16678 - Far-UV spectroscopy of 22 early-type galaxies: testing for IMF variation and a legacy dataset

Cycle: 29, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
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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) NGC-1399 (23) NGC-1399-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:23.0	yes
02	(24) NGC-1404-STAR (25) NGC-1404	COS/FUV COS/NUV	2	29-Aug-2022 08:00:24.0	yes
03	(26) NGC-1453 (27) NGC-1453-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:24.0	yes
04	(28) NGC-1600-STAR (29) NGC-1600	COS/FUV COS/NUV	2	29-Aug-2022 08:00:25.0	yes
05	(30) NGC-2699 (31) NGC-2699-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:26.0	yes
06	(32) NGC-3115 (33) NGC-3115-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:27.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
07	(34) NGC-3384 (35) NGC-3384-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:27.0	yes
57	(34) NGC-3384 (35) NGC-3384-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:28.0	yes
08	(36) NGC-3608 (37) NGC-3608-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:29.0	yes
09	(38) NGC-3998 (39) NGC-3998-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:30.0	yes
10	(40) NGC-4262 (41) NGC-4262-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:30.0	yes
22	(64) NGC-4270 (65) NGC-4270-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:31.0	yes
11	(42) NGC-4342 (43) NGC-4342-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:32.0	yes
12	(44) M-85 (45) M-85-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:33.0	yes
59	(44) M-85 (45) M-85-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:33.0	yes
13	(46) NGC-4458 (47) NGC-4458-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:35.0	yes
60	(46) NGC-4458 (47) NGC-4458-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:35.0	yes
14	(48) NGC-4473 (49) NGC-4473-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:36.0	yes
15	(50) NGC-4564 (51) NGC-4564-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:37.0	yes
58	(50) NGC-4564 (51) NGC-4564-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:38.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
16	(52) NGC-4570 (53) NGC-4570-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:38.0	yes
17	(54) M-59 (55) M-59-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:39.0	yes
18	(56) M-60 (57) M-60-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:40.0	yes
19	(58) NGC-4660 (59) NGC-4660-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:41.0	yes
20	(60) NGC-5308 (61) NGC-5308-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:41.0	yes
21	(62) ESO325-G004 (63) ESO325-G004-STAR	COS/FUV COS/NUV	2	29-Aug-2022 08:00:42.0	yes

52 Total Orbits Used

ABSTRACT

The question whether the stellar initial mass function (IMF) is universal or varies with galactic environment is one of the most vexing in all of astrophysics. In the past decade there has been a particular focus on the centers of massive early-type galaxies, as studies of gravity-sensitive absorption lines and kinematics have found evidence for an excess of low mass stars in these regions compared to the IMF of the Milky Way. We propose to test this hypothesis by measuring the average chromospheric activity of stars in the centers of 22 dust-free early-type galaxies spanning a wide range of masses, ages, abundances, and spectroscopically-derived IMFs. The chromospheres of M dwarfs are very active, as has been well-established in the context of the habitability of orbiting planets, and the average level of activity in a stellar population is a strong function of the prevalence of these stars. The dominant chromospheric emission line is Ly-alpha, which we can measure using the G130M grating of COS. If the IMF varies from galaxy to galaxy we expect to see a correlation between the strength of Ly-alpha and the strength of gravity-sensitive absorption features. The program uses the same instrumental setup as was used for observations of two early-type galaxies in Cycle 27, and an analysis of those observations shows that the measurements are feasible. The proposed spectra will have substantial long-term value beyond this primary aim. The Cycle 27 data appear to be the highest quality far-UV spectra of early-type galaxies ever taken, and the full sample will constitute a legacy spectroscopic dataset of HST that complements the many orbits of archival imaging of these galaxies.

OBSERVING DESCRIPTION

The goal of the program is to measure the Ly alpha emission line in 22 early-type galaxies.
The program builds on our Cycle 27 program 15852, which obtained the same information for 2 early-type galaxies.

We follow the same observing procedures as we used in 15852. The only difference is that 15852 obtained data with both G130M and G160M, in 2 + 2 orbits for each galaxy. Here we only obtain data in G130M, in 2 orbits.

Each visit has the following structure:

orbit 1: acquisition on offset star + blind offset + direct image on target + G130M exposure at 1291 Ang at FP-POS 3
orbit 2: G130M exposure at 1291 Ang at FP-POS 4

Brightness of the galaxies

The program aims to measure the faint Ly alpha line, but for the direct imaging and also for the expected continuum emission in the spectra it is important to have an approximate estimate of the continuum brightness. We calculated these from GALEX FUV and NUV data. The average brightness per square arcsec, which is needed in the ETC, is fairly constant in this diverse sample. As explained in phase 1, the reason is that intrinsically brighter galaxies tend to have shallower ("cored") surface brightness profiles, and intrinsically fainter galaxies tend to have steeper ("cuspy") profiles. As a result, we estimate that the average surface brightness within the central 0.4" will be fairly constant across the sample, at ~22.5 mag in the NUV. This means that we are not anywhere near bright source limits, even if it is assumed that the light distribution within 0.4" is a point source, and for simplicity we used 22.5 mag in the ETC calculation for both the 300s direct images and the spectroscopic observations.

Brightness of the Ly alpha line

This is estimated to be ~1e-15; this is discussed in the Phase 1 proposal (and measured for the two early-type galaxies of the Cycle 27 program). We

are not near bright limits.

Acquisition

The targets are too faint for a direct acquisition, and offset stars are used. The magnitudes of the stars were measured from GALEX NUV images. Exposure times were determined with the ETC. For most targets we used a S/N=30 criterion and MIRRORA. In some cases the stars are so faint that the S/N=30 criterion leads to very long exposure times for the individual acquisition frames (of 5 minutes or more). In these cases a S/N=20 criterion was used; this applies to: NGC1453, NGC3608, NGC4262, NGC4270, NGC4342, NGC4570, NGC4660.

We note that for one galaxy, NGC4262, the offset star is so faint that 450s exposures are needed to get a S/N of 20. As two exposures are obtained in the acquisition process, this takes up a large chunk of the first orbit.

In two other cases the offset star is too bright for MIRRORA as the count rate gets close to 50 cts/s: for NGC1404 and M85 MIRRORB was used instead.
With these choices in all cases the maximum count rate is now ~5 cnts/s or less.

The coordinates of the offset stars were obtained from Gaia and are extremely accurate. The offsets to the galaxies were determined from existing HST imaging in the cases where both the offset star and the galaxy are within a single existing HST observation. In cases where the offset star is not covered by existing HST data, 2MASS was used for the galaxy coordinates and the offset was determined from the difference between the Gaia coordinates of the star and the 2MASS coordinates of the galaxy. These are on the same system to ~0.2" or better; we verified this. In all cases the proper motions of the stars are negligible.

Direct images on target

After slewing to the science targets a short (300s) imaging exposure will be obtained to verify the location of the galaxy. As we do not know the exact brightness distribution of the galaxies on sub-arcsec scales it is difficult to estimate what, exactly, the S/N ratio will be. We assume that the average AB surface brightness within a 0.4" aperture is about ~22.5 mag (see above). In 300s this gives a S/N ratio within this aperture of 20,

sufficient to determine whether it is properly centered (and whether it is there!). If the light is more spread out, the S/N ratio will be lower, and if it is more peaked, the S/N ratio will be higher, but in either case we should be able to see both galaxies quite clearly if we are in the right place.
Following section 6.1 in the Instrument Handbook, FLASH=YES was selected to track the drift of the OSMs.
Again, for our Cycle 27 program this worked beautifully: we have images with a S/N ratio of ~1 per pixel and ~20 within 0.4" of both galaxies, and these enabled us to verify that we were properly centered.

Wavelength setting

We use only a single setting for G130M (1291). With this setting Ly alpha is well covered and away from gaps.

FP-POS settings

In the context of COS2025 we can only use FP-POS 3 and FP-POS 4 with the G130M/1291 setting. We use position 3 for the first exposure and position 4 for the second.

Visit

Proposal 16678, NGC1399 (01), scheduled Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC1399 (01)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC1399 (01))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC1399 (01))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

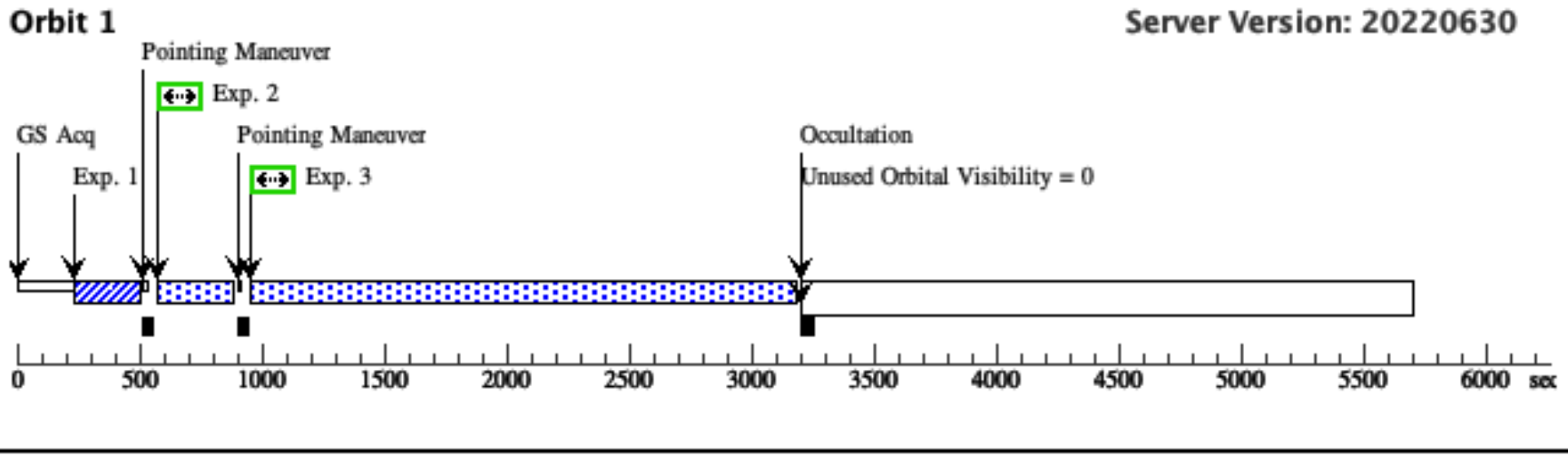
Fixed Targets

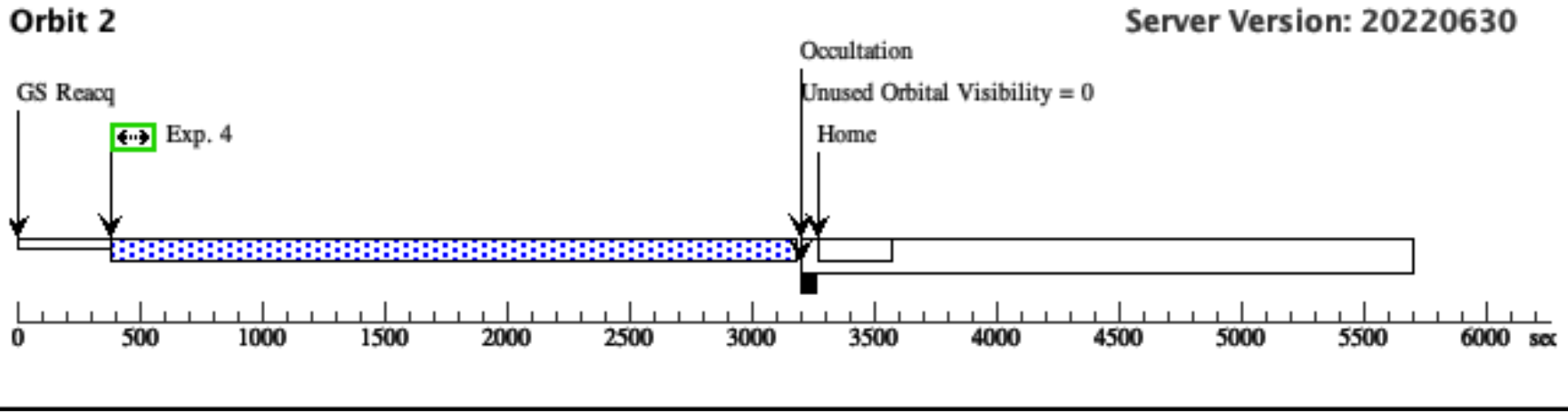
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC-1399	Offset from NGC-1399-STAR RA Offset: 0.00452 Degrees Dec Offset: 0.00391 Degrees		V=10	Offset Position (NGC-1399)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(23)	NGC-1399-STAR	RA: 03 38 27.9407 (54.6164196d) Dec: -35 27 15.71 (-35.45436d) Equinox: J2000	Proper Motion RA: 2.3 mas/yr Proper Motion Dec: 3.5 mas/yr Parallax: 0.0003" Epoch of Position: 2015.5	V=15.9 20.23 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522613)	(23) NGC-1399-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				26 Secs (26 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(1) NGC-1399	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(1) NGC-1399	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (2058 Secs) *[==>2058.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(1) NGC-1399	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2744 Secs) *[==>2744.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC1404 (02), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC1404 (02)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC1404 (02))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC1404 (02))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

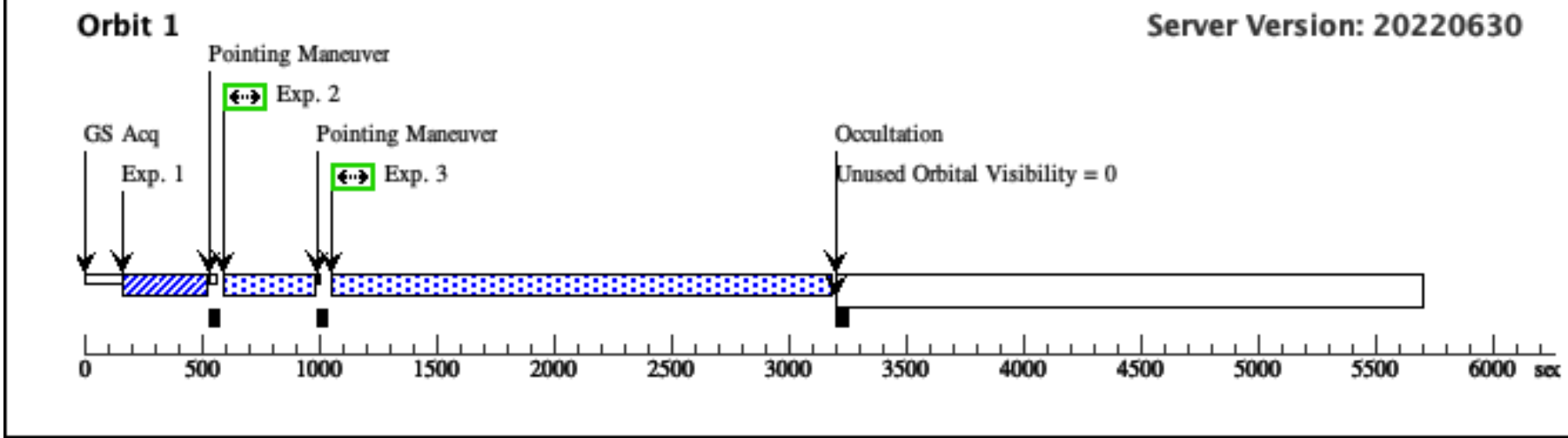
Fixed Targets

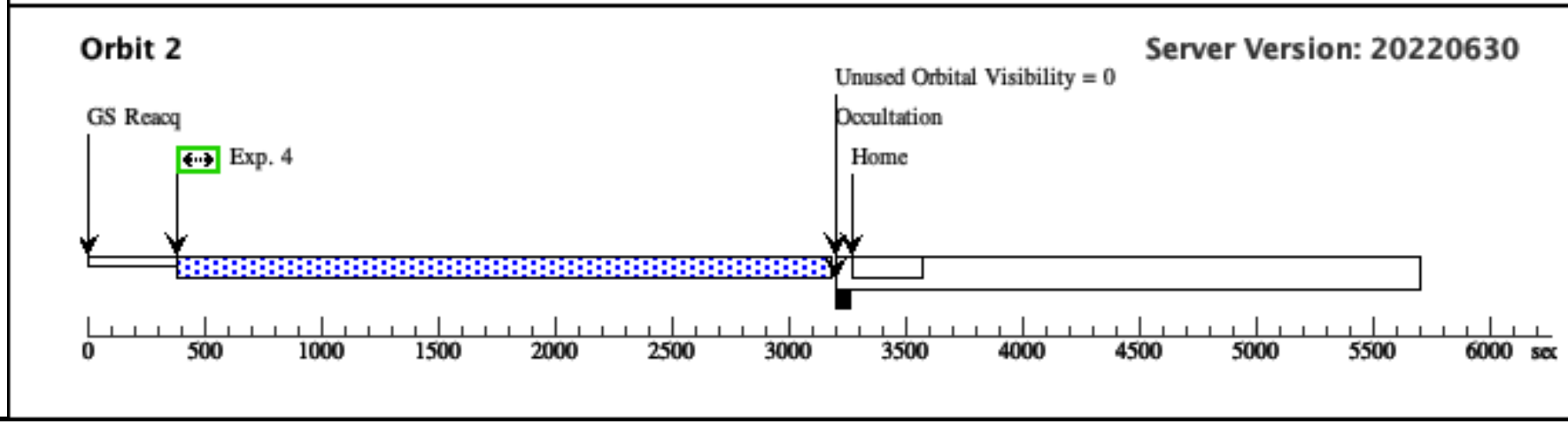
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(24)	NGC-1404-STAR	RA: 03 38 55.0878 (54.7295325d) Dec: -35 36 5.44 (-35.60151d) Equinox: J2000	Proper Motion RA: 22.5 mas/yr Proper Motion Dec: 8.2 mas/yr Parallax: 0.0017" Epoch of Position: 2015.5	V=12.05 17.28 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					
(25)	NGC-1404	Offset from NGC-1404-STAR RA Offset: -0.01308 Degrees Dec Offset: 0.00734 Degrees		V=10	Offset Position (NGC-1404)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522617)	(24) NGC-1404-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				35 Secs (35 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(25) NGC-1404	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(25) NGC-1404	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1963 Secs) *[==>1963.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(25) NGC-1404	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2744 Secs) *[==>2744.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC1453 (03), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: Faint acquisition star. Used S/N=20 criterion.

Diagnostics

(NGC1453 (03)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC1453 (03))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC1453 (03))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

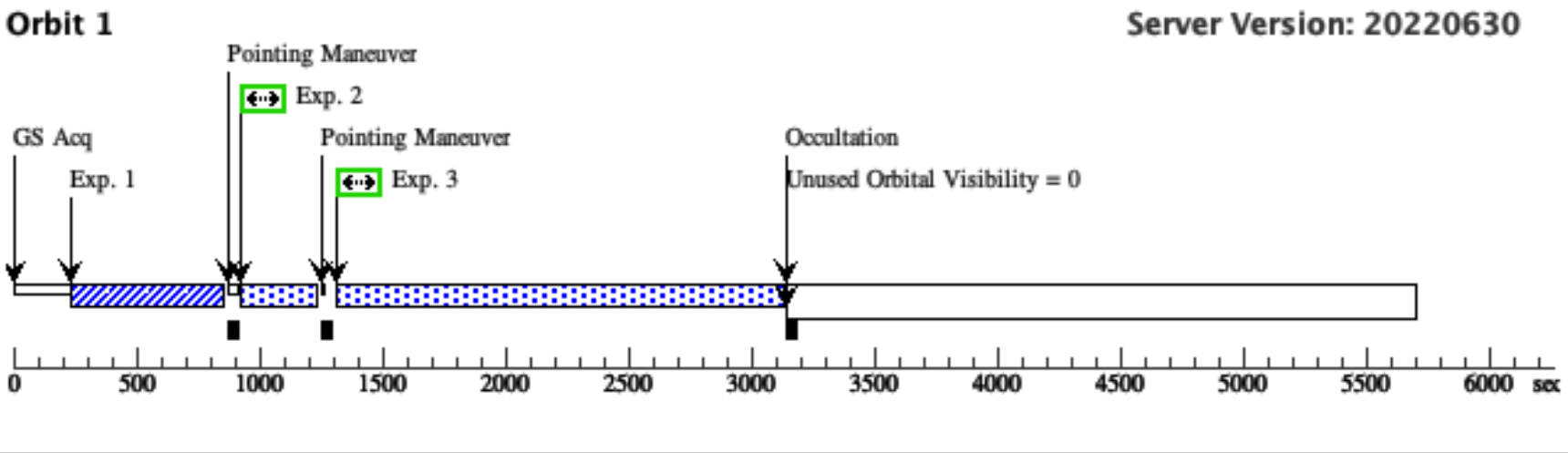
Fixed Targets

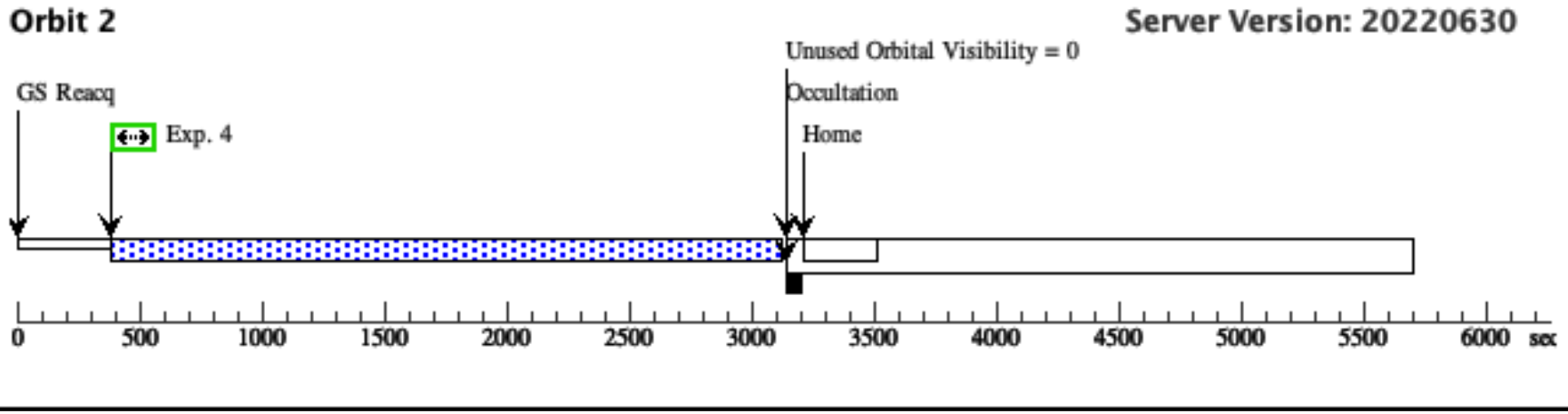
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(26)	NGC-1453	Offset from NGC-1453-STAR RA Offset: -0.0141 Degrees Dec Offset: 0.013455 Degrees		V=10	Offset Position (NGC-1453)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(27)	NGC-1453-STAR	RA: 03 46 30.6176 (56.6275733d) Dec: -03 58 56.22 (-3.98228d) Equinox: J2000	Proper Motion RA: 0 mas/yr Proper Motion Dec: 0 mas/yr Parallax: 0" Epoch of Position: 2015.5	V=20.30 23.27 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522680)	(27) NGC-1453-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				202 Secs (202 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(26) NGC-1453	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(26) NGC-1453	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1648 Secs) *[==>1648.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(26) NGC-1453	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2686 Secs) *[==>2686.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC1600 (04), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC1600 (04)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC1600 (04))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC1600 (04))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

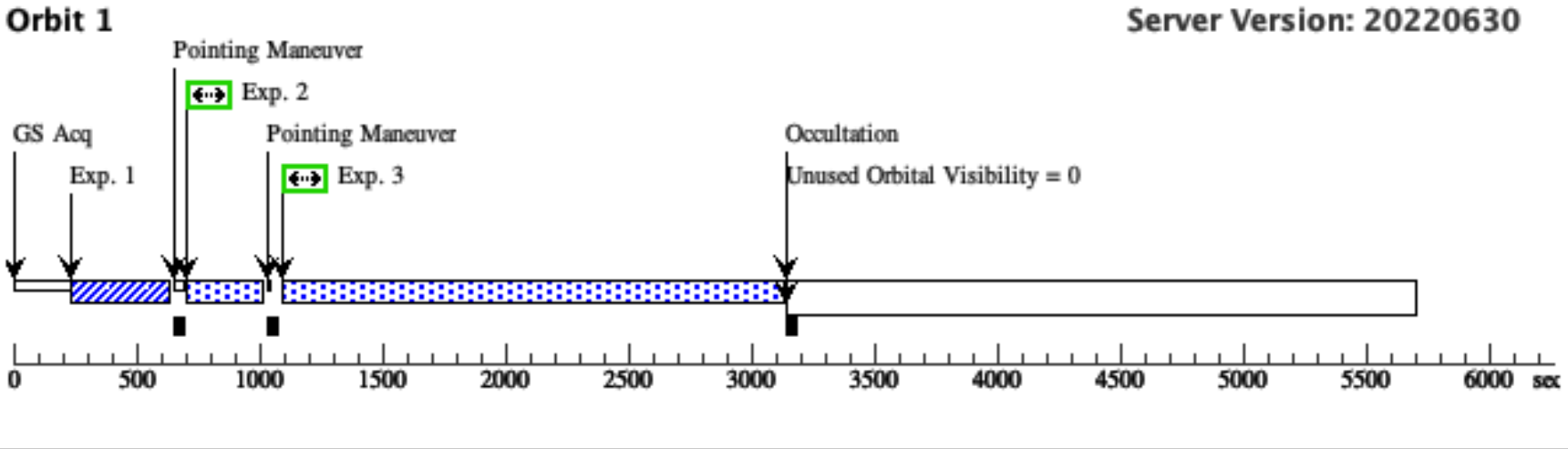
Fixed Targets

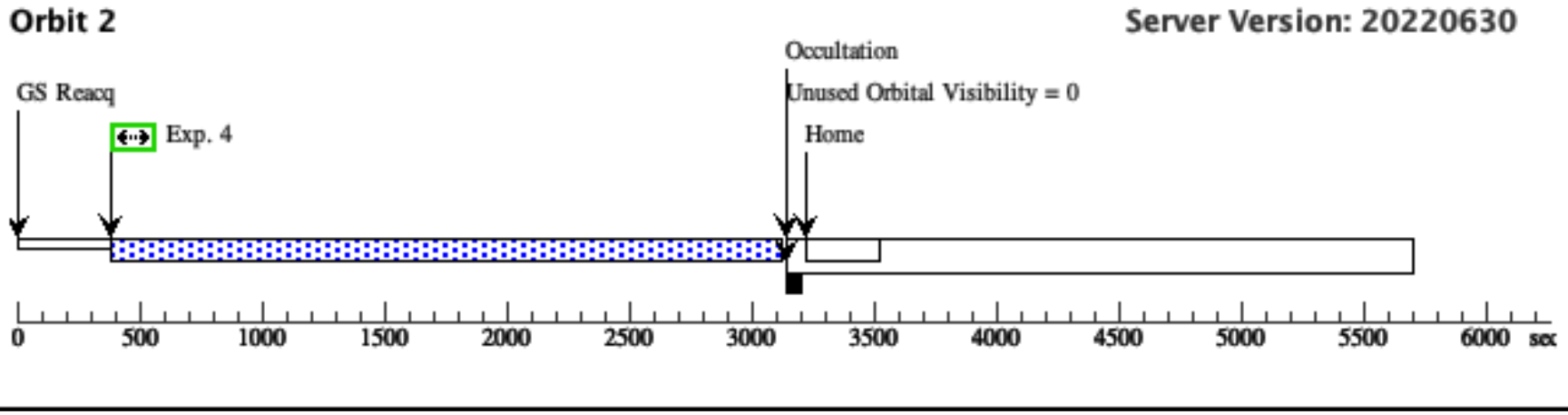
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(28)	NGC-1600-STAR	RA: 04 31 38.8941 (67.9120587d) Dec: -05 06 39.18 (-5.11088d) Equinox: J2000	Proper Motion RA: 5.0 mas/yr Proper Motion Dec: -3.7 mas/yr Parallax: 0.0003" Epoch of Position: 2015.5	V=16.26 21.58 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					
(29)	NGC-1600	Offset from NGC-1600-STAR RA Offset: 0.00411 Degrees Dec Offset: 0.024651 Degrees		V=10	Offset Position (NGC-1600)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522734)	(28) NGC-1600-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				92 Secs (92 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(29) NGC-1600	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(29) NGC-1600	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1869 Secs) *[==>1869.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(29) NGC-1600	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2689 Secs) *[==>2689.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC2699 (05), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC2699 (05)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC2699 (05))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC2699 (05))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

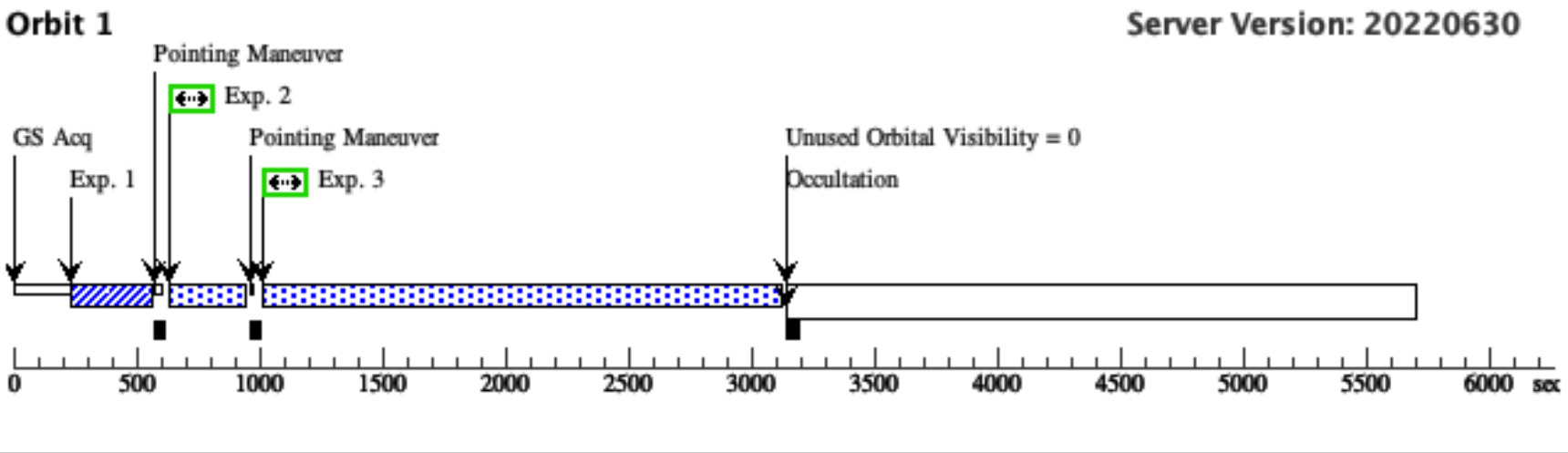
Fixed Targets

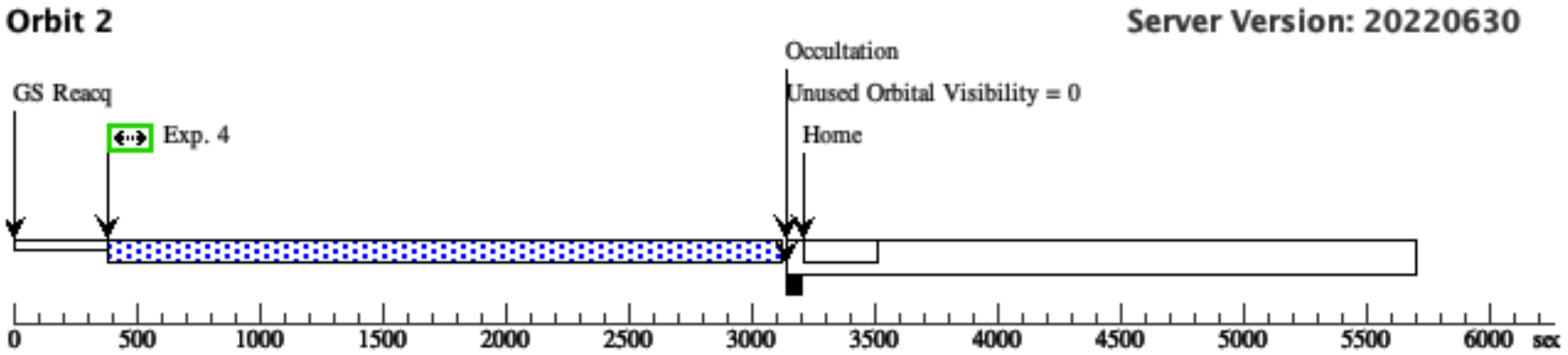
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(30)	NGC-2699	Offset from NGC-2699-STAR RA Offset: 0.0079 Degrees Dec Offset: 0.006482 Degrees		V=10	Offset Position (NGC-2699)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(31)	NGC-2699-STAR	RA: 08 55 46.8799 (133.9453329d) Dec: -03 08 2.84 (-3.13412d) Equinox: J2000	Proper Motion RA: -3.3 mas/yr Proper Motion Dec: 3.0 mas/yr Parallax: 0.0008" Epoch of Position: 2015.5	V=15.06 21.05 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522746)	(31) NGC-2699-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				56 Secs (56 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(30) NGC-2699	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(30) NGC-2699	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1940 Secs) *[==>1940.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(30) NGC-2699	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2686 Secs) *[==>2686.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC3115 (06), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC3115 (06)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC3115 (06))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC3115 (06))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

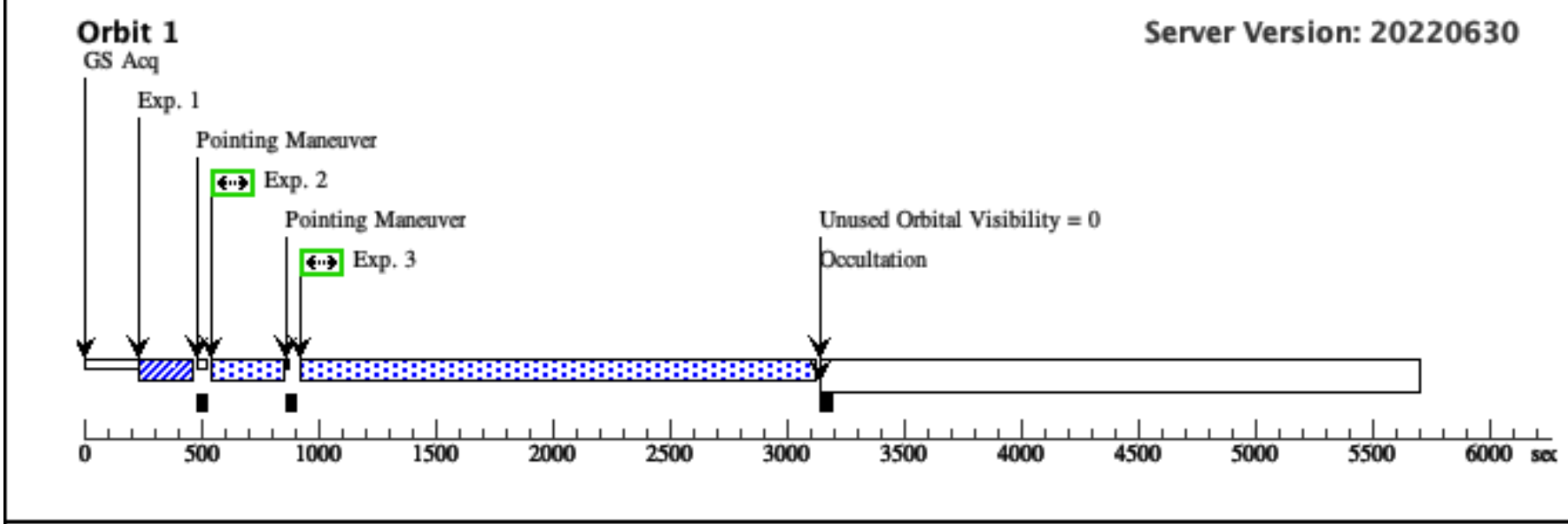
Fixed Targets

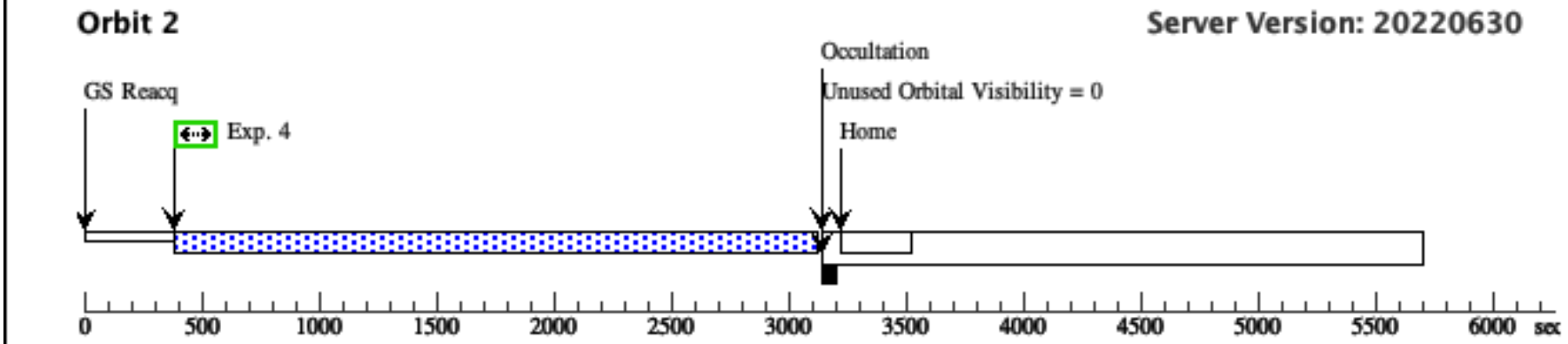
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(32)	NGC-3115	Offset from NGC-3115-STAR RA Offset: 0.003557 Degrees Dec Offset: 0.021912 Degrees		V=10	Offset Position (NGC-3115)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(33)	NGC-3115-STAR	RA: 10 05 13.0904 (151.3045433d) Dec: -07 44 25.79 (-7.74050d) Equinox: J2000	Proper Motion RA: -7.5 mas/yr Proper Motion Dec: 8.1 mas/yr Parallax: 0.0011" Epoch of Position: 2015.5	V=13.65 19.12 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522758)	(33) NGC-3115-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				10 Secs (10 Secs) *[==>]*	***[1]***
Comments: Maximum count rate = 13.3 in brightest pixel; 96 for 9x9 region. Bright but still well below maximum.									
2	(COS.im.1522614)	(32) NGC-3115	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	***[1]***
3	(COS.sp.1522615)	(32) NGC-3115	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (2035 Secs) *[==>2035.0 Secs]*	***[1]***
4	(COS.sp.1522615)	(32) NGC-3115	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2689 Secs) *[==>2689.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 16678, NGC3384 (07), failed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC3384 (07)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC3384 (07))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC3384 (07))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

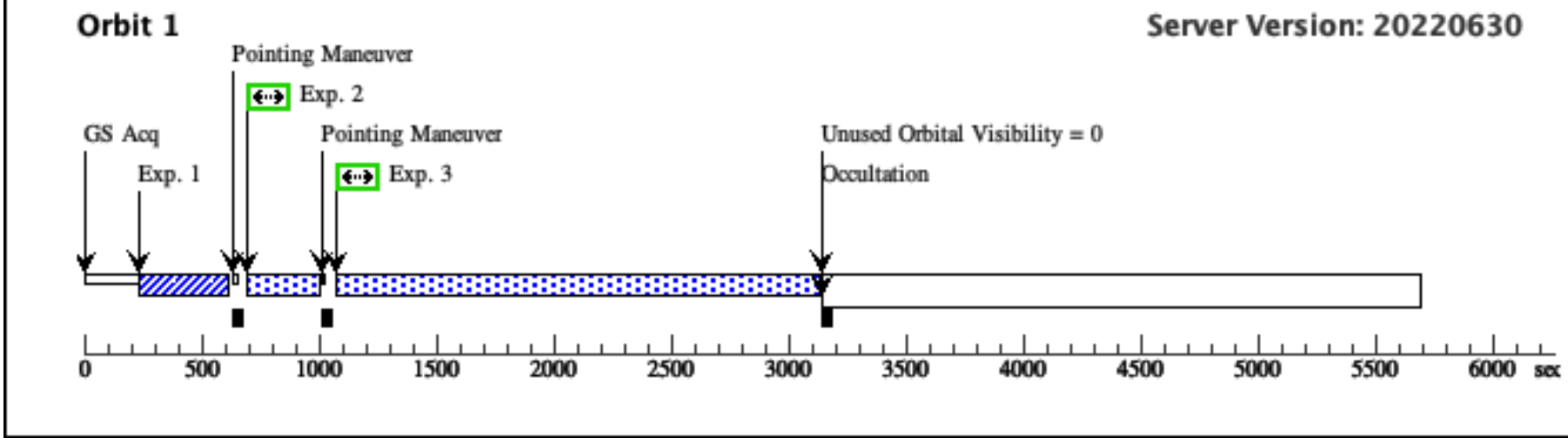
Fixed Targets

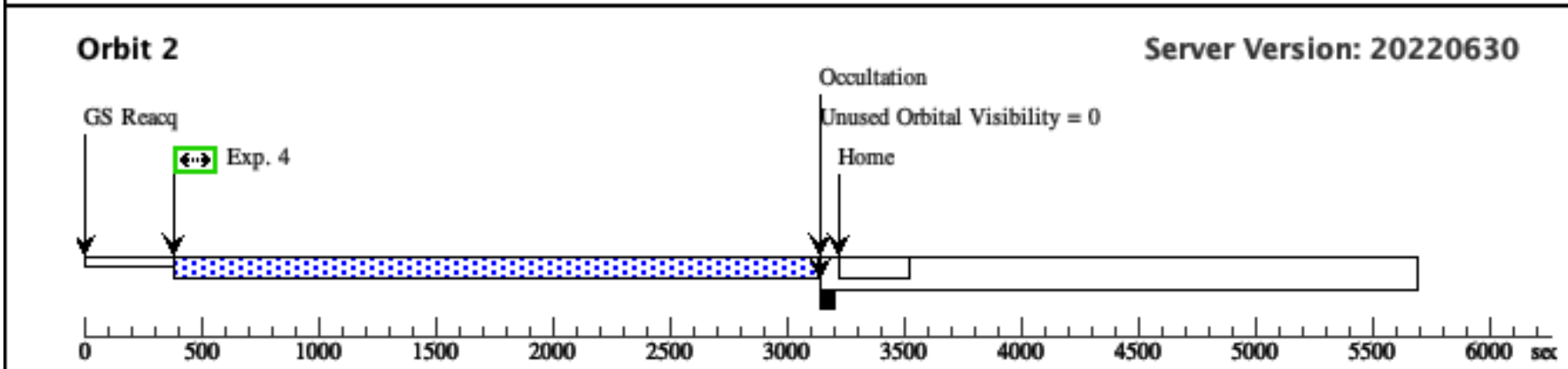
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(34)	NGC-3384	Offset from NGC-3384-STAR RA Offset: 0.006 Degrees Dec Offset: 0.00475 Degrees		V=10	Offset Position (NGC-3384)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(35)	NGC-3384-STAR	RA: 10 48 15.4311 (162.0642963d) Dec: +12 37 28.25 (12.62451d) Equinox: J2000	Proper Motion RA: 0.6 mas/yr Proper Motion Dec: -4.3 mas/yr Parallax: 0.00007" Epoch of Position: 2015.5	V=16.13 21.50 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522778)	(35) NGC-3384-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				85 Secs (85 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(34) NGC-3384	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(34) NGC-3384	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1889 Secs) *[==>1889.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(34) NGC-3384	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC3384 (57), scheduling Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: HOPR repeat of visit 07

Diagnostics

(NGC3384 (57)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC3384 (57))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC3384 (57))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

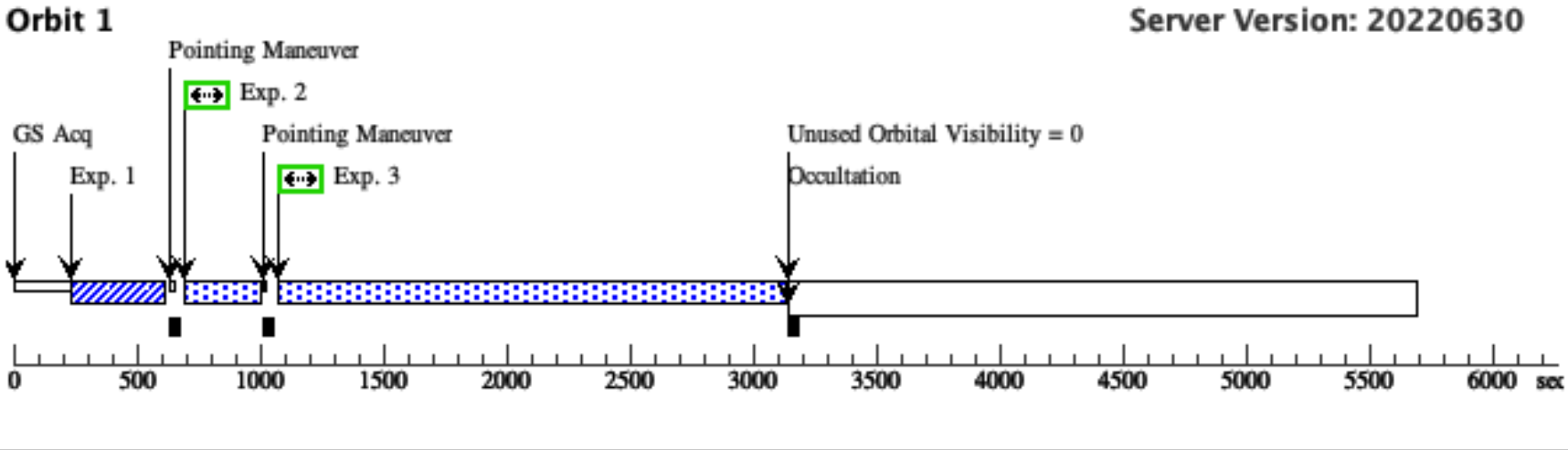
Fixed Targets

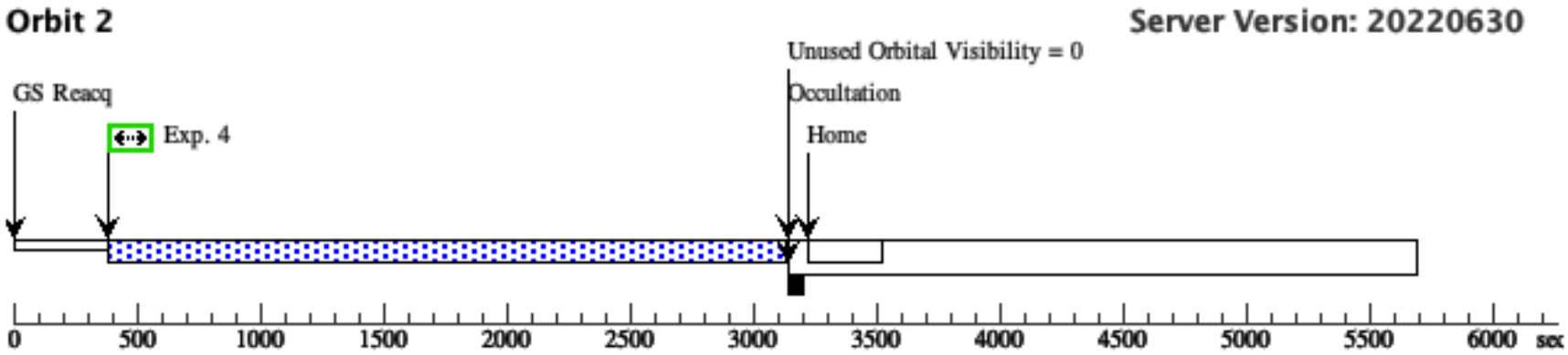
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(34)	NGC-3384	Offset from NGC-3384-STAR RA Offset: 0.006 Degrees Dec Offset: 0.00475 Degrees		V=10	Offset Position (NGC-3384)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(35)	NGC-3384-STAR	RA: 10 48 15.4311 (162.0642963d) Dec: +12 37 28.25 (12.62451d) Equinox: J2000	Proper Motion RA: 0.6 mas/yr Proper Motion Dec: -4.3 mas/yr Parallax: 0.00007" Epoch of Position: 2015.5	V=16.13 21.50 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522778)	(35) NGC-3384-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				85 Secs (85 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(34) NGC-3384	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(34) NGC-3384	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1889 Secs) *[==>1889.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(34) NGC-3384	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC3608 (08), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: Faint acquisition star. Used S/N=20 criterion.

Diagnostics

(NGC3608 (08)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC3608 (08))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC3608 (08))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

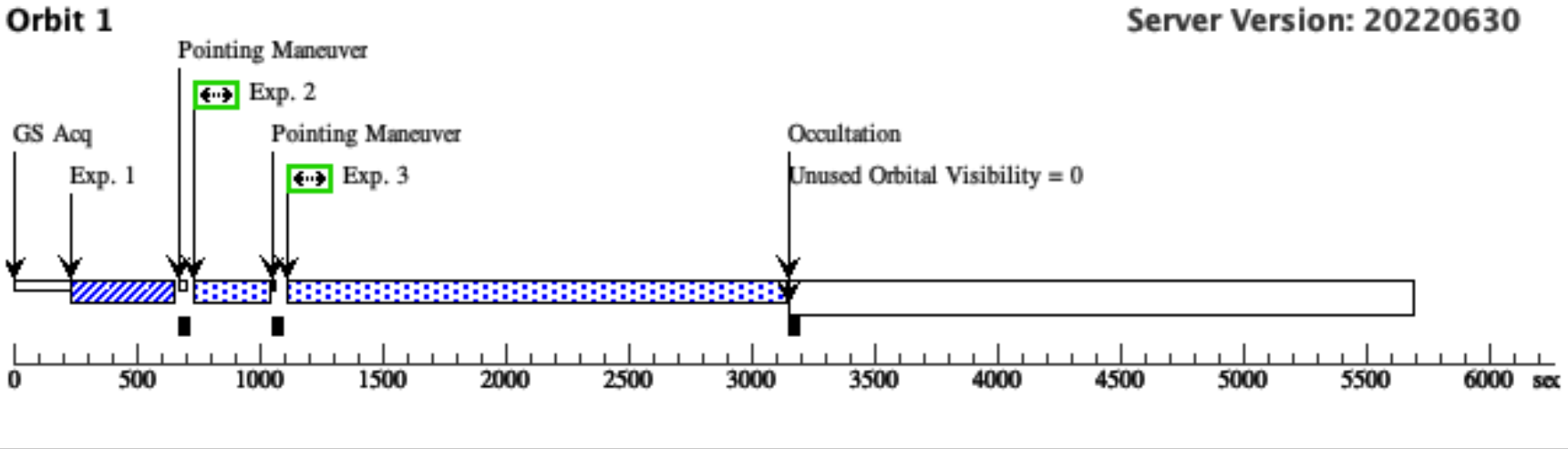
Fixed Targets

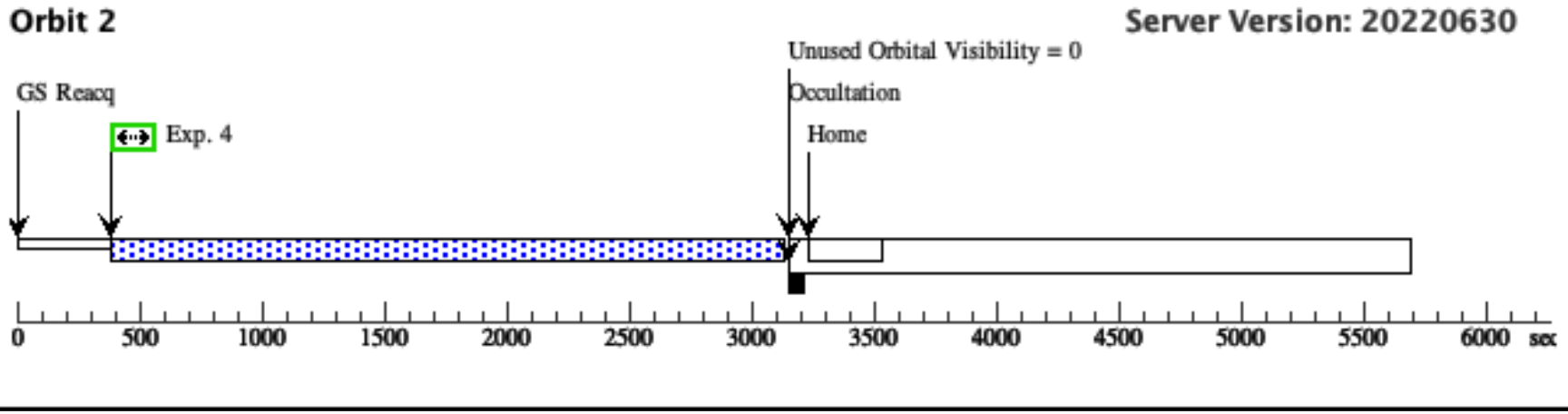
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(36)	NGC-3608	Offset from NGC-3608-STAR RA Offset: -0.009736 Degrees Dec Offset: 0.004801 Degrees		V=10	Offset Position (NGC-3608)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(37)	NGC-3608-STAR	RA: 11 17 1.2807 (169.2553362d) Dec: +18 08 37.96 (18.14388d) Equinox: J2000	Proper Motion RA: -5.3 mas/yr Proper Motion Dec: 3.8 mas/yr Parallax: 0.0005" Epoch of Position: 2015.5	V=16.89 22.58 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522885)	(37) NGC-3608-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				104 Secs (104 Secs) *[==>]*	***[1]***
2	(COS.im.1522614)	(36) NGC-3608	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	***[1]***
3	(COS.sp.1522615)	(36) NGC-3608	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1858 Secs) *[==>1858.0 Secs]*	***[1]***
4	(COS.sp.1522615)	(36) NGC-3608	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2700 Secs) *[==>2700.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 16678, NGC3998 (09), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC3998 (09)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC3998 (09))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC3998 (09))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

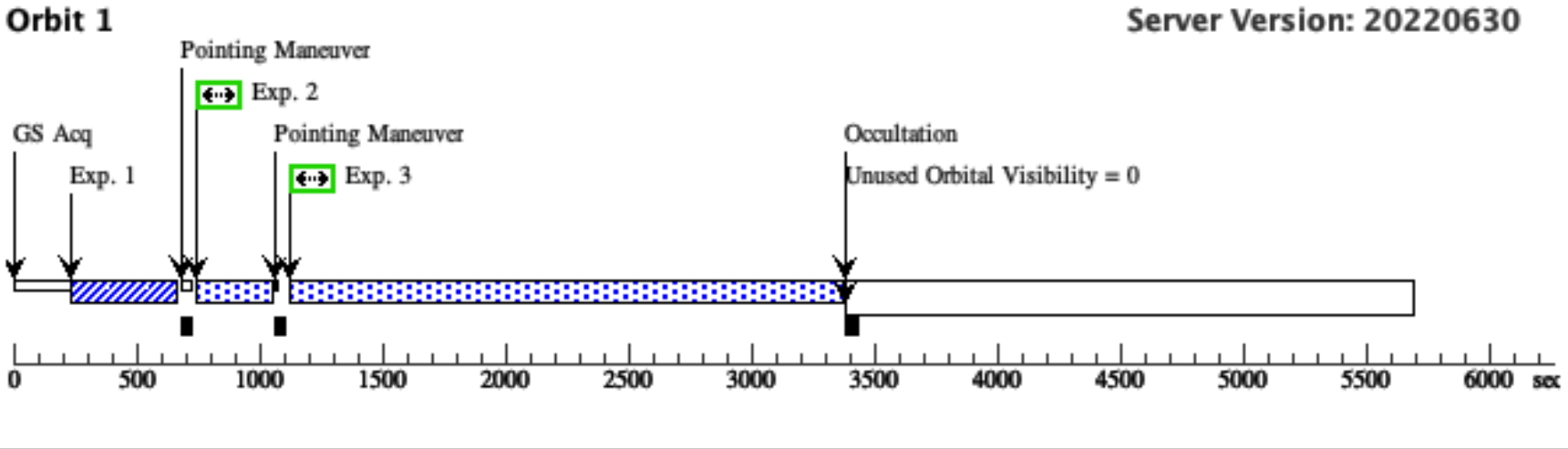
Fixed Targets

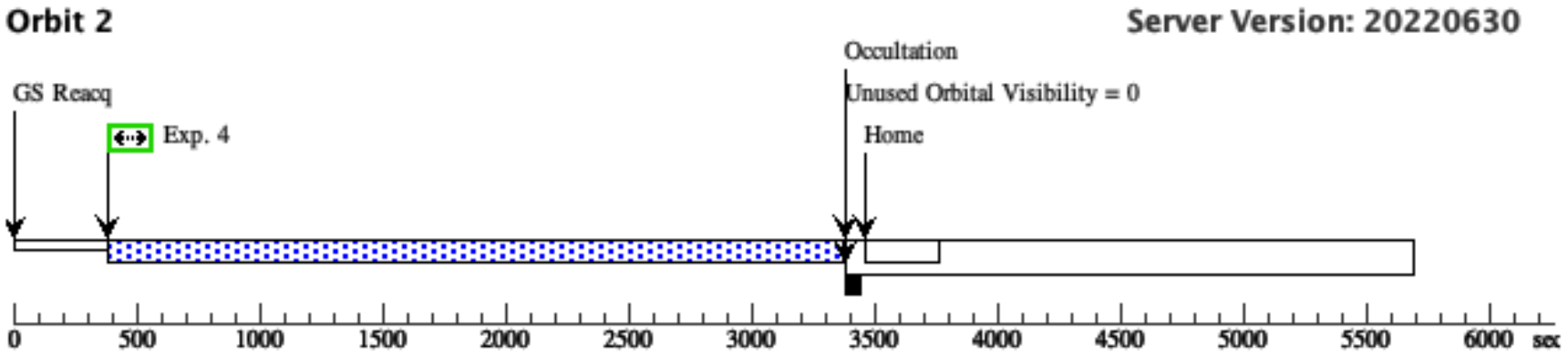
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(38)	NGC-3998	Offset from NGC-3998-STAR RA Offset: -0.031562 Degrees Dec Offset: -0.010406 Degrees		V=10	Offset Position (NGC-3998)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(39)	NGC-3998-STAR	RA: 11 58 3.7110 (179.5154625d) Dec: +55 27 50.17 (55.46394d) Equinox: J2000	Proper Motion RA: -5.7 mas/yr Proper Motion Dec: -11.4 mas/yr Parallax: 0.00006" Epoch of Position: 2015.5	V=18.63 21.77 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522890)	(39) NGC-3998-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				109 Secs (109 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(38) NGC-3998	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(38) NGC-3998	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (2081 Secs) *[==>2081.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(38) NGC-3998	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2933 Secs) *[==>2933.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC4262 (10), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: Faint acquisition star. Used S/N=20 criterion; nevertheless, very long acquisition time.

Diagnostics

(NGC4262 (10)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4262 (10))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4262 (10))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

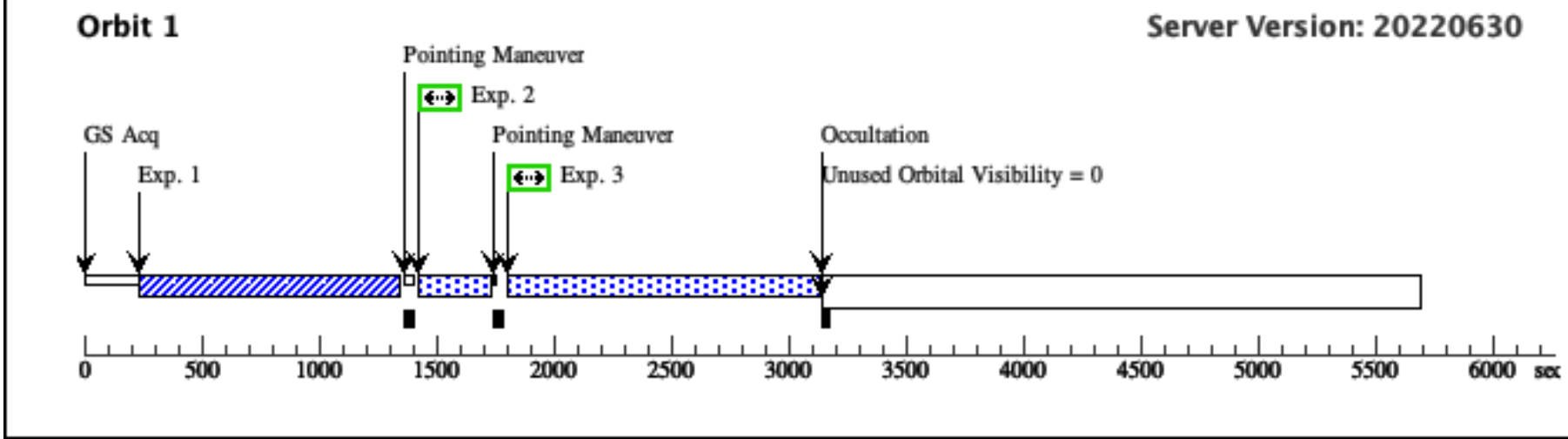
Fixed Targets

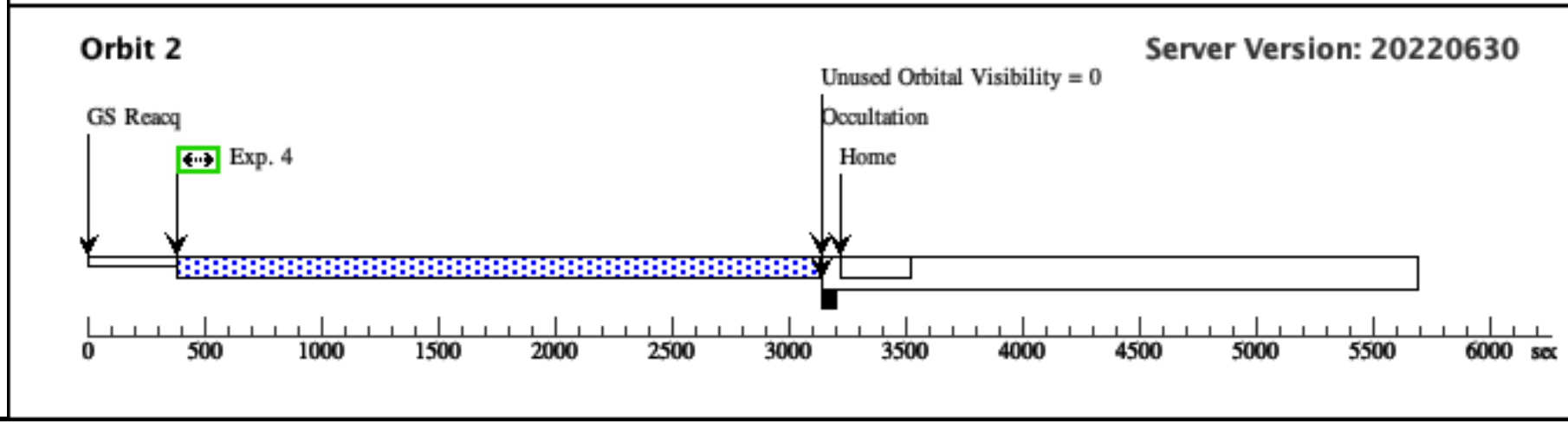
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(40)	NGC-4262	Offset from NGC-4262-STAR RA Offset: -0.0197 Degrees Dec Offset: -4.1E-4 Degrees		V=10	Offset Position (NGC-4262)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(41)	NGC-4262-STAR	RA: 12 19 35.3137 (184.8971404d) Dec: +14 52 40.81 (14.87800d) Equinox: J2000	Proper Motion RA: -6.1 mas/yr Proper Motion Dec: -13.6 mas/yr Parallax: 0.0005" Epoch of Position: 2015.5	V=18.89 24.08 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522896)	(41) NGC-4262-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				450 Secs (450 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(40) NGC-4262	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(40) NGC-4262	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1000 Secs (1159 Secs) *[==>1159.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(40) NGC-4262	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC4270 (22), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: Faint acquisition star. Used S/N=20 criterion.

Diagnostics

(NGC4270 (22)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4270 (22))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4270 (22))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

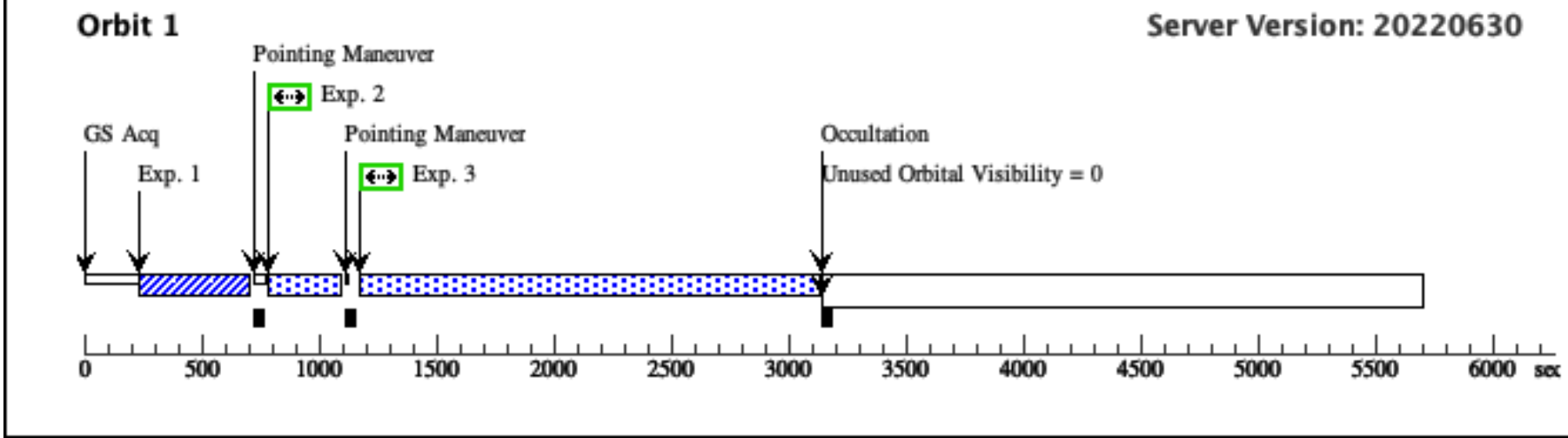
Fixed Targets

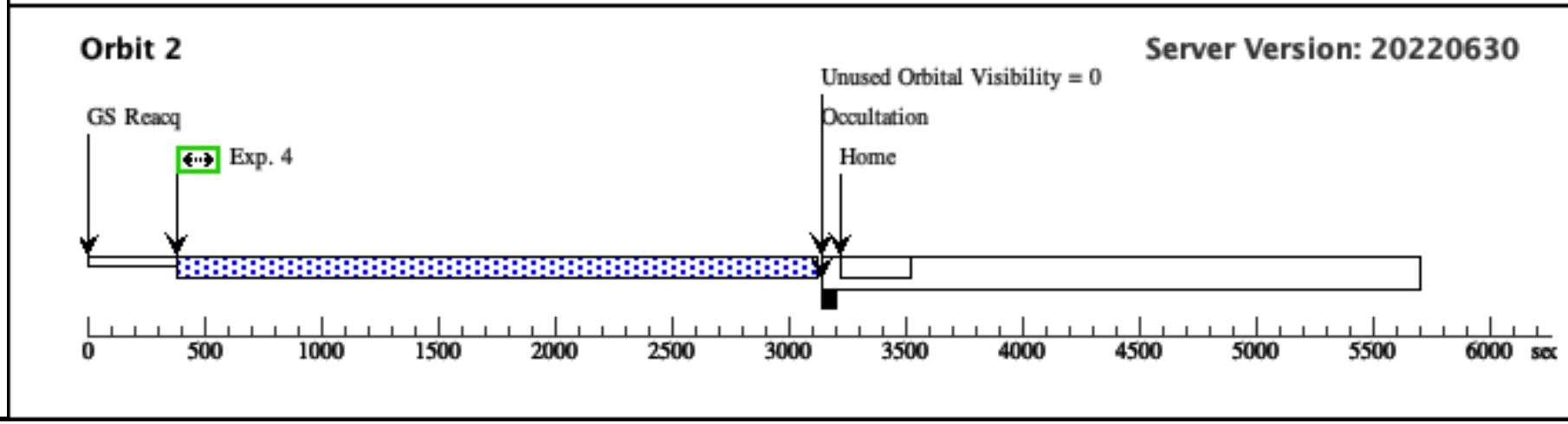
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(64)	NGC-4270	Offset from NGC-4270-STAR RA Offset: -0.011424 Degrees Dec Offset: -0.02496 Degrees		V=10	Offset Position (NGC-4270)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(65)	NGC-4270-STAR	RA: 12 19 52.2057 (184.9675237d) Dec: +05 29 18.21 (5.48839d) Equinox: J2000	Proper Motion RA: 0.3 mas/yr Proper Motion Dec: -4.1 mas/yr Parallax: 0.0001" Epoch of Position: 2015.5	V=19.26 22.58 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522907)	(65) NGC-4270-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				130 Secs (130 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(64) NGC-4270	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(64) NGC-4270	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1791 Secs) *[==>1791.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(64) NGC-4270	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2689 Secs) *[==>2689.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC4342 (11), completed Mon Aug 29 12:00:43 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: Faint acquisition star. Used S/N=20 criterion.

Diagnostics

(NGC4342 (11)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4342 (11))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4342 (11))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

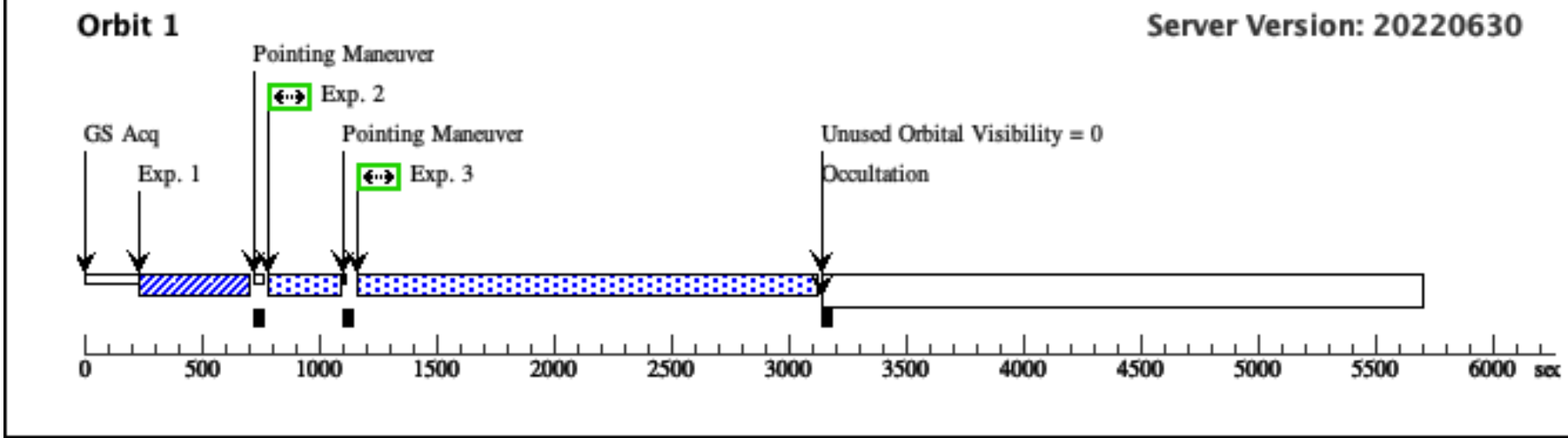
Fixed Targets

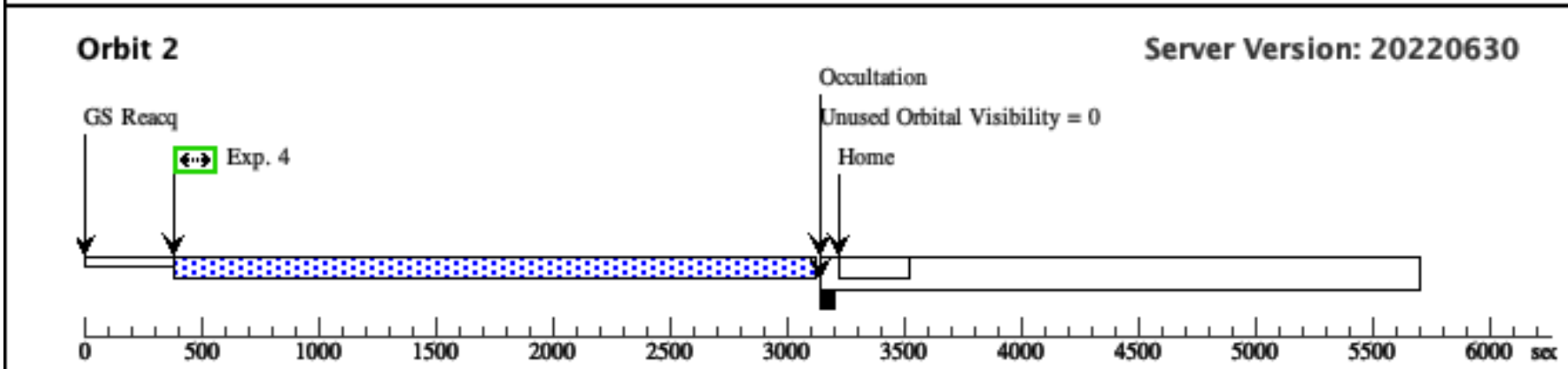
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(42)	NGC-4342	Offset from NGC-4342-STAR RA Offset: 0.016076 Degrees Dec Offset: -0.011165 Degrees		V=10	Offset Position (NGC-4342)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(43)	NGC-4342-STAR	RA: 12 23 35.1418 (185.8964242d) Dec: +07 03 54.72 (7.06520d) Equinox: J2000	Proper Motion RA: -2.0 mas/yr Proper Motion Dec: -2.2 mas/yr Parallax: 0.00001" Epoch of Position: 2015.5	V=19.89 22.82 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522907)	(43) NGC-4342-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				130 Secs (130 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(42) NGC-4342	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(42) NGC-4342	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1795 Secs) *[==>1795.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(42) NGC-4342	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2689 Secs) *[==>2689.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, M85 (12), failed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(M85 (12)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (M85 (12))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (M85 (12))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

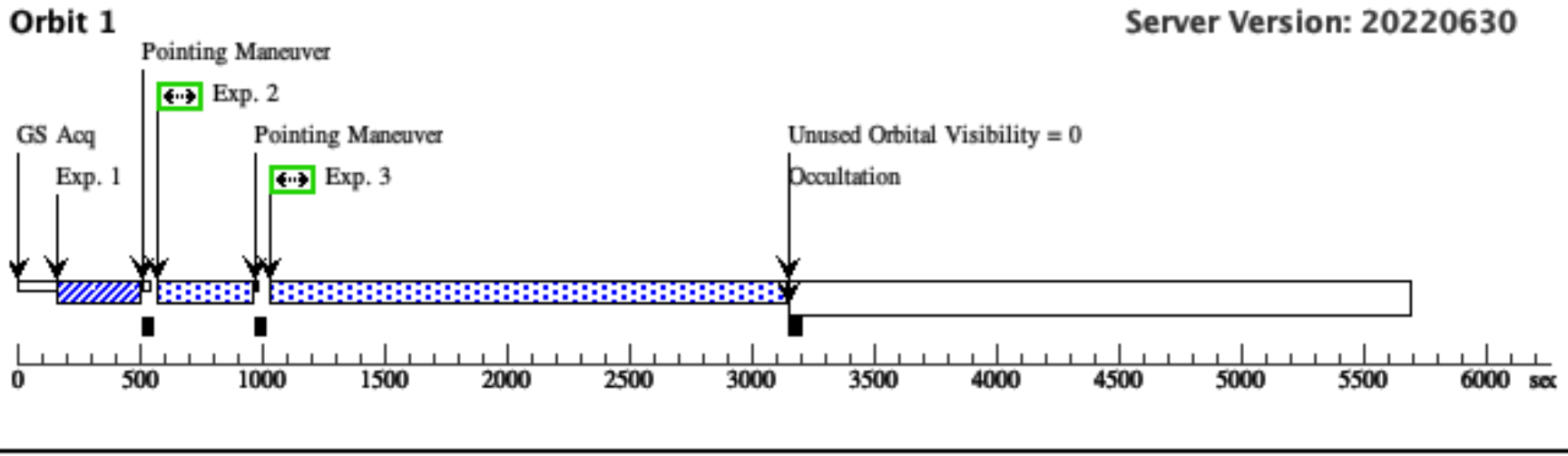
Fixed Targets

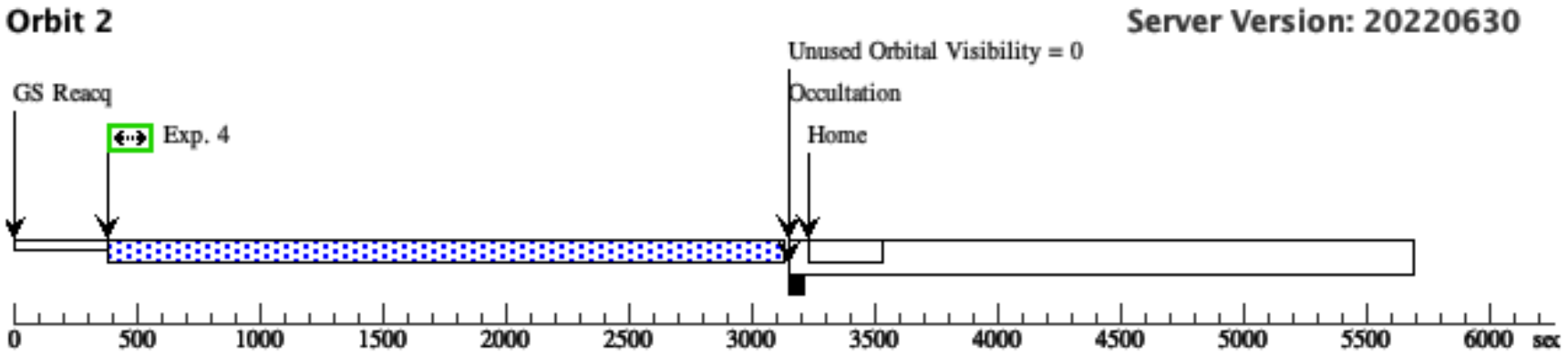
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(44)	M-85	Offset from M-85-STAR RA Offset: -0.0048 Degrees Dec Offset: -0.01367 Degrees		V=10	Offset Position (M-85)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(45)	M-85-STAR	RA: 12 25 25.2189 (186.3550787d) Dec: +18 12 17.28 (18.20480d) Equinox: J2000	Proper Motion RA: -3.8 mas/yr Proper Motion Dec: 12.2 mas/yr Parallax: 0.0013" Epoch of Position: 2015.5	V=13.09 16.91 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522912)	(45) M-85-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				25 Secs (25 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(44) M-85	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(44) M-85	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1939 Secs) *[==>1939.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(44) M-85	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2700 Secs) *[==>2700.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, M85 (59) Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: HOPR repeat of visit 12

Diagnostics

(M85 (59)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (M85 (59))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (M85 (59))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

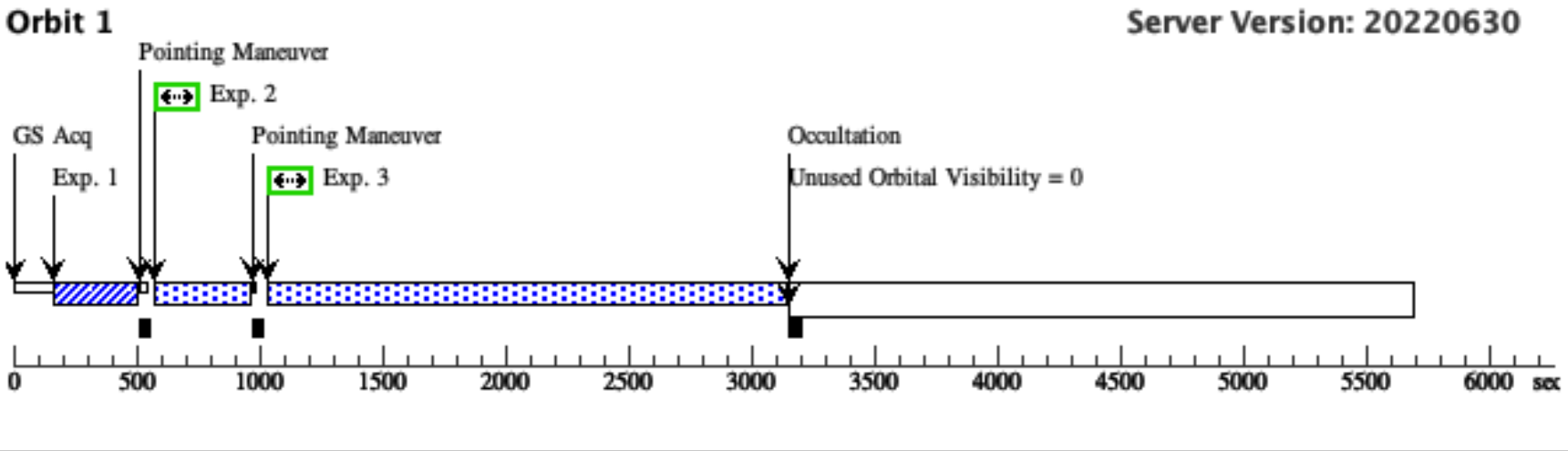
Fixed Targets

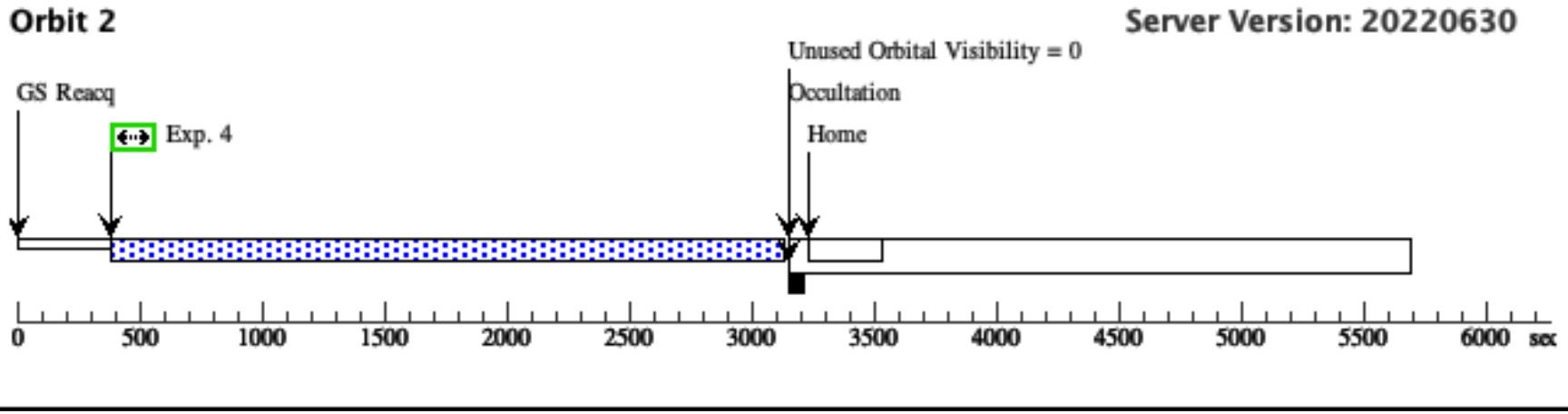
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(44)	M-85	Offset from M-85-STAR RA Offset: -0.0048 Degrees Dec Offset: -0.01367 Degrees		V=10	Offset Position (M-85)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(45)	M-85-STAR	RA: 12 25 25.2189 (186.3550787d) Dec: +18 12 17.28 (18.20480d) Equinox: J2000	Proper Motion RA: -3.8 mas/yr Proper Motion Dec: 12.2 mas/yr Parallax: 0.0013" Epoch of Position: 2015.5	V=13.09 16.91 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522912)	(45) M-85-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				25 Secs (25 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(44) M-85	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(44) M-85	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1939 Secs) *[==>1939.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(44) M-85	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2700 Secs) *[==>2700.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC4458 (13), failed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC4458 (13)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4458 (13))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4458 (13))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

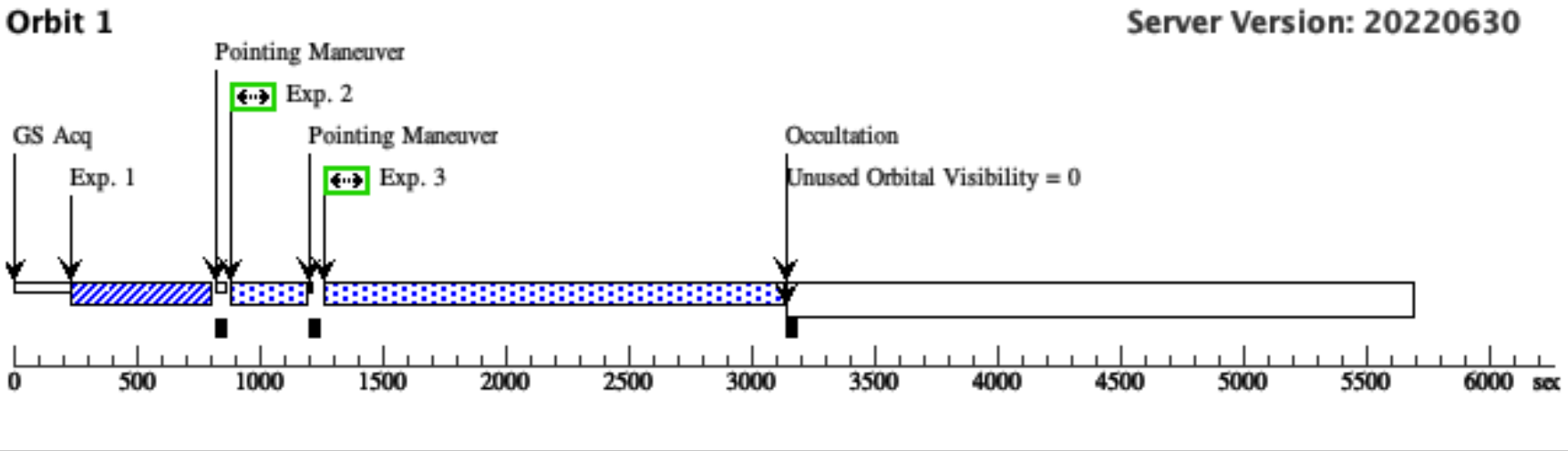
Fixed Targets

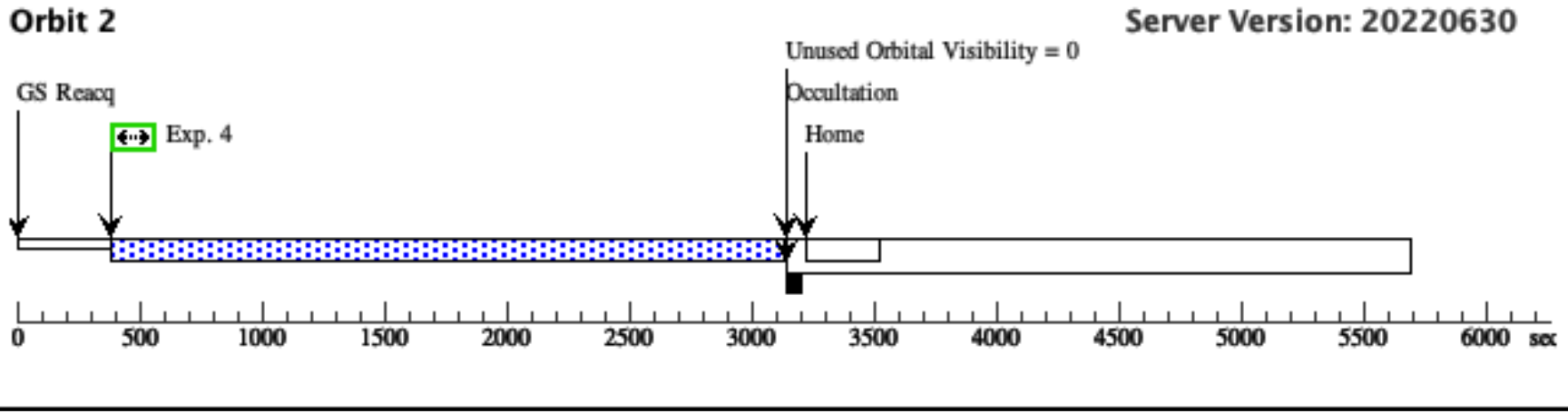
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(46)	NGC-4458	Offset from NGC-4458-STAR RA Offset: 0.003 Degrees Dec Offset: -0.01767 Degrees		V=10	Offset Position (NGC-4458)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(47)	NGC-4458-STAR	RA: 12 28 56.8141 (187.2367254d) Dec: +13 15 34.49 (13.25958d) Equinox: J2000	Proper Motion RA: -12.5 mas/yr Proper Motion Dec: -6.7 mas/yr Parallax: 0.00005" Epoch of Position: 2015.5	V=18.54 22.30 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522925)	(47) NGC-4458-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				180 Secs (180 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(46) NGC-4458	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(46) NGC-4458	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1699 Secs) *[==>1699.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(46) NGC-4458	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC4458 (60) Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: HOPR repeat of visit 13

Diagnostics

(NGC4458 (60)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4458 (60))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4458 (60))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

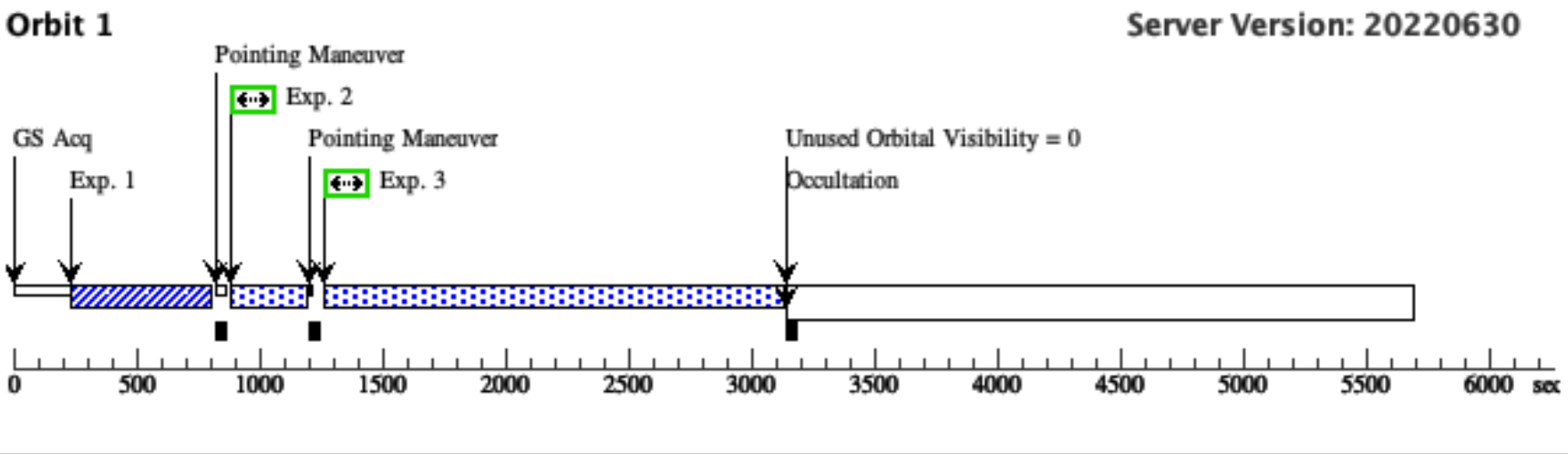
Fixed Targets

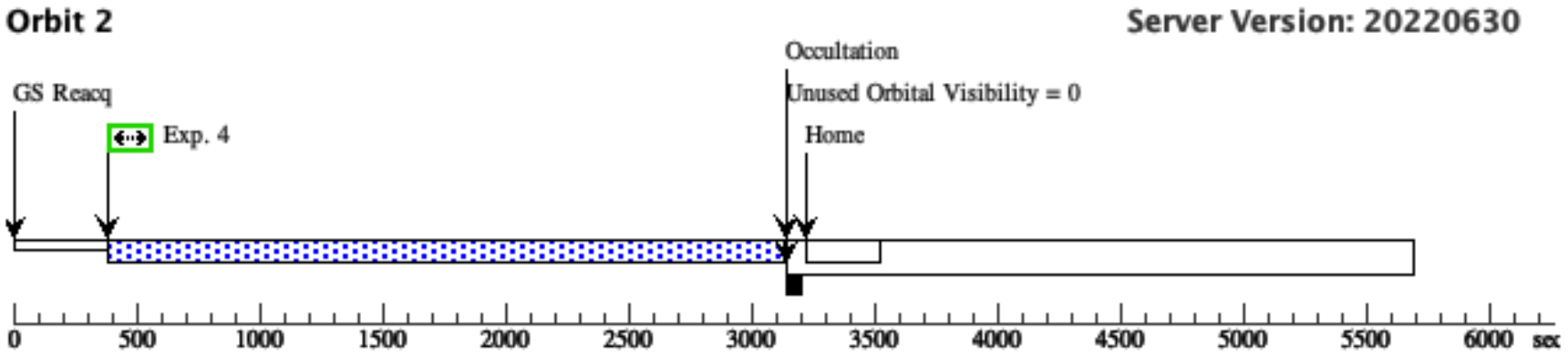
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(46)	NGC-4458	Offset from NGC-4458-STAR RA Offset: 0.003 Degrees Dec Offset: -0.01767 Degrees		V=10	Offset Position (NGC-4458)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(47)	NGC-4458-STAR	RA: 12 28 56.8141 (187.2367254d) Dec: +13 15 34.49 (13.25958d) Equinox: J2000	Proper Motion RA: -12.5 mas/yr Proper Motion Dec: -6.7 mas/yr Parallax: 0.00005" Epoch of Position: 2015.5	V=18.54 22.30 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522925)	(47) NGC-4458-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				180 Secs (180 Secs) *[==>]*	*[1]*
2	(COS.im.1522614)	(46) NGC-4458	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	*[1]*
3	(COS.sp.1522615)	(46) NGC-4458	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1699 Secs) *[==>1699.0 Secs]*	*[1]*
4	(COS.sp.1522615)	(46) NGC-4458	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	*[2]*

Orbit Structure





Visit

Proposal 16678, NGC4473 (14), completed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC4473 (14)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4473 (14))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4473 (14))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

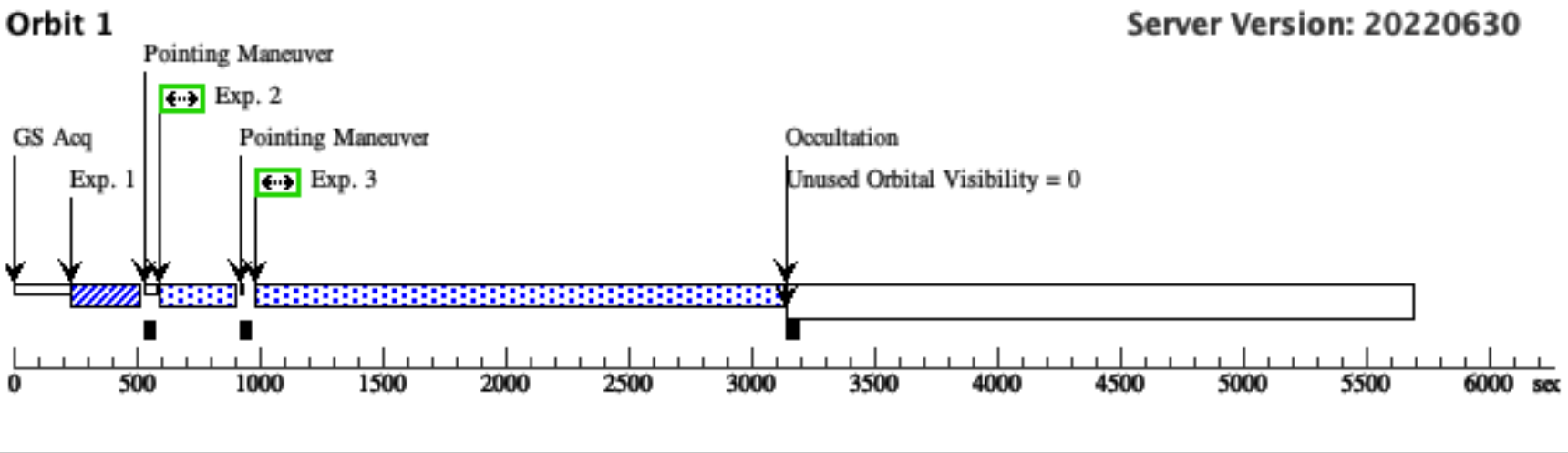
Fixed Targets

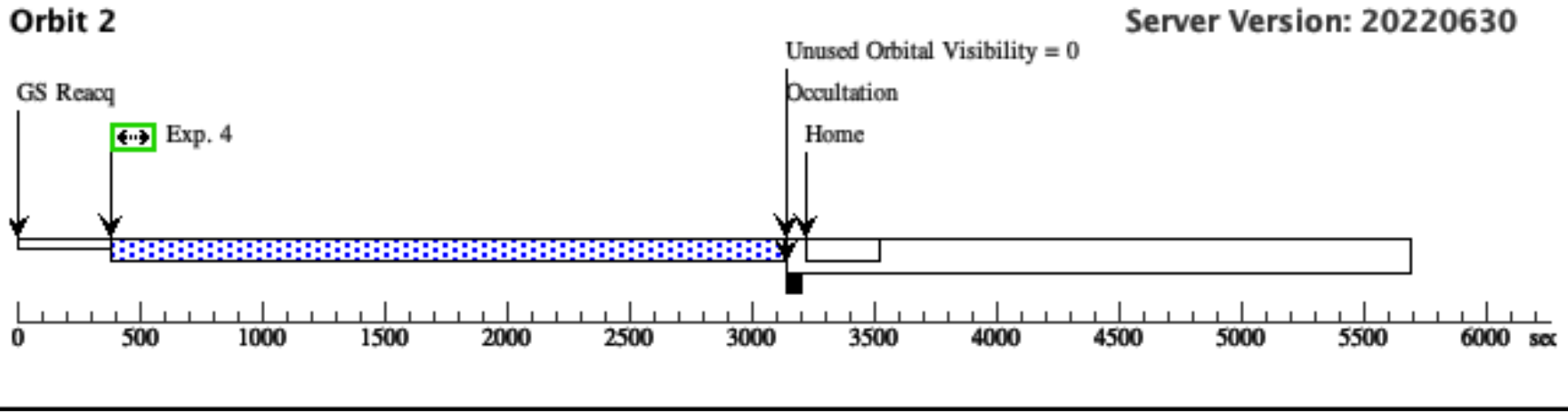
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(48)	NGC-4473	Offset from NGC-4473-STAR RA Offset: 0.0263 Degrees Dec Offset: -0.017 Degrees		V=10	Offset Position (NGC-4473)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(49)	NGC-4473-STAR	RA: 12 29 42.5576 (187.4273233d) Dec: +13 26 47.21 (13.44645d) Equinox: J2000	Proper Motion RA: -6.7 mas/yr Proper Motion Dec: 2.4 mas/yr Parallax: 0.0004" Epoch of Position: 2015.5	V=15.39 20.55 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522942)	(49) NGC-4473-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				35 Secs (35 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(48) NGC-4473	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(48) NGC-4473	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1982 Secs) *[==>1982.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(48) NGC-4473	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC4564 (15), failed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC4564 (15)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4564 (15))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4564 (15))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

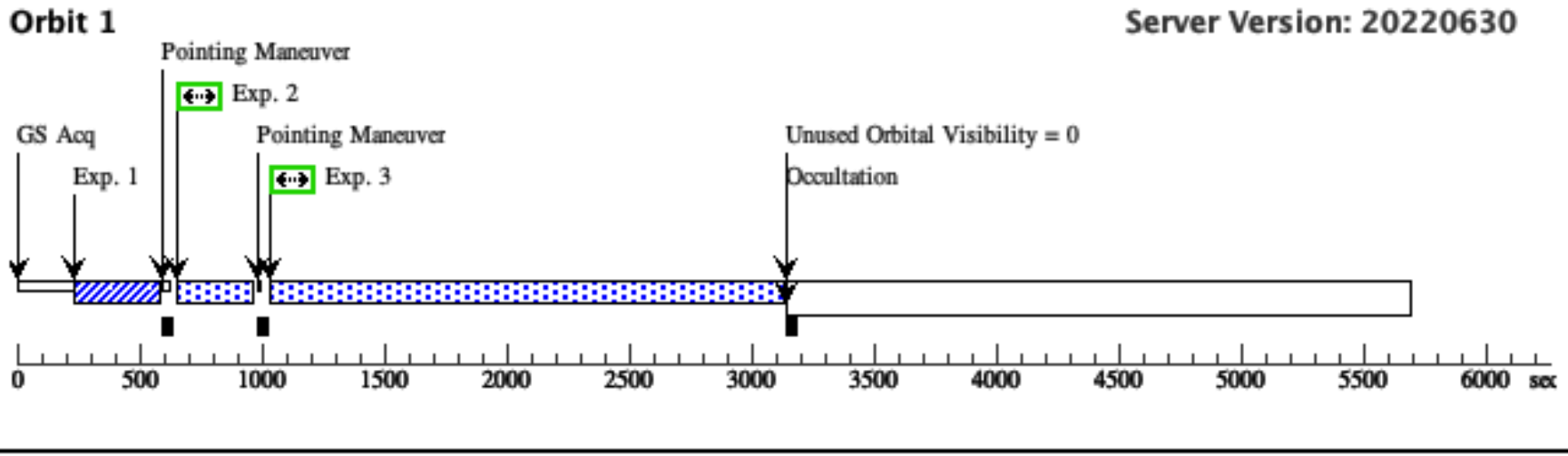
Fixed Targets

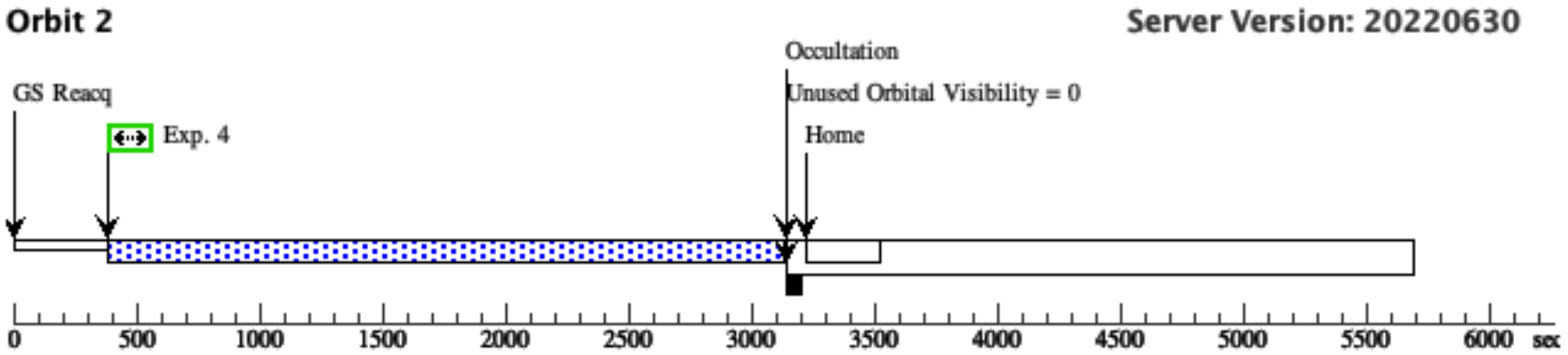
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(50)	NGC-4564	Offset from NGC-4564-STAR RA Offset: -0.007 Degrees Dec Offset: -0.00831 Degrees		V=10	Offset Position (NGC-4564)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(51)	NGC-4564-STAR	RA: 12 36 28.6520 (189.1193833d) Dec: +11 26 51.22 (11.44756d) Equinox: J2000	Proper Motion RA: -16.3 mas/yr Proper Motion Dec: 8.9 mas/yr Parallax: 0.00145" Epoch of Position: 2015.5	V=20.26 21.22 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522960)	(51) NGC-4564-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				66 Secs (66 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(50) NGC-4564	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(50) NGC-4564	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1927 Secs) *[==>1927.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(50) NGC-4564	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC4564 (58), scheduling Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: HOPR repeat of visit 15

Diagnostics

(NGC4564 (58)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4564 (58))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4564 (58))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

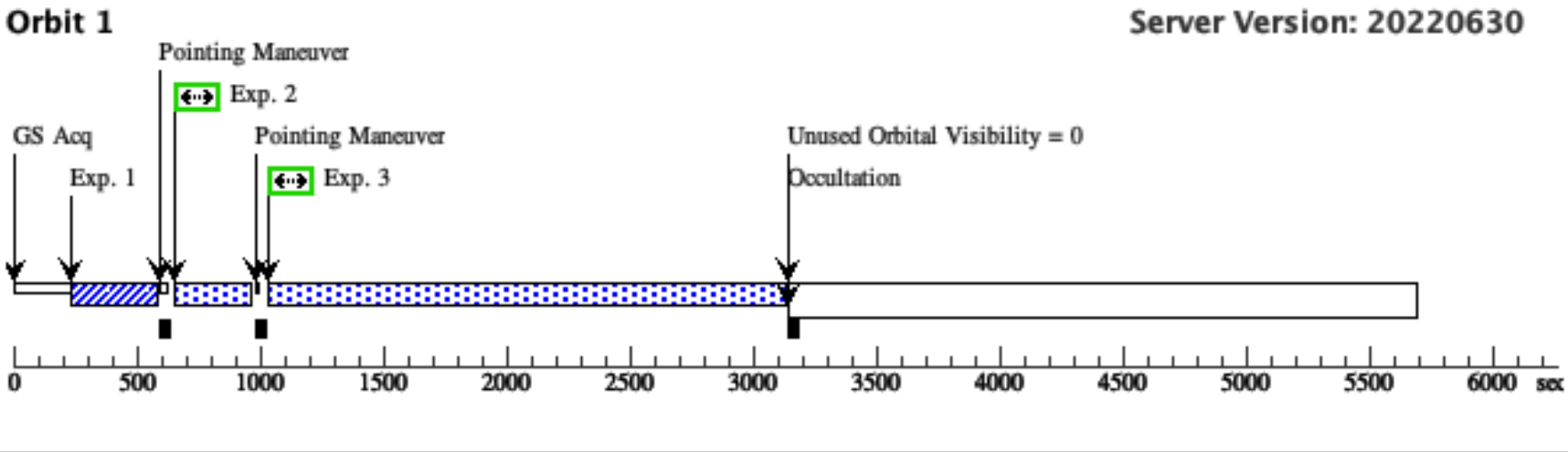
Fixed Targets

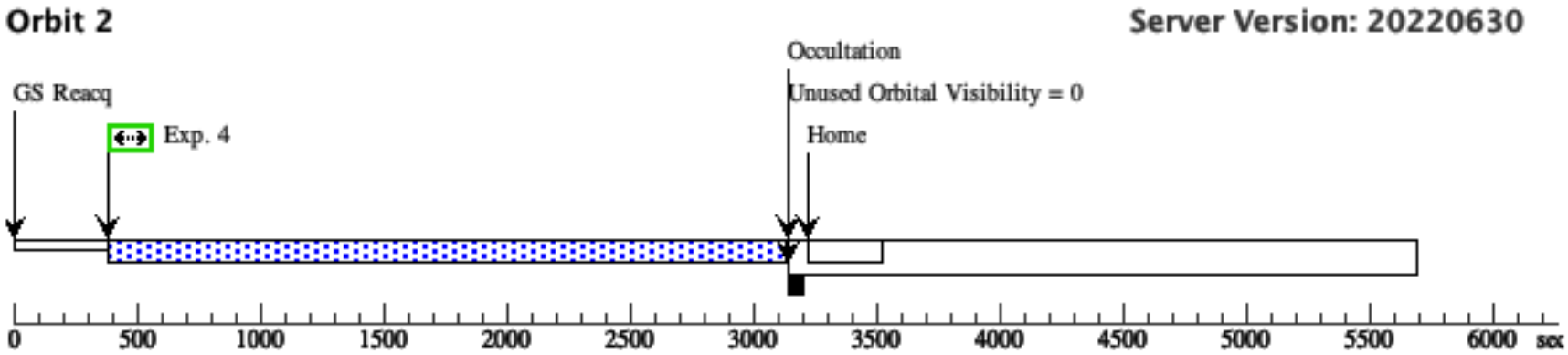
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(50)	NGC-4564	Offset from NGC-4564-STAR RA Offset: -0.007 Degrees Dec Offset: -0.00831 Degrees		V=10	Offset Position (NGC-4564)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(51)	NGC-4564-STAR	RA: 12 36 28.6520 (189.1193833d) Dec: +11 26 51.22 (11.44756d) Equinox: J2000	Proper Motion RA: -16.3 mas/yr Proper Motion Dec: 8.9 mas/yr Parallax: 0.00145" Epoch of Position: 2015.5	V=20.26 21.22 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522960)	(51) NGC-4564-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				66 Secs (66 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(50) NGC-4564	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(50) NGC-4564	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1927 Secs) *[==>1927.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(50) NGC-4564	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC4570 (16), completed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: Faint acquisition star. Used S/N=20 criterion.

Diagnostics

(NGC4570 (16)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4570 (16))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4570 (16))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

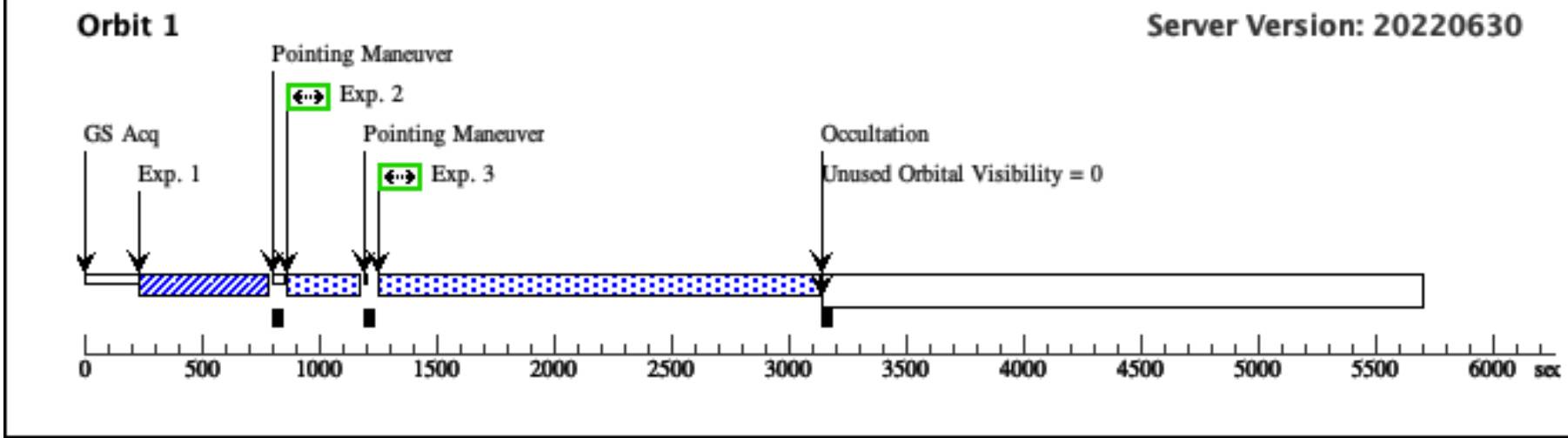
Fixed Targets

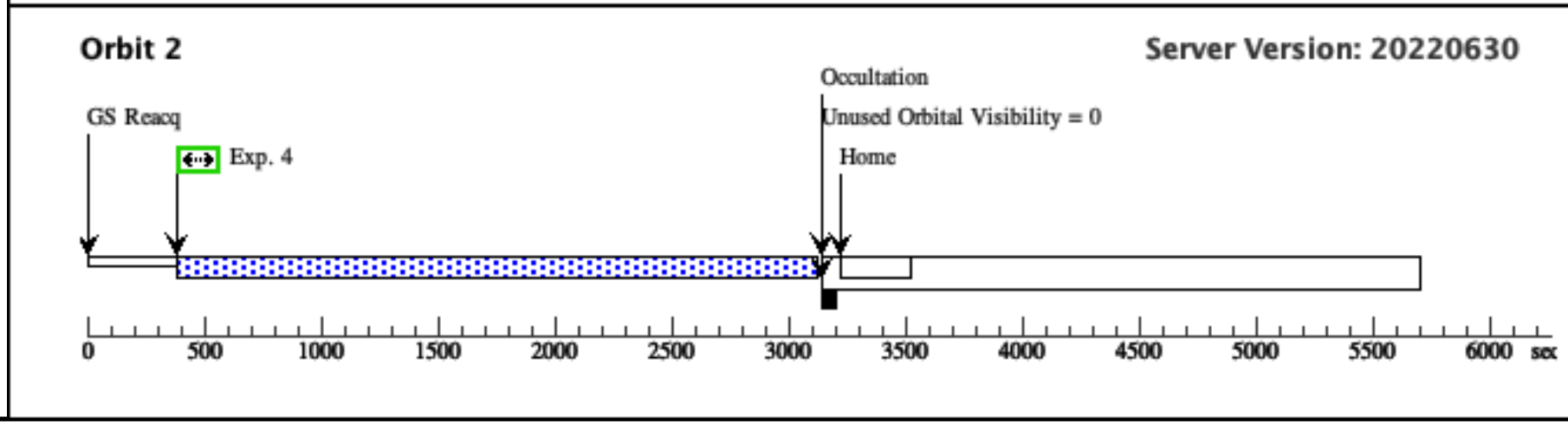
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(52)	NGC-4570	Offset from NGC-4570-STAR RA Offset: 0.027293 Degrees Dec Offset: -0.011269 Degrees		V=10	Offset Position (NGC-4570)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(53)	NGC-4570-STAR	RA: 12 36 46.8497 (189.1952071d) Dec: +07 15 28.25 (7.25785d) Equinox: J2000	Proper Motion RA: -3.7 mas/yr Proper Motion Dec: -3.9 mas/yr Parallax: 0.0002" Epoch of Position: 2015.5	V=19.91 22.82 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522976)	(53) NGC-4570-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				170 Secs (170 Secs) *[==>]*	***[1]***
2	(COS.im.1522614)	(52) NGC-4570	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	***[1]***
3	(COS.sp.1522615)	(52) NGC-4570	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1709 Secs) *[==>1709.0 Secs]*	***[1]***
4	(COS.sp.1522615)	(52) NGC-4570	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2689 Secs) *[==>2689.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 16678, M59 (17), completed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(M59 (17)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (M59 (17))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (M59 (17))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

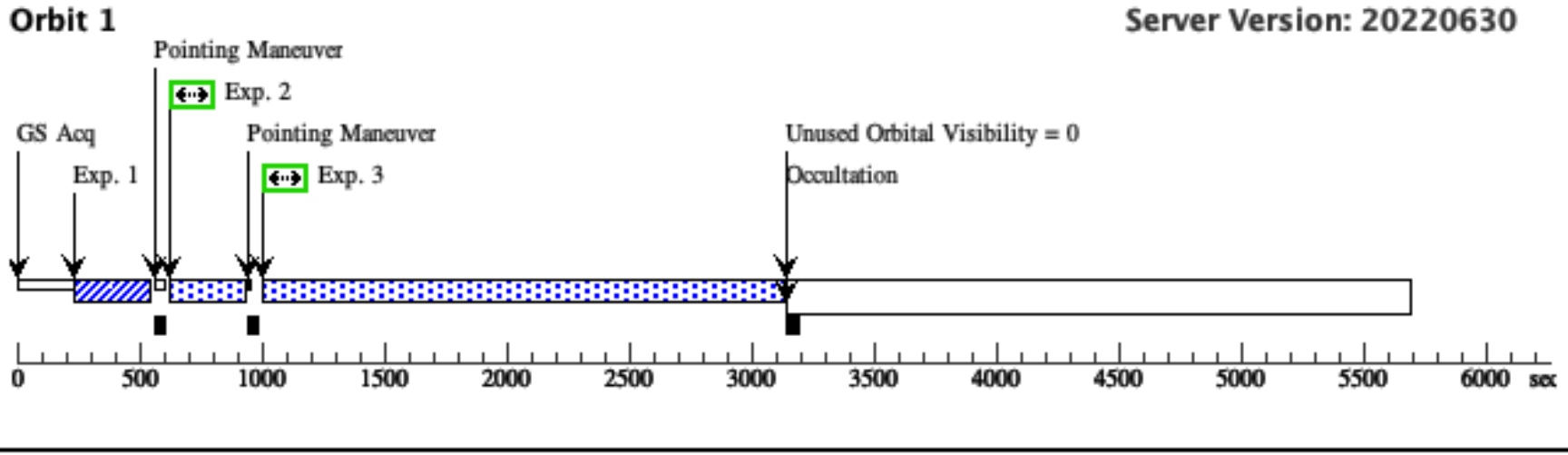
Fixed Targets

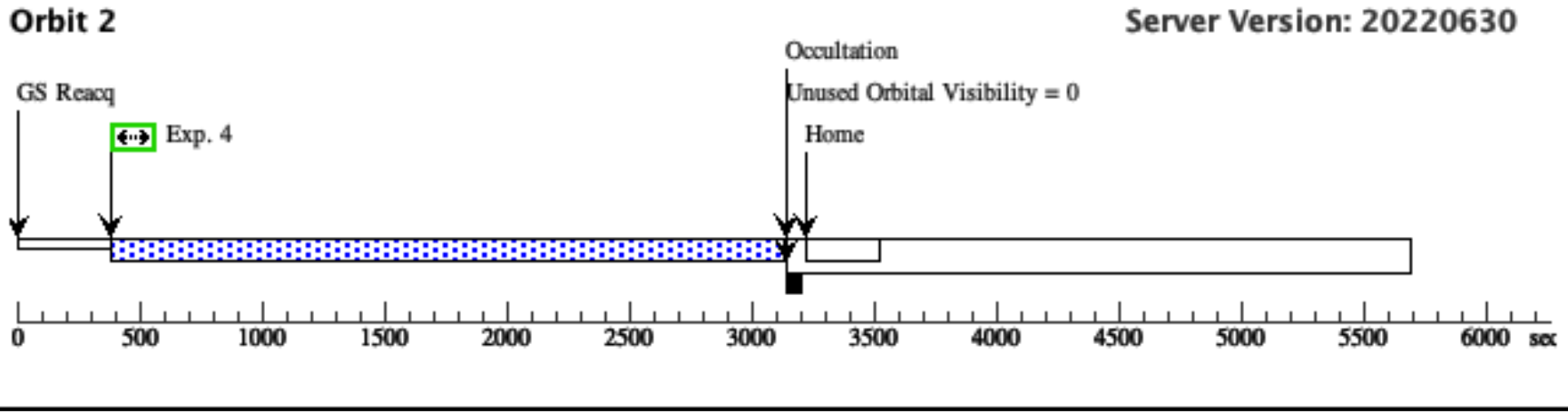
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(54)	M-59	Offset from M-59-STAR RA Offset: 0.0133 Degrees Dec Offset: 0.01202 Degrees		V=10	Offset Position (M-59)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(55)	M-59-STAR	RA: 12 41 59.0672 (190.4961133d) Dec: +11 38 5.44 (11.63484d) Equinox: J2000	Proper Motion RA: 5.9 mas/yr Proper Motion Dec: -17.0 mas/yr Parallax: 0.0012" Epoch of Position: 2015.5	V=14.70 20.92 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522978)	(55) M-59-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				50 Secs (50 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(54) M-59	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(54) M-59	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1959 Secs) *[==>1959.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(54) M-59	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, M60 (18), completed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(M60 (18)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (M60 (18))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (M60 (18))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

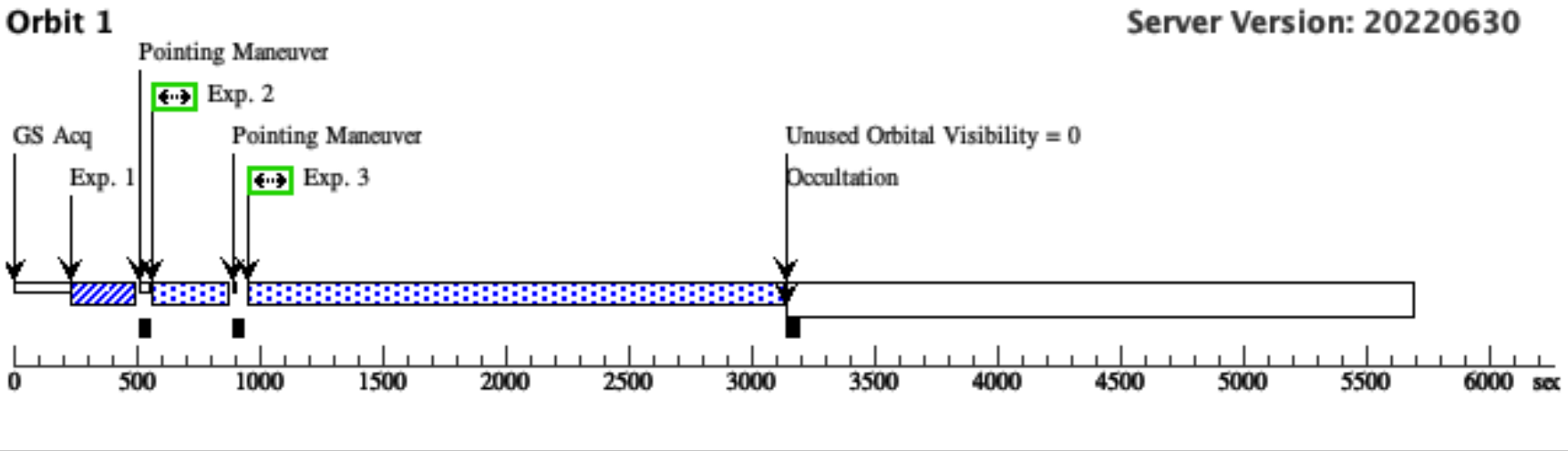
Fixed Targets

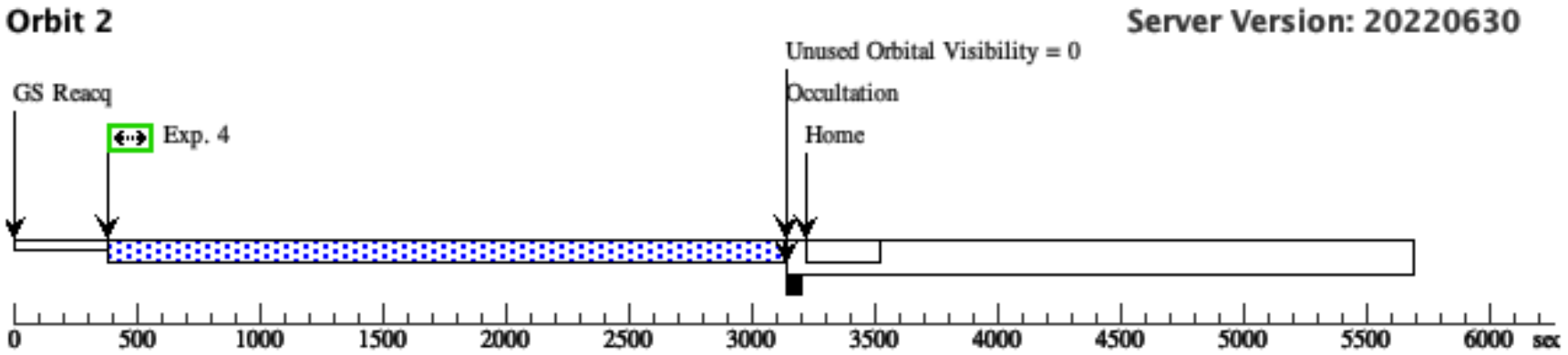
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(56)	M-60	Offset from M-60-STAR RA Offset: -0.0142 Degrees Dec Offset: -0.01887 Degrees		V=10	Offset Position (M-60)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(57)	M-60-STAR	RA: 12 43 43.3504 (190.9306267d) Dec: +11 34 17.51 (11.57153d) Equinox: J2000	Proper Motion RA: 5.9 mas/yr Proper Motion Dec: -17.0 mas/yr Parallax: 0.0012" Epoch of Position: 2015.5	V=15.62 20.09 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1523100)	(57) M-60-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				23 Secs (23 Secs) *[==>]*	*[1]*
2	(COS.im.1522614)	(56) M-60	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	*[1]*
3	(COS.sp.1522615)	(56) M-60	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (2012 Secs) *[==>2012.0 Secs]*	*[1]*
4	(COS.sp.1522615)	(56) M-60	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	*[2]*

Orbit Structure





Visit

Proposal 16678, NGC4660 (19), completed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: Faint acquisition star. Used S/N=20 criterion.

Diagnostics

(NGC4660 (19)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC4660 (19))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC4660 (19))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

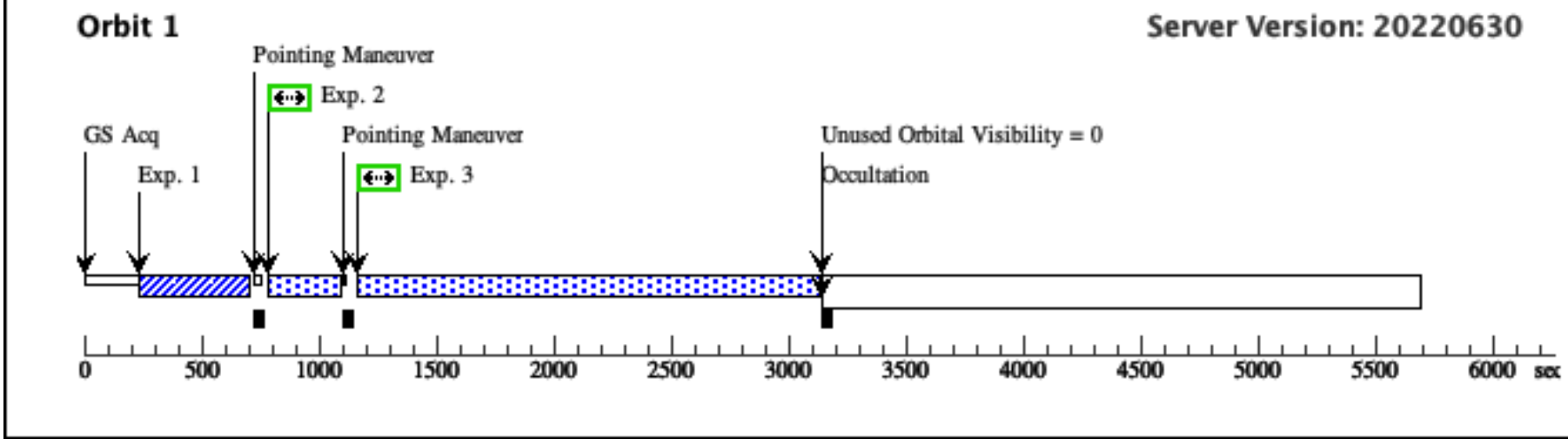
Fixed Targets

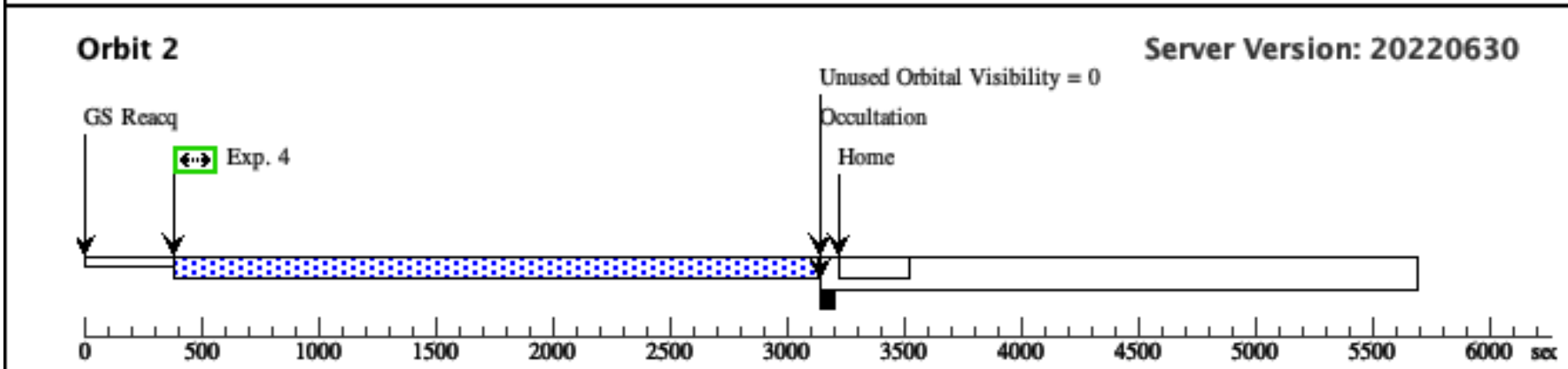
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(58)	NGC-4660	Offset from NGC-4660-STAR RA Offset: 0.0079 Degrees Dec Offset: 0.00841 Degrees		V=10	Offset Position (NGC-4660)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(59)	NGC-4660-STAR	RA: 12 44 30.0765 (191.1253187d) Dec: +11 10 54.97 (11.18194d) Equinox: J2000	Proper Motion RA: -9.0 mas/yr Proper Motion Dec: -39.5 mas/yr Parallax: 0.0006" Epoch of Position: 2015.5	V=16.87 22.82 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1522907)	(59) NGC-4660-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				130 Secs (130 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(58) NGC-4660	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(58) NGC-4660	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (1799 Secs) *[==>1799.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(58) NGC-4660	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2693 Secs) *[==>2693.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, NGC5308 (20), completed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(NGC5308 (20)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (NGC5308 (20))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (NGC5308 (20))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

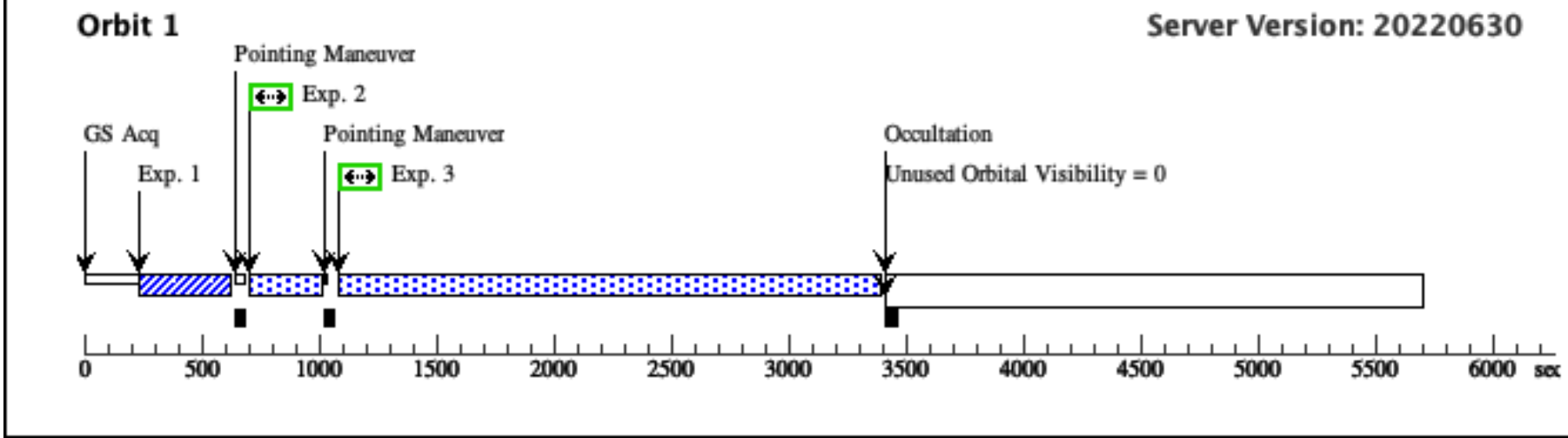
Fixed Targets

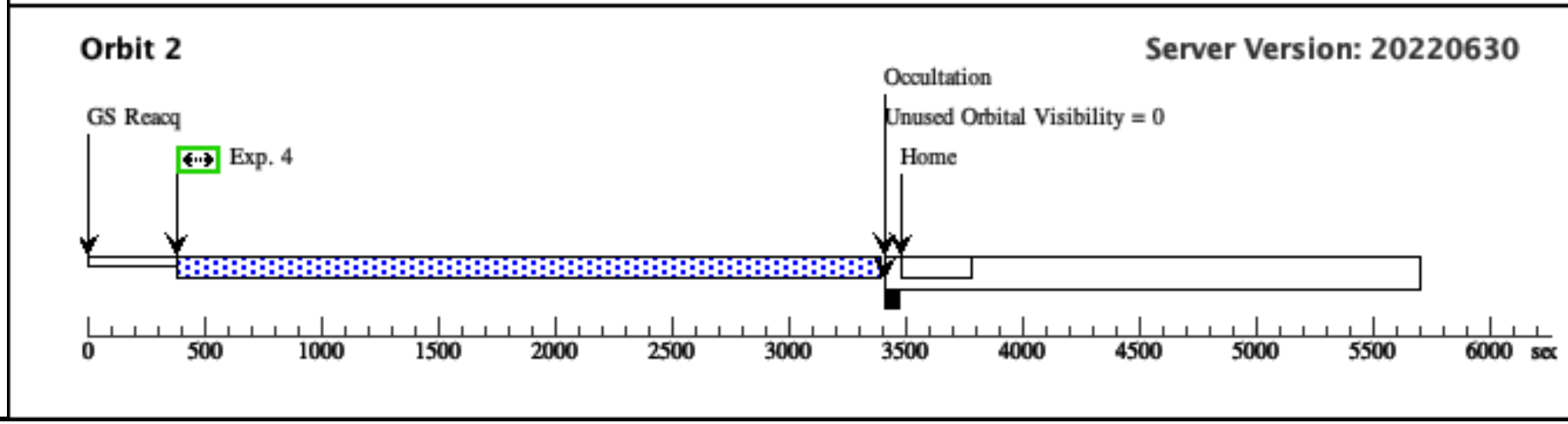
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(60)	NGC-5308	Offset from NGC-5308-STAR RA Offset: -0.051547 Degrees Dec Offset: 0.003313 Degrees		V=10	Offset Position (NGC-5308)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(61)	NGC-5308-STAR	RA: 13 47 12.8034 (206.8033475d) Dec: +60 58 11.74 (60.96993d) Equinox: J2000	Proper Motion RA: 19.3 mas/yr Proper Motion Dec: -17.9 mas/yr Parallax: 0.0039" Epoch of Position: 2015.5	V=13.48 21.54 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1523127)	(61) NGC-5308-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				88 Secs (88 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(60) NGC-5308	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(60) NGC-5308	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (2143 Secs) *[==>2143.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(60) NGC-5308	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2955 Secs) *[==>2955.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16678, ESO325G004 (21), completed Mon Aug 29 12:00:44 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(ESO325G004 (21)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(Exposure 3 (ESO325G004 (21))) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(Exposure 4 (ESO325G004 (21))) 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
(62)	ESO325-G004	Offset from ESO325-G004-STAR RA Offset: -0.0173 Degrees Dec Offset: 1.0E-4 Degrees		V=10	Offset Position (ESO325-G004)
Comments: *Category=GALAXY* *Description=[ELLIPTICAL]* *Extended=YES*					
(63)	ESO325-G004-STAR	RA: 13 43 37.3590 (205.9056625d) Dec: -38 10 33.88 (-38.17608d) Equinox: J2000	Proper Motion RA: 1.1 mas/yr Proper Motion Dec: 6.4 mas/yr Parallax: 0.0005" Epoch of Position: 2015.5	V=14.70 19.88 (GALEX NUV)	Reference Frame: ICRS
Comments: *Category=STAR* *Description=[UNDESIGNATED]* *Extended=NO*					

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1523136)	(63) ESO325-G004-STAR	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				20 Secs (20 Secs) *[==>]*	 ***[1]***
2	(COS.im.1522614)	(62) ESO325-G004	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=1226; FLASH=YES			300 Secs (300 Secs) *[==>]*	 ***[1]***
3	(COS.sp.1522615)	(62) ESO325-G004	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1600 Secs (2070 Secs) *[==>2070.0 Secs]*	 ***[1]***
4	(COS.sp.1522615)	(62) ESO325-G004	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5816; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2000 Secs (2744 Secs) *[==>2744.0 Secs]*	 ***[2]***

Orbit Structure