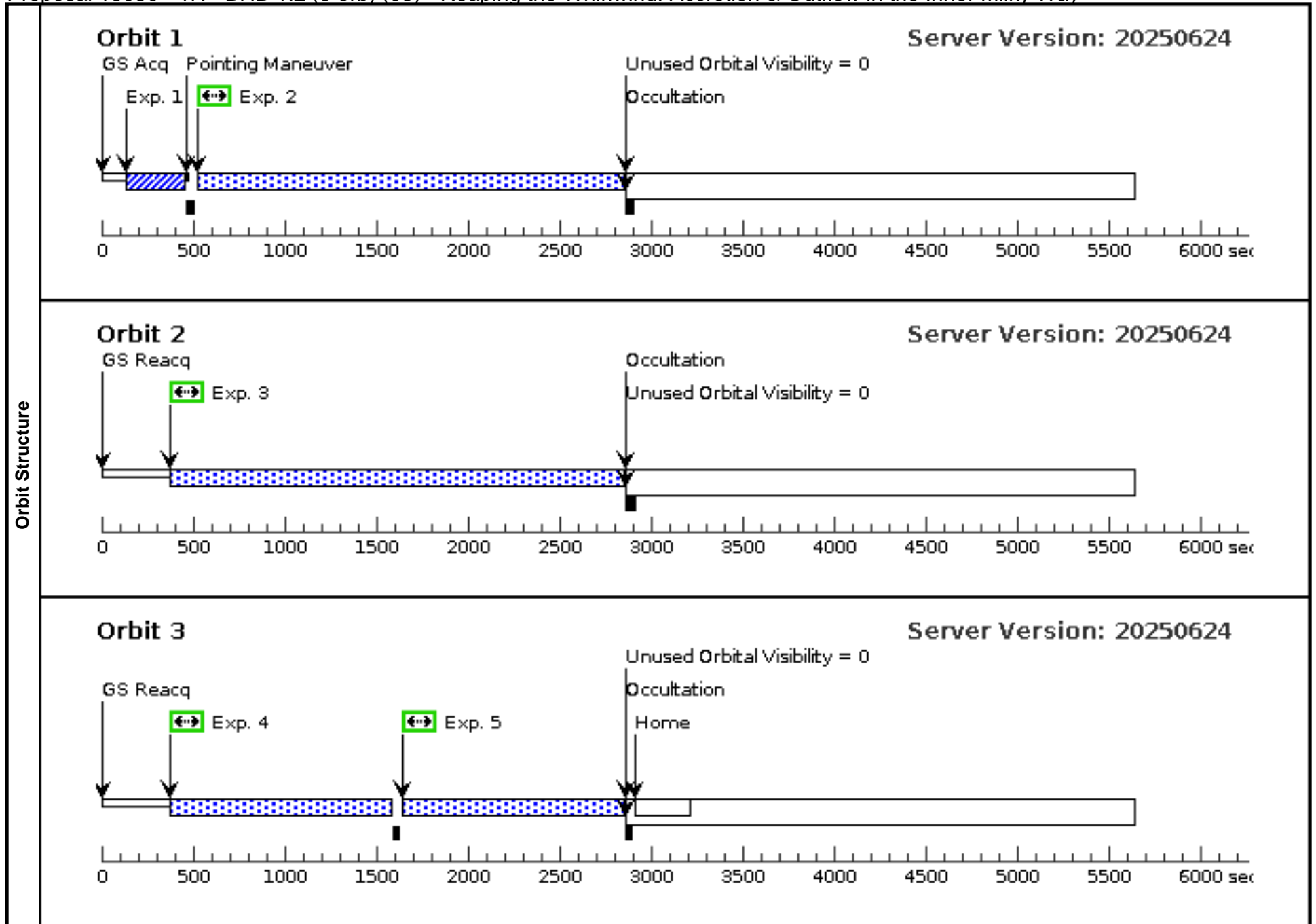
Visit	Proposal 18050, 1N - BHB 1.1 (2 orb) (02), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(2)	GALEX-J173107.5+322809	RA: 17 31 7.5112 (262.7812967d) Dec: +32 28 9.61 (32.46934d) Equinox: J2000	Proper Motion RA: -7.881771364142762 mas/yr Proper Motion Dec: -0.6428121669363608 mas/yr Parallax: 0.00019563897" Epoch of Position: 2000	V=14.1 GALEX FUV = 16.4	Reference Frame: ICRS				
	Alt Name1: 587742631742013788 Alt Name2: GAIA-DR3-4601682734654806656 Comments: NUV = 15.9 e(b-v) = 0.031 dist = 4.56 kpc acq ETC: COS.ta.2024145 (4 sec) spec ETC: COS.sp.2022091 (2,304 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024145)	(2) GALEX-J173107.5+322809	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				4 Secs (4 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022091)	(2) GALEX-J173107.5+322809	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=48 29			1002 Secs (1002 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022091)	(2) GALEX-J173107.5+322809	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=48 29			1002 Secs (1002 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022091)	(2) GALEX-J173107.5+322809	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=48 29			1149 Secs (1149 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022091)	(2) GALEX-J173107.5+322809	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=48 29			1149 Secs (1149 Secs) [==>]	[2]



Proposal 18050 - 1N - BHB 1.2 (3 orb) (03) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:32 GMT 2025

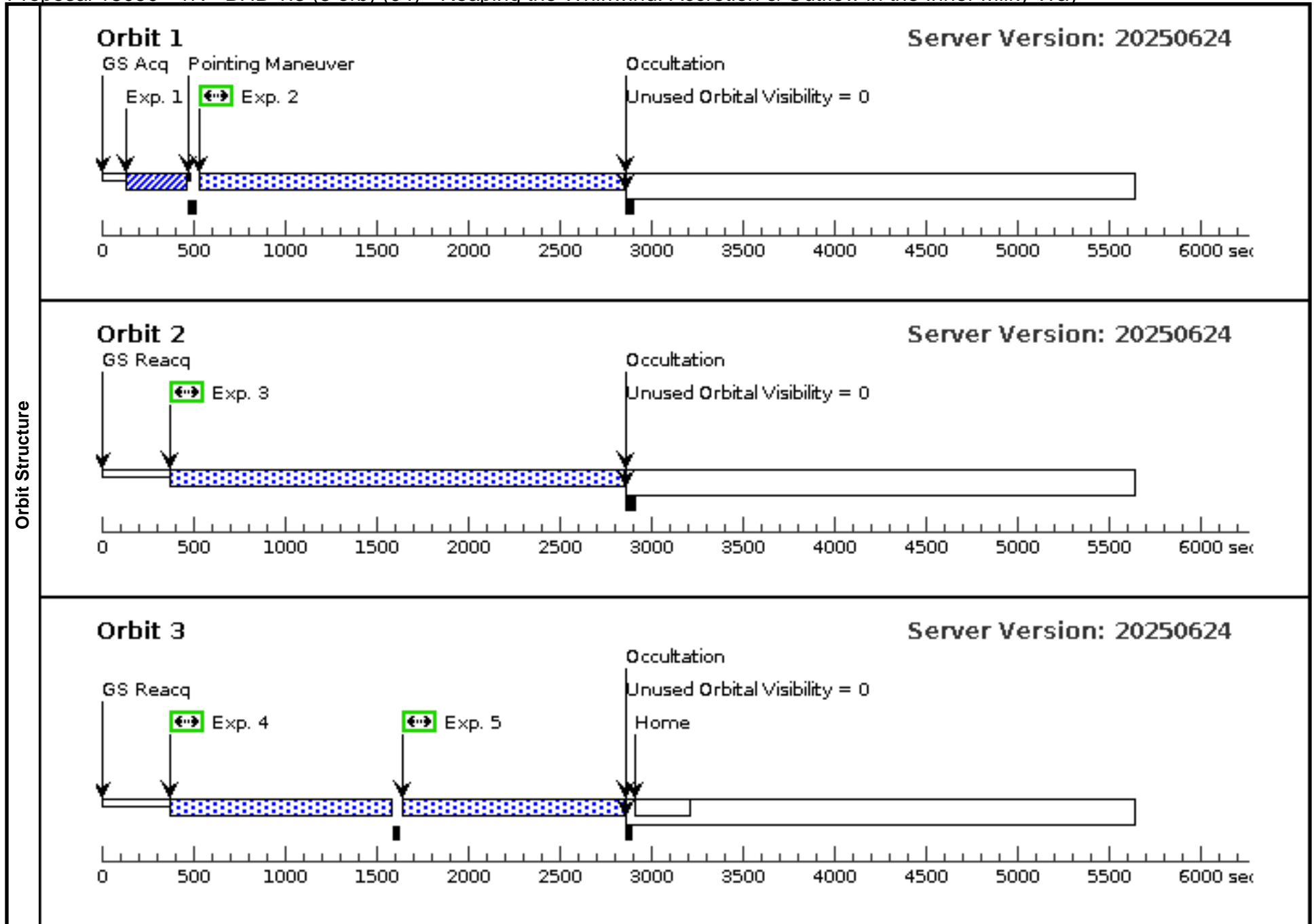
Visit	Proposal 18050, 1N - BHB 1.2 (3 orb) (03), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(3)	GALEX-J172901.5+320719 Alt Name1: 587739849687892316 Alt Name2: GAIA-DR2-4601834501618554368	RA: 17 29 1.5570 (262.2564875d) Dec: +32 07 19.96 (32.12221d) Equinox: J2000	Proper Motion RA: -6.445800036591286 mas/yr Proper Motion Dec: -12.274203904440537 mas/yr Parallax: 0.0001624633" Epoch of Position: 2000	V=14.7 GALEX FUV = 17.4	Reference Frame: ICRS				
	Comments: NUV = 16.536259 e(b-v) = 0.0274 dist = 6.15 kpc acq ETC: COS.ta.2024152 (8 sec) spec ETC: COS.sp.2022093 (5,796 sec) --- SDSS-J172901.52+320720.4 Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024152)	(3) GALEX-J172901.5+320719	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				8 Secs (8 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022093)	(3) GALEX-J172901.5+320719	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=71 11			2112 Secs (2112 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022093)	(3) GALEX-J172901.5+320719	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=71 11			2423 Secs (2423 Secs) [==>]	[2]
	4	FP3 (COS.sp.2022093)	(3) GALEX-J172901.5+320719	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=71 11			1154 Secs (1154 Secs) [==>]	[3]
	5	FP4 (COS.sp.2022093)	(3) GALEX-J172901.5+320719	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=71 11			1154 Secs (1154 Secs) [==>]	[3]



Proposal 18050 - 1N - BHB 1.3 (3 orb) (04) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

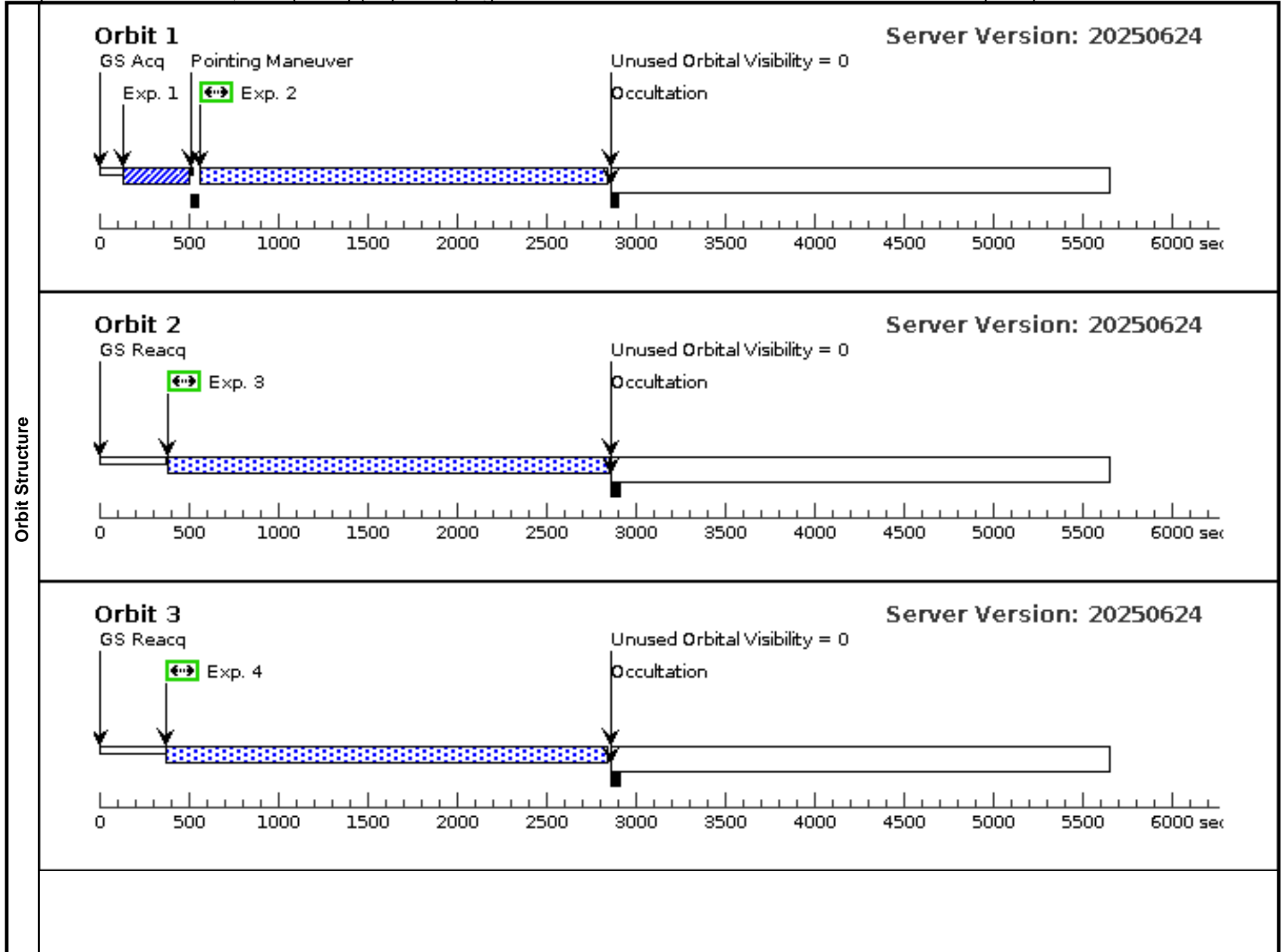
Visit	Proposal 18050, 1N - BHB 1.3 (3 orb) (04), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(4)	GALEX-J173027.0+323458	RA: 17 30 27.0646 (262.6127692d) Dec: +32 34 58.62 (32.58295d) Equinox: J2000	Proper Motion RA: -1.4936198446717117 mas/yr Proper Motion Dec: -3.495544916000279 mas/yr Parallax: 0.00008137842" Epoch of Position: 2000	V=15.2 GALEX FUV =17.4	Reference Frame: ICRS				
	Alt Name1: 587742631741948207 Alt Name2: GAIA-DR2-4601871644495880192 Comments: NUV = 16.93915 e(b-v) = 0.0265 dist = 7.59 kpc acq ETC: COS.ta.2024172 (11 sec) spec ETC: COS.sp.2022095 (6,193 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024172)	(4) GALEX-J173027.0+323458	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				11 Secs (11 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022095)	(4) GALEX-J173027.0+323458	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=72 56			2106 Secs (2106 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022095)	(4) GALEX-J173027.0+323458	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=72 56			2423 Secs (2423 Secs) [==>]	[2]
	4	FP3 (COS.sp.2022095)	(4) GALEX-J173027.0+323458	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=72 56			1154 Secs (1154 Secs) [==>]	[3]
	5	FP4 (COS.sp.2022095)	(4) GALEX-J173027.0+323458	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=72 56			1154 Secs (1154 Secs) [==>]	[3]

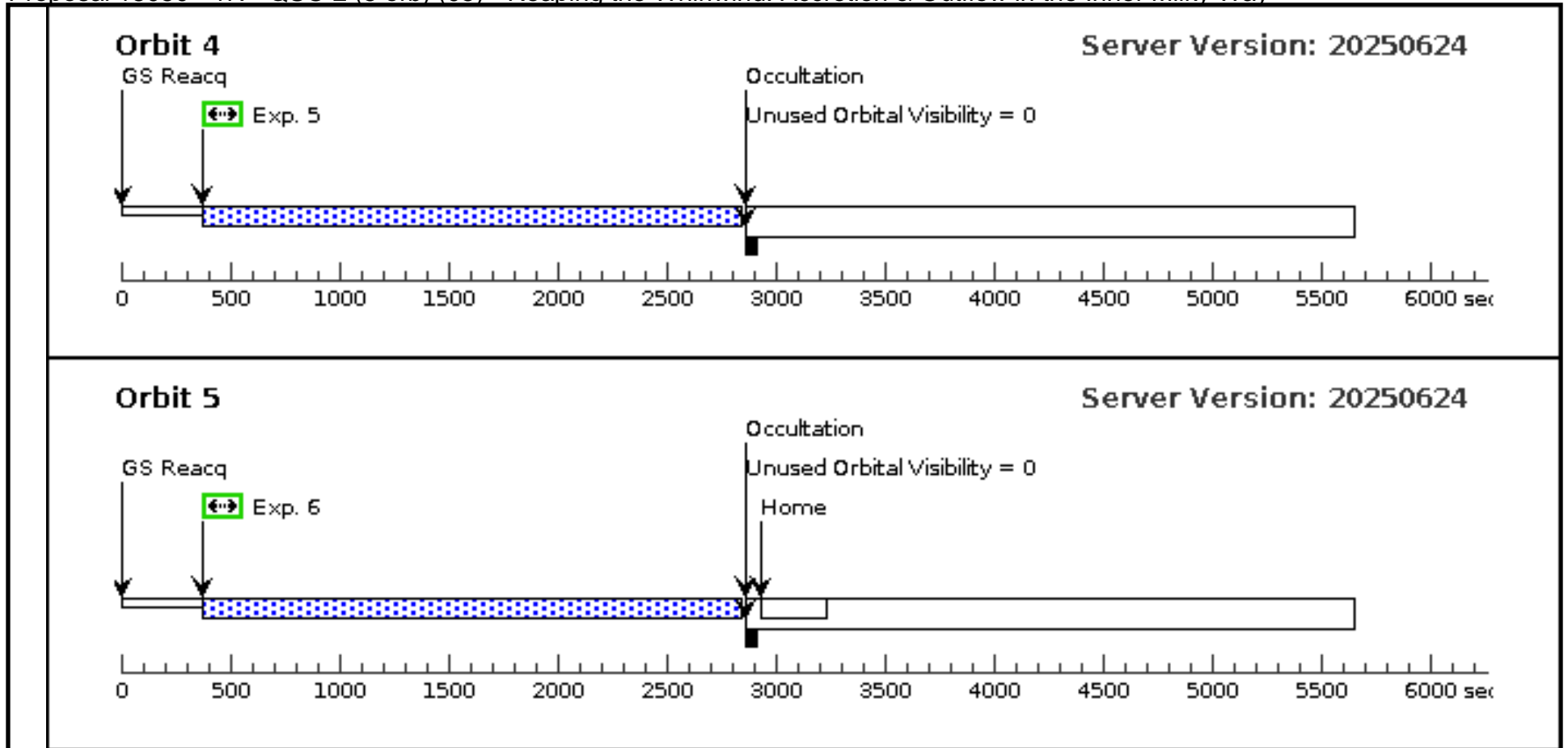


Proposal 18050 - 1N - QSO 2 (5 orb) (05) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

Visit	Proposal 18050, 1N - QSO 2 (5 orb) (05), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% Comments: 2 orbits initially allocated. To maximize the amount of on-source time, we configure the exposures into one visit of 5 orbits. If this visit is split into two, the additional overheads will prevent us from reaching the S/N required for our science goals.												
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(5)</td> <td>GALEX-J165551.3+214602 Alt Name1: RXSJ16558+2146 Alt Name2: GAIA-DR2-4565259247321015552</td> <td>RA: 16 55 51.3754 (253.9640642d) Dec: +21 46 1.80 (21.76717d) Equinox: J2000</td> <td>Proper Motion RA: 0.005038398996451084 mas/yr Proper Motion Dec: -0.3528631249988692 mas/yr Parallax: 0.00006240794377080987 " Epoch of Position: 2000 Redshift: 0.154</td> <td>V=16.4 GALEX FUV = 17.7</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p>Comments: NUV = 17.2 e(b-v) = 0.0489 acq ETC: COS.ta.2023872 (30 sec) spec ETC: COS.sp.2023841 (11,320 sec) Category=GALAXY Description=[QSO, QUASAR] Extended=NO</p>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(5)	GALEX-J165551.3+214602 Alt Name1: RXSJ16558+2146 Alt Name2: GAIA-DR2-4565259247321015552	RA: 16 55 51.3754 (253.9640642d) Dec: +21 46 1.80 (21.76717d) Equinox: J2000	Proper Motion RA: 0.005038398996451084 mas/yr Proper Motion Dec: -0.3528631249988692 mas/yr Parallax: 0.00006240794377080987 " Epoch of Position: 2000 Redshift: 0.154	V=16.4 GALEX FUV = 17.7
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous							
(5)	GALEX-J165551.3+214602 Alt Name1: RXSJ16558+2146 Alt Name2: GAIA-DR2-4565259247321015552	RA: 16 55 51.3754 (253.9640642d) Dec: +21 46 1.80 (21.76717d) Equinox: J2000	Proper Motion RA: 0.005038398996451084 mas/yr Proper Motion Dec: -0.3528631249988692 mas/yr Parallax: 0.00006240794377080987 " Epoch of Position: 2000 Redshift: 0.154	V=16.4 GALEX FUV = 17.7	Reference Frame: ICRS								
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit			
	1	acq (COS.ta.2023872)	(5) GALEX-J165551.3+214602	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs (30 Secs) [==>]	[1]			
	2	FP1 (COS.sp.2023841)	(5) GALEX-J165551.3+214602	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=71 27; FP-POS=1; SEGMENT=BOTH			2065 Secs (2065 Secs) [==>]	[1]			
	3	FP1 (COS.sp.2023841)	(5) GALEX-J165551.3+214602	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=71 27; FP-POS=1; SEGMENT=BOTH			2420 Secs (2420 Secs) [==>]	[2]			
	4	FP2 (COS.sp.2023841)	(5) GALEX-J165551.3+214602	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=71 27; FP-POS=2; SEGMENT=BOTH			2420 Secs (2420 Secs) [==>]	[3]			
	5	FP3 (COS.sp.2023841)	(5) GALEX-J165551.3+214602	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=71 27; FP-POS=3; SEGMENT=BOTH			2420 Secs (2420 Secs) [==>]	[4]			
	6	FP4 (COS.sp.2023841)	(5) GALEX-J165551.3+214602	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=71 27; FP-POS=4; SEGMENT=BOTH			2420 Secs (2420 Secs) [==>]	[5]			

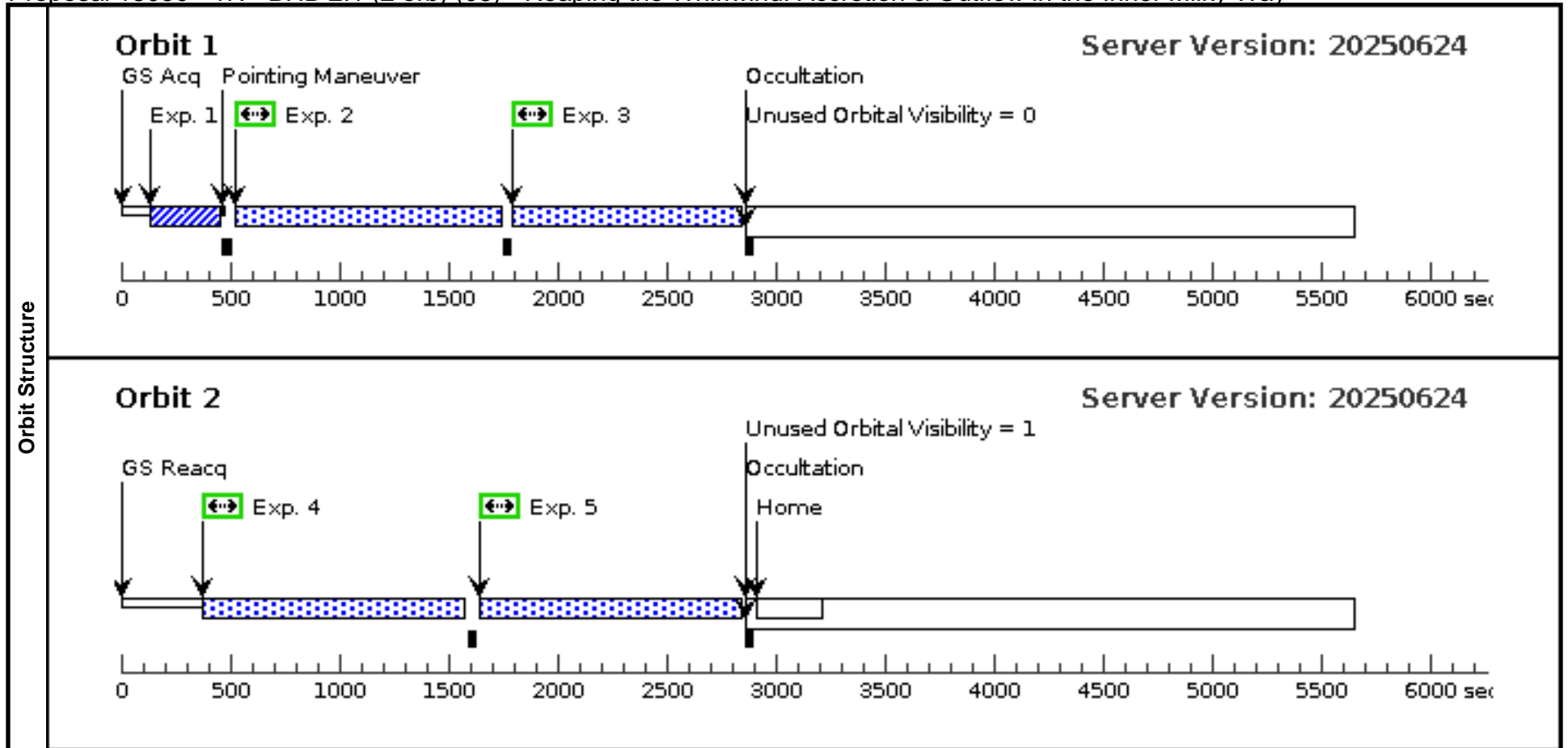




Proposal 18050 - 1N - BHB 2.1 (2 orb) (06) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

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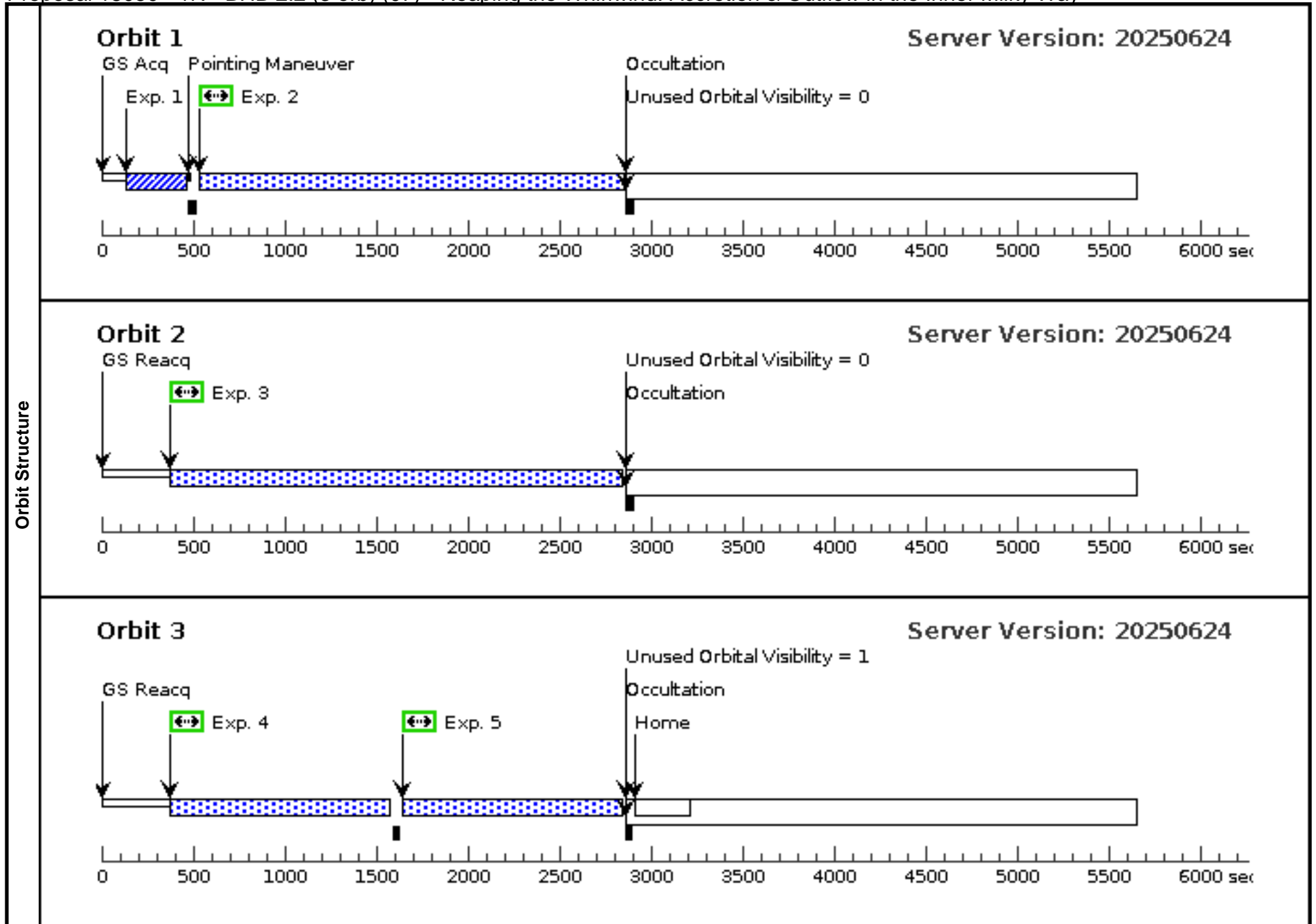
Visit	Proposal 18050, 1N - BHB 2.1 (2 orb) (06), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(6)	GALEX-J165056.9+220744 Alt Name1: 588018090013556782 Alt Name2: GAIA-DR2-4565727978574795264	RA: 16 50 56.9583 (252.7373262d) Dec: +22 07 44.37 (22.12899d) Equinox: J2000	Proper Motion RA: -8.64081985249995 mas/yr Proper Motion Dec: -8.77726549338222 mas/yr Parallax: 0.00021471947376234576" Epoch of Position: 2000	V=14.2 GALEX FUV = 17.1	Reference Frame: ICRS				
	<i>Comments: NUV = 16.362505</i> <i>e(b-v) = 0.048</i> <i>dist = 4.65</i> <i>acq ETC: COS.ta.2024183 (6 sec)</i> <i>spec ETC: COS.sp.2024182 (4,475 sec)</i> Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2025276)	(6) GALEX-J165056.9+220744	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				6 Secs (6 Secs) [==>]	[1]
	2	FP1 (COS.sp.2025272)	(6) GALEX-J165056.9+220744	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=65 21			999 Secs (999 Secs) [==>]	[1]
	3	FP2 (COS.sp.2025272)	(6) GALEX-J165056.9+220744	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=65 21			999 Secs (999 Secs) [==>]	[1]
	4	FP3 (COS.sp.2025272)	(6) GALEX-J165056.9+220744	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=65 21			1152 Secs (1152 Secs) [==>]	[2]
	5	FP4 (COS.sp.2025272)	(6) GALEX-J165056.9+220744	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=65 21			1152 Secs (1152 Secs) [==>]	[2]



Proposal 18050 - 1N - BHB 2.2 (3 orb) (07) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

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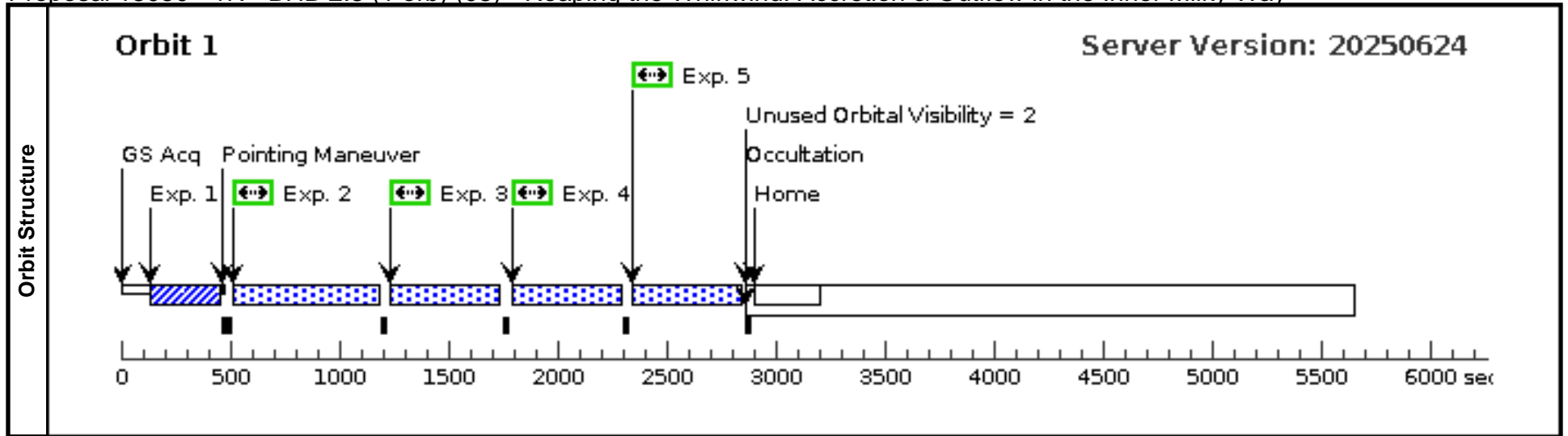
Visit	Proposal 18050, 1N - BHB 2.2 (3 orb) (07), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(7)	GALEX-J165751.9+213845 Alt Name1: 588018091087953964 Alt Name2: GAIA-DR2-4565086658356022400	RA: 16 57 51.9142 (254.4663092d) Dec: +21 38 45.89 (21.64608d) Equinox: J2000	Proper Motion RA: -7.7262862891799085 mas/yr Proper Motion Dec: 0.36598908096886085 mas/yr Parallax: 0.00011314283529683954" Epoch of Position: 2000	V=15.0 GALEX FUV = 17.7	Reference Frame: ICRS				
	<i>Comments: NUV = 17.042898 e(b-v) = 0.0512 dist = 6.70 kpc acq ETC: COS.ta.2024188 (12.sec) spec ETC: COS.sp.2022041 (7,697 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024188)	(7) GALEX-J165751.9+213845	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				12 Secs (12 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022041)	(7) GALEX-J165751.9+213845	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=77 17			2101 Secs (2101 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022041)	(7) GALEX-J165751.9+213845	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=77 17			2420 Secs (2420 Secs) [==>]	[2]
	4	FP3 (COS.sp.2022041)	(7) GALEX-J165751.9+213845	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=77 17			1152 Secs (1152 Secs) [==>]	[3]
	5	FP4 (COS.sp.2022041)	(7) GALEX-J165751.9+213845	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=77 17			1152 Secs (1152 Secs) [==>]	[3]



Proposal 18050 - 1N - BHB 2.3 (1 orb) (08) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

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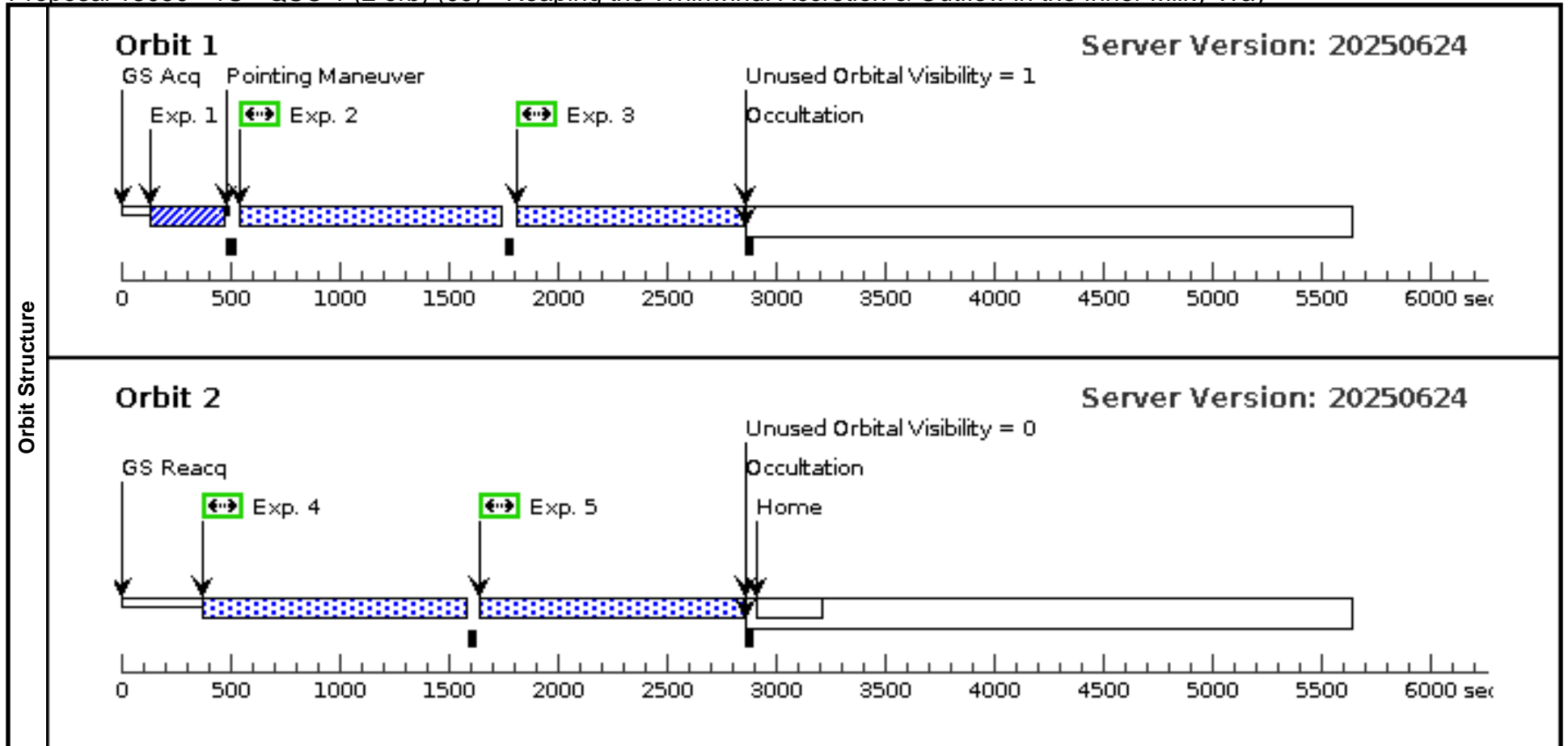
Visit	Proposal 18050, 1N - BHB 2.3 (1 orb) (08), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: 2 orbits initially allocated.</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(8)	GALEX-J165855.6+213857 Alt Name1: 587736782003437701 Alt Name2: GAIA-DR2-4565077312507255680	RA: 16 58 55.6110 (254.7317125d) Dec: +21 38 57.71 (21.64936d) Equinox: J2000	Proper Motion RA: -6.005526711482453 mas/yr Proper Motion Dec: 3.4274294753158125 mas/yr Parallax: 0.0002637612" Epoch of Position: 2000	V=16.1 GALEX FUV = 16.3	Reference Frame: ICRS			
	<i>Comments: NUV = 15.809637 e(b-v) = 0.049 dist = 4.21 kpc acq ETC: COS.ta.2024199 (4 sec) spec ETC: COS.sp.2022046 (2,143 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024199)	(8) GALEX-J165855.6+213857	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				4 Secs (4 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022046)	(8) GALEX-J165855.6+213857	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=46 53			450 Secs (450 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022046)	(8) GALEX-J165855.6+213857	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=46 53			450 Secs (450 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022046)	(8) GALEX-J165855.6+213857	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=46 53			450 Secs (450 Secs) [==>]	[1]
	5	FP4 (COS.sp.2022046)	(8) GALEX-J165855.6+213857	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=46 53			450 Secs (450 Secs) [==>]	[1]



Proposal 18050 - 1S - QSO 1 (2 orb) (09) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

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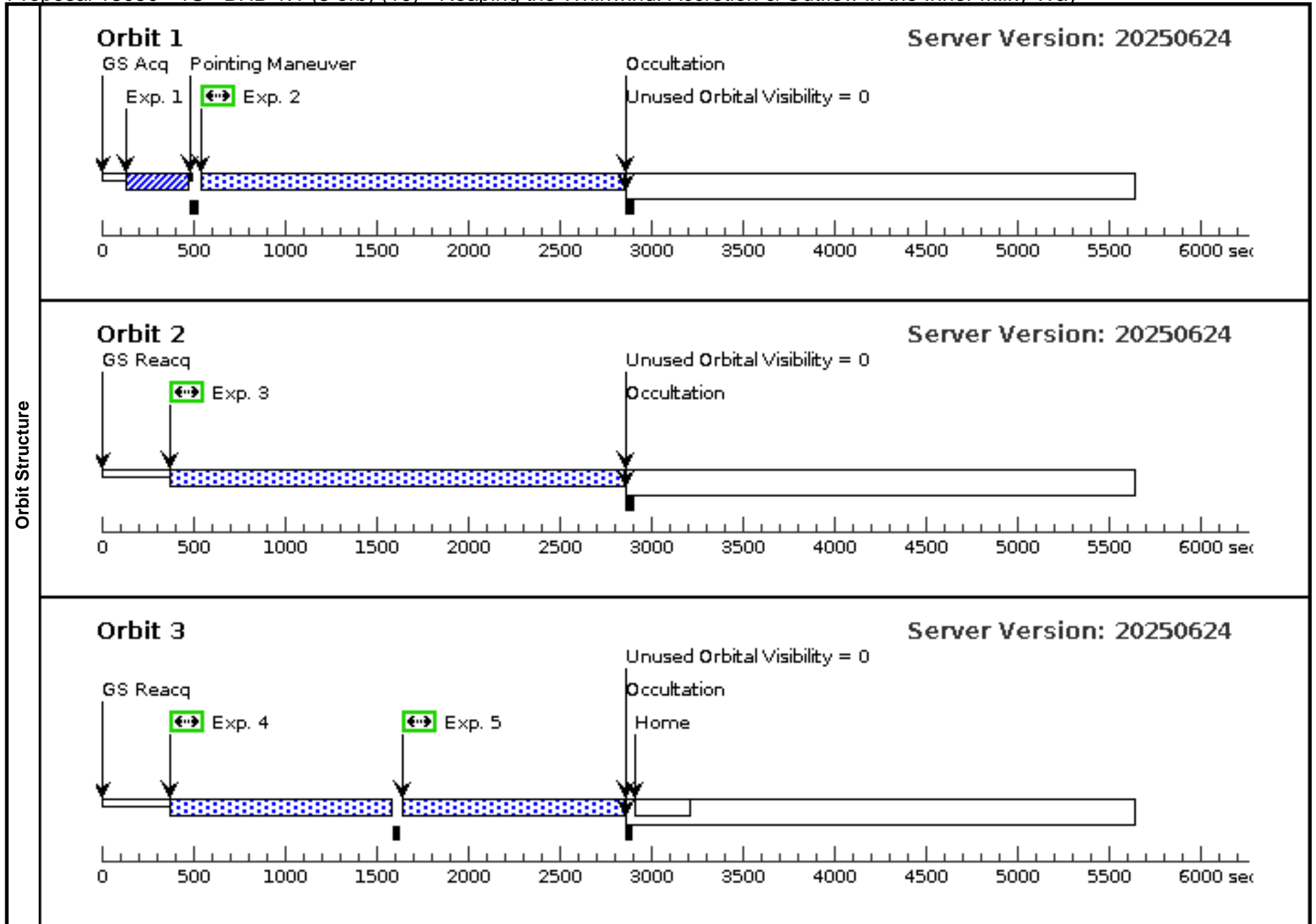
Visit	Proposal 18050, 1S - QSO 1 (2 orb) (09), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(9)	GALEX-J203413.3-040529 Alt Name1: PGC-1062999 Alt Name2: GAIA-DR2-4218657791715405952	RA: 20 34 13.3233 (308.5555137d) Dec: -04 05 29.21 (-4.09145d) Equinox: J2000	Proper Motion RA: -0.056 mas/yr Proper Motion Dec: -0.028 mas/yr Epoch of Position: 2000 Redshift: 0.099	V=16.0 GALEX FUV = 16.7	Reference Frame: ICRS				
	<i>Comments: NUV = 16.5 e(b-v) = 0.0599 acq ETC: COS.ta.2023877 (18 sec) spec ETC: COS.sp.2022024 (3,487 sec) --- Category=GALAXY Description=[QSO, QUASAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2023877)	(9) GALEX-J203413.3-040529	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				18 Secs (18 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022024)	(9) GALEX-J203413.3-040529	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=57 99; FP-POS=1; SEGMENT=BOTH			988 Secs (988 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022024)	(9) GALEX-J203413.3-040529	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=57 99; FP-POS=2; SEGMENT=BOTH			988 Secs (988 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022024)	(9) GALEX-J203413.3-040529	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=57 99; FP-POS=3; SEGMENT=BOTH			1154 Secs (1154 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022024)	(9) GALEX-J203413.3-040529	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=57 99; FP-POS=4; SEGMENT=BOTH			1154 Secs (1154 Secs) [==>]	[2]



Proposal 18050 - 1S - BHB 1.1 (3 orb) (10) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

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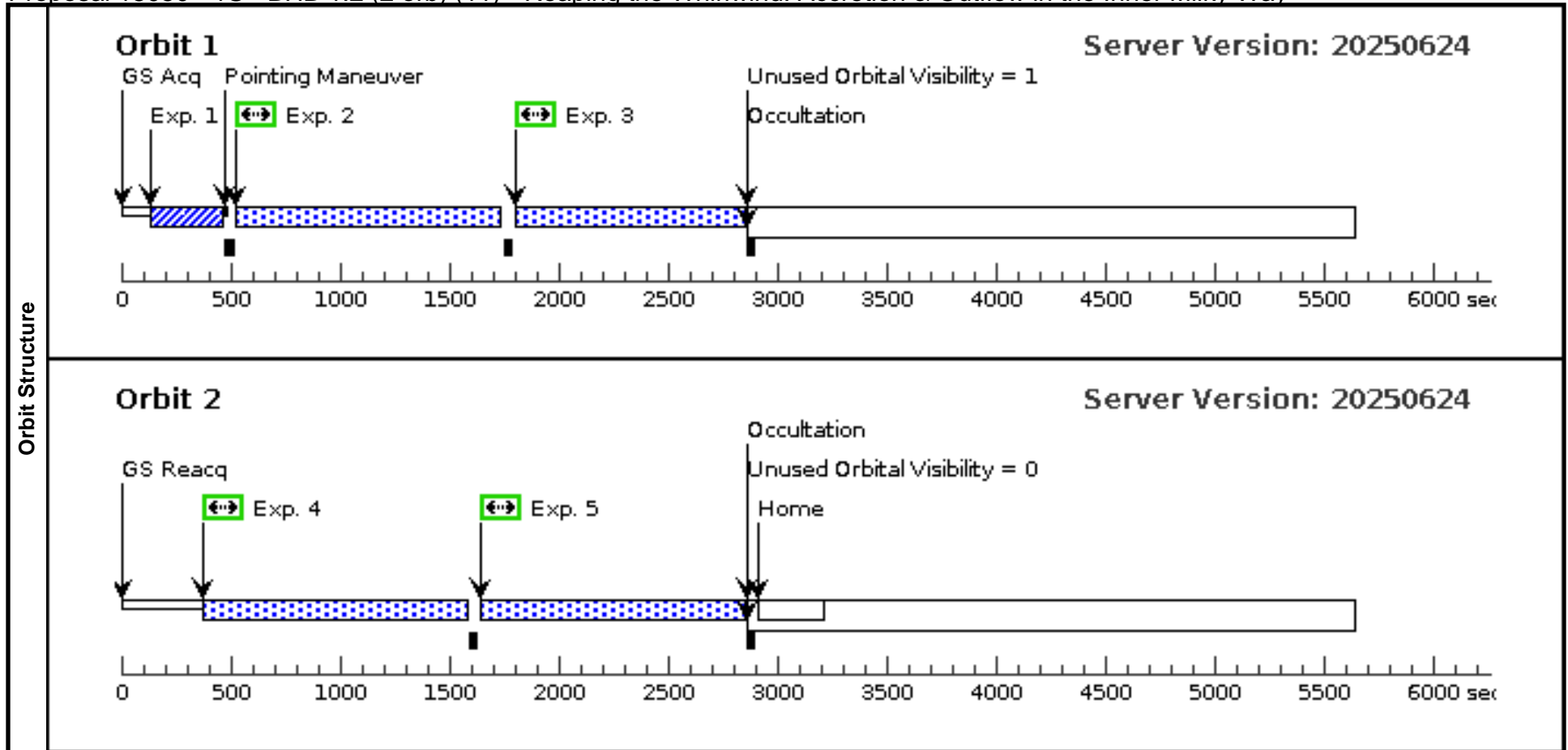
Visit	Proposal 18050, 1S - BHB 1.1 (3 orb) (10), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(10)	GALEX-J203424.5-032202 Alt Name1: 175289801 Alt Name2: GALA-DR2-4224771454323031168	RA: 20 34 24.5721 (308.6023838d) Dec: -03 22 2.88 (-3.36747d) Equinox: J2000	Proper Motion RA: -3.102 mas/yr Proper Motion Dec: -5.181 mas/yr Parallax: 0.0000858" Epoch of Position: 2000	V=15.5 GALEX FUV = 17.7	Reference Frame: ICRS				
	<i>Comments: NUV = 17.445309</i> <i>e(b-v) = 0.074</i> <i>dist = 8.51</i> <i>acq ETC: COS.ta.2024213 (17 sec)</i> <i>spec ETC: COS.sp.2022048 (8,192 sec)</i> Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024213)	(10) GALEX-J20342 4.5-032202	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				17 Secs (17 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022048)	(10) GALEX-J20342 4.5-032202	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=78 49			2094 Secs (2094 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022048)	(10) GALEX-J20342 4.5-032202	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=78 49			2423 Secs (2423 Secs) [==>]	[2]
	4	FP3 (COS.sp.2022048)	(10) GALEX-J20342 4.5-032202	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=78 49			1154 Secs (1154 Secs) [==>]	[3]
	5	FP4 (COS.sp.2022048)	(10) GALEX-J20342 4.5-032202	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=78 49			1154 Secs (1154 Secs) [==>]	[3]



Proposal 18050 - 1S - BHB 1.2 (2 orb) (11) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

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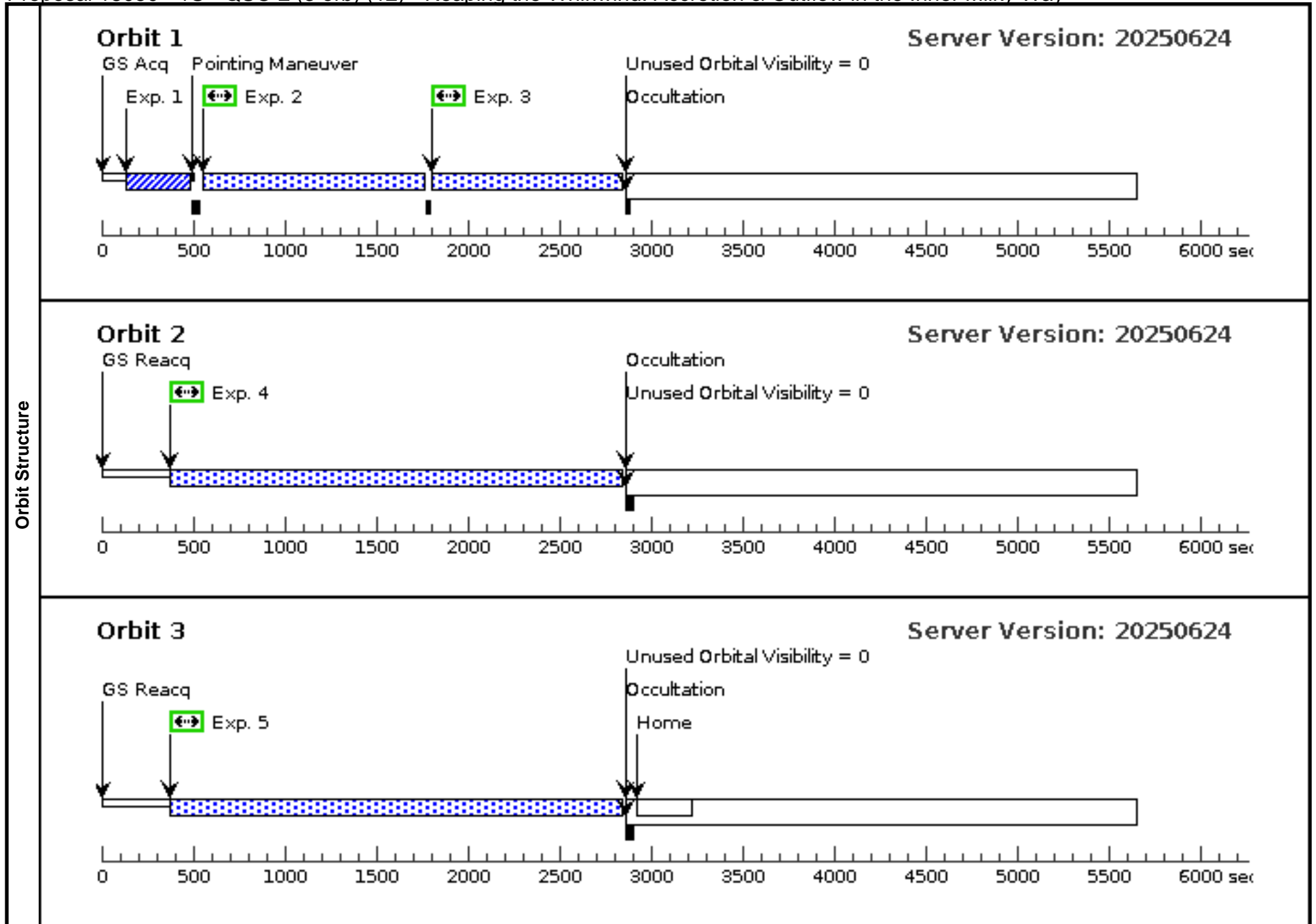
Visit	Proposal 18050, 1S - BHB 1.2 (2 orb) (11), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(11)	GALEX-J203253.8-030625 Alt Name1: 175287670 Alt Name2: GALA-DR2-4225543685147314560	RA: 20 32 53.8315 (308.2242979d) Dec: -03 06 25.88 (-3.10719d) Equinox: J2000	Proper Motion RA: -4.646515878272158 mas/yr Proper Motion Dec: -7.843278905092416 mas/yr Parallax: 0.0001373880947481663 " Epoch of Position: 2000	V=14.9 GALEX FUV = 17.2	Reference Frame: ICRS				
	<i>Comments: NUV = 16.830383 e(b-v) = 0.0871 dist = 6.21 kpc acq ETC: COS.ta.2024212 (10 sec) spec ETC: COS.sp.2022050 (4,980 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024212)	(11) GALEX-J203253.8-030625	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				10 Secs (10 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022050)	(11) GALEX-J203253.8-030625	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=67 97			996 Secs (996 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022050)	(11) GALEX-J203253.8-030625	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=67 97			996 Secs (996 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022050)	(11) GALEX-J203253.8-030625	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=67 97			1154 Secs (1154 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022050)	(11) GALEX-J203253.8-030625	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=67 97			1154 Secs (1154 Secs) [==>]	[2]



Proposal 18050 - 1S - QSO 2 (3 orb) (12) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

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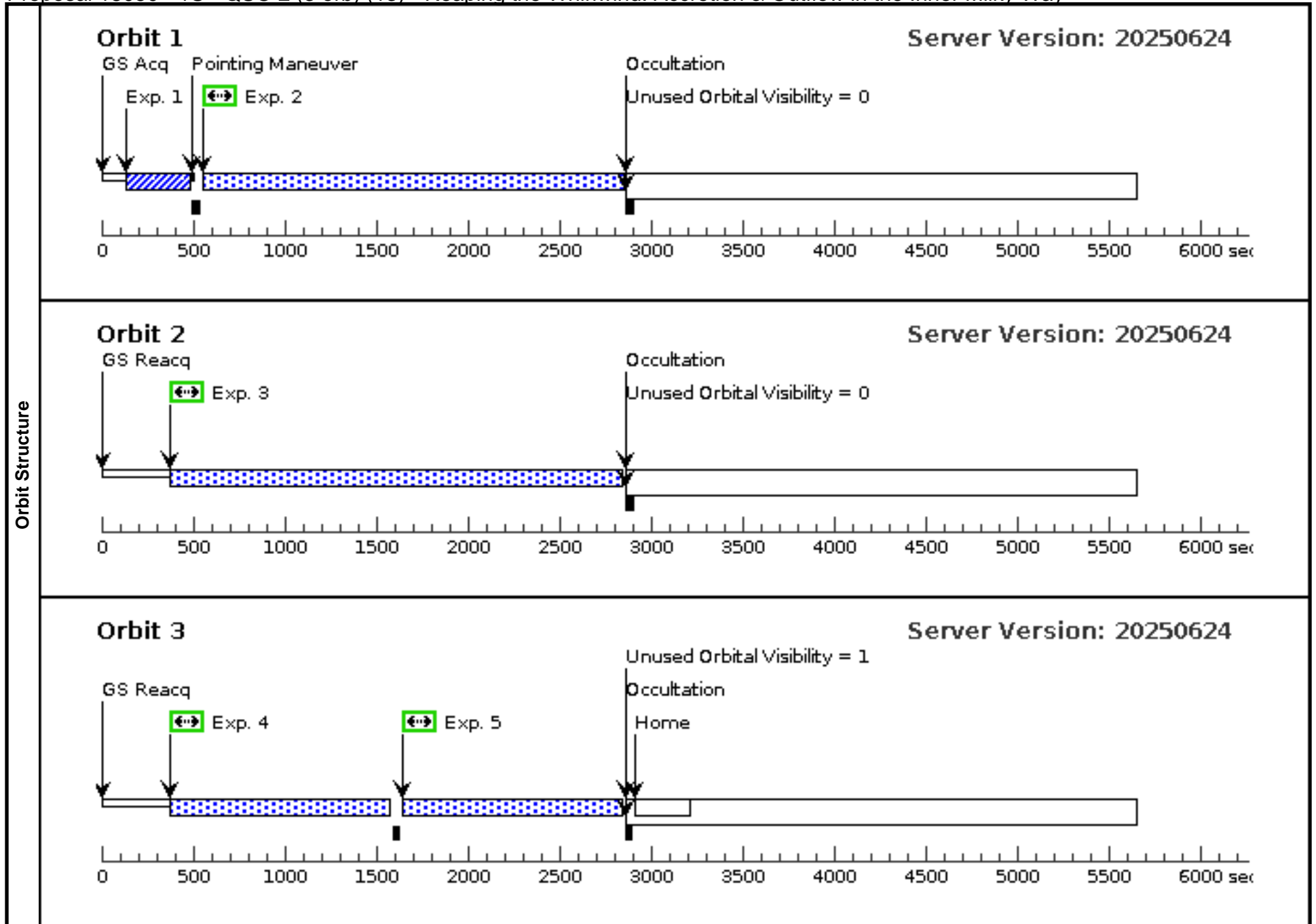
Visit	Proposal 18050, 1S - QSO 2 (3 orb) (12), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(12)	GALEX-J213850.6-225323 Alt Name1: MS-21360-2307 Alt Name2: QSO-B2136-2307	RA: 21 38 50.5964 (324.7108183d) Dec: -22 53 23.52 (-22.88987d) Equinox: J2000	Proper Motion RA: 0.014 mas/yr Proper Motion Dec: -0.012 mas/yr Epoch of Position: 2000 Redshift: 0.646	V=17.0 GALEX FUV = 18.4	Reference Frame: ICRS				
	Comments: NUV = 17.4 e(b-v) = 0.0437 acq ETC: COS.ta.2023885 (20.sec) spec ETC: COS.sp.2022022 (17,428.sec) --- Gaia DR2 6817349194635565440 Category=GALAXY Description=[QSO, QUASAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2025294)	(12) GALEX-J21385 0.6-225323	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				21 Secs (21 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022022)	(12) GALEX-J21385 0.6-225323	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=89 87; SEGMENT=BOTH; FP-POS=1			989 Secs (989 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022022)	(12) GALEX-J21385 0.6-225323	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=89 87; SEGMENT=BOTH; FP-POS=2			989 Secs (989 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022022)	(12) GALEX-J21385 0.6-225323	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=89 87; SEGMENT=BOTH; FP-POS=3			2420 Secs (2420 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022022)	(12) GALEX-J21385 0.6-225323	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=89 87; SEGMENT=BOTH; FP-POS=4			2420 Secs (2420 Secs) [==>]	[3]



Proposal 18050 - 1S - QSO 2 (3 orb) (13) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

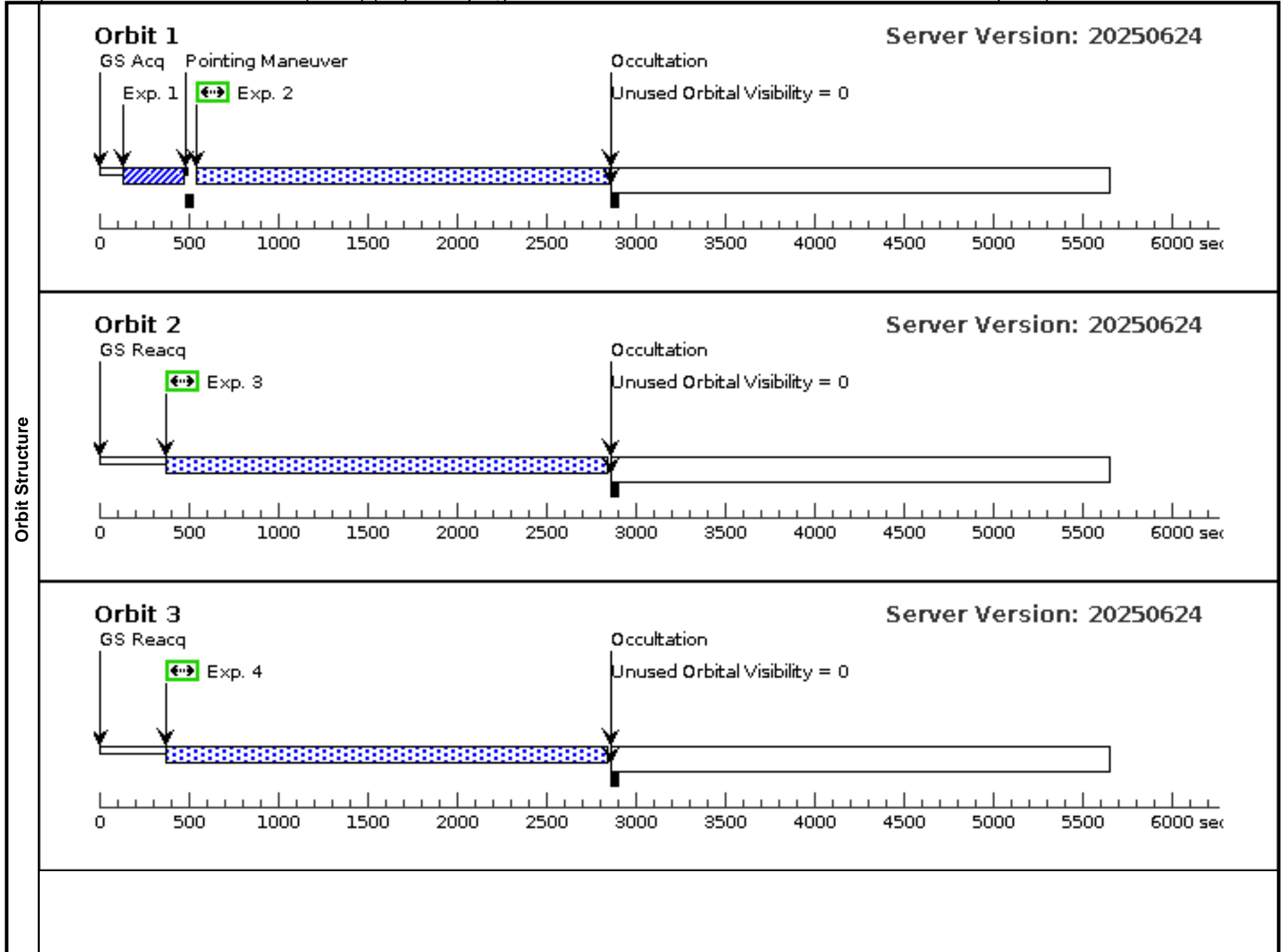
Visit	Proposal 18050, 1S - QSO 2 (3 orb) (13), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(12)	GALEX-J213850.6-225323 Alt Name1: MS-21360-2307 Alt Name2: QSO-B2136-2307	RA: 21 38 50.5964 (324.7108183d) Dec: -22 53 23.52 (-22.88987d) Equinox: J2000	Proper Motion RA: 0.014 mas/yr Proper Motion Dec: -0.012 mas/yr Epoch of Position: 2000 Redshift: 0.646	V=17.0 GALEX FUV = 18.4	Reference Frame: ICRS				
	Comments: NUV = 17.4 e(b-v) = 0.0437 acq ETC: COS.ta.2023885 (20.sec) spec ETC: COS.sp.2022022 (17,428.sec) --- Gaia DR2 6817349194635565440 Category=GALAXY Description=[QSO, QUASAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2025294)	(12) GALEX-J21385 0.6-225323	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				21 Secs (21 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022022)	(12) GALEX-J21385 0.6-225323	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=89 87; SEGMENT=BOTH; FP-POS=1			2083 Secs (2083 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022022)	(12) GALEX-J21385 0.6-225323	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=89 87; SEGMENT=BOTH; FP-POS=2			2420 Secs (2420 Secs) [==>]	[2]
	4	FP3 (COS.sp.2022022)	(12) GALEX-J21385 0.6-225323	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=89 87; SEGMENT=BOTH; FP-POS=3			1152 Secs (1152 Secs) [==>]	[3]
	5	FP4 (COS.sp.2022022)	(12) GALEX-J21385 0.6-225323	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=89 87; SEGMENT=BOTH; FP-POS=4			1152 Secs (1152 Secs) [==>]	[3]

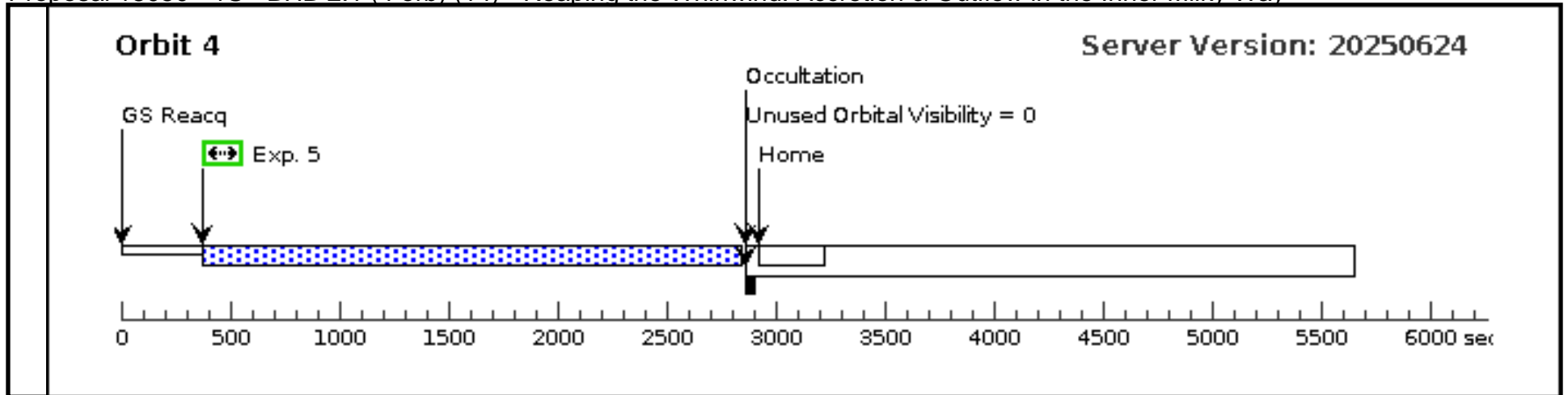


Proposal 18050 - 1S - BHB 2.1 (4 orb) (14) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

Visit	Proposal 18050, 1S - BHB 2.1 (4 orb) (14), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: To maximize the amount of on-source time, we configure the exposures into one visit of 4 orbits. If this visit is split into two, the additional overheads will prevent us from reaching the S/N required for our science goals.</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(13)	GALEX-J214044.0-230938 Alt Name1: 975903 Alt Name2: GAIA-DR2-6816581387627412992	RA: 21 40 44.0819 (325.1836746d) Dec: -23 09 38.30 (-23.16064d) Equinox: J2000	Proper Motion RA: -0.6974541239737915 mas/yr Proper Motion Dec: -7.239179561229996 mas/yr Parallax: 0.00008671215799664528 " Epoch of Position: 2000 Radial Velocity: -186.2 km/sec	V=15.6 GALEX FUV = 17.9	Reference Frame: ICRS			
	<i>Comments: NUV = 17.377161 e(b-v) = 0.0419 dist = 9.3 kpc acq ETC: COS.ta.2024229 (16 sec) spec ETC: COS.sp.2022053 (10,137 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024229)	(13) GALEX-J21404 4.0-230938	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				16 Secs (16 Secs) [==>]	[1]
	2	FP1 (COS.sp.202053)	(13) GALEX-J21404 4.0-230938	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=82 18			2093 Secs (2093 Secs) [==>]	[1]
	3	FP2 (COS.sp.202053)	(13) GALEX-J21404 4.0-230938	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=82 18			2420 Secs (2420 Secs) [==>]	[2]
	4	FP3 (COS.sp.202053)	(13) GALEX-J21404 4.0-230938	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=82 18			2420 Secs (2420 Secs) [==>]	[3]
	5	FP4 (COS.sp.202053)	(13) GALEX-J21404 4.0-230938	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=82 18			2420 Secs (2420 Secs) [==>]	[4]

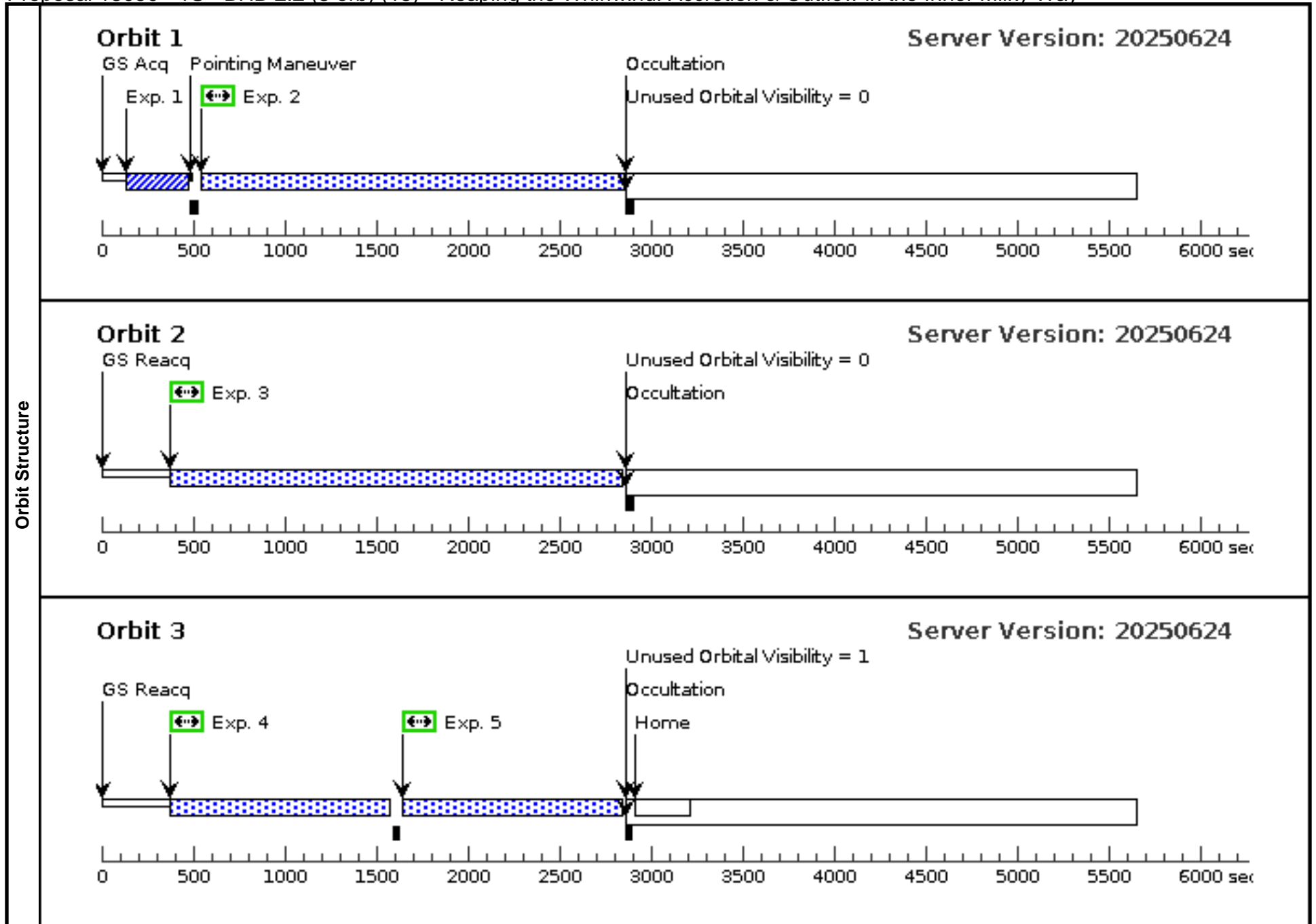




Proposal 18050 - 1S - BHB 2.2 (3 orb) (15) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

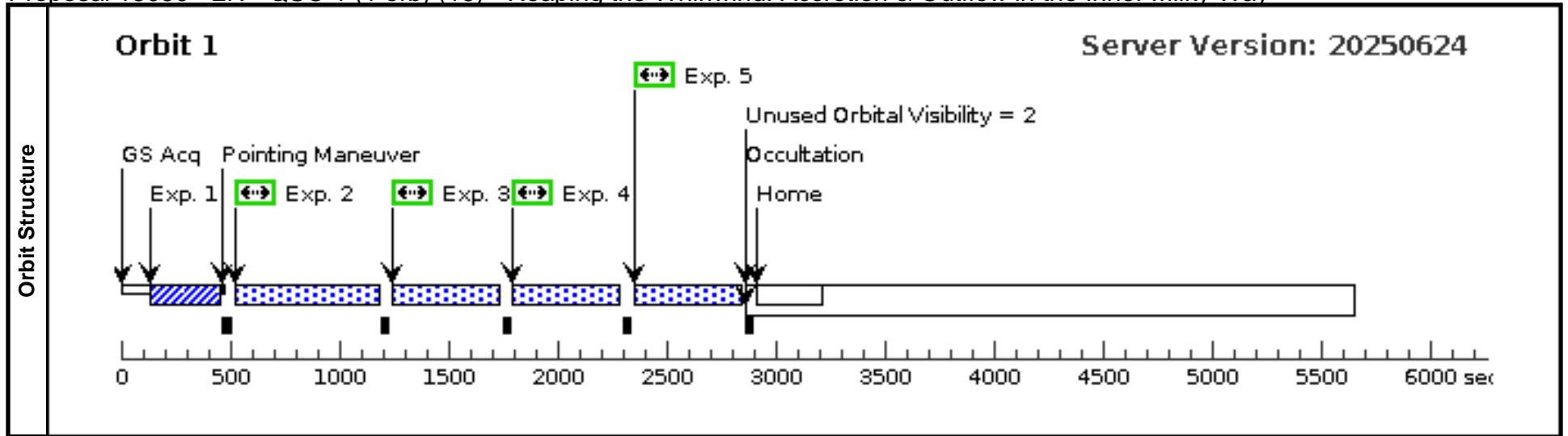
Visit	Proposal 18050, 1S - BHB 2.2 (3 orb) (15), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(14)	GALEX-J214049.5-230450 Alt Name1: 976401 Alt Name2: GAIA-DR2-6816583762745965952	RA: 21 40 49.5353 (325.2063971d) Dec: -23 04 50.41 (-23.08067d) Equinox: J2000	Proper Motion RA: -0.5304514748273176 mas/yr Proper Motion Dec: -6.992921056825322 mas/yr Parallax: 0.00012790575001158597" Epoch of Position: 2000 Radial Velocity: -182.5 km/sec	V=15.9 GALEX FUV = 17.7	Reference Frame: ICRS				
	<i>Comments: NUV = 17.382263 e(b-v) = 0.0402 dist = 10.5 kpc acq ETC: COS.ta.2024234 (16 sec) spec ETC: COS.sp.2022057 (8,357 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024234)	(14) GALEX-J214049.5-230450	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				16 Secs (16 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022057)	(14) GALEX-J214049.5-230450	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=78 71			2093 Secs (2093 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022057)	(14) GALEX-J214049.5-230450	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=78 71			2420 Secs (2420 Secs) [==>]	[2]
	4	FP3 (COS.sp.2022057)	(14) GALEX-J214049.5-230450	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=78 71			1152 Secs (1152 Secs) [==>]	[3]
	5	FP4 (COS.sp.2022057)	(14) GALEX-J214049.5-230450	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=78 71			1152 Secs (1152 Secs) [==>]	[3]



Proposal 18050 - 2N - QSO 1 (1 orb) (16) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

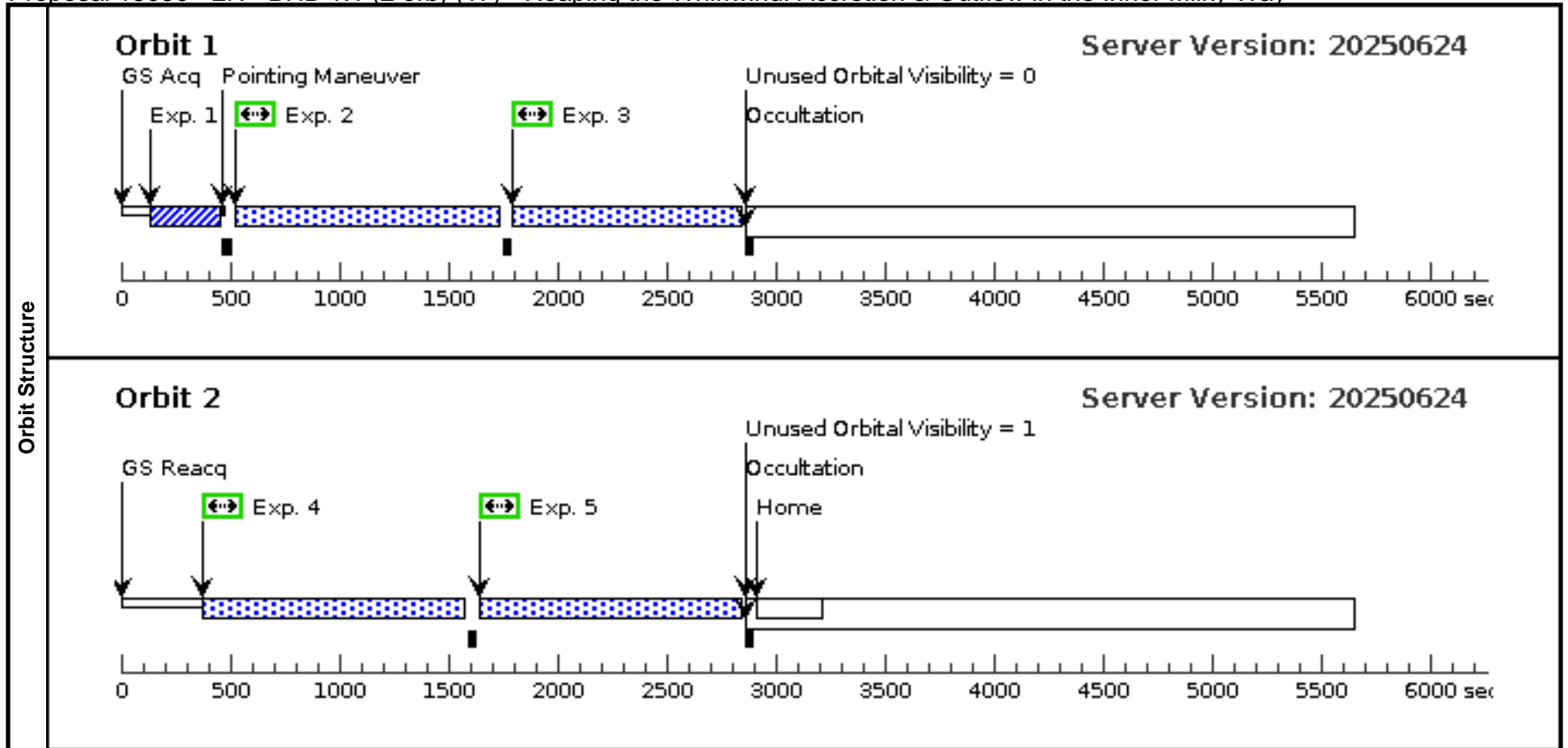
Visit	Proposal 18050, 2N - QSO 1 (1 orb) (16), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: 2 orbits initially allocated.</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(15)	GALEX-J141655.8-252413 Alt Name1: UVQSI141655.81-252413.4 Alt Name2: CTS-25	RA: 14 16 55.8056 (214.2325233d) Dec: -25 24 13.44 (-25.40373d) Equinox: J2000	Proper Motion RA: 0.095 mas/yr Proper Motion Dec: -0.075 mas/yr Epoch of Position: 2000 Redshift: 0.2363	V=15.5 GALEX FUV = 16.0	Reference Frame: ICRS			
	<i>Comments: NUV = 15.8</i> <i>e(b-v) = 0.072</i> <i>acq ETC: COS.ta.2023889 (7 sec)</i> <i>spec ETC: COS.sp.2022019 (1,861 sec)</i> --- <i>Gaia DR2 6271166827898483712</i> <i>Category=GALAXY</i> <i>Description=[QSO, QUASAR]</i> <i>Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2023889)	(15) GALEX-J14165 5.8-252413	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				7 Secs (7 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022019)	(15) GALEX-J14165 5.8-252413	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=37 41			441 Secs (441 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022019)	(15) GALEX-J14165 5.8-252413	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=37 41			441 Secs (441 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022019)	(15) GALEX-J14165 5.8-252413	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=37 41			441 Secs (441 Secs) [==>]	[1]
	5	FP4 (COS.sp.2022019)	(15) GALEX-J14165 5.8-252413	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=37 41			441 Secs (441 Secs) [==>]	[1]



Proposal 18050 - 2N - BHB 1.1 (2 orb) (17) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

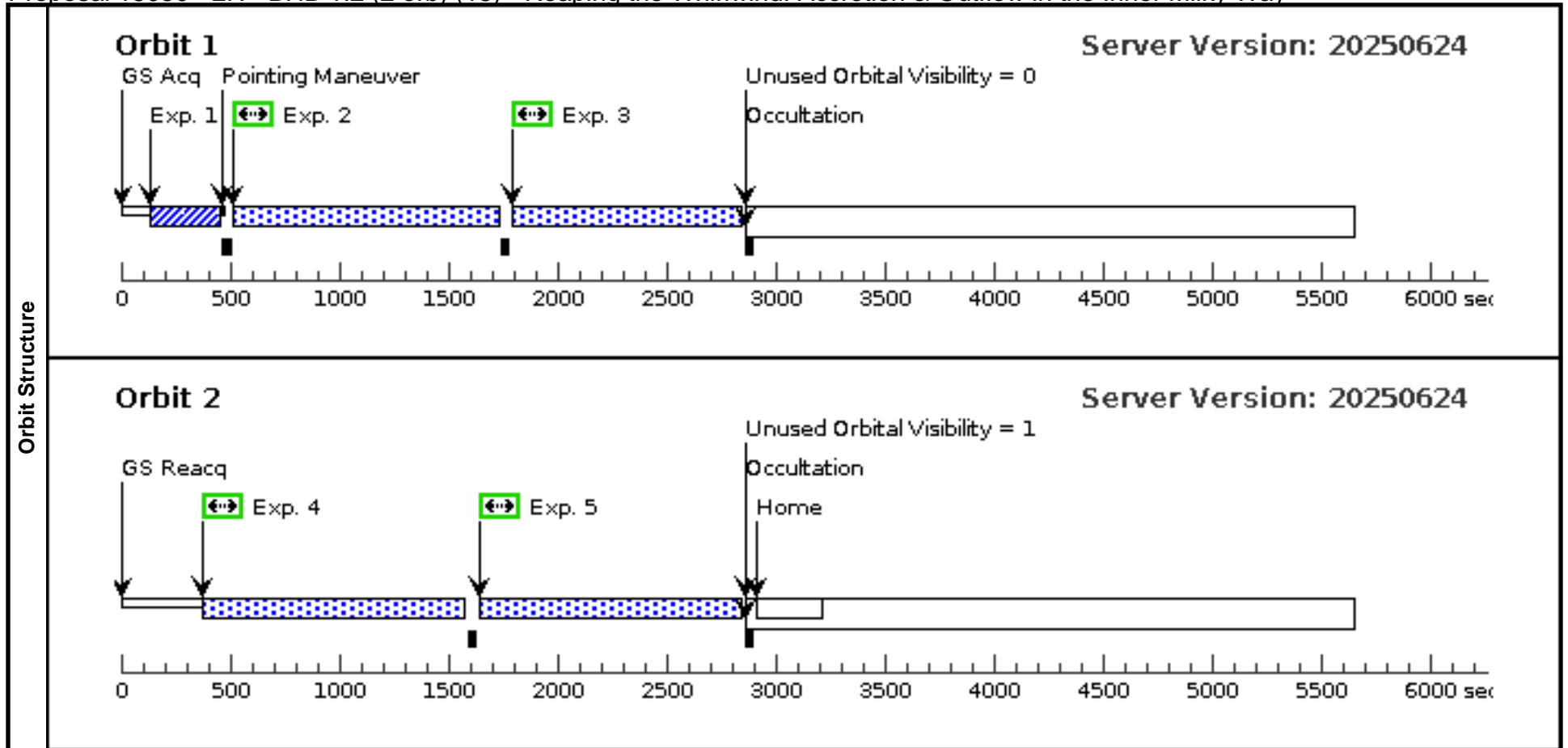
Visit	Proposal 18050, 2N - BHB 1.1 (2 orb) (17), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(16)	GALEX-J142022.7-251856 Alt Name1: 63436426 Alt Name2: GAIA-DR2-6272469985399045632	RA: 14 20 22.7398 (215.0947492d) Dec: -25 18 56.55 (-25.31571d) Equinox: J2000	Proper Motion RA: -4.5046928323219015 mas/yr Proper Motion Dec: 0.9839639509691918 mas/yr Parallax: 0.0001354" Epoch of Position: 2000	V=14.7 GALEX FUV = 17.0	Reference Frame: ICRS				
	<i>Comments: NUV = 16.477348 e(b-v) = 0.0671 dist = 5.84 kpc acq ETC: COS.ta.2024243 (7 sec) spec ETC: COS.sp.2022067 (3,907 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024243)	(16) GALEX-J14202 2.7-251856	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				7 Secs (7 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022067)	(16) GALEX-J14202 2.7-251856	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=6200			998 Secs (998 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022067)	(16) GALEX-J14202 2.7-251856	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=6200			998 Secs (998 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022067)	(16) GALEX-J14202 2.7-251856	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=6200			1152 Secs (1152 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022067)	(16) GALEX-J14202 2.7-251856	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=6200			1152 Secs (1152 Secs) [==>]	[2]



Proposal 18050 - 2N - BHB 1.2 (2 orb) (18) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

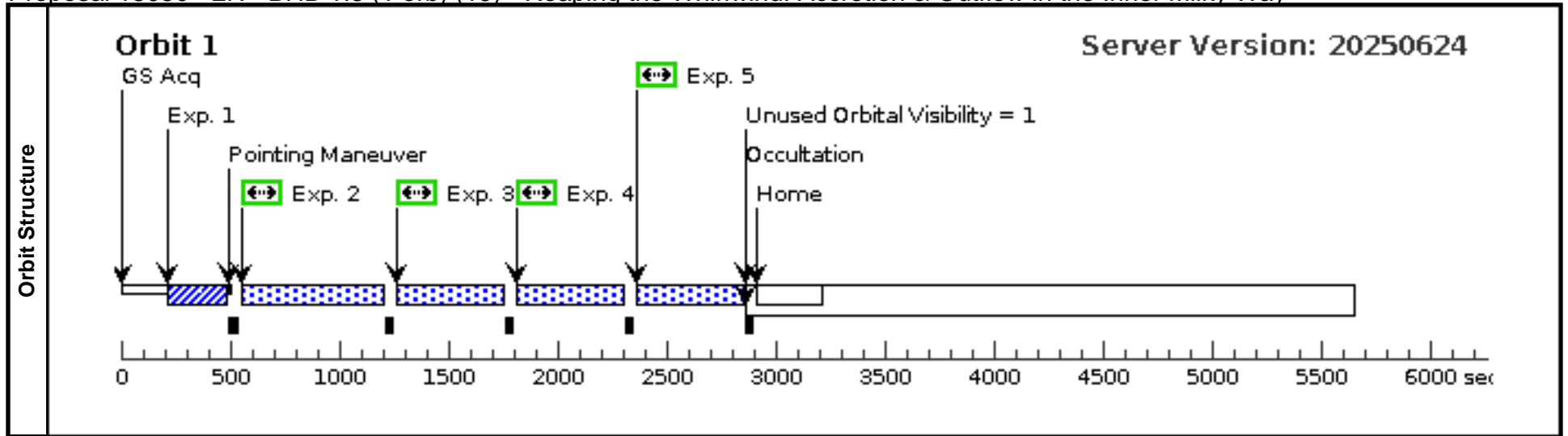
Visit	Proposal 18050, 2N - BHB 1.2 (2 orb) (18), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(17)	GALEX-J141955.9-251027 Alt Name1: 63439014 Alt Name2: GAIA-DR2-6272475899570321536	RA: 14 19 55.9452 (214.9831050d) Dec: -25 10 27.07 (-25.17419d) Equinox: J2000	Proper Motion RA: -13.586474096823155 mas/yr Proper Motion Dec: 0.005255520957867846 mas/yr Parallax: 0.00015759194916836794 " Epoch of Position: 2000	V=14.4 GALEX FUV = 16.6	Reference Frame: ICRS				
	<i>Comments: NUV = 16.0959 e(b-v) = 0.0686 dist = 5.15 kpc acq ETC: COS.ta.2024247 (5 sec) spec ETC: COS.sp.2022070 (2,719 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024247)	(17) GALEX-J14195 5.9-251027	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				5 Secs (5 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022070)	(17) GALEX-J14195 5.9-251027	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=52 79			1000 Secs (1000 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022070)	(17) GALEX-J14195 5.9-251027	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=52 79			1000 Secs (1000 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022070)	(17) GALEX-J14195 5.9-251027	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=52 79			1152 Secs (1152 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022070)	(17) GALEX-J14195 5.9-251027	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=52 79			1152 Secs (1152 Secs) [==>]	[2]



Proposal 18050 - 2N - BHB 1.3 (1 orb) (19) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

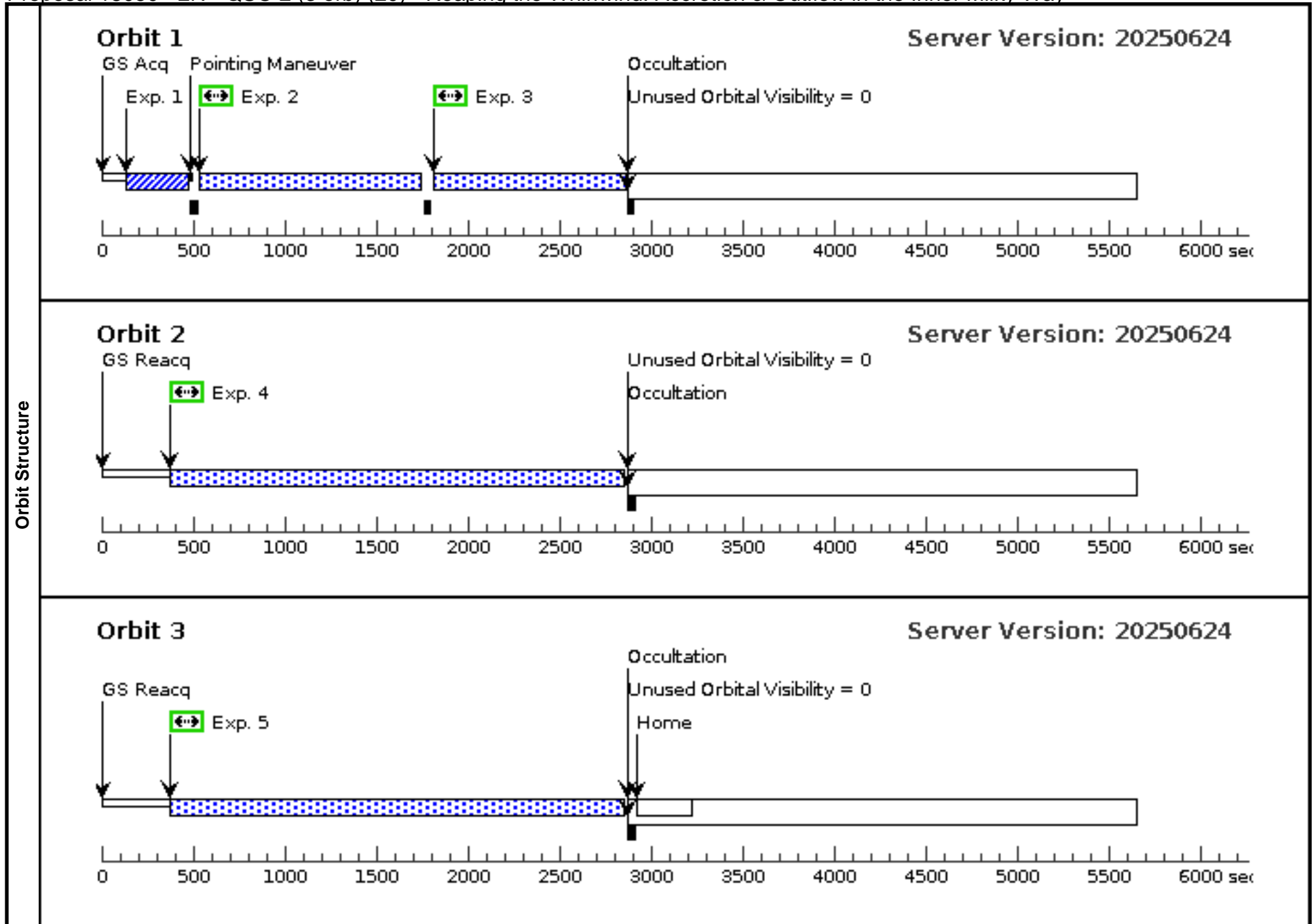
Visit	Proposal 18050, 2N - BHB 1.3 (1 orb) (19), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(18)	GALEX-J141520.1-243401 Alt Name1: 63458370 Alt Name2: GAIA-DR2-6272764276558020608	RA: 14 15 20.1305 (213.8338771d) Dec: -24 34 1.61 (-24.56711d) Equinox: J2000	Proper Motion RA: -20.814902956572165 mas/yr Proper Motion Dec: 5.292826858830487 mas/yr Parallax: 0.0004201420455836631" Epoch of Position: 2000	V=12.2 GALEX FUV = 15.1	Reference Frame: ICRS				
	<i>Comments: NUV = 14.271387</i> <i>e(b-v) = 0.0741</i> <i>dist = 1.84 kpc</i> <i>acq ETC: COS.ta.2024253 (1 sec)</i> <i>spec ETC: COS.sp.2022072 (680 sec)</i> Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.202 5497)	(18) GALEX-J14152 0.1-243401	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				21 Secs (21 Secs) [==>]	[1]
	2	FP1 (COS.sp.202 2072)	(18) GALEX-J14152 0.1-243401	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=21 43			433 Secs (433 Secs) [==>]	[1]
	3	FP2 (COS.sp.202 2072)	(18) GALEX-J14152 0.1-243401	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=21 43			433 Secs (433 Secs) [==>]	[1]
	4	FP3 (COS.sp.202 2072)	(18) GALEX-J14152 0.1-243401	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=21 43			433 Secs (433 Secs) [==>]	[1]
	5	FP4 (COS.sp.202 2072)	(18) GALEX-J14152 0.1-243401	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=21 43			433 Secs (433 Secs) [==>]	[1]



Proposal 18050 - 2N - QSO 2 (3 orb) (20) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

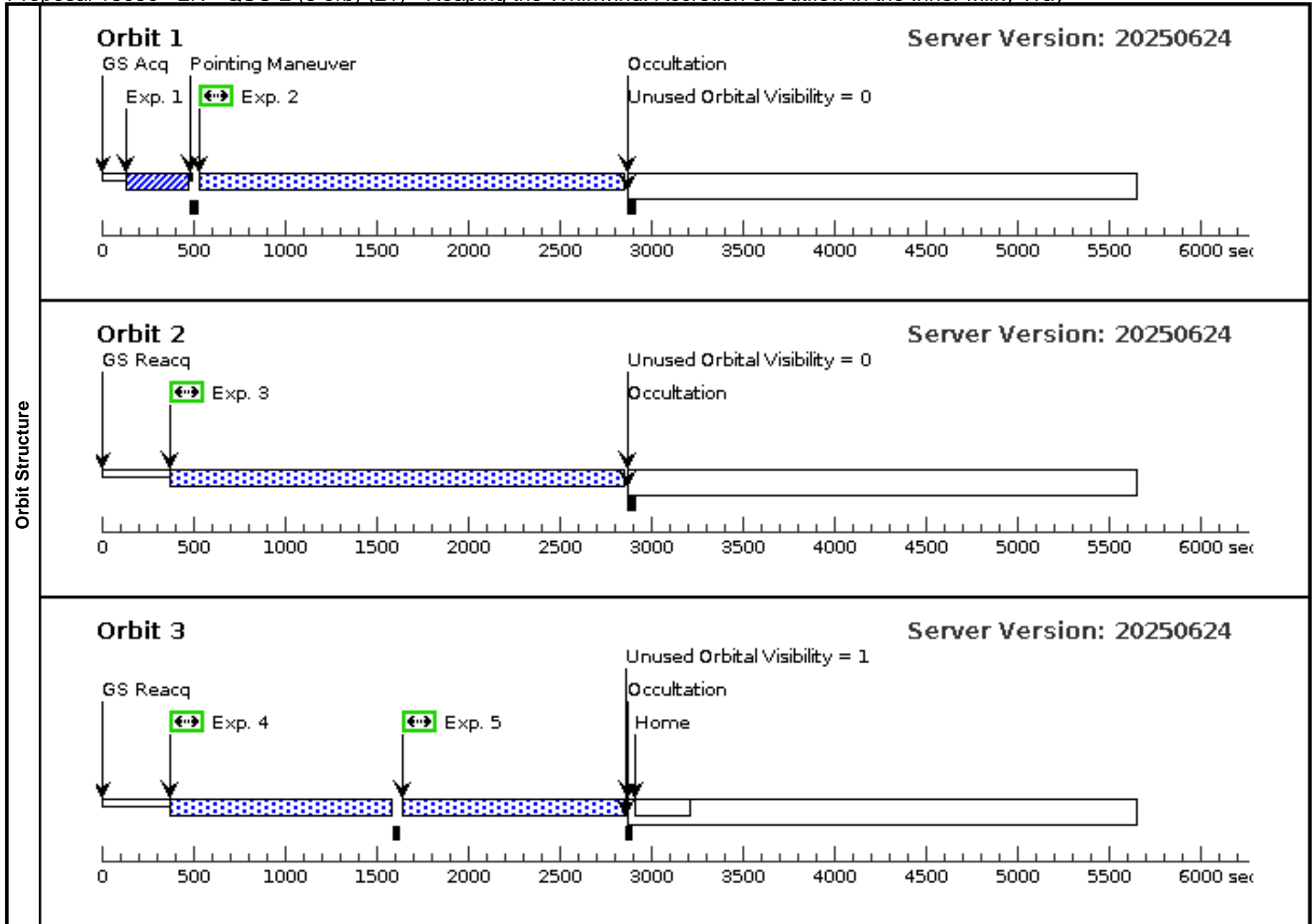
Visit	Proposal 18050, 2N - QSO 2 (3 orb) (20), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(29)	GALEX-J125706.4-443519 Alt Name1: UVQSI125706.42-443520.0	RA: 12 57 6.4246 (194.2767692d) Dec: -44 35 20.09 (-44.58891d) Equinox: J2000	Proper Motion RA: -0.005 mas/yr Proper Motion Dec: 0.098 mas/yr Epoch of Position: 2000 Redshift: 0.096326344	V=16.5 GALEX FUV = 18.3	Reference Frame: ICRS			
	<i>Comments: NUV = 17.35970497</i> <i>e(b-v) = 0.0758</i> <i>acq ETC: COS.ta.2023894 (40.sec)</i> <i>spec ETC: COS.sp.2022013 (17,234 sec)</i> Category=GALAXY Description=[QSO, QUASAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2025298)	(29) GALEX-J12570 6.4-443519	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				15 Secs (15 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022013)	(29) GALEX-J12570 6.4-443519	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=88 58			993 Secs (993 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022013)	(29) GALEX-J12570 6.4-443519	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=88 58			993 Secs (993 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022013)	(29) GALEX-J12570 6.4-443519	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=88 58			2426 Secs (2426 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022013)	(29) GALEX-J12570 6.4-443519	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=88 58			2426 Secs (2426 Secs) [==>]	[3]



Proposal 18050 - 2N - QSO 2 (3 orb) (21) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

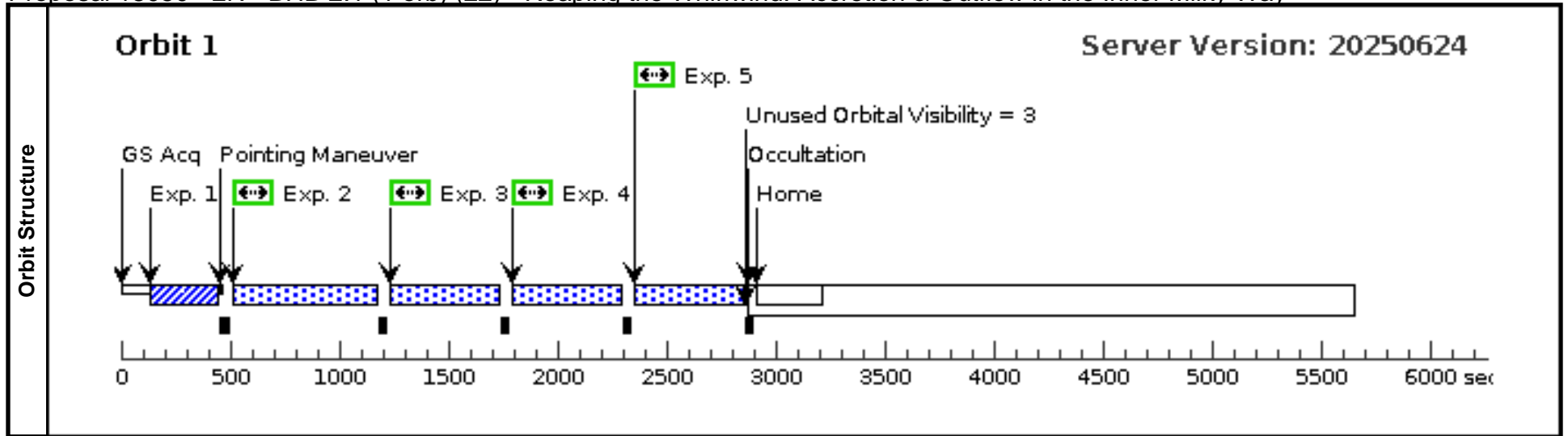
Visit	Proposal 18050, 2N - QSO 2 (3 orb) (21), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(29)	GALEX-J125706.4-443519 Alt Name1: UVQSI125706.42-443520.0	RA: 12 57 6.4246 (194.2767692d) Dec: -44 35 20.09 (-44.58891d) Equinox: J2000	Proper Motion RA: -0.005 mas/yr Proper Motion Dec: 0.098 mas/yr Epoch of Position: 2000 Redshift: 0.096326344	V=16.5 GALEX FUV = 18.3	Reference Frame: ICRS			
	<i>Comments: NUV = 17.35970497</i> <i>e(b-v) = 0.0758</i> <i>acq ETC: COS.ta.2023894 (40.sec)</i> <i>spec ETC: COS.sp.2022013 (17,234 sec)</i> <i>Category=GALAXY</i> <i>Description=[QSO, QUASAR]</i> <i>Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2025298)	(29) GALEX-J12570 6.4-443519	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				15 Secs (15 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022013)	(29) GALEX-J12570 6.4-443519	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=88 58			2101 Secs (2101 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022013)	(29) GALEX-J12570 6.4-443519	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=88 58			2426 Secs (2426 Secs) [==>]	[2]
	4	FP3 (COS.sp.2022013)	(29) GALEX-J12570 6.4-443519	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=88 58			1155 Secs (1155 Secs) [==>]	[3]
	5	FP4 (COS.sp.2022013)	(29) GALEX-J12570 6.4-443519	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=88 58			1155 Secs (1155 Secs) [==>]	[3]



Proposal 18050 - 2N - BHB 2.1 (1 orb) (22) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

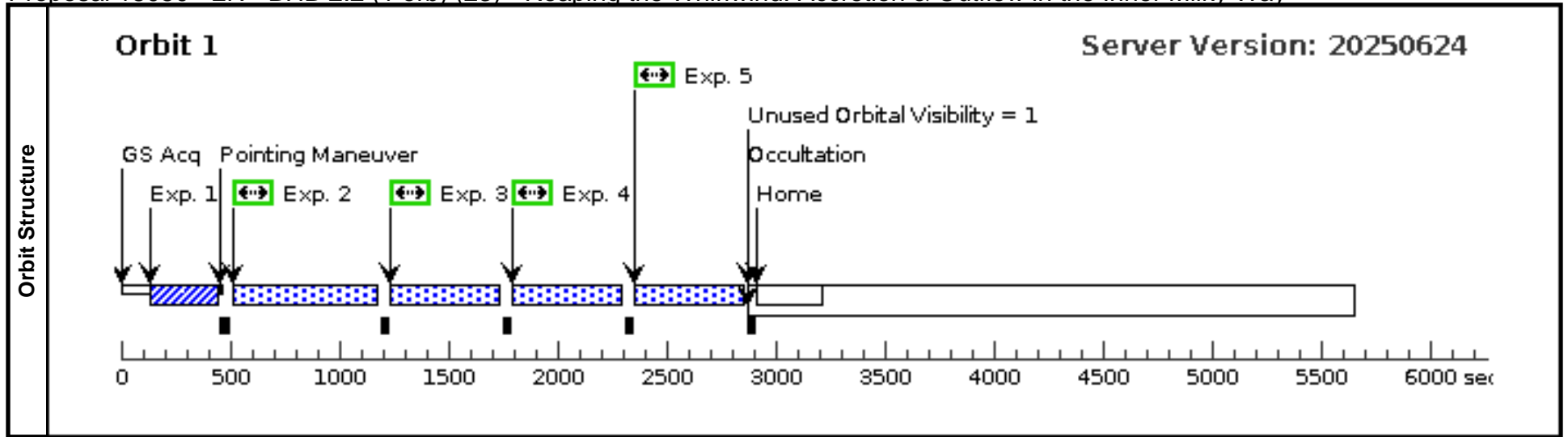
Visit	Proposal 18050, 2N - BHB 2.1 (1 orb) (22), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(30)	GALEX-J125205.7-460035 Alt Name1: 187487537 Alt Name2: GAIA-DR2-6135045879635813120	RA: 12 52 5.6299 (193.0234579d) Dec: -46 00 36.25 (-46.01007d) Equinox: J2000	Proper Motion RA: -24.774 mas/yr Proper Motion Dec: -18.059 mas/yr Parallax: 0.0004322" Epoch of Position: 2000	V=10.5 GALEX FUV = 15.6	Reference Frame: ICRS				
	<i>Comments: NUV = 15.081159</i> <i>e(b-v) = 0.0963</i> <i>dist = 2.34 kpc</i> <i>acq ETC: COS.ta.2024259 (2 sec)</i> <i>spec ETC: COS.sp.2022074 (1,039 sec)</i> Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024259)	(30) GALEX-J125205.7-460035	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				2 Secs (2 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022074)	(30) GALEX-J125205.7-460035	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=29 60			445 Secs (445 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022074)	(30) GALEX-J125205.7-460035	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=29 60			445 Secs (445 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022074)	(30) GALEX-J125205.7-460035	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=29 60			445 Secs (445 Secs) [==>]	[1]
	5	FP4 (COS.sp.2022074)	(30) GALEX-J125205.7-460035	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=29 60			445 Secs (445 Secs) [==>]	[1]



Proposal 18050 - 2N - BHB 2.2 (1 orb) (23) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

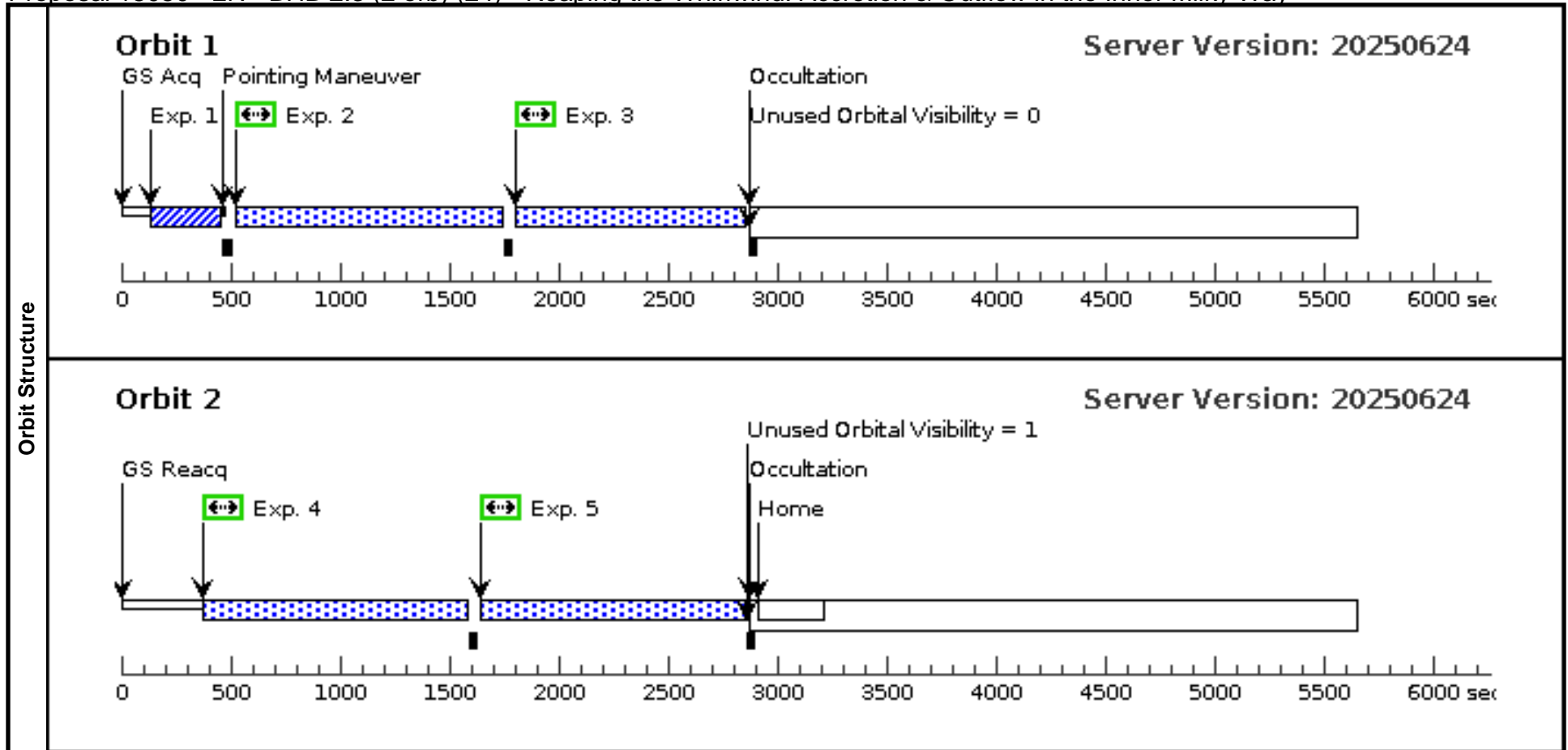
Visit	Proposal 18050, 2N - BHB 2.2 (1 orb) (23), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: 2 orbits initially allocated.</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(31)	GALEX-J125556.1-453541 Alt Name1: 187471106 Alt Name2: GAIA-DR2-6135172392190697728	RA: 12 55 56.1839 (193.9840996d) Dec: -45 35 41.76 (-45.59493d) Equinox: J2000	Proper Motion RA: -6.920719258386498 mas/yr Proper Motion Dec: -1.9719044919492001 mas/yr Parallax: 0.00041397566886419396" Epoch of Position: 2000	V=15.3 GALEX FUV = 16.0	Reference Frame: ICRS			
	<i>Comments: NUV = 15.325894 e(b-v) = 0.0904 dist = 2.79 acq ETC: COS.ta.2024260 (3 sec) spec ETC: COS.sp.2022078 (1,632 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024260)	(31) GALEX-J12555 6.1-453541	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				3 Secs (3 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022078)	(31) GALEX-J12555 6.1-453541	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=39 93			445 Secs (445 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022078)	(31) GALEX-J12555 6.1-453541	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=39 93			445 Secs (445 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022078)	(31) GALEX-J12555 6.1-453541	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=39 93			445 Secs (445 Secs) [==>]	[1]
	5	FP4 (COS.sp.2022078)	(31) GALEX-J12555 6.1-453541	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=39 93			445 Secs (445 Secs) [==>]	[1]



Proposal 18050 - 2N - BHB 2.3 (2 orb) (24) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

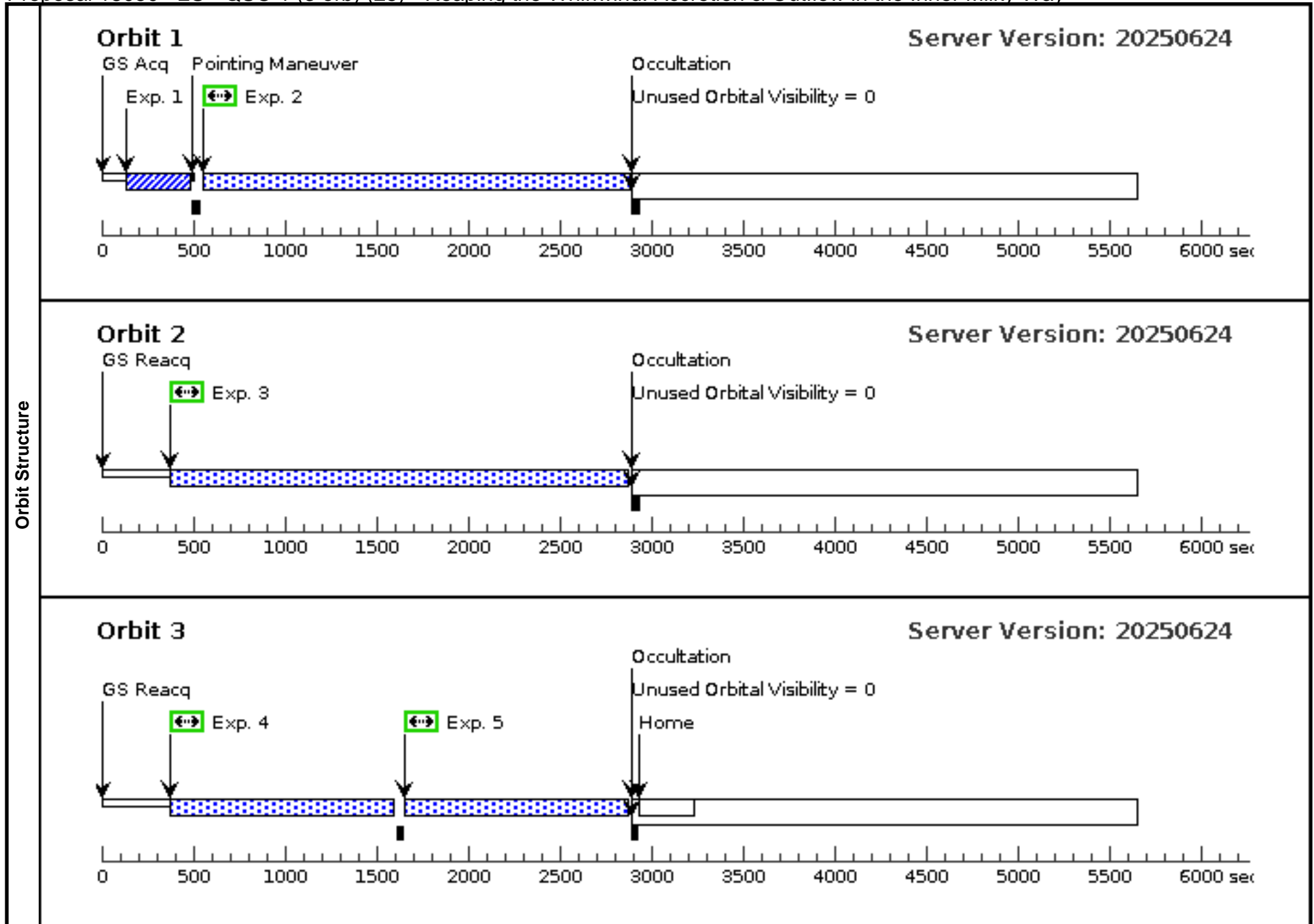
Visit	Proposal 18050, 2N - BHB 2.3 (2 orb) (24), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(32)	GALEX-J125833.6-434413 Alt Name1: 59767889 Alt Name2: GAIA-DR2-6135944524229396608	RA: 12 58 33.6670 (194.6402792d) Dec: -43 44 13.92 (-43.73720d) Equinox: J2000	Proper Motion RA: -8.293440503743927 mas/yr Proper Motion Dec: 6.8310851988773855 mas/yr Parallax: 0.00018448031131923773 " Epoch of Position: 2000	V=14.3 GALEX FUV = 16.8	Reference Frame: ICRS				
	Comments: NUV = 16.191883 e(b-v) = 0.075 dist = 4.81 acq ETC: COS.ta.2024261 (6 sec) spec ETC: COS.sp.2022080 (3,228 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024261)	(32) GALEX-J12583 3.6-434413	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				6 Secs (6 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022080)	(32) GALEX-J12583 3.6-434413	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=57 24			1002 Secs (1002 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022080)	(32) GALEX-J12583 3.6-434413	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=57 24			1002 Secs (1002 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022080)	(32) GALEX-J12583 3.6-434413	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=57 24			1155 Secs (1155 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022080)	(32) GALEX-J12583 3.6-434413	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=57 24			1155 Secs (1155 Secs) [==>]	[2]



Proposal 18050 - 2S - QSO 1 (3 orb) (25) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

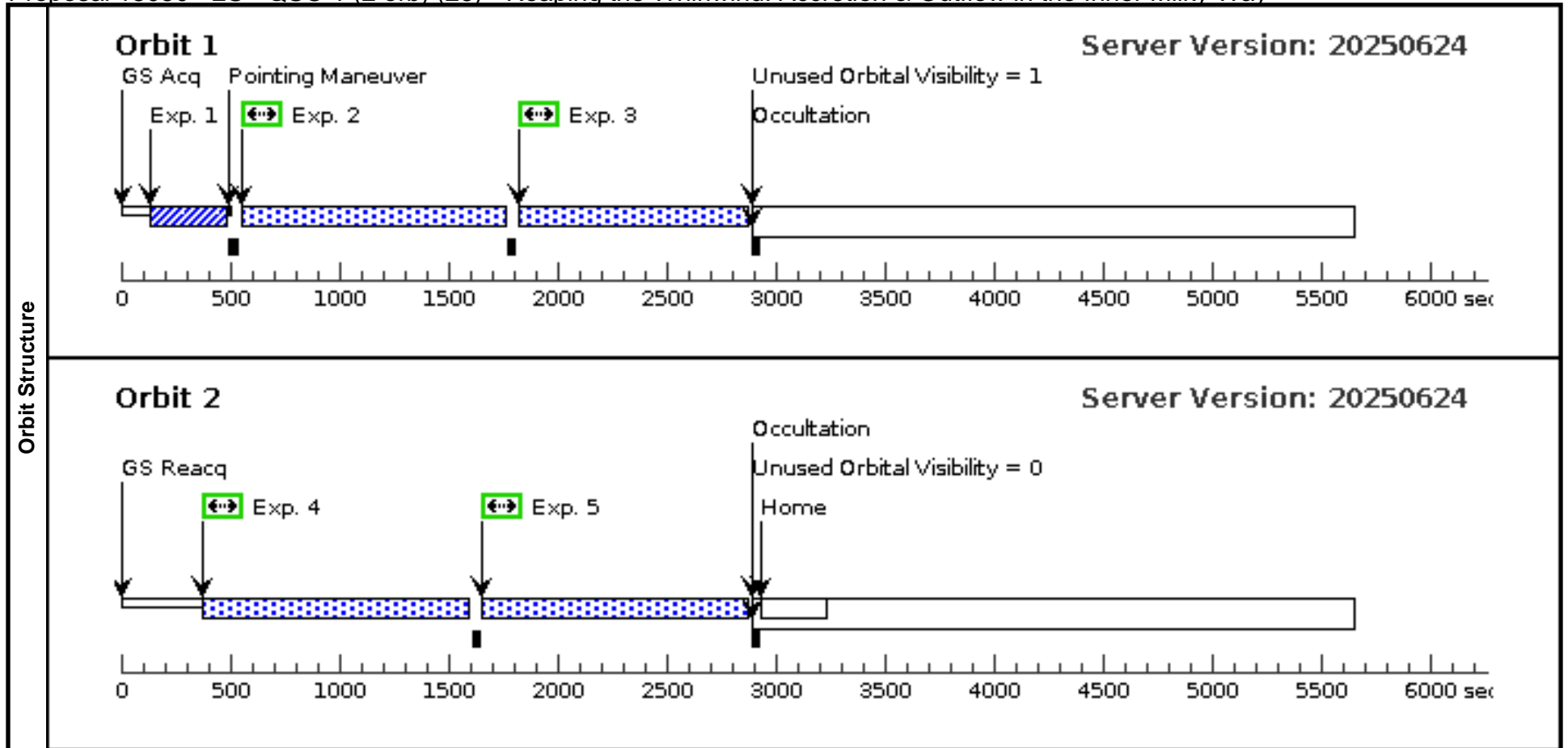
Visit	Proposal 18050, 2S - QSO 1 (3 orb) (25), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(23)	GALEX-J211030.5-635814 Alt Name1: GAIA6449826987693899776 Alt Name2: GAIA-DR2-6449826987693899776	RA: 21 10 30.7085 (317.6279521d) Dec: -63 58 14.76 (-63.97077d) Equinox: J2000	Proper Motion RA: -0.023 mas/yr Proper Motion Dec: 0.213 mas/yr Parallax: 0.0000136" Epoch of Position: 2000 Redshift: 0.65	V=18.0 GALEX FUV = 18.2	Reference Frame: ICRS				
	<i>Comments: NUV = 17.4</i> <i>e(b-v) = 0.0345</i> <i>acq ETC: COS.ta.2023892 (19 sec)</i> <i>spec ETC: COS.sp.2022011 (13,778 sec)</i> Category=GALAXY Description=[QSO, QUASAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2025301)	(23) GALEX-J21103 0.5-635814	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				21 Secs (21 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022011)	(23) GALEX-J21103 0.5-635814	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=8670			2110 Secs (2110 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022011)	(23) GALEX-J21103 0.5-635814	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=8670			2447 Secs (2447 Secs) [==>]	[2]
	4	FP3 (COS.sp.2022011)	(23) GALEX-J21103 0.5-635814	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=8670			1166 Secs (1166 Secs) [==>]	[3]
	5	FP4 (COS.sp.2022011)	(23) GALEX-J21103 0.5-635814	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=8670			1166 Secs (1166 Secs) [==>]	[3]



Proposal 18050 - 2S - QSO 1 (2 orb) (26) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

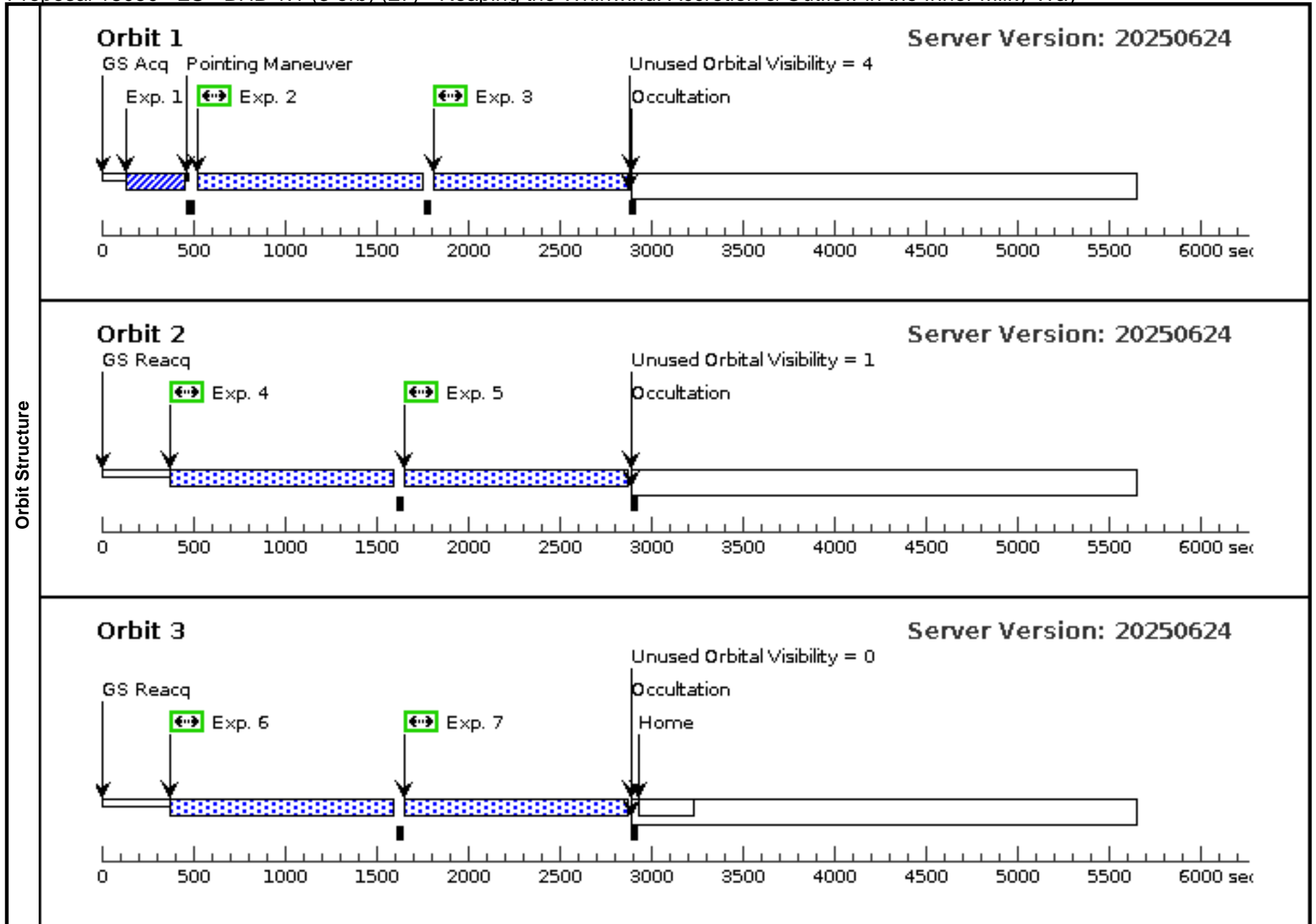
Visit	Proposal 18050, 2S - QSO 1 (2 orb) (26), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(23)	GALEX-J211030.5-635814	RA: 21 10 30.7085 (317.6279521d) Dec: -63 58 14.76 (-63.97077d)	Proper Motion RA: -0.023 mas/yr Proper Motion Dec: 0.213 mas/yr Parallax: 0.0000136" Epoch of Position: 2000 Redshift: 0.65	V=18.0 GALEX FUV = 18.2	Reference Frame: ICRS				
	Alt Name1: GAIA6449826987693899776 Alt Name2: GAIA-DR2-6449826987693899776 Comments: NUV = 17.4 e(b-v) = 0.0345 acq ETC: COS.ta.2023892 (19 sec) spec ETC: COS.sp.2022011 (13,778 sec) Category=GALAXY Description=[QSO, QUASAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2025301)	(23) GALEX-J21103 0.5-635814	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				21 Secs (21 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022011)	(23) GALEX-J21103 0.5-635814	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=8670			997 Secs (997 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022011)	(23) GALEX-J21103 0.5-635814	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=8670			997 Secs (997 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022011)	(23) GALEX-J21103 0.5-635814	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=8670			1166 Secs (1166 Secs) [==>]	[2]
	5	FP4 (COS.sp.2022011)	(23) GALEX-J21103 0.5-635814	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=8670			1166 Secs (1166 Secs) [==>]	[2]



Proposal 18050 - 2S - BHB 1.1 (3 orb) (27) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

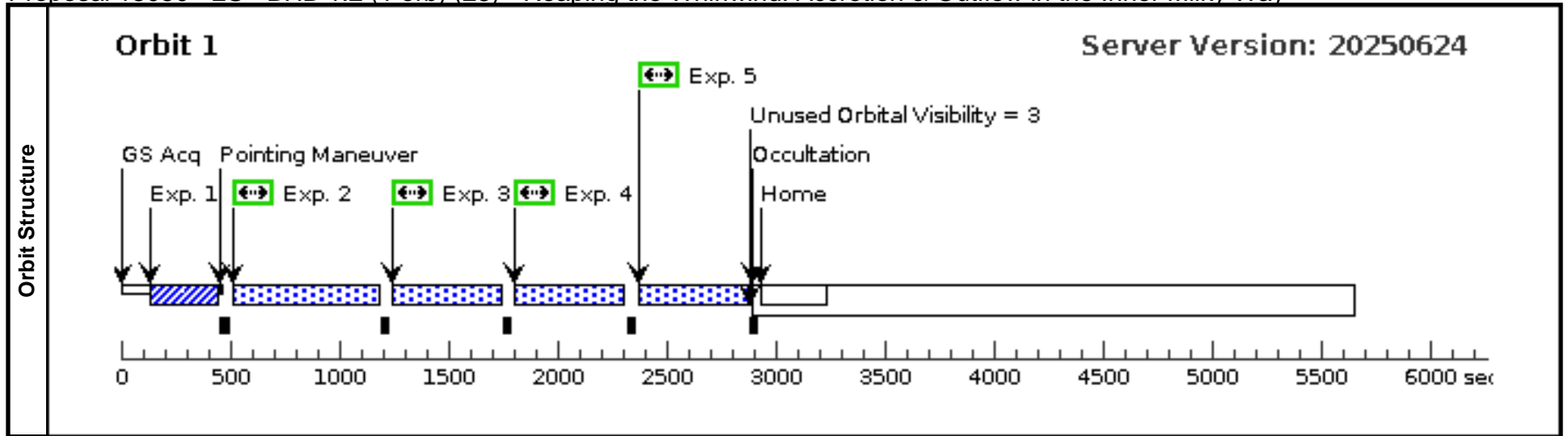
Visit	Proposal 18050, 2S - BHB 1.1 (3 orb) (27), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: 2 orbits initially allocated.</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(24)	GALEX-J210220.3-641817 Alt Name1: 305060330 Alt Name2: GAIA-DR2-6449619798470621312	RA: 21 02 20.3074 (315.5846142d) Dec: -64 18 17.35 (-64.30482d) Equinox: J2000	Proper Motion RA: 3.9700416534189547 mas/yr Proper Motion Dec: -9.200682560058684 mas/yr Parallax: 0.00017374462386676345" Epoch of Position: 2000	V=14.7 GALEX FUV = 17.4	Reference Frame: ICRS			
	<i>Comments: NUV = 16.6715 e(b-v) = 0.0305 dist = 6.26 kpc acq ETC: COS.ta.2024254 (8 sec) spec ETC: COS.sp.2022082 (5,743 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024254)	(24) GALEX-J21022 0.3-641817	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				8 Secs (8 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022082)	(24) GALEX-J21022 0.3-641817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=70 92			1010 Secs (1010 Secs) [==>]	[1]
	3	FP1 (COS.sp.2022082)	(24) GALEX-J21022 0.3-641817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=70 92			1010 Secs (1010 Secs) [==>]	[1]
	4	FP2 (COS.sp.2022082)	(24) GALEX-J21022 0.3-641817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=70 92			1167 Secs (1167 Secs) [==>]	[2]
	5	FP2 (COS.sp.2022082)	(24) GALEX-J21022 0.3-641817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=70 92			1167 Secs (1167 Secs) [==>]	[2]
	6	FP3 (COS.sp.2022082)	(24) GALEX-J21022 0.3-641817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=70 92			1166 Secs (1166 Secs) [==>]	[3]
	7	FP4 (COS.sp.2022082)	(24) GALEX-J21022 0.3-641817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=70 92			1166 Secs (1166 Secs) [==>]	[3]



Proposal 18050 - 2S - BHB 1.2 (1 orb) (28) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

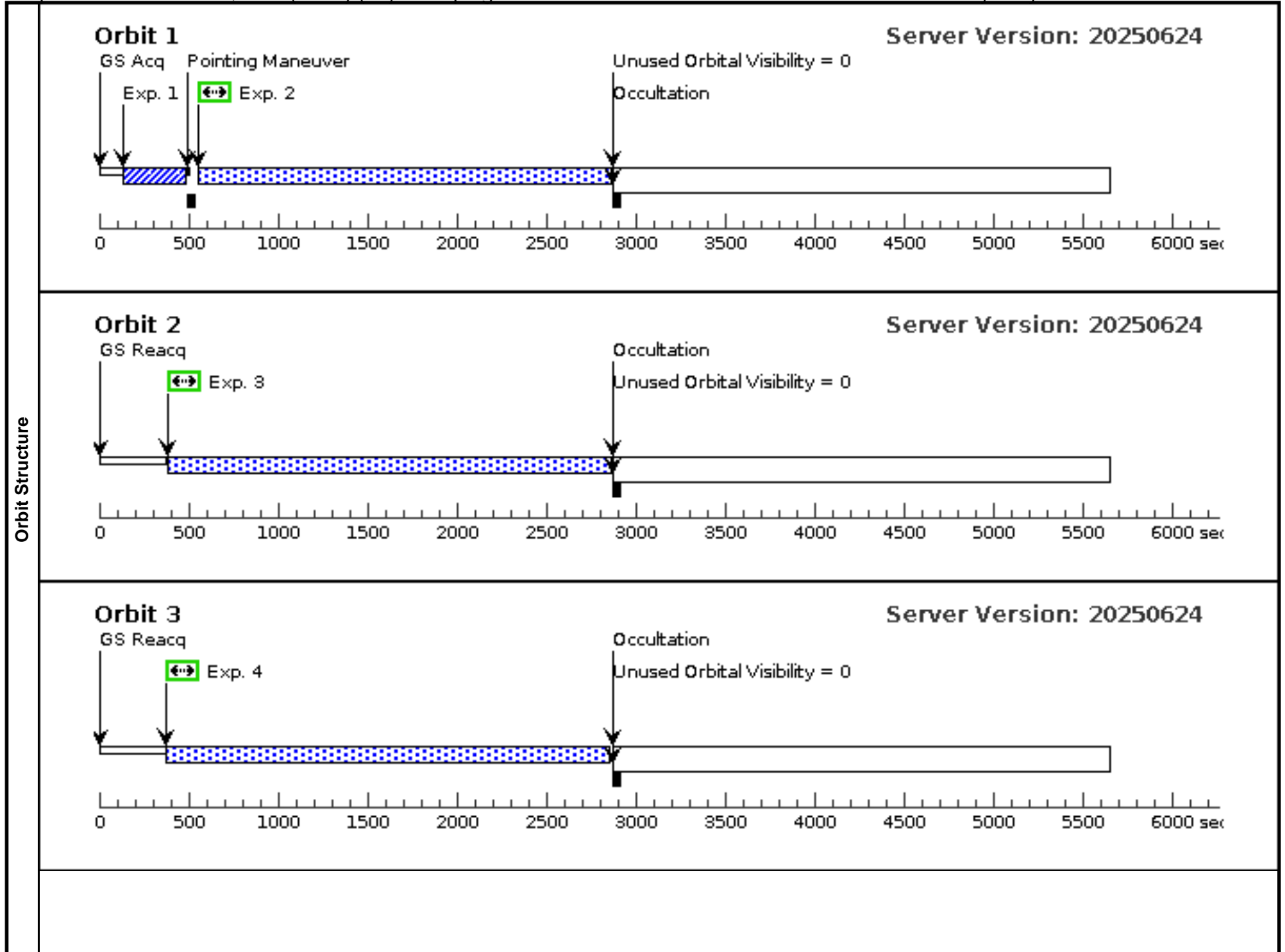
Visit	Proposal 18050, 2S - BHB 1.2 (1 orb) (28), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(25)	GALEX-J211036.6-622517 Alt Name1: 305336859 Alt Name2: GAIA-DR2-6450255487989280256	RA: 21 10 36.6105 (317.6525438d) Dec: -62 25 17.53 (-62.42154d) Equinox: J2000	Proper Motion RA: 1.7541146524120261 mas/yr Proper Motion Dec: 0.3178652018301942 mas/yr Parallax: 0.0002148318339981363" Epoch of Position: 2000	V=13.5 GALEX FUV = 15.8	Reference Frame: ICRS				
	<i>Comments: NUV = 15.061919 e(b-v) = 0.0304 dist = 3.60 kpc acq ETC: COS.ta.2024256 (2 sec) spec ETC: COS.sp.2022084 (1,260 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024256)	(25) GALEX-J211036.6-622517	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				2 Secs (2 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022084)	(25) GALEX-J211036.6-622517	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=33 51			450 Secs (450 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022084)	(25) GALEX-J211036.6-622517	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=33 51			450 Secs (450 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022084)	(25) GALEX-J211036.6-622517	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=33 51			450 Secs (450 Secs) [==>]	[1]
	5	FP4 (COS.sp.2022084)	(25) GALEX-J211036.6-622517	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=33 51			450 Secs (450 Secs) [==>]	[1]

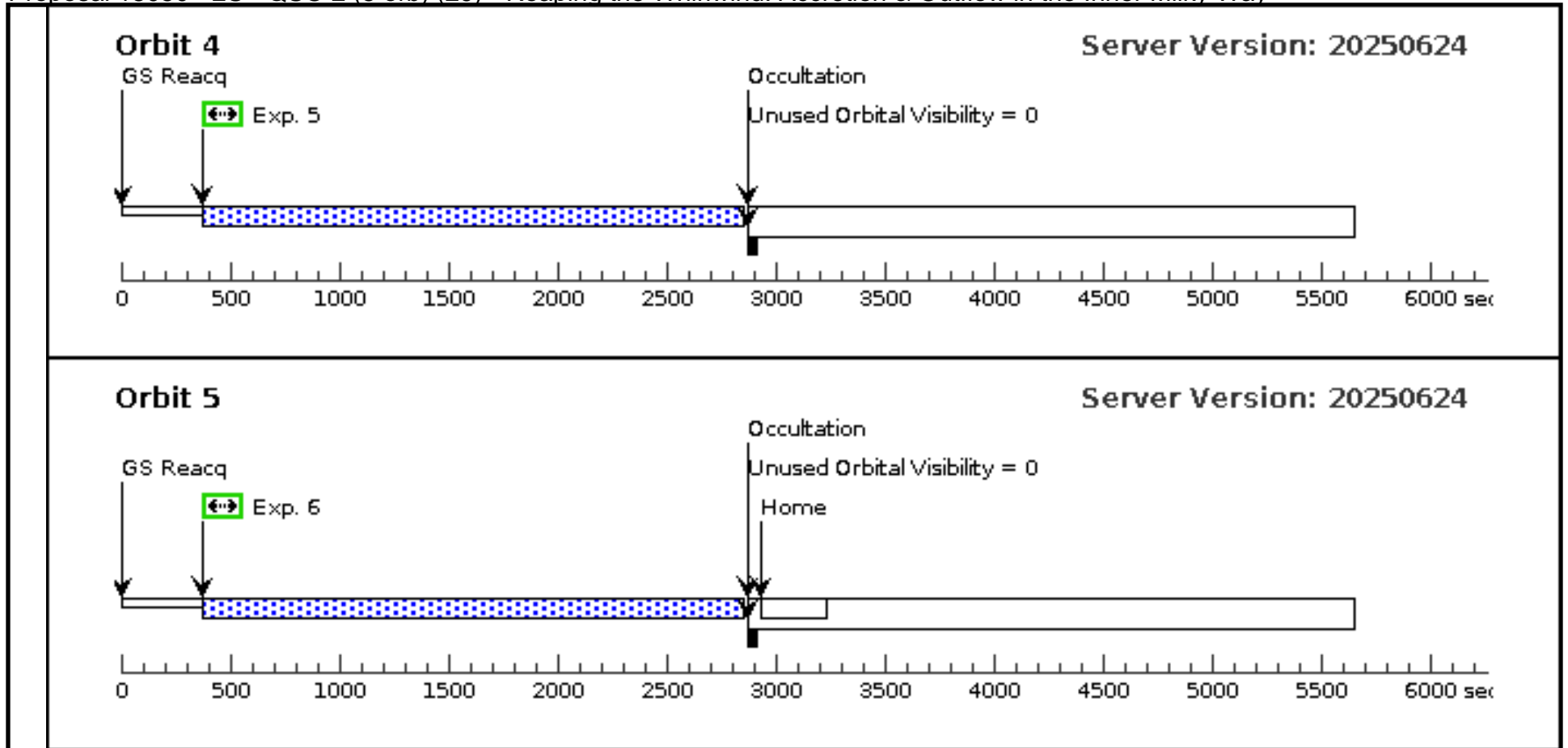


Proposal 18050 - 2S - QSO 2 (5 orb) (29) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

Visit	Proposal 18050, 2S - QSO 2 (5 orb) (29), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: 4 orbits initially allocated.</i> <i>To maximize the amount of on-source time, we configure the exposures into one visit of 5 orbits. If this visit is split into two, the additional overheads will prevent us from reaching the S/N required for our science goals.</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
(26)		GALEX-J194202.2-513609 Alt Name1: UVQSJ194202.28-513609.8	RA: 19 42 2.2865 (295.5095271d) Dec: -51 36 9.86 (-51.60274d) Equinox: J2000	Proper Motion RA: -0.1524217164348973 mas/yr Proper Motion Dec: 0.046232170013235346 mas/yr Epoch of Position: 2000 Redshift: 0.5252	V=17.1 GALEX FUV = 18.2	Reference Frame: ICRS				
<i>Comments: NUV = 17.6</i> <i>e(b-v) = 0.0406</i> <i>acq ETC: COS.ta.2023893 (23 sec)</i> <i>spec ETC: COS.sp.2022009 (12,399 sec)</i> --- <i>Two close matches in Gaia</i> <i>Gaia DR2 6645753568851066752 ?</i> <i>Category=GALAXY</i> <i>Description=[QSO, QUASAR]</i> <i>Extended=NO</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2023893)	(26) GALEX-J19420 2.2-513609	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				23 Secs (23 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022009)	(26) GALEX-J19420 2.2-513609	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=86 54			2090 Secs (2090 Secs) [==>]	[1]
	3	FP1 (COS.sp.2022009)	(26) GALEX-J19420 2.2-513609	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=86 54			2431 Secs (2431 Secs) [==>]	[2]
	4	FP2 (COS.sp.2022009)	(26) GALEX-J19420 2.2-513609	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=86 54			2431 Secs (2431 Secs) [==>]	[3]
	5	FP3 (COS.sp.2022009)	(26) GALEX-J19420 2.2-513609	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=86 54			2431 Secs (2431 Secs) [==>]	[4]
	6	FP4 (COS.sp.2022009)	(26) GALEX-J19420 2.2-513609	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=86 54			2431 Secs (2431 Secs) [==>]	[5]

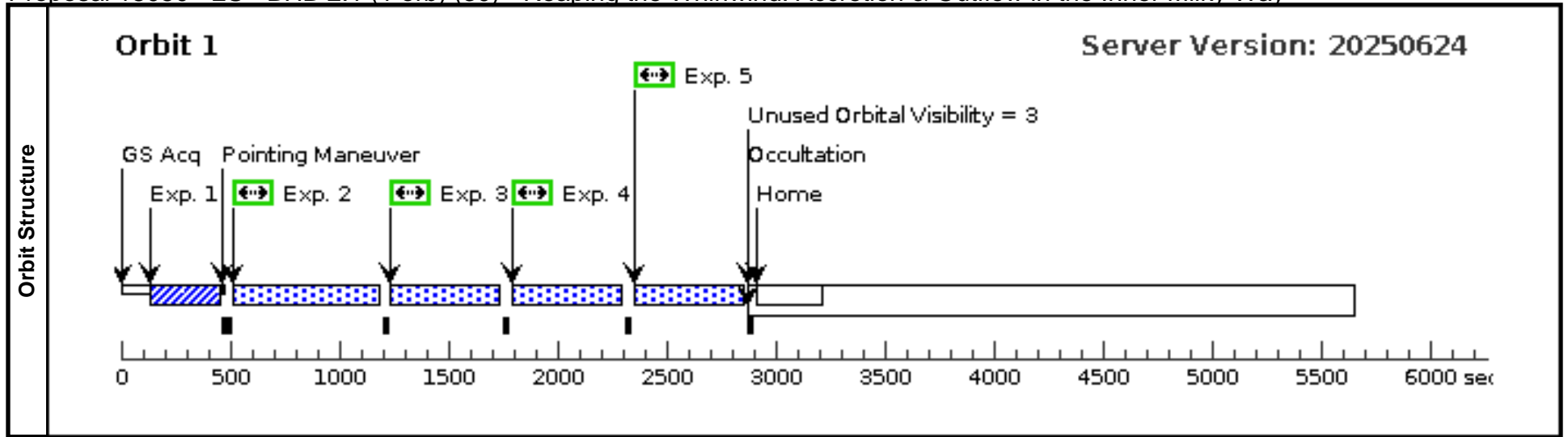




Proposal 18050 - 2S - BHB 2.1 (1 orb) (30) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

Visit	Proposal 18050, 2S - BHB 2.1 (1 orb) (30), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: 2 orbits initially allocated.</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(27)	GALEX-J194448.7-515828 Alt Name1: 301007168 Alt Name2: GAIA-DR2-6645674404013734528	RA: 19 44 48.7156 (296.2029817d) Dec: -51 58 28.94 (-51.97471d) Equinox: J2000	Proper Motion RA: 1.1092015346208095 mas/yr Proper Motion Dec: -18.680818362376876 mas/yr Parallax: 0.00019146395604509872" Epoch of Position: 2000	V=14.7 GALEX FUV = 16.3	Reference Frame: ICRS			
	<i>Comments: NUV = 15.967175</i> <i>e(b-v) = 0.04</i> <i>dist = 6.07 kpc</i> <i>acq ETC: COS.ta.2024257 (5 sec)</i> <i>spec ETC: COS.sp.2022089 (2,071 sec)</i> Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2024257)	(27) GALEX-J19444 8.7-515828	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				5 Secs (5 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022089)	(27) GALEX-J19444 8.7-515828	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=45 61			452 Secs (452 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022089)	(27) GALEX-J19444 8.7-515828	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=45 61			452 Secs (452 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022089)	(27) GALEX-J19444 8.7-515828	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=45 61			452 Secs (452 Secs) [==>]	[1]
	5	FP4 (COS.sp.2022089)	(27) GALEX-J19444 8.7-515828	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=45 61			452 Secs (452 Secs) [==>]	[1]



Proposal 18050 - 2S - BHB 2.2 (1 orb) (31) - Reaping the Whirlwind: Accretion & Outflow in the Inner Milky Way

Wed Nov 05 12:00:33 GMT 2025

Visit	Proposal 18050, 2S - BHB 2.2 (1 orb) (31), implementation Diagnostic Status: No Diagnostics Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(28)	GALEX-J195024.2-520009 Alt Name1: 301015982 Alt Name2: GAIA-DR2-6642728125167941888	RA: 19 50 24.2532 (297.6010550d) Dec: -52 00 9.63 (-52.00268d) Equinox: J2000	Proper Motion RA: -3.1196310978890094 mas/yr Proper Motion Dec: -3.381142525078944 mas/yr Parallax: 0.00043646490514507646" Epoch of Position: 2000	V=12.4 GALEX FUV = 14.5	Reference Frame: ICRS				
	Comments: NUV = 14.033216 e(b-v) = 0.04 dist = 2.16 acq ETC: COS.ta.2024258 (1 sec) spec ETC: COS.sp.2022086 (401 sec) Category=STAR Description=[HORIZONTAL BRANCH STAR] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	acq (COS.ta.2025499)	(28) GALEX-J19502 4.2-520009	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				17 Secs (17 Secs) [==>]	[1]
	2	FP1 (COS.sp.2022086)	(28) GALEX-J19502 4.2-520009	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=1; BUFFER-TIME=13 71			431 Secs (431 Secs) [==>]	[1]
	3	FP2 (COS.sp.2022086)	(28) GALEX-J19502 4.2-520009	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=2; BUFFER-TIME=13 71			431 Secs (431 Secs) [==>]	[1]
	4	FP3 (COS.sp.2022086)	(28) GALEX-J19502 4.2-520009	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=3; BUFFER-TIME=13 71			431 Secs (431 Secs) [==>]	[1]
	5	FP4 (COS.sp.2022086)	(28) GALEX-J19502 4.2-520009	COS/FUV, TIME-TAG, PSA	G160M 1577 A	SEGMENT=BOTH; FP-POS=4; BUFFER-TIME=13 71			431 Secs (431 Secs) [==>]	[1]

