18088 - A New Benchmark Set of Massive Stars Spectra to Distinguish Wolf-Rayet Stars and Very Massive Stars

Cycle: 33, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) NGC5447S	COS/FUV COS/NUV	3	30-Dec-2025 16:00:17.0	yes
02	(2) NGC5447N	COS/FUV COS/NUV	2	30-Dec-2025 16:00:17.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
03	(3) H317	COS/FUV COS/NUV	3	30-Dec-2025 16:00:18.0	yes
04	(4) H1046	COS/FUV COS/NUV	3	30-Dec-2025 16:00:19.0	yes
05	(5) NGC5461	COS/FUV COS/NUV	3	30-Dec-2025 16:00:19.0	yes
06	(6) H1052	COS/FUV COS/NUV	3	30-Dec-2025 16:00:20.0	yes
07	(7) H1013	COS/FUV COS/NUV	2	30-Dec-2025 16:00:21.0	yes
08	(8) J0217-0619	COS/FUV COS/NUV	2	30-Dec-2025 16:00:21.0	yes
09	(8) J0217-0619	COS/FUV COS/NUV	3	30-Dec-2025 16:00:22.0	yes
10	(9) MRK71-SSCA	COS/FUV COS/NUV	2	30-Dec-2025 16:00:22.0	yes
11	(9) MRK71-SSCA	COS/FUV COS/NUV	3	30-Dec-2025 16:00:23.0	yes
12	(10) J1129+2034	COS/FUV COS/NUV	2	30-Dec-2025 16:00:23.0	yes
13	(10) J1129+2034	COS/FUV COS/NUV	2	30-Dec-2025 16:00:24.0	yes
14	(10) J1129+2034	COS/FUV COS/NUV	3	30-Dec-2025 16:00:24.0	yes
15	(11) J1314+3452	COS/FUV COS/NUV	2	30-Dec-2025 16:00:25.0	yes
16	(11) J1314+3452	COS/FUV COS/NUV	3	30-Dec-2025 16:00:26.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
17	(12) NGC2403+178-210	COS/FUV COS/NUV	2	30-Dec-2025 16:00:26.0	yes
18	(12) NGC2403+178-210	COS/FUV COS/NUV	3	30-Dec-2025 16:00:27.0	yes
19	(13) H949	COS/FUV COS/NUV	3	30-Dec-2025 16:00:27.0	yes
20	(14) NGC2403-14+42	COS/FUV COS/NUV	3	30-Dec-2025 16:00:28.0	yes
21	(14) NGC2403-14+42	COS/FUV COS/NUV	3	30-Dec-2025 16:00:28.0	yes

55 Total Orbits Used

ABSTRACT

Determining the stellar content of UV-bright star-forming galaxies is crucial to understanding the origin and evolution of massive stars and their impact on their host galaxies across cosmic time. Despite the importance of massive stars, current stellar population synthesis models cannot reproduce a number of stellar and nebular spectral features in high-ionization galaxies, e.g., broad HeII emission. We propose HST/COS far-UV spectra covering 913-1940 angstroms for 14 integrated star-forming regions and galaxies. These spectra will probe a suite of wind features that are sensitive to the very-massive-stars (VMSs) and classical Wolf-Rayet stars (cW). While the vast majority of far-ultraviolet (FUV) stellar studies to date focused on wavelengths >1300 angstroms, the extension of the proposed spectra to the very-blue FUV (< 1300 angstroms) is essential to capture the high-ionization features sensitive to the youngest ages, capable of distinguishing the presence of the most extreme young VMSs from the more evolved cWRs. These data will be used to construct the first FUV spectral catalog of integrated star-forming regions that can diagnose the presence of, and distinguish between, WRs and VMS. This atlas will provide crucial benchmarks for stellar population models to accurately constrain the relative importance of the most extreme and massive stars.

OBSERVING DESCRIPTION

Goal:

We will obtain NUV target aquisiton images and high S/N HST/COS G140L/800 FUV spectra of the suite of 914-1940 angstrom stellar continuum features that are sensitive to the contributionsfrom VMSs and WRs.

Targets:
Our targets were selected from previous galaxies and HII regions with optical spectra showing strong, broad (> 500 km/s) He II 4686, that are UV-bright, and which sample a range of metallicities and ionization parameters. The sample contain 7 cWRs targets, which demonstrates strong blue and/or red WR bumps and 7 VMSs targets, which lack a clear blue or red bump.

Acquisition:
Our sample benefits from having two of the following: (1) previous HST/COS observations, (2) UV HST imaging, and (3) PanStarrs imaging, providing very accurate coordinates. The three targets in our sample without HST observations have PanStarrs coordinates, which are generally accurate to 0.1". The excellent input coordinates of our sample allow us to utilize the ACQ/IMAGE mode for target acquisition with the PSA aperture and Mirror A/Mirror B (for half of the targets each) for the COS/NUV configuration.

Science Exposures:
HST/COS spectra will be taken with the G140L grating with the 800 central wavelength setting to cover ~913-1940 angstroms, which allows simultaneous observations of all necessary UV stellar features. This provides a resolution of R=1500-4000, or a velocity resolution of 75-400 km/s, which is sufficient to resolve the stellar continuum wind features of the proposed galaxies. We used the COS ETC to determine the time needed to achieve S/N>5-10 per resel element in G140M/800. These calculations were optimized to achieve S/N near OVI at 1032,1038.

Visit

Proposal 18088, NGC 5447S (01), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Exposure 2 (NGC 5447S (01))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

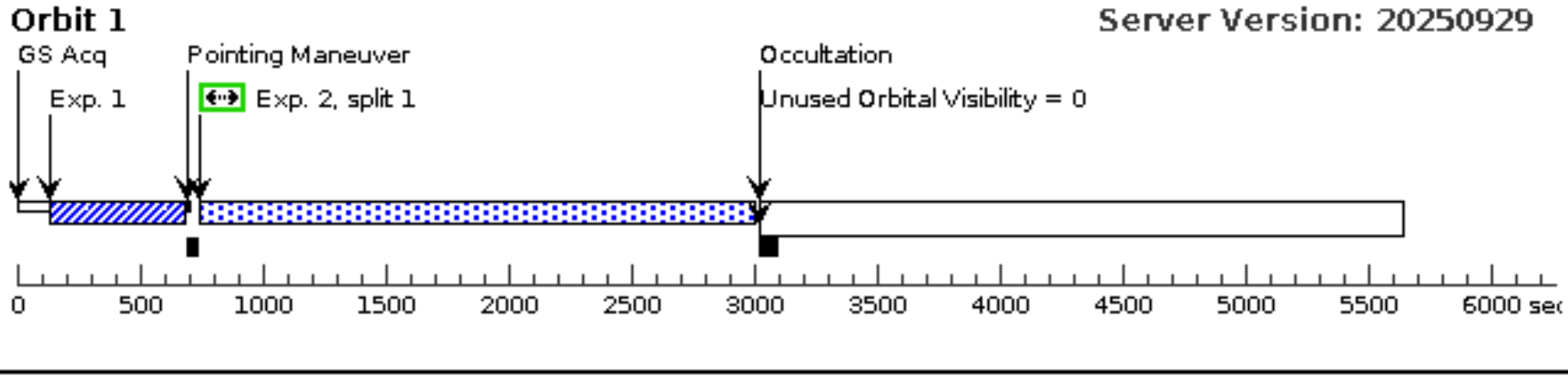
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC5447S	RA: 14 02 29.6332 (210.6234717d) Dec: +54 16 14.52 (54.27070d) Equinox: J2000		V=17.91 FUV = 15.0	Reference Frame: ICRS

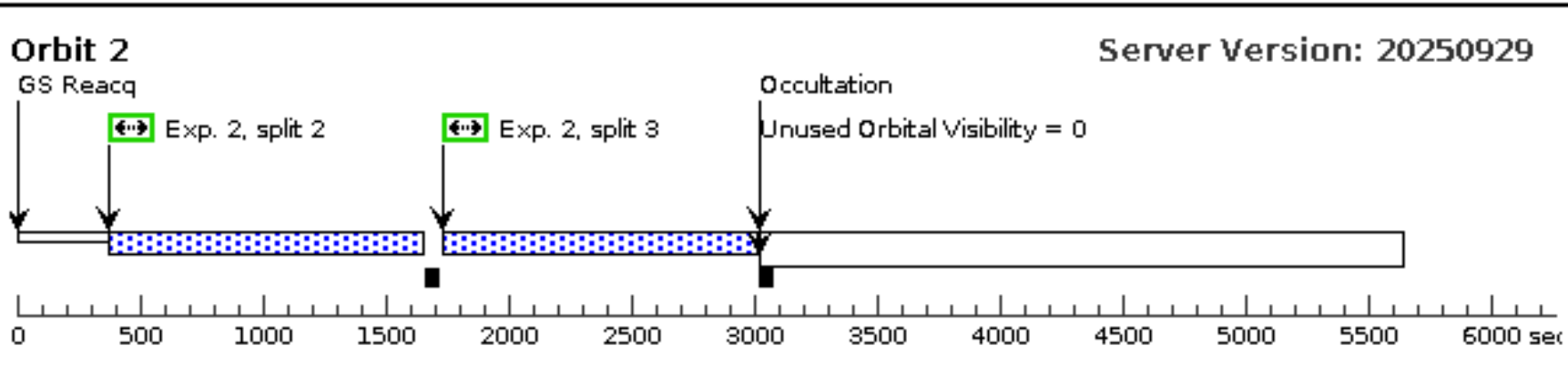
Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

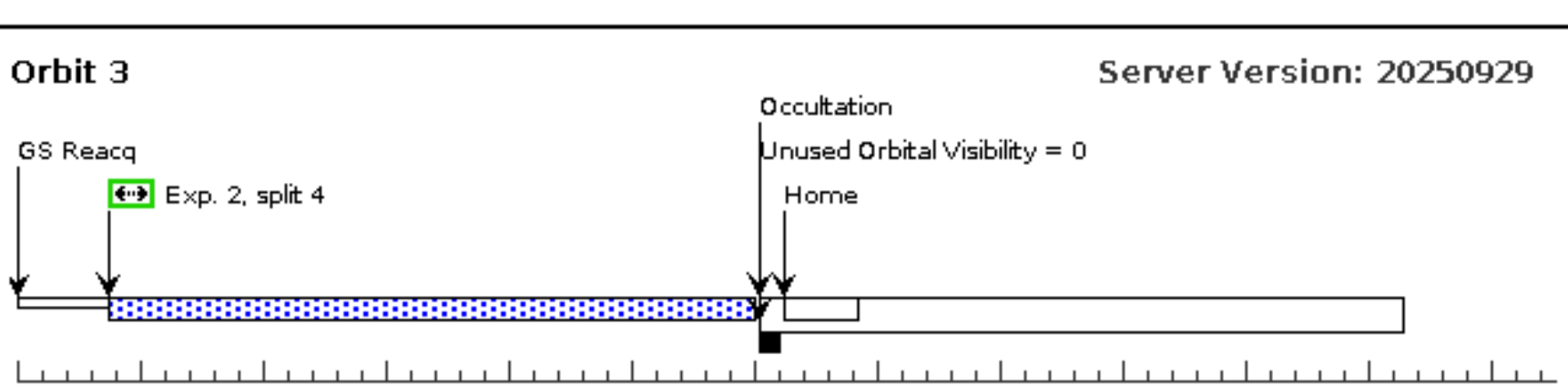
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026355)	(1) NGC5447S	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				120 Secs (120 Secs)	
								[==>]	***[1]***
2	(2026370)	(1) NGC5447S	COS/FUV, TIME-TAG, PSA	G140L 800 A	FP-POS=ALL; BUFFER-TIME=3538; FLASH=YES			3000 Secs (7087 Secs)	
								[==>2057.0 Secs (Split 1)]	***[1]***
								[==>1224.0 Secs (Split 2)] *[==>1224.0 Secs (Split 3)]*	***[2]***
								[==>2582.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 18088, NGC 5447N (02), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Exposure 2 (NGC 5447N (02))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

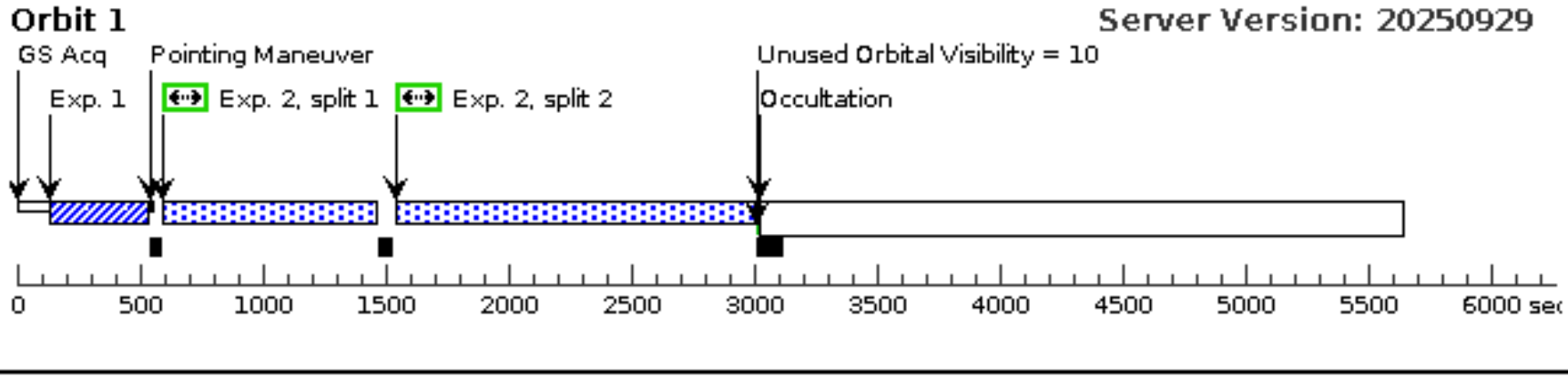
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	NGC5447N	RA: 14 02 28.2203 (210.6175846d) Dec: +54 16 26.40 (54.27400d) Equinox: J2000		V=16.79 FUV = 14.7	Reference Frame: ICRS

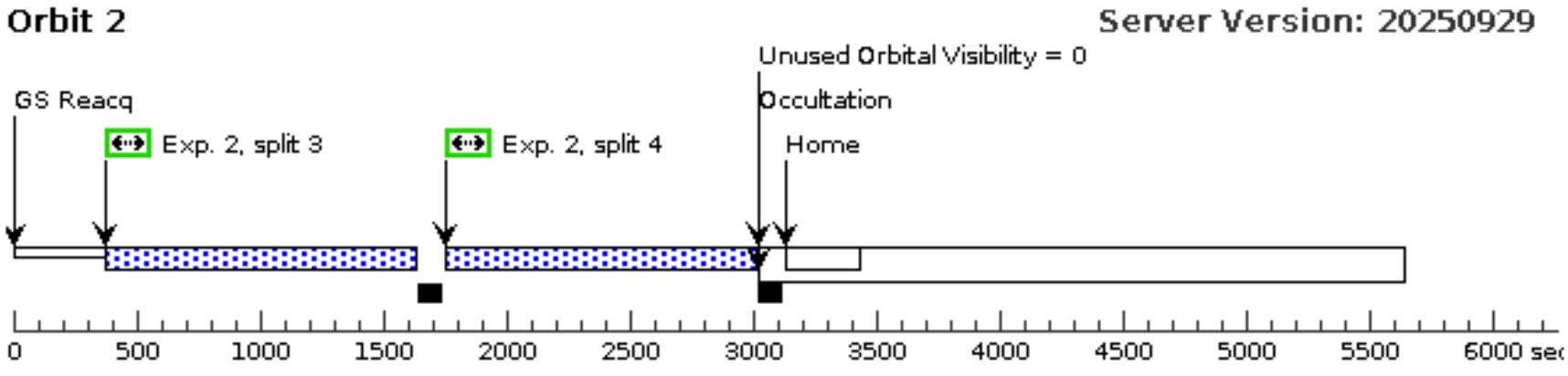
Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026356)	(2) NGC5447N	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				45 Secs (45 Secs)	
								[==>]	***[1]***
2	(2026372)	(2) NGC5447N	COS/FUV, TIME-TAG, PSA	G140L 800 A	FP-POS=ALL; BUFFER-TIME=1494; FLASH=YES			3000 Secs (4473 Secs)	
								[==>660.0 Secs (Split 1)] *[==>1403.0 Secs (Split 2)]*	***[1]***
								[==>1205.0 Secs (Split 3)] *[==>1205.0 Secs (Split 4)]*	***[2]***

Orbit Structure





Visit

Proposal 18088, H317 (03), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Exposure 2 (H317 (03))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

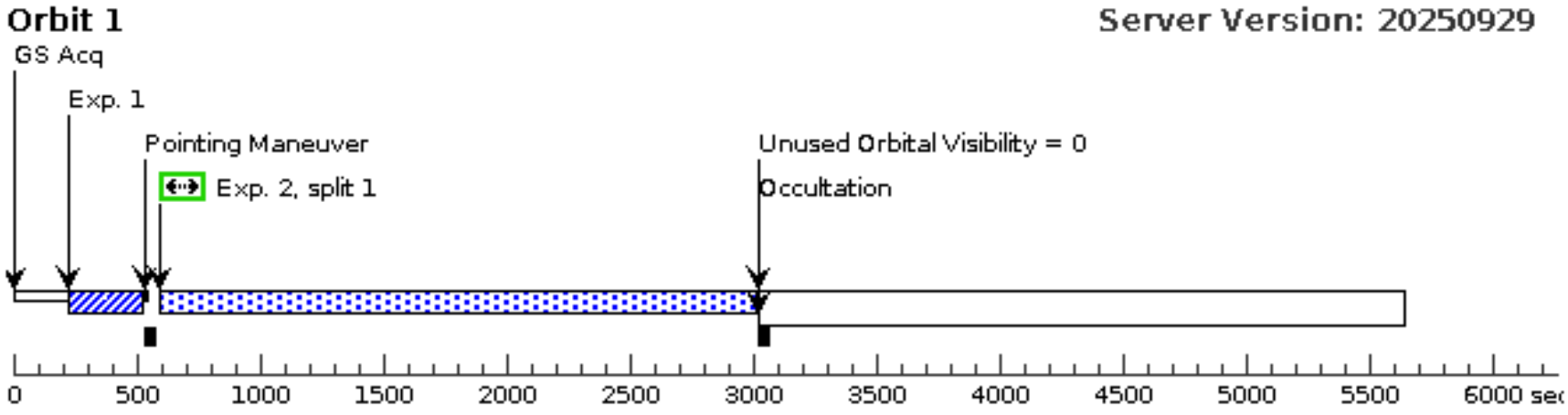
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	H317	RA: 14 02 52.2998 (210.7179158d) Dec: +54 26 16.59 (54.43794d) Equinox: J2000		V=19.55 FUV = 16.3	Reference Frame: ICRS

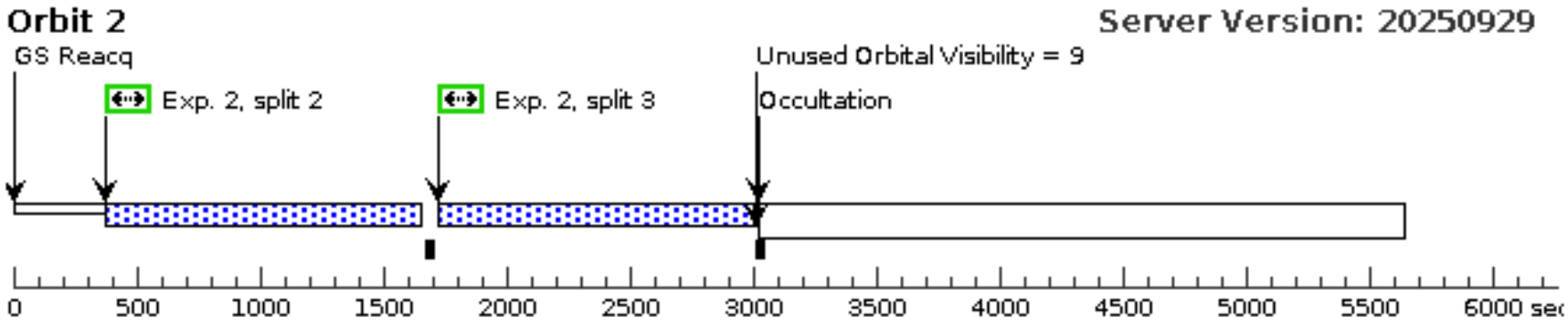
Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

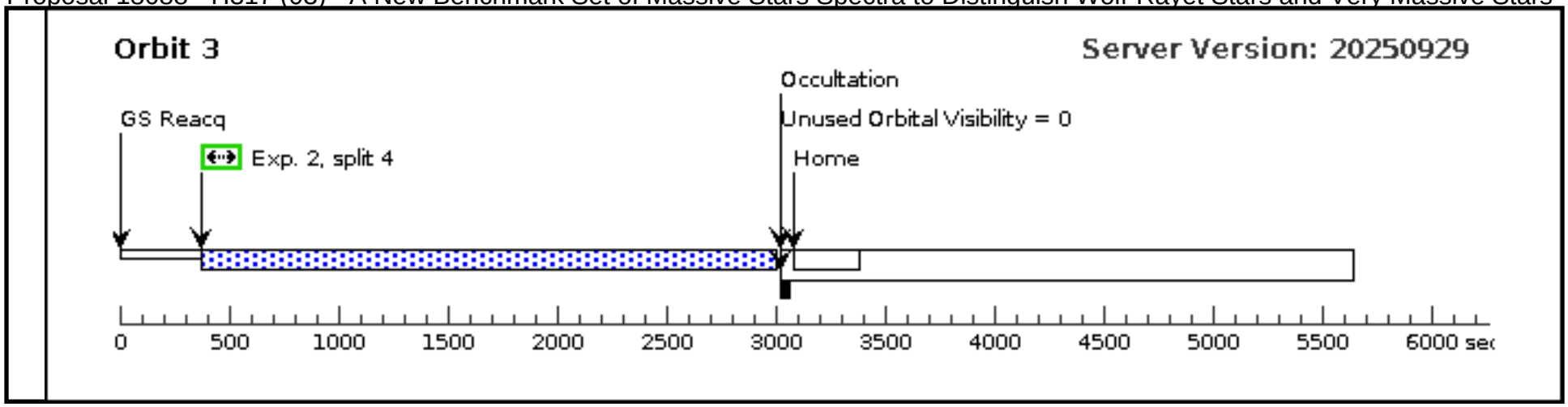
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2260591)	(3) H317	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				41 Secs (41 Secs)	
								[==>]	***[1]***
2	(2026374)	(3) H317	COS/FUV, TIME-TAG, PSA	G140L 800 A	FP-POS=ALL; BUFFER-TIME=9201; FLASH=YES			3000 Secs (7255 Secs)	
								[==>2215.0 Secs (Split 1)]	***[1]***
								[==>1229.0 Secs (Split 2)] *[==>1229.0 Secs (Split 3)]*	***[2]***
								[==>2582.0 Secs (Split 4)]	***[3]***

Orbit Structure






Orbit 3
Server Version: 20250929
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 2, split 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 18088, H1046 (04), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

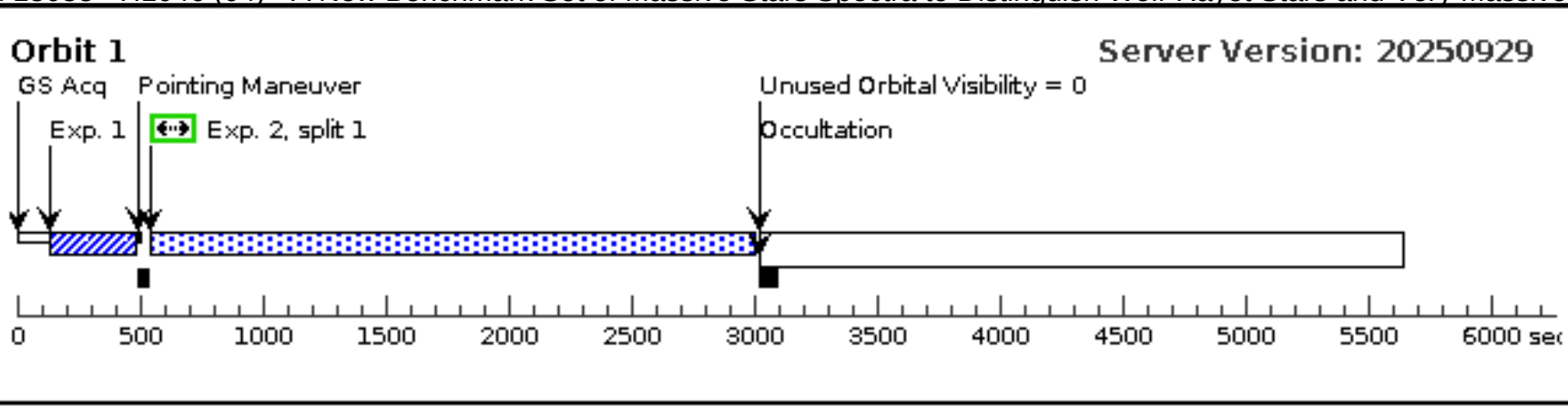
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	H1046	RA: 14 03 32.8142 (210.8867258d) Dec: +54 20 10.12 (54.33614d) Equinox: J2000		V=7.77 FUV = 16.4, NUV = 17.2	Reference Frame: ICRS

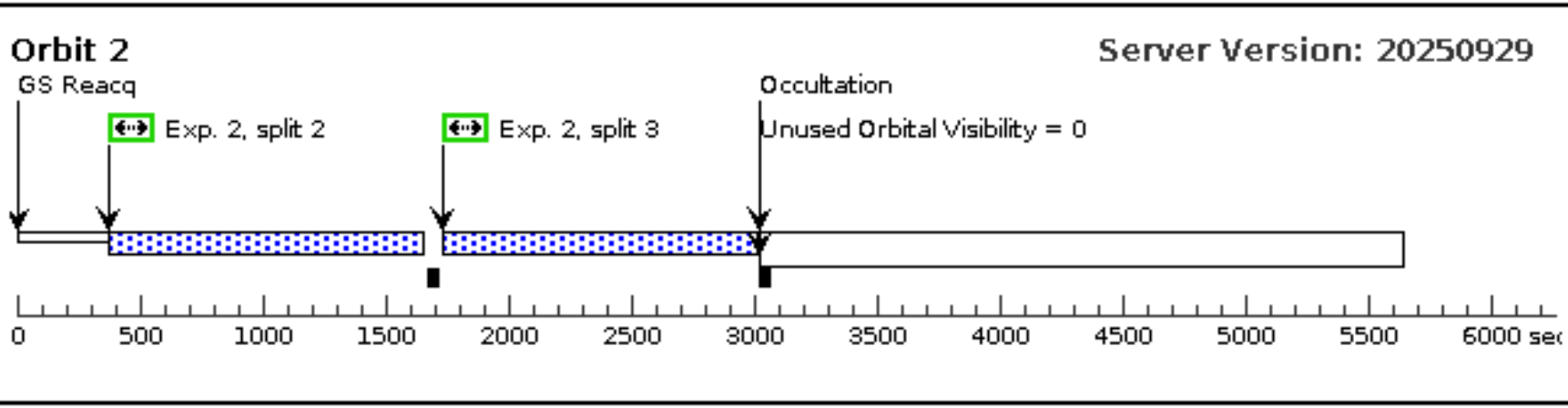
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

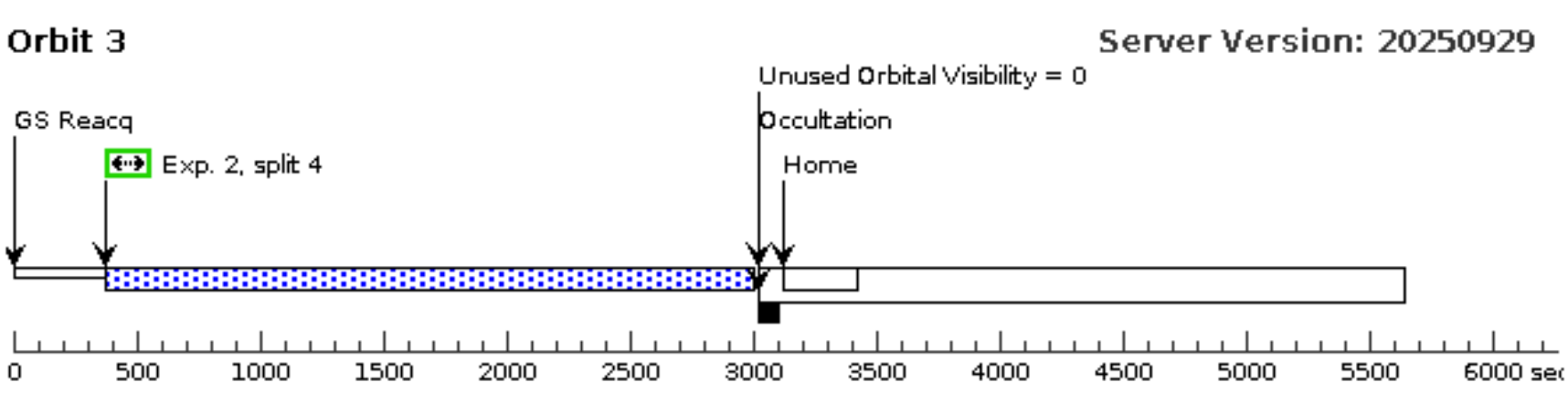
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026338)	(4) H1046	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				20 Secs (20 Secs)	
								[==>]	***[1]***
2	(2026379)	(4) H1046	COS/FUV, TIME-TAG, PSA	G140L 800 A	FP-POS=ALL; BUFFER-TIME=3786; FLASH=YES			3000 Secs (7297 Secs)	
								[==>2257.0 Secs (Split 1)]	***[1]***
								[==>1229.0 Secs (Split 2)] *[==>1229.0 Secs (Split 3)]*	***[2]***
								[==>2582.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 18088, NGC 5461 (05), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Exposure 2 (NGC 5461 (05))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

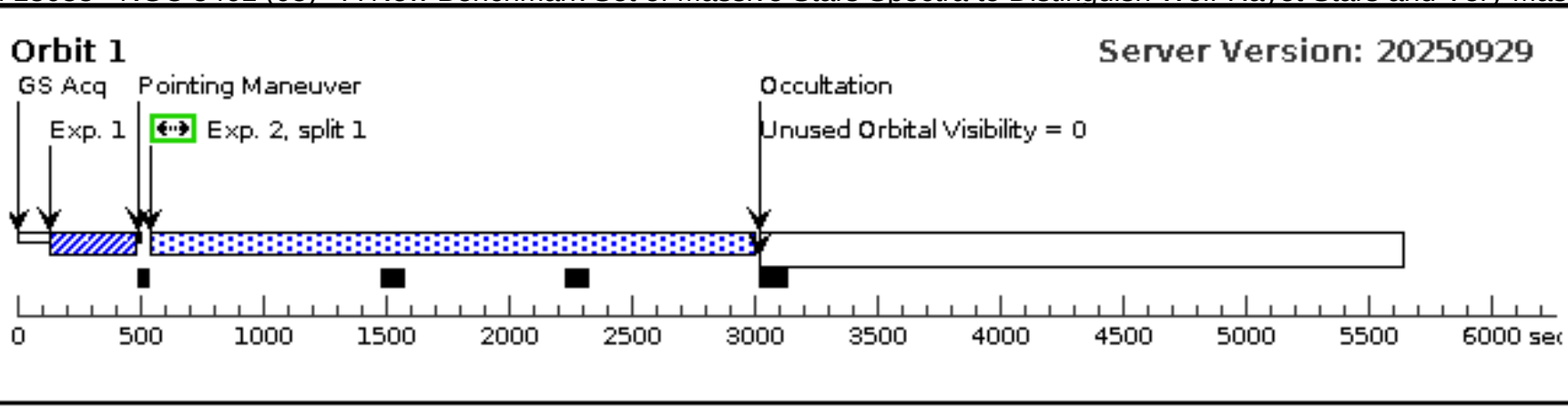
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	NGC5461	RA: 14 03 41.3789 (210.9224121d) Dec: +54 19 4.59 (54.31794d) Equinox: J2000		V=15.97 FUV = 14.5, g=15.98	Reference Frame: ICRS

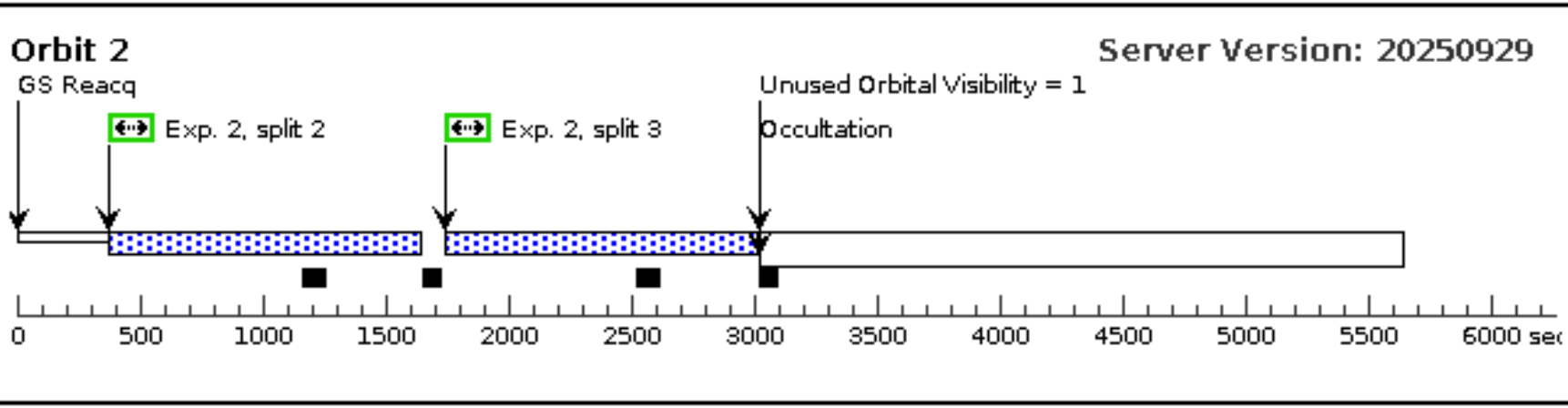
Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

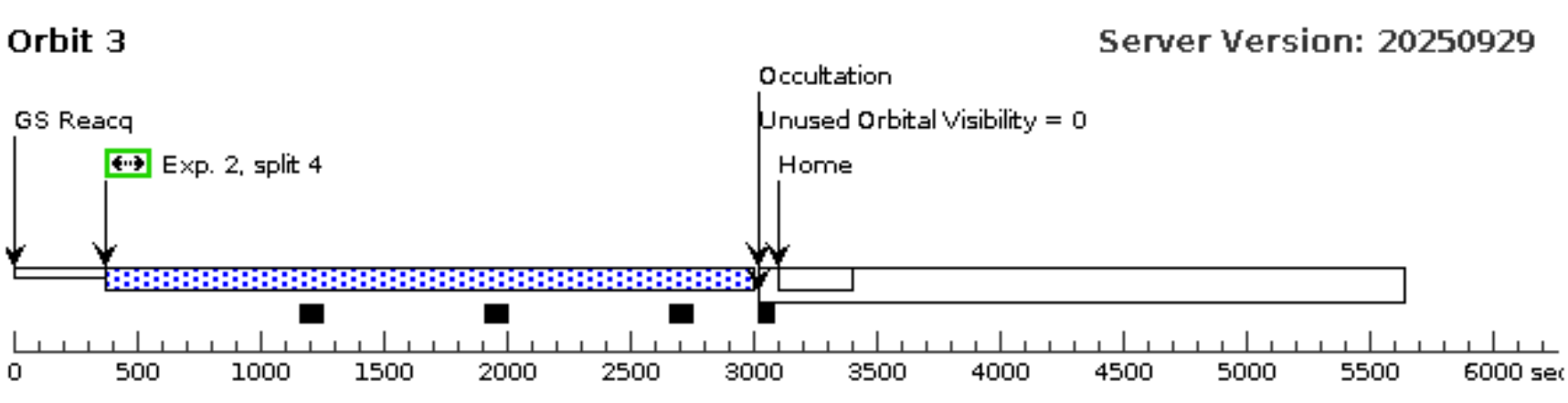
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026337)	(5) NGC5461	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				20 Secs (20 Secs)	
								[==>]	***[1]***
2	(2026380)	(5) NGC5461	COS/FUV, TIME-TAG, PSA	G140L 800 A	FP-POS=ALL; BUFFER-TIME=749; FLASH=YES			3000 Secs (7267 Secs)	
								[==>2257.0 Secs (Split 1)]	***[1]***
								[==>1214.0 Secs (Split 2)] *[==>1214.0 Secs (Split 3)]*	***[2]***
								[==>2582.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 18088, H1052 (06), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Exposure 2 (H1052 (06))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

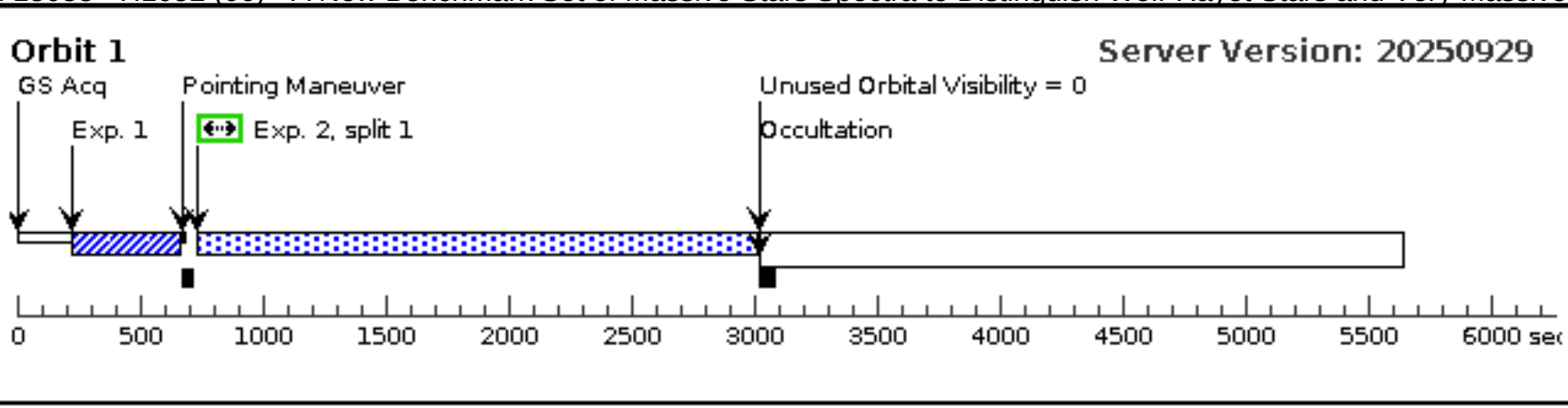
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	H1052	RA: 14 03 35.7480 (210.8989500d) Dec: +54 17 59.82 (54.29995d) Equinox: J2000		V=19.21 FUV = 16.6	Reference Frame: ICRS

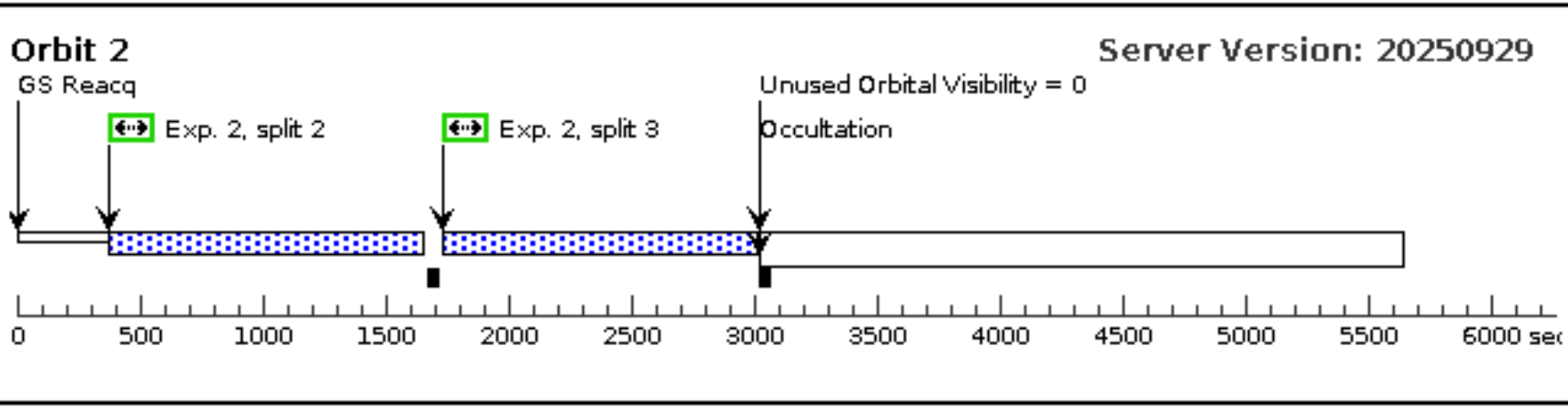
Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

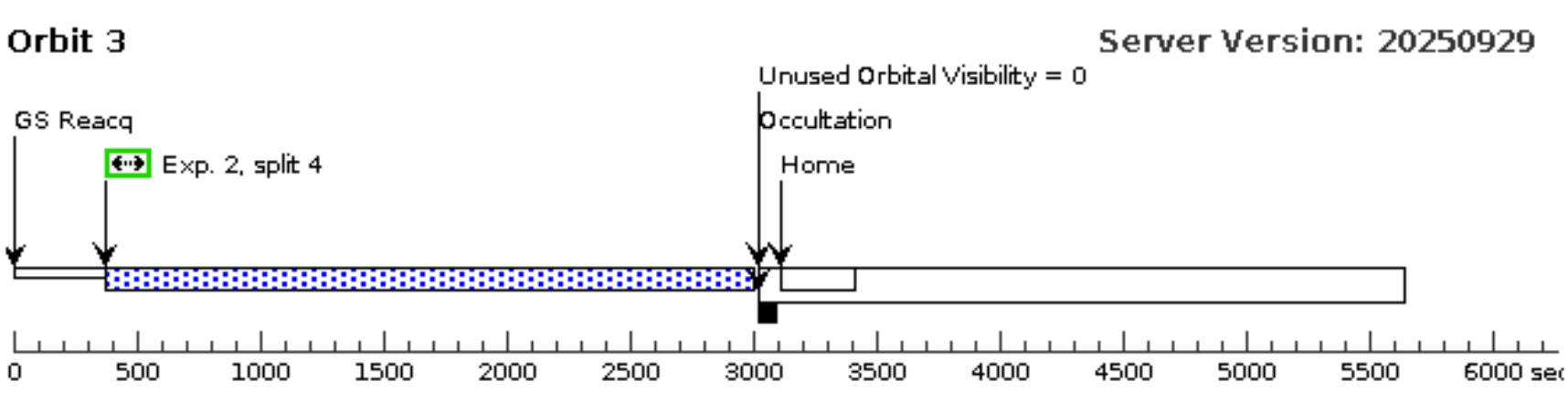
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2260591)	(6) H1052	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				112 Secs (112 Secs)	
								[==>]	***[1]***
2	(2026382)	(6) H1052	COS/FUV, TIME-TAG, PSA	G140L 800 A	FP-POS=ALL; BUFFER-TIME=4485; FLASH=YES			2000 Secs (7113 Secs)	
								[==>2073.0 Secs (Split 1)]	***[1]***
								[==>1229.0 Secs (Split 2)] *[==>1229.0 Secs (Split 3)]*	***[2]***
								[==>2582.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 18088, H1013 (07), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Exposure 2 (H1013 (07))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

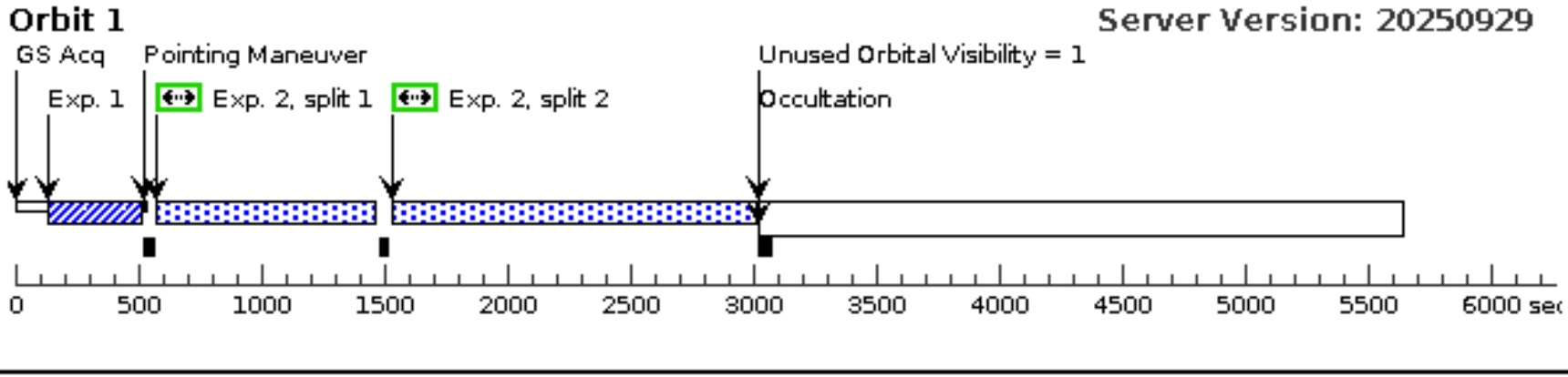
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	H1013	RA: 14 03 36.1596 (210.9006650d) Dec: +54 20 58.96 (54.34971d) Equinox: J2000		V=16.52 FUV = 16.2	Reference Frame: ICRS

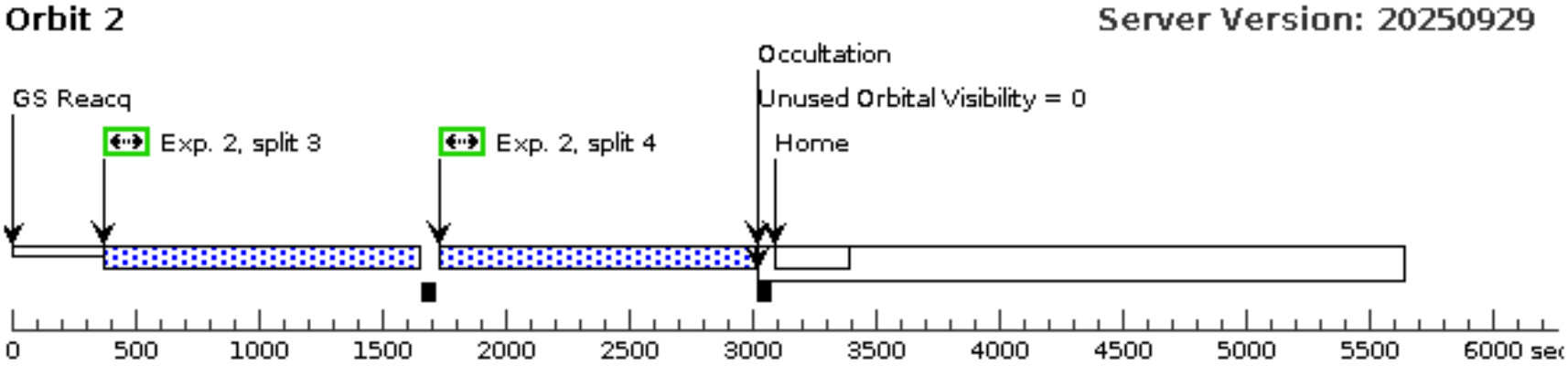
Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026352)	(7) H1013	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				35 Secs (35 Secs)	
								[==>]	***[1]***
2	(2026383)	(7) H1013	COS/FUV, TIME-TAG, PSA	G140L 800 A	FP-POS=ALL; BUFFER-TIME=3428; FLASH=YES			3000 Secs (4559 Secs)	
								[==>684.0 Secs (Split 1)] *[==>1427.0 Secs (Split 2)]*	***[1]***
								[==>1224.0 Secs (Split 3)] *[==>1224.0 Secs (Split 4)]*	***[2]***

Orbit Structure





Visit

Proposal 18088, J0217-0619 (08), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J0217-0619 (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.

Fixed Targets

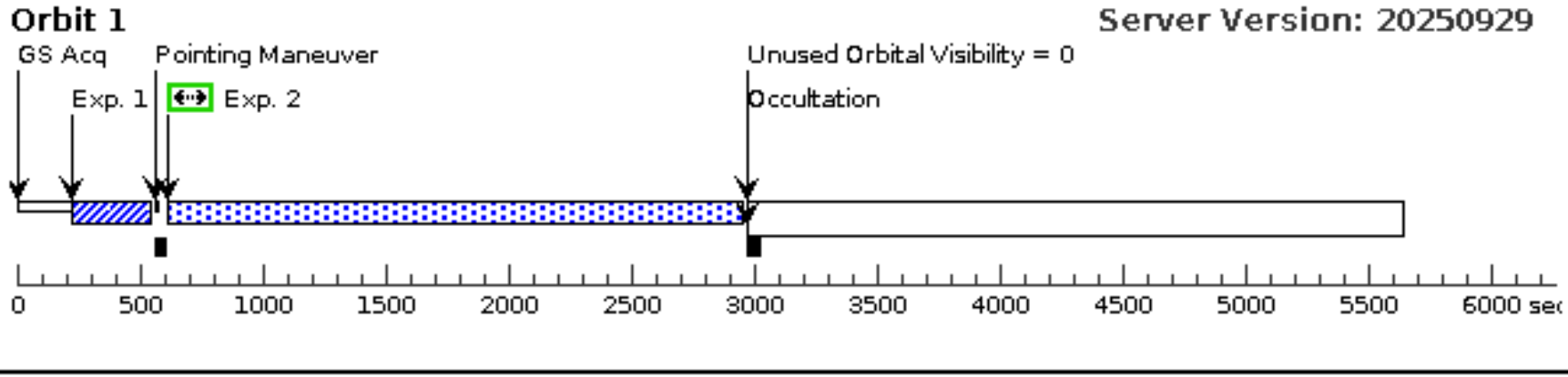
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	J0217-0619	RA: 01 27 35.5110 (21.8979625d) Dec: -06 19 36.06 (-6.32668d) Equinox: J2000		V=15.03 FUV = 17.1	Reference Frame: ICRS

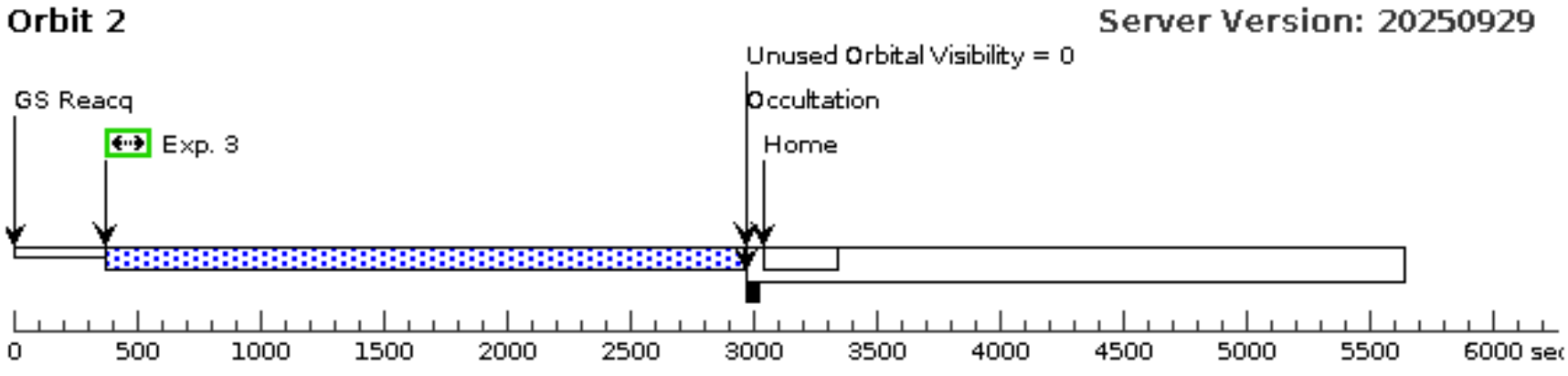
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(1338365)	(8) J0217-0619	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				55 Secs (55 Secs) *[==>]*	***[1]***
Comments: BOT/GSCII issue was noted, target cleared via ETC using continuum flux of 8.01E-16/sq arcsec (see Phase II for HST-GO-15840)									
2	(2026388)	(8) J0217-0619	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6024; FLASH=YES; FP-POS=1			2200 Secs (2138 Secs) *[==>2138.0 Secs]*	***[1]***
3	(2026388)	(8) J0217-0619	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6024; FLASH=YES; FP-POS=2			2500 Secs (2533 Secs) *[==>2533.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 18088, J0217-0619 (09), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J0217-0619 (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.

Fixed Targets

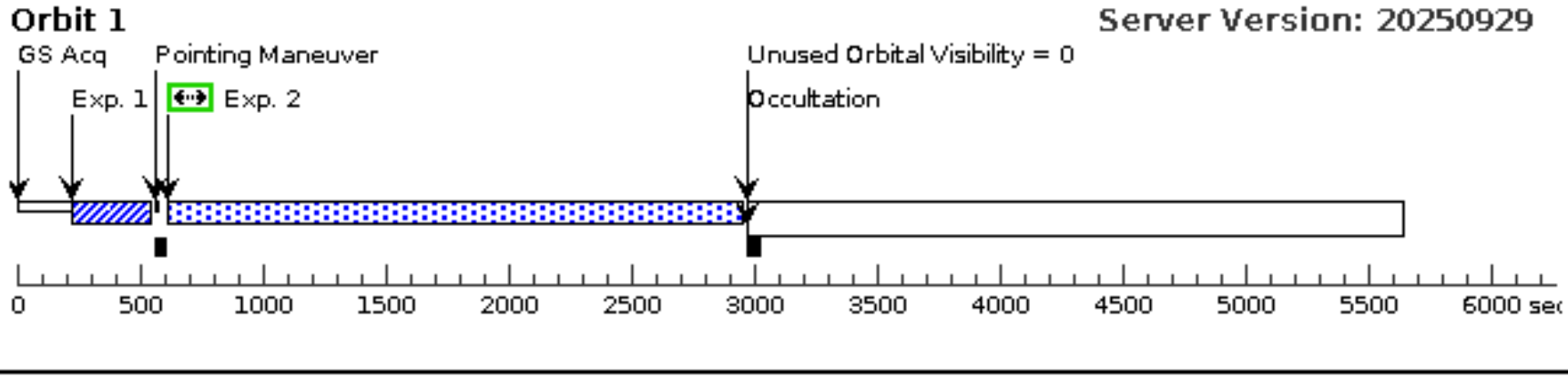
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	J0217-0619	RA: 01 27 35.5110 (21.8979625d) Dec: -06 19 36.06 (-6.32668d) Equinox: J2000		V=15.03 FUV = 17.1	Reference Frame: ICRS

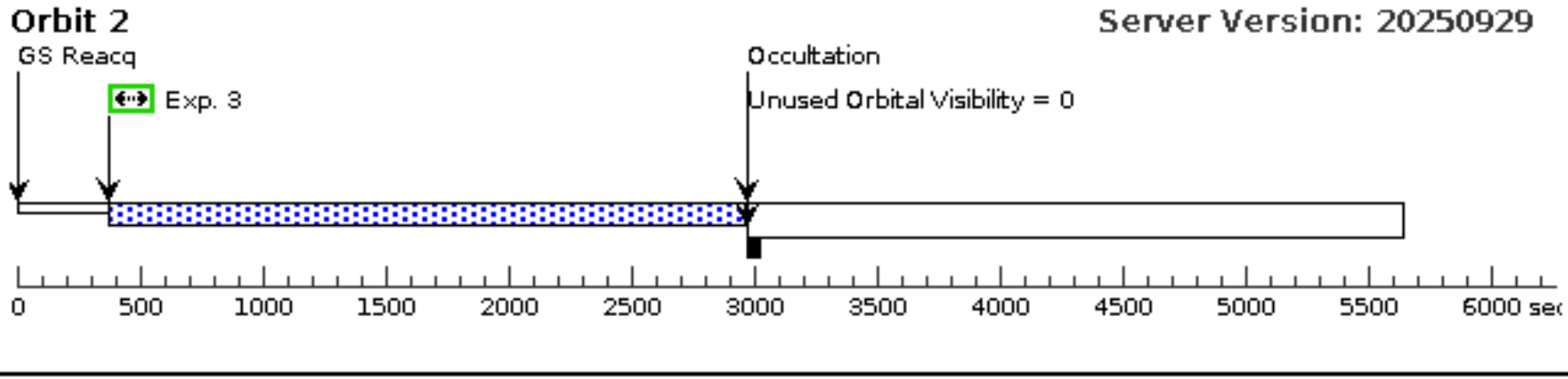
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

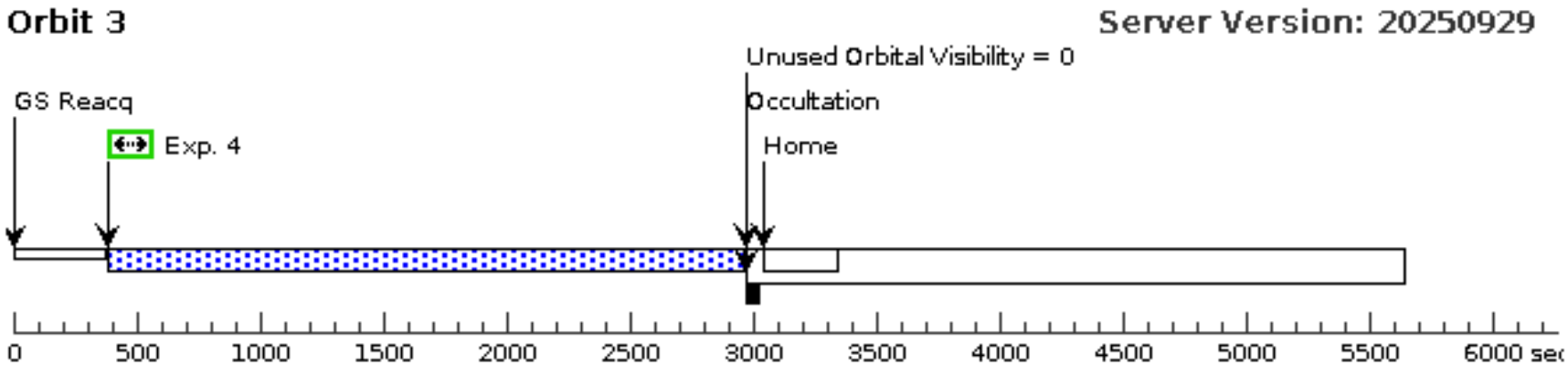
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(1338365)	(8) J0217-0619	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				55 Secs (55 Secs) *[==>]*	***[1]***
Comments: BOT/GSCII issue was noted, target cleared via ETC using continuum flux of 8.01E-16/sq arcsec (see Phase II for HST-GO-15840)									
2	(2026388)	(8) J0217-0619	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6024; FLASH=YES; FP-POS=3			2200 Secs (2138 Secs) *[==>2138.0 Secs]*	***[1]***
3	(2026388)	(8) J0217-0619	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6024; FLASH=YES; FP-POS=4			2500 Secs (2533 Secs) *[==>2533.0 Secs]*	***[2]***
4	(2026388)	(8) J0217-0619	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6024; FLASH=YES; FP-POS=4			2500 Secs (2533 Secs) *[==>2533.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 18088, MRK71-SSCA (10), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(MRK71-SSCA (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.

(Exposure 2 (MRK71-SSCA (10))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 3 (MRK71-SSCA (10))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

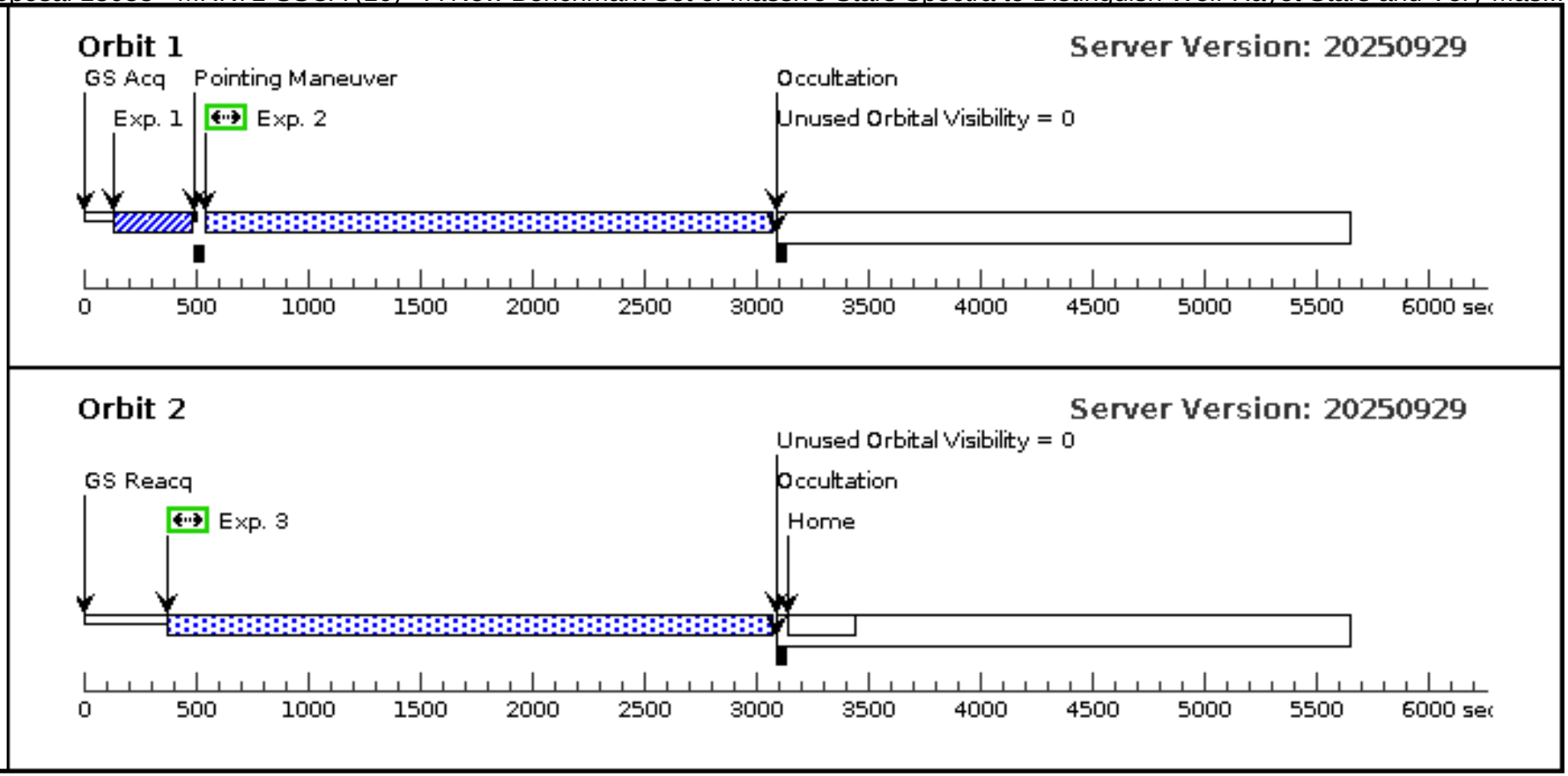
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	MRK71-SSCA	RA: 07 28 42.6858 (112.1778575d) Dec: +69 11 21.89 (69.18941d) Equinox: J2000		V=7.77 FUV = 14.0, NUV = 16.51	Reference Frame: ICRS

Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026339)	(9) MRK71-SSCA	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				20 Secs (20 Secs) *[==>]*	***[1]***
2	(2026365)	(9) MRK71-SSCA	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=9662; FLASH=YES; FP-POS=1			2300 Secs (2323 Secs) *[==>2323.0 Secs]*	***[1]***
3	(2026365)	(9) MRK71-SSCA	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=9662; FLASH=YES; FP-POS=2			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	***[2]***

Orbit Structure



Visit

Proposal 18088, MK71-SSCA (11), implementation Tue Dec 30 21:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(MK71-SSCA (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.

(Exposure 2 (MK71-SSCA (11))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 3 (MK71-SSCA (11))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (MK71-SSCA (11))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

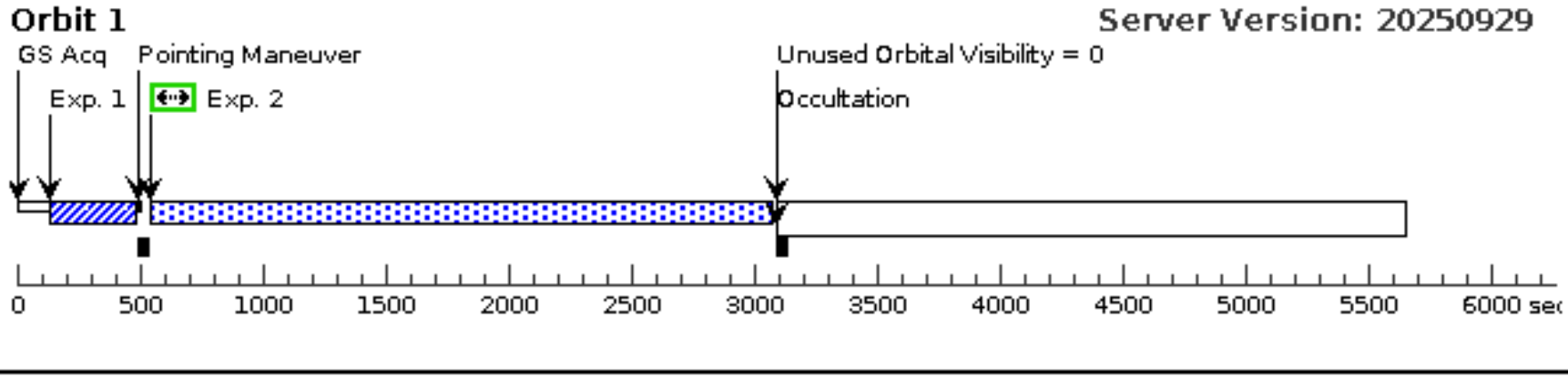
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	MRK71-SSCA	RA: 07 28 42.6858 (112.1778575d) Dec: +69 11 21.89 (69.18941d) Equinox: J2000		V=7.77 FUV = 14.0, NUV = 16.51	Reference Frame: ICRS

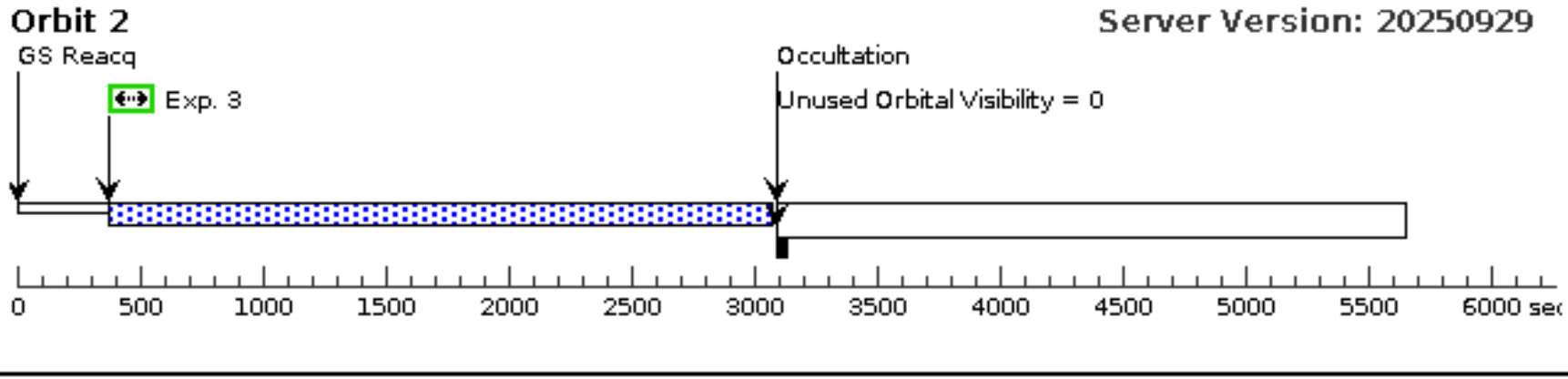
Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

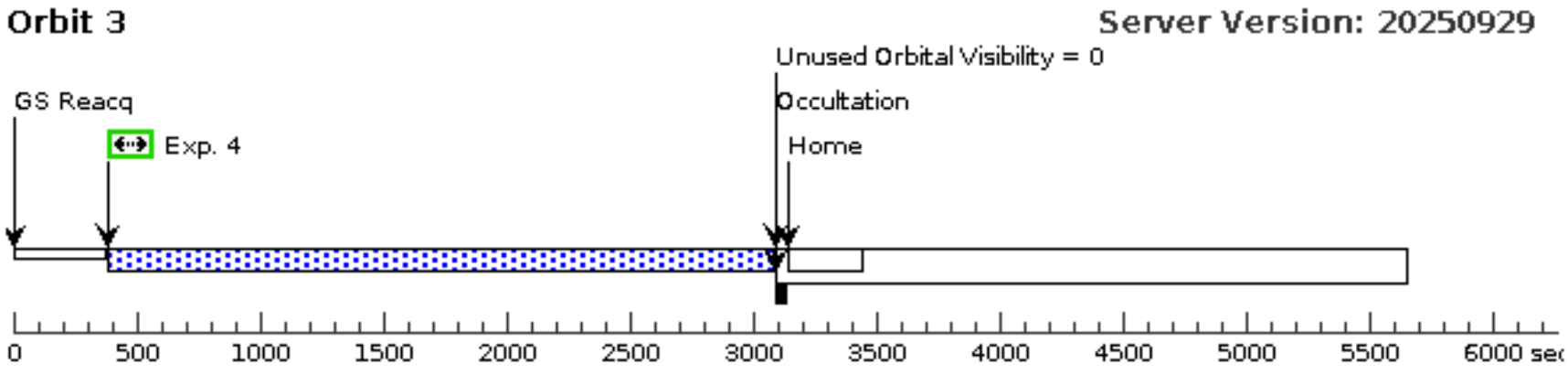
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026339)	(9) MRK71-SSCA	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				20 Secs (20 Secs) *[==>]*	*[1]*
2	(2026365)	(9) MRK71-SSCA	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=9662; FLASH=YES; FP-POS=3			2300 Secs (2323 Secs) *[==>2323.0 Secs]*	*[1]*
3	(2026365)	(9) MRK71-SSCA	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=9662; FLASH=YES; FP-POS=4			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	*[2]*
4	(2026365)	(9) MRK71-SSCA	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=9662; FLASH=YES; FP-POS=4			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	*[3]*

Orbit Structure







Visit

Proposal 18088, J1129+2034 (12), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J1129+2034 (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.

Fixed Targets

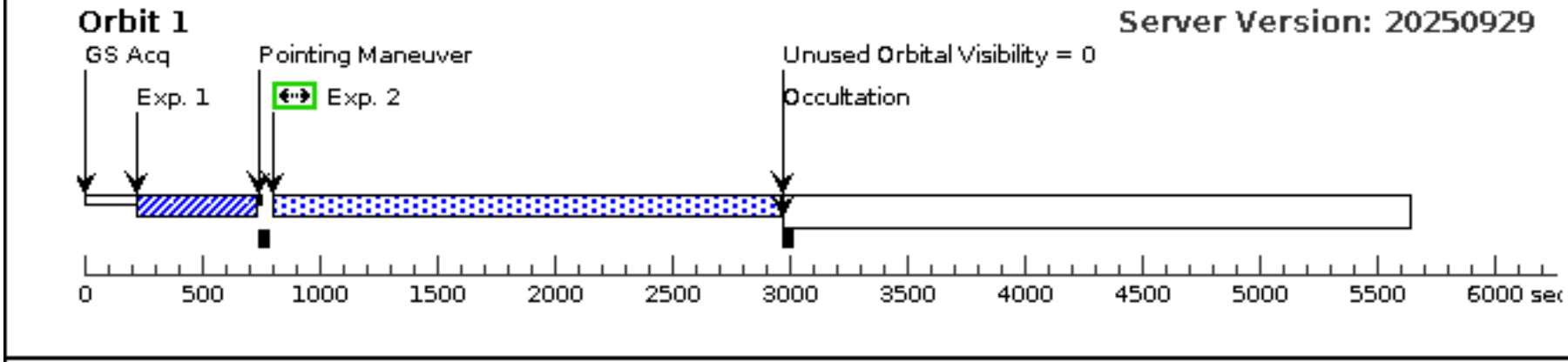
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	J1129+2034	RA: 11 29 14.1500 (172.3089583d) Dec: +20 34 52.01 (20.58111d) Equinox: J2000		V=18.15 FUV = 17.3	Reference Frame: ICRS

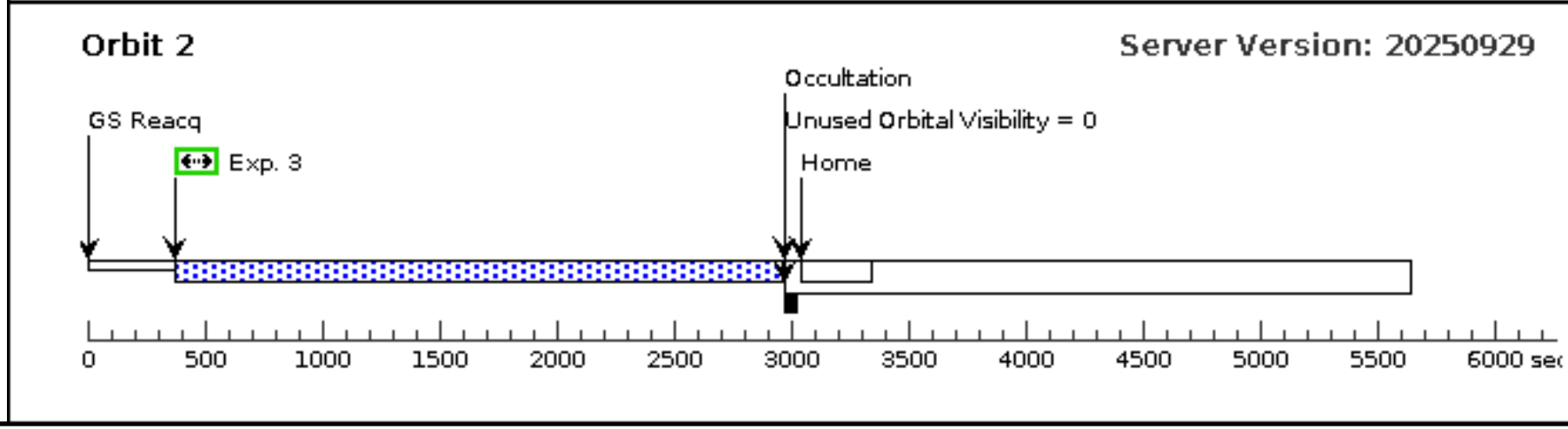
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(1338337)	(10) J1129+2034	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				146 Secs (146 Secs) *[==>]*	***[1]***
2	(2026390)	(10) J1129+2034	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6683; FLASH=YES; FP-POS=1			1900 Secs (1958 Secs) *[==>1958.0 Secs]*	***[1]***
3	(2026390)	(10) J1129+2034	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6683; FLASH=YES; FP-POS=2			2200 Secs (2535 Secs) *[==>2535.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 18088, J1129+2034 (13), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J1129+2034 (13)) 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.

Fixed Targets

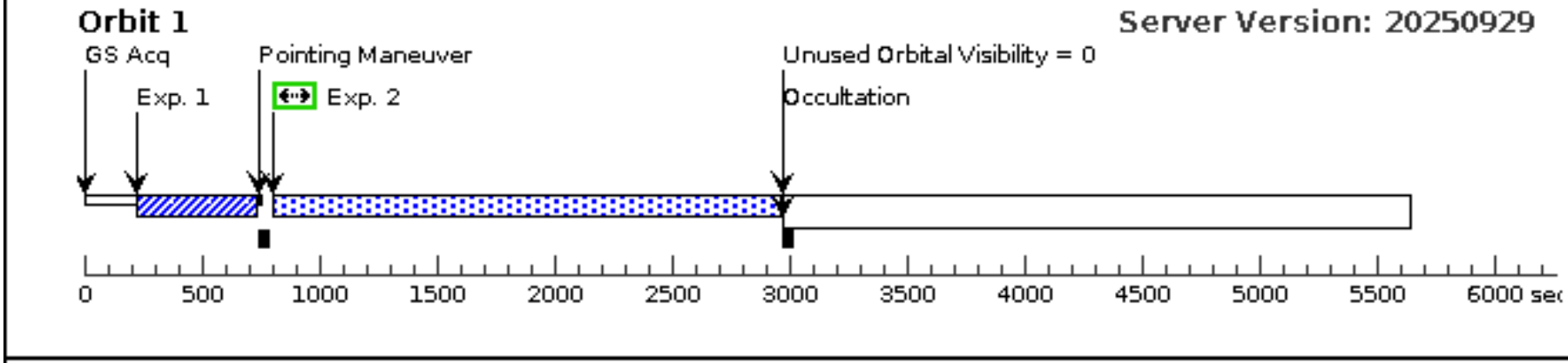
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	J1129+2034	RA: 11 29 14.1500 (172.3089583d) Dec: +20 34 52.01 (20.58111d) Equinox: J2000		V=18.15 FUV = 17.3	Reference Frame: ICRS

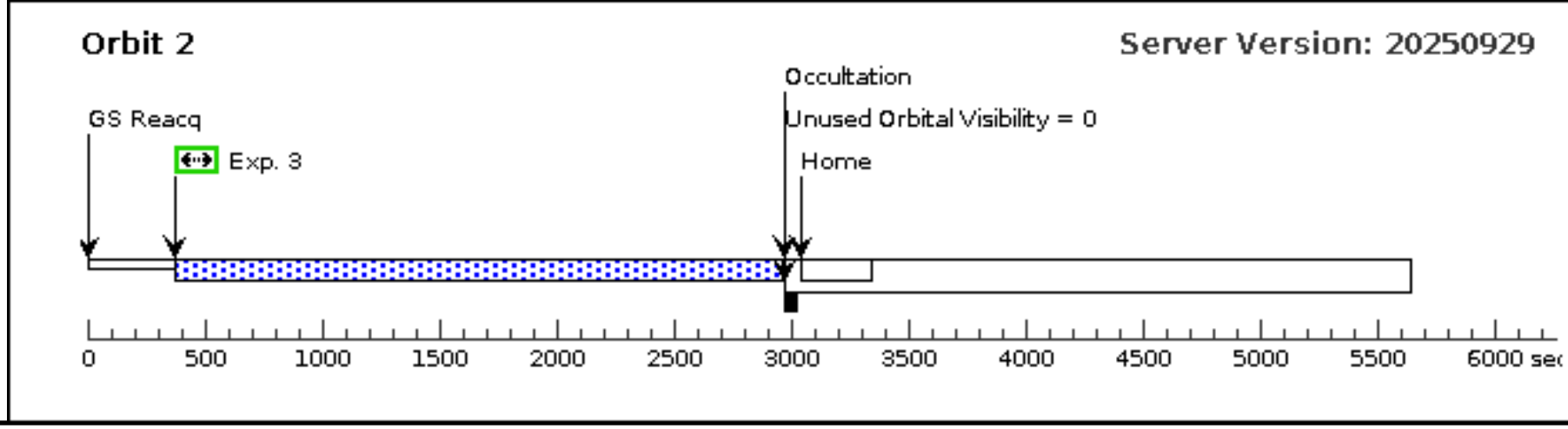
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(1338337)	(10) J1129+2034	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				146 Secs (146 Secs) *[==>]*	***[1]***
2	(2026390)	(10) J1129+2034	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6683; FLASH=YES; FP-POS=1			1900 Secs (1958 Secs) *[==>1958.0 Secs]*	***[1]***
3	(2026390)	(10) J1129+2034	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6683; FLASH=YES; FP-POS=2			2200 Secs (2535 Secs) *[==>2535.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 18088, J1129+2034 (14), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J1129+2034 (14)) 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.

Fixed Targets

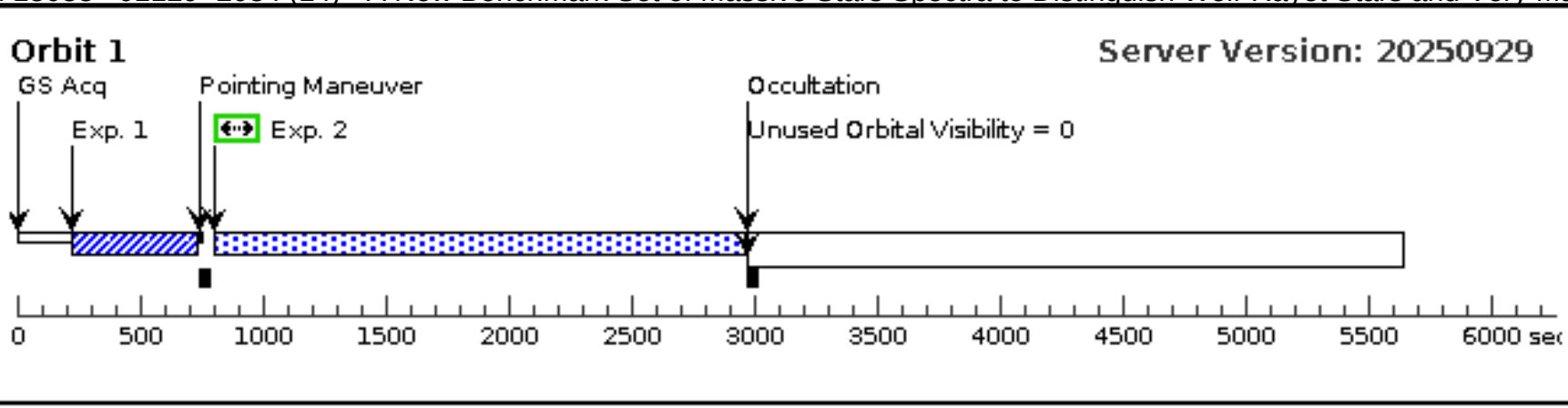
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	J1129+2034	RA: 11 29 14.1500 (172.3089583d) Dec: +20 34 52.01 (20.58111d) Equinox: J2000		V=18.15 FUV = 17.3	Reference Frame: ICRS

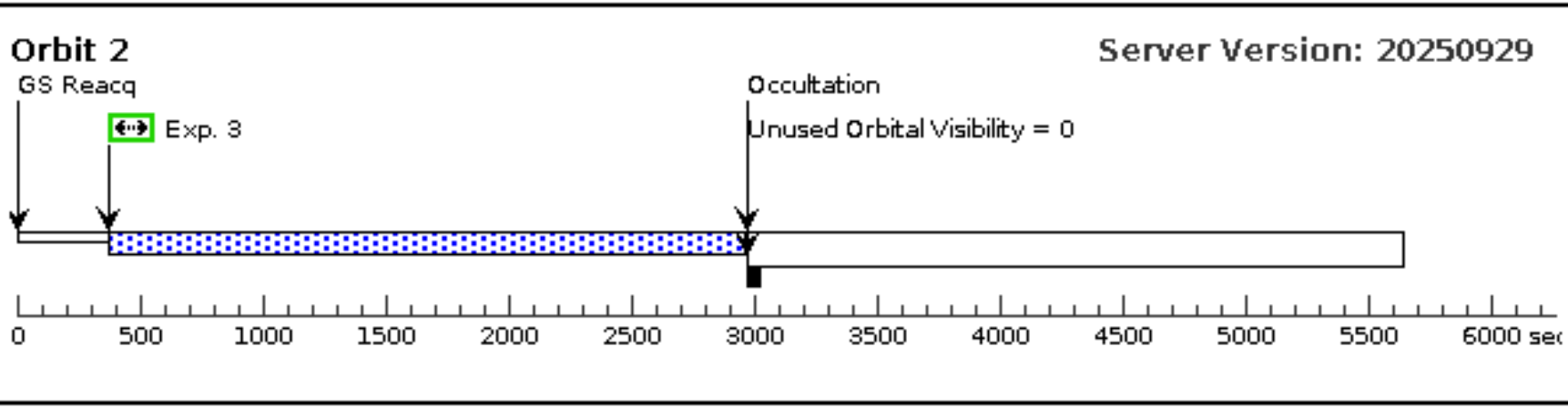
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

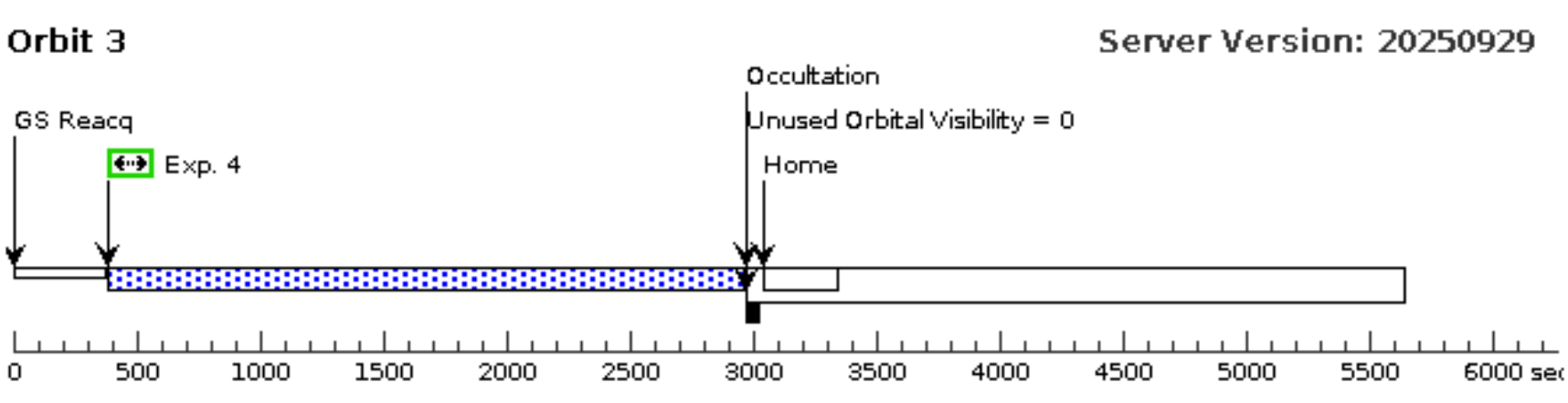
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(1338337)	(10) J1129+2034	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				146 Secs (146 Secs) *[==>]*	***[1]***
2	(2026390)	(10) J1129+2034	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6683; FLASH=YES; FP-POS=3			2000 Secs (1958 Secs) *[==>1958.0 Secs]*	***[1]***
3	(2026390)	(10) J1129+2034	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6683; FLASH=YES; FP-POS=4			2500 Secs (2535 Secs) *[==>2535.0 Secs]*	***[2]***
4	(2026390)	(10) J1129+2034	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=6683; FLASH=YES; FP-POS=4			2500 Secs (2535 Secs) *[==>2535.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 18088, J1314+3452 (15), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J1314+3452 (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.

(Exposure 2 (J1314+3452 (15))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 3 (J1314+3452 (15))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

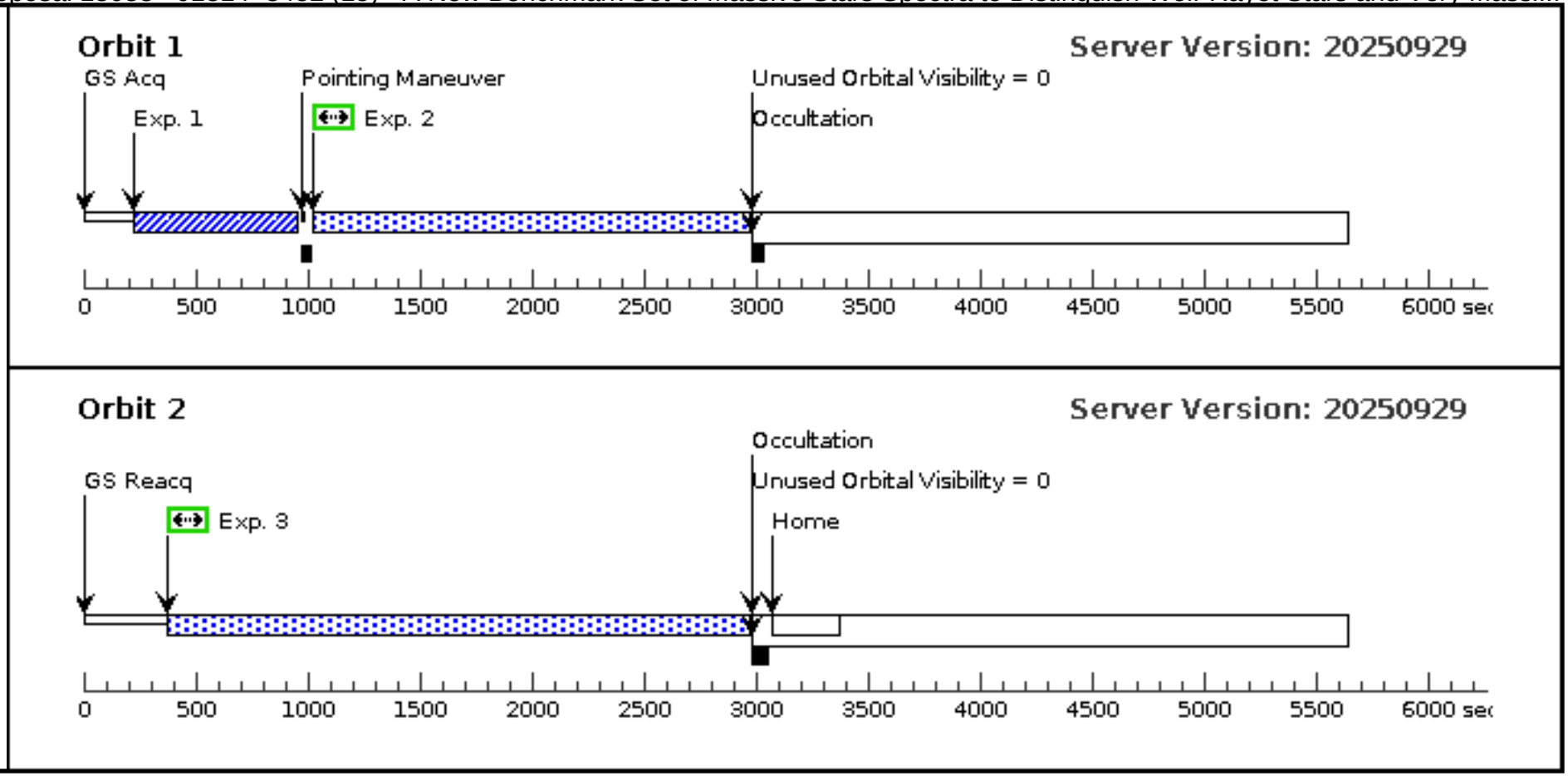
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	J1314+3452	RA: 13 14 47.3700 (198.6973750d) Dec: +34 52 59.81 (34.88328d) Equinox: J2000		V=17.49 FUV = 16.4	Reference Frame: ICRS

Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(1338352)	(11) J1314+3452	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				259 Secs (259 Secs) *[==>]*	***[1]***
2	(2026393)	(11) J1314+3452	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=3934; FLASH=YES; FP-POS=1			1700 Secs (1740 Secs) *[==>1740.0 Secs]*	***[1]***
3	(2026393)	(11) J1314+3452	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=3934; FLASH=YES; FP-POS=2			2000 Secs (2543 Secs) *[==>2543.0 Secs]*	***[2]***

Orbit Structure



Visit

Proposal 18088, J1314+3452 (16), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J1314+3452 (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.

(Exposure 2 (J1314+3452 (16))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 3 (J1314+3452 (16))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (J1314+3452 (16))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

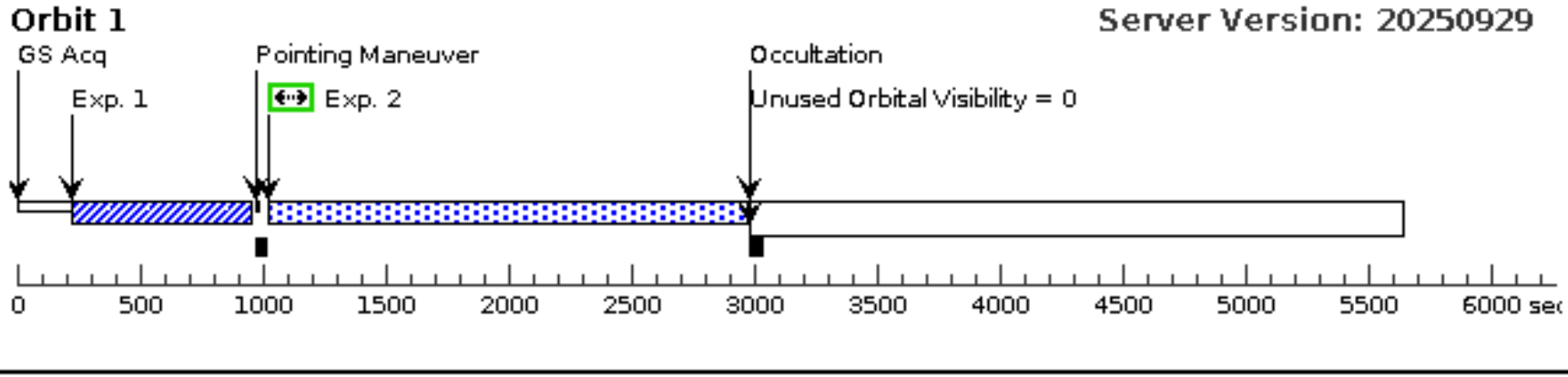
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	J1314+3452	RA: 13 14 47.3700 (198.6973750d) Dec: +34 52 59.81 (34.88328d) Equinox: J2000		V=17.49 FUV = 16.4	Reference Frame: ICRS

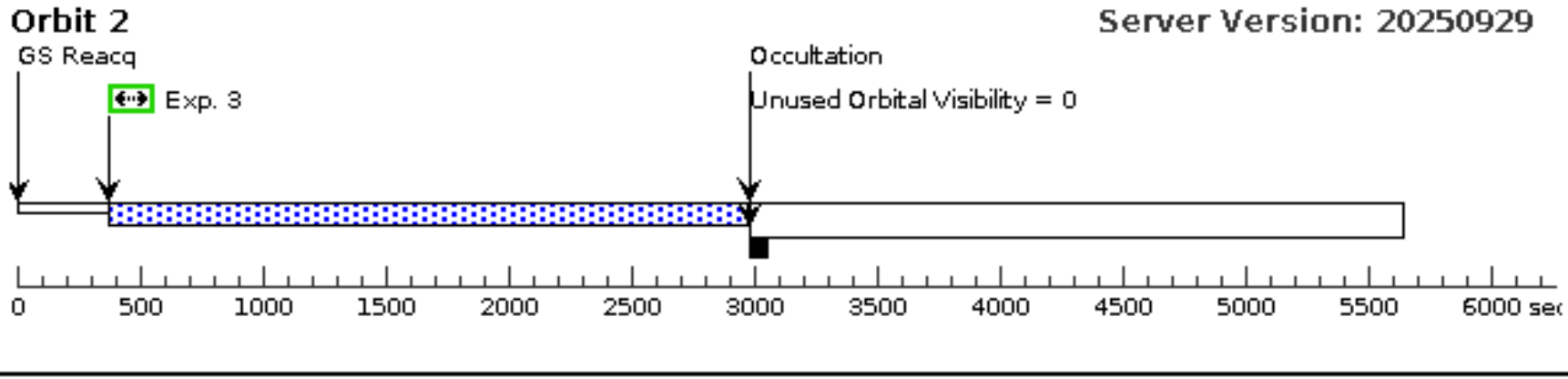
Comments:
Category=ISM
Description=[HII REGION]
Extended=YES

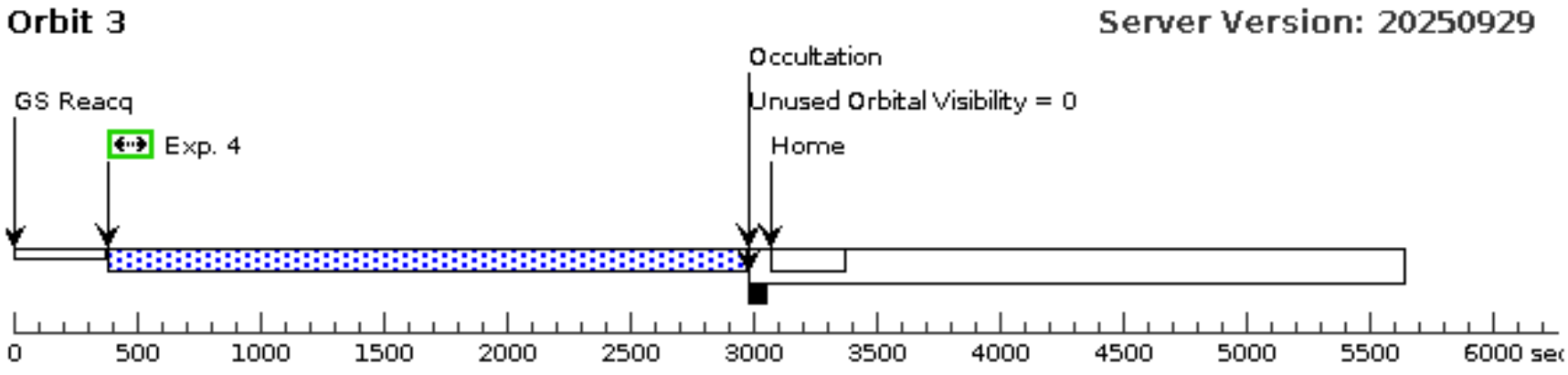
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(1338352)	(11) J1314+3452	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				259 Secs (259 Secs) *[==>]*	***[1]***
2	(2026393)	(11) J1314+3452	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=3934; FLASH=YES; FP-POS=3			2000 Secs (1740 Secs) *[==>1740.0 Secs]*	***[1]***
3	(2026393)	(11) J1314+3452	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=3934; FLASH=YES; FP-POS=4			2600 Secs (2543 Secs) *[==>2543.0 Secs]*	***[2]***
4	(2026393)	(11) J1314+3452	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=3934; FLASH=YES; FP-POS=4			2600 Secs (2543 Secs) *[==>2543.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 18088, NGC 243+178-210 (17), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC 243+178-210 (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.

Fixed Targets

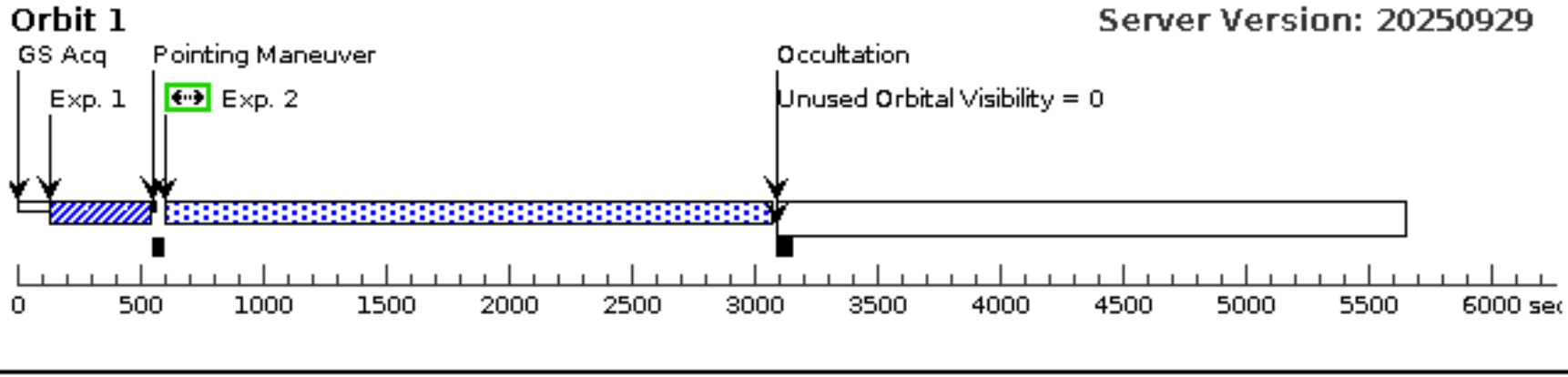
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	NGC2403+178-210	RA: 07 36 49.2272 (114.2051133d) Dec: +65 36 51.74 (65.61437d) Equinox: J2000		V=7.77 FUV = 16.7, NUV = 18.17	Reference Frame: ICRS

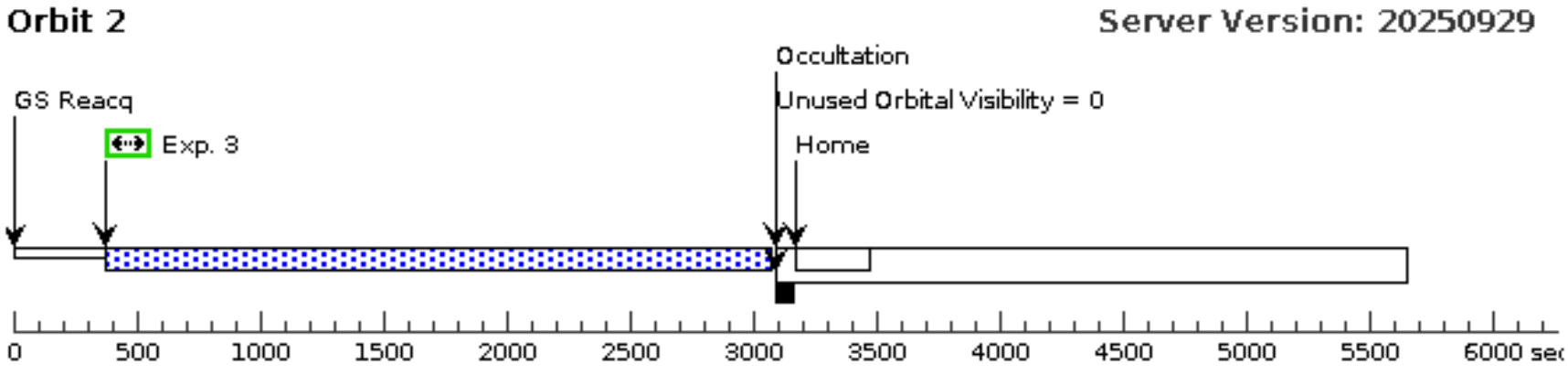
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026345)	(12) NGC2403+178-210	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				50 Secs (50 Secs) *[==>]*	***[1]***
2	(2026394)	(12) NGC2403+178-210	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=4218; FLASH=YES; FP-POS=1			1700 Secs (2263 Secs) *[==>2263.0 Secs]*	***[1]***
3	(2026394)	(12) NGC2403+178-210	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=4218; FLASH=YES; FP-POS=2			2000 Secs (2648 Secs) *[==>2648.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 18088, NGC 243+178-210 (18), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC 243+178-210 (18)) 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.

Fixed Targets

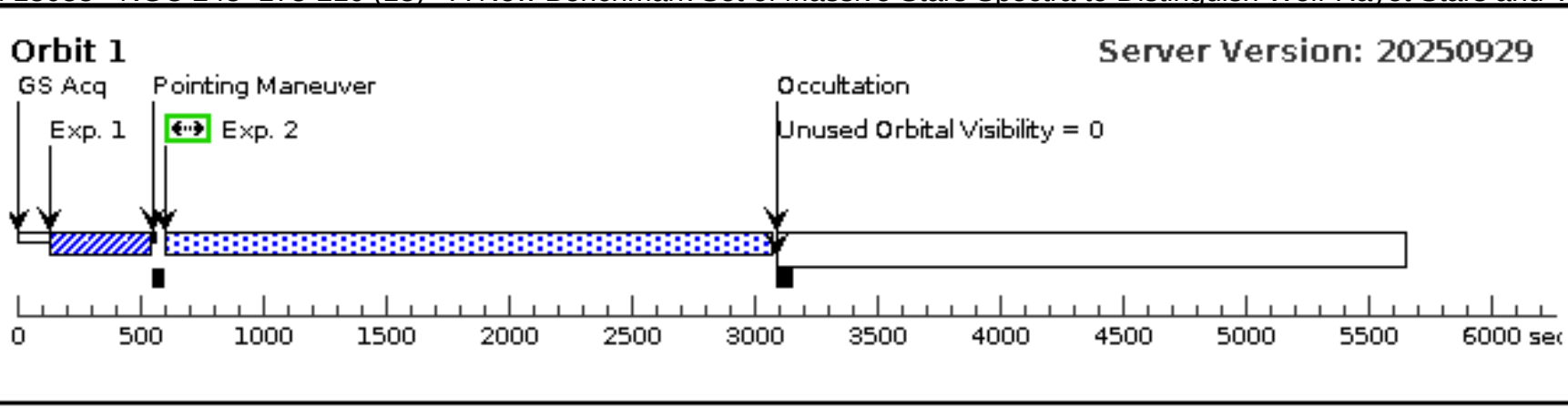
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	NGC2403+178-210	RA: 07 36 49.2272 (114.2051133d) Dec: +65 36 51.74 (65.61437d) Equinox: J2000		V=7.77 FUV = 16.7, NUV = 18.17	Reference Frame: ICRS

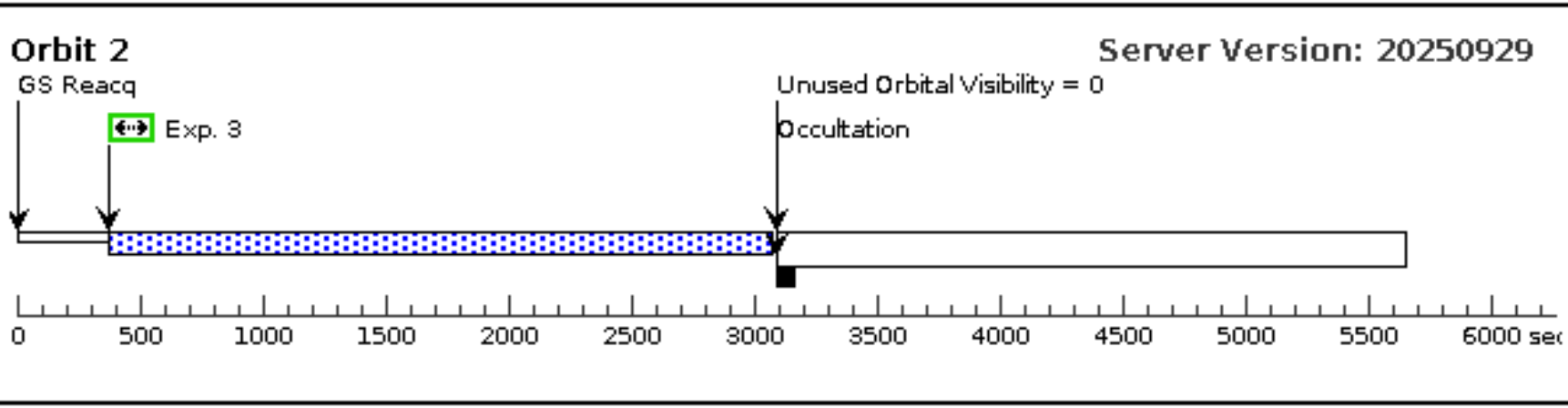
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

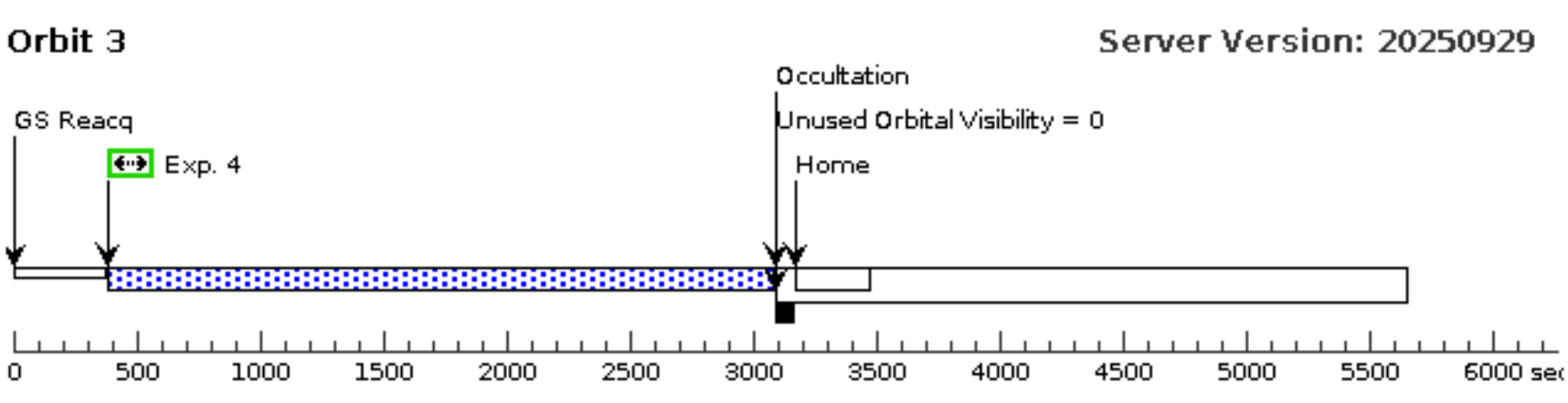
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026345)	(12) NGC2403+178-210	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				50 Secs (50 Secs) *[==>]*	***[1]***
2	(2026394)	(12) NGC2403+178-210	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=4218; FLASH=YES; FP-POS=3			2000 Secs (2263 Secs) *[==>2263.0 Secs]*	***[1]***
3	(2026394)	(12) NGC2403+178-210	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=4218; FLASH=YES; FP-POS=4			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	***[2]***
4	(2026394)	(12) NGC2403+178-210	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=4218; FLASH=YES; FP-POS=4			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 18088, H949 (19), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

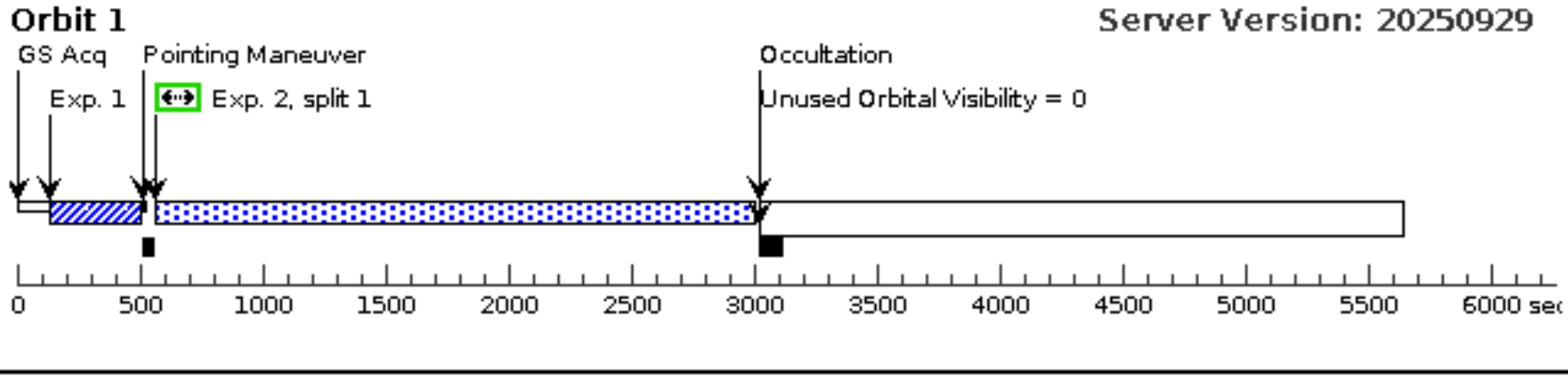
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	H949	RA: 14 03 27.6630 (210.8652625d) Dec: +54 18 46.62 (54.31295d) Equinox: J2000		V=7.77 FUV = 15.6, NUV = 17.54	Reference Frame: ICRS

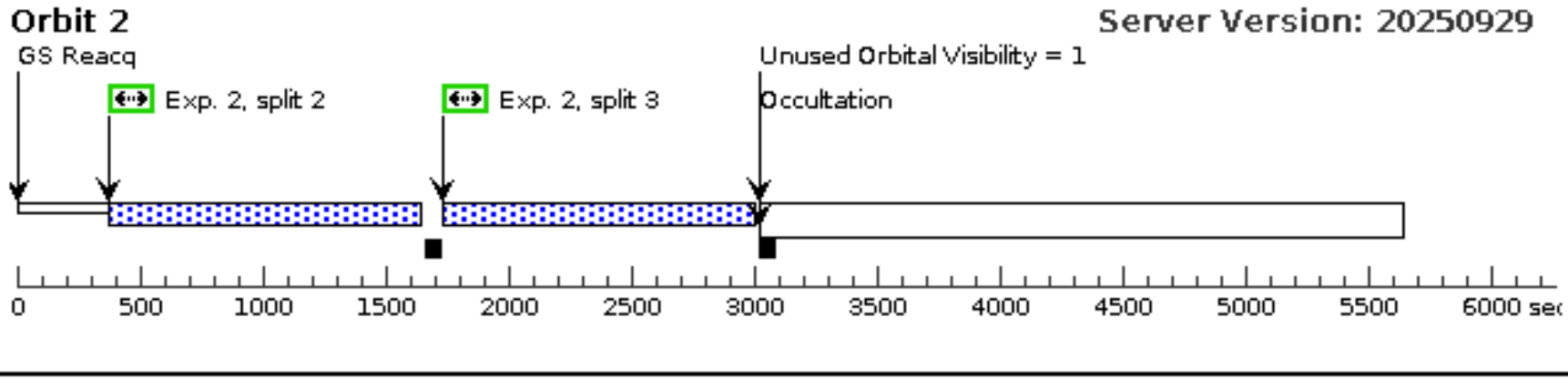
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

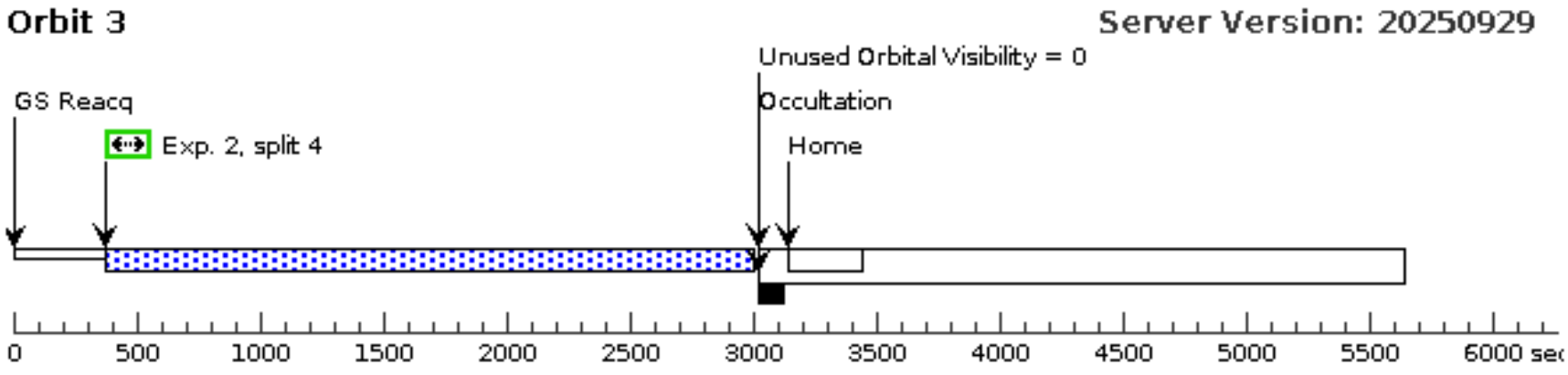
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026346)	(13) H949	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs (30 Secs)	
								[==>]	***[1]***
2	(2026395)	(13) H949	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=2706; FLASH=YES; FP-POS=ALL			2000 Secs (7257 Secs)	
								[==>2237.0 Secs (Split 1)]	***[1]***
								[==>1219.0 Secs (Split 2)] *[==>1219.0 Secs (Split 3)]*	***[2]***
								[==>2582.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 18088, NGC 2403-14+42 (20), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC 2403-14+42 (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.

Fixed Targets

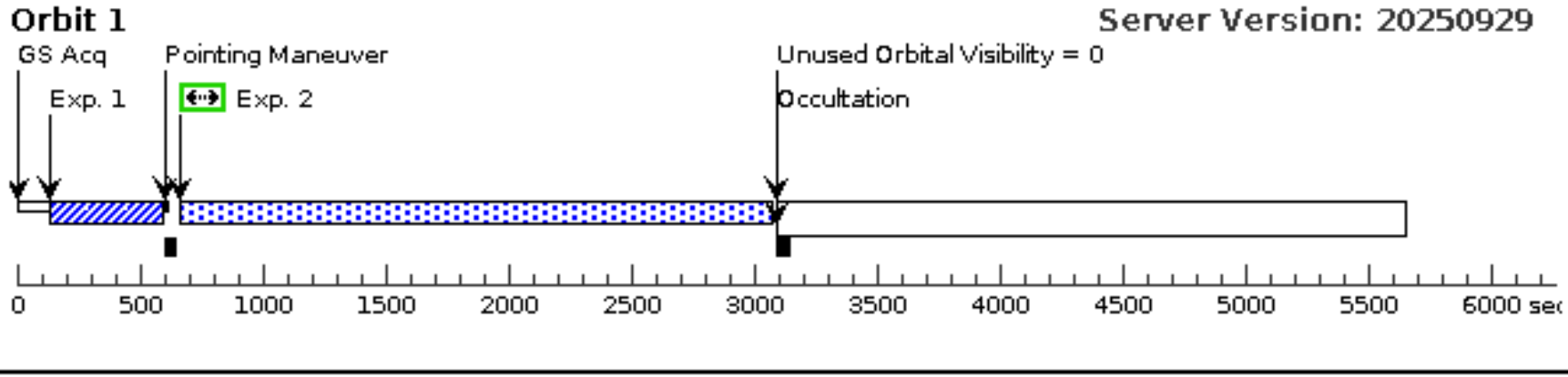
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	NGC2403-14+42	RA: 07 37 23.9808 (114.3499200d) Dec: +65 35 43.06 (65.59529d) Equinox: J2000		V=7.77 FUV = 17.9, NUV = 18.67	Reference Frame: ICRS

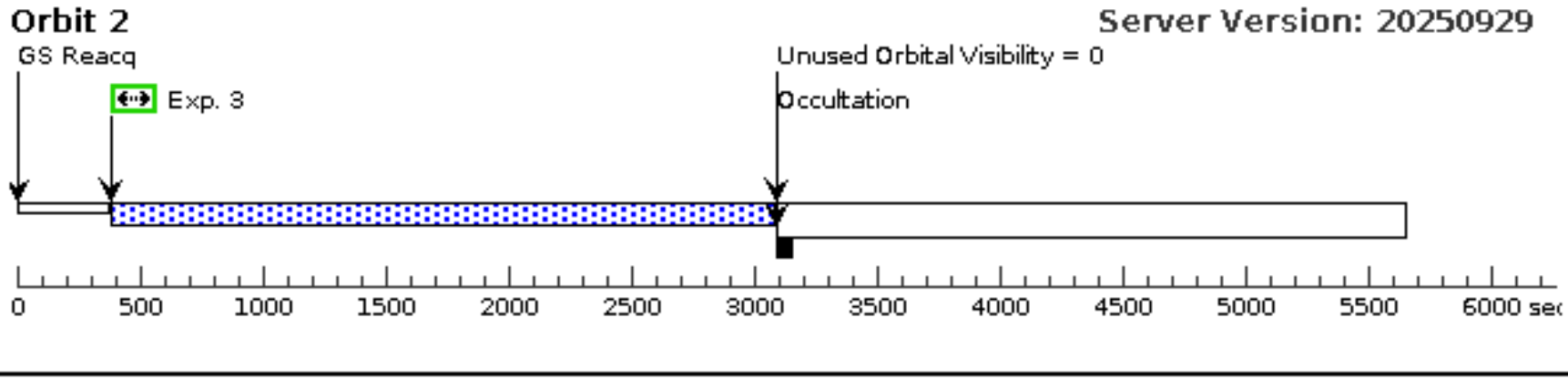
Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

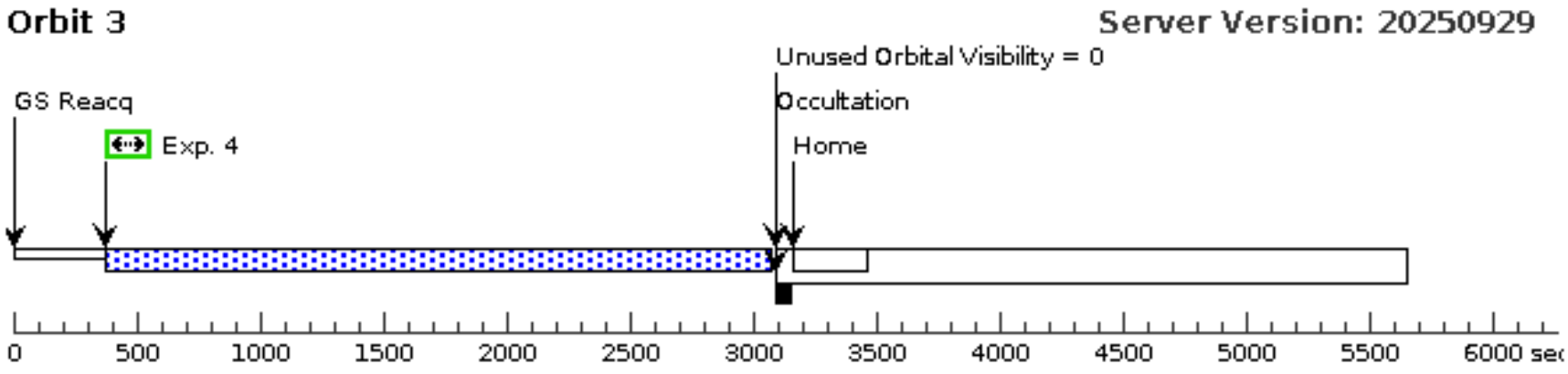
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026347)	(14) NGC2403-14+42	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				78 Secs (78 Secs) *[==>]*	***[1]***
2	(2026398)	(14) NGC2403-14+42	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=5717; FLASH=YES; FP-POS=1			2000 Secs (2207 Secs) *[==>2207.0 Secs]*	***[1]***
3	(2026398)	(14) NGC2403-14+42	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=5717; FLASH=YES; FP-POS=1			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	***[2]***
4	(2026398)	(14) NGC2403-14+42	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=5717; FLASH=YES; FP-POS=2			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	***[3]***

Orbit Structure







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Proposal 18088, NGC 2403-14+42 (21), implementation Tue Dec 30 21:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC 2403-14+42 (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.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	NGC2403-14+42	RA: 07 37 23.9808 (114.3499200d) Dec: +65 35 43.06 (65.59529d) Equinox: J2000		V=7.77 FUV = 17.9, NUV = 18.67	Reference Frame: ICRS

Comments:
Category=EXT-MEDIUM
Description=[HII REGION]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(2026347)	(14) NGC2403-14+42	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				78 Secs (78 Secs) *[==>]*	***[1]***
2	(2026398)	(14) NGC2403-14+42	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=5717; FLASH=YES; FP-POS=3			2000 Secs (2207 Secs) *[==>2207.0 Secs]*	***[1]***
3	(2026398)	(14) NGC2403-14+42	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=5717; FLASH=YES; FP-POS=4			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	***[2]***
4	(2026398)	(14) NGC2403-14+42	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=5717; FLASH=YES; FP-POS=4			2600 Secs (2648 Secs) *[==>2648.0 Secs]*	***[3]***

Orbit Structure