17478 - A comprehensive survey of diffuse gas in the Fornax Cluster

Cycle: 31, Proposal Category: GO

(UV Initiative)

(Availability Mode: AVAILABLE)

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	(6) 6DFGS-GJ033340.2-370655	COS/FUV COS/NUV	1	11-Jun-2024 14:01:50.0	yes
02	(1) VV2006-J033736.7-353335	COS/FUV COS/NUV	3	11-Jun-2024 14:01:51.0	yes
03	(1) VV2006-J033736.7-353335	COS/FUV COS/NUV	2	11-Jun-2024 14:01:51.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
04	(1) VV2006-J033736.7-353335	COS/FUV COS/NUV	2	11-Jun-2024 14:01:52.0	yes
05	(4) VV2006-J034108.8-363459	COS/FUV COS/NUV	3	11-Jun-2024 14:01:53.0	yes
06	(4) VV2006-J034108.8-363459	COS/FUV COS/NUV	3	11-Jun-2024 14:01:53.0	yes
07	(4) VV2006-J034108.8-363459	COS/FUV COS/NUV	2	11-Jun-2024 14:01:54.0	yes
08	(4) VV2006-J034108.8-363459	COS/FUV COS/NUV	2	11-Jun-2024 14:01:55.0	yes
09	(7) QSO-B0333-342	COS/FUV COS/NUV	2	11-Jun-2024 14:01:55.0	yes
10	(7) QSO-B0333-342	COS/FUV COS/NUV	3	11-Jun-2024 14:01:56.0	yes
11	(2) QSO-B0323-381	COS/FUV COS/NUV	2	11-Jun-2024 14:01:56.0	yes
12	(3) VV2000-J032601.0-364149	COS/FUV COS/NUV	2	11-Jun-2024 14:01:57.0	yes
13	(8) UVQS-J034209.28-370251.7	COS/FUV COS/NUV	3	11-Jun-2024 14:01:58.0	yes
14	(5) QSO-B0330-368	COS/FUV COS/NUV	2	11-Jun-2024 14:01:58.0	yes

32 Total Orbits Used

ABSTRACT

We propose an HST/COS study of the cool and warm gas contents of the Fornax cluster. Fornax is among the closest massive galaxy clusters, at a distance of only 20 Mpc, enabling a deep characterization of the galaxy populations and intracluster medium. Indeed, much ancillary data exists on Fornax with deep optical imaging, substantial spectroscopic coverage, and X-ray imaging/spectroscopy, and is currently the focus of a deep, high-

resolution 21cm HI mapping campaign with the MeerKAT array. The Hubble legacy includes similar COS surveys of QSOs probing two other massive clusters, Coma and Virgo, but Fornax is even more ideal for a study of this kind. These other systems have provided the first glimpses of just how unique cluster environments are relative to the gaseous halos of galaxies, as surveyed by such programs as COS-Halos. For example, clusters do not show the characteristic anti-correlation between HI absorber strength and impact parameters as do galaxy halos. Also, the studies of Virgo and Coma as well as other higher redshift clusters indicate that the virialized medium is devoid of HI relative to the expected HI reservoir contents observed around less massive systems. This indicates that cluster galaxies lack the abundant reservoirs to fuel star formation, a key quenching mechanism. However, Fornax contains several galaxies that appear to be undergoing interactions with the environment and many galaxies that are still forming stars. Combined with the extensive ancillary data available, our survey of Fornax will provide the most comprehensive look at a massive halo in transition in the nearby Universe.

OBSERVING DESCRIPTION

To select our QSO targets, we crossmatched the 'Million Quasars Catalog' (Milliquas Flesch, 2015) with both NGC1399 (the central galaxy of Fornax) and individual galaxies in the Fornax spectroscopic census compiled by Maddox et al. (2019). Our version of the Milliquas catalog includes FUV magnitudes from crossmatching the original catalog with GALEX sources. For the crossmatch with NGC1399, we employed a search radius of 1.4 Mpc (twice the Fornax virial radius) at the distance of Fornax; for crossmatching with individual galaxies, we limited to impact parameters of 75 kpc. Clearly, these two crossmatches were redundant in the QSOs they returned, but this enabled prioritizing certain QSOs in our final sample selection due to their likely probing (or not) a cluster galaxy.

To achieve our science goals, we will employ the G130M grating to achieve ~20 km/s spectral resolution and to cover, primarily, H I Lya. The G130M 1309 cenwave setting covers not only Lya but also the Si II 1260 Ang, 1190, 1193 Ang, Si III 1206 Ang, Si IV 1393, 1402 Ang, and C II 1334 Ang transitions at the Fornax redshift (z = 0.0047). Mission critical to our science are the coverage and sufficient S/N of these lines. Therefore, we requested the use of LP3 for the G130 grating, as the COS2025 default lifetime positions do not include Segment B, which covers the observed wavelengths where these lines would fall. This will enable us to also search for associated metal lines, enabling more rigorous constraints on our Key Science Objectives. Our orbit requests are driven by exposure time estimates from the COS ETC to deliver S/N = 10 at Lya, which corresponds to a limiting equivalent width Wlim ~40 mAng assuming a line width of 6 pixels. This detection limit is commensurate with that achieved in the Yoon et al. (2012) and Yoon & Putman (2017a) surveys, enabling comparison with those samples (Science Objective 2). Given the variable sensitivity across the bandpass, our COS ETC calculations return that we should achieve S/N of 9.5, 10.5, and 8.5 at the accompanying metal lines Si III 1206 Ang, Si II 1260 Ang, and C II 1334 Ang, respectively. These sensitivities will yield approximate 3 sigma equivalent width detection limits of 44 mAng, 40

mAng, and 49 mAng, respectively. From the linear part of the curve of growth, these detection limits translate to column density detection limits of log (N(Si III)/cm^-2) = 12.3, log (N(Si II)/cm^-2) = 12.4, and log (N(C II)/cm^-2) = 13.4. Hence, we will meet or exceed the detection limits of the Yoon et al. (2012) and Yoon & Putman (2017a) surveys that serve as our primary comparison samples.

We will employ a routine observing sequence for COS. We will acquire the targets in the near-UV with an ACQ/IMAGE exposure then switch to TIME-TAG for our science exposures. To comply with guidelines as outlined in the COS Handbook and minimize flatfield artifacts, we will use multiple FP-POS settings during each visit. We have verified that the spectral lines we intend to cover are attainable complying with the COS 2025 guidelines for allowed grating/cenwave/FP-POS modes.

Visit

Proposal 17478, Visit 01, completed

Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Visit 01) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

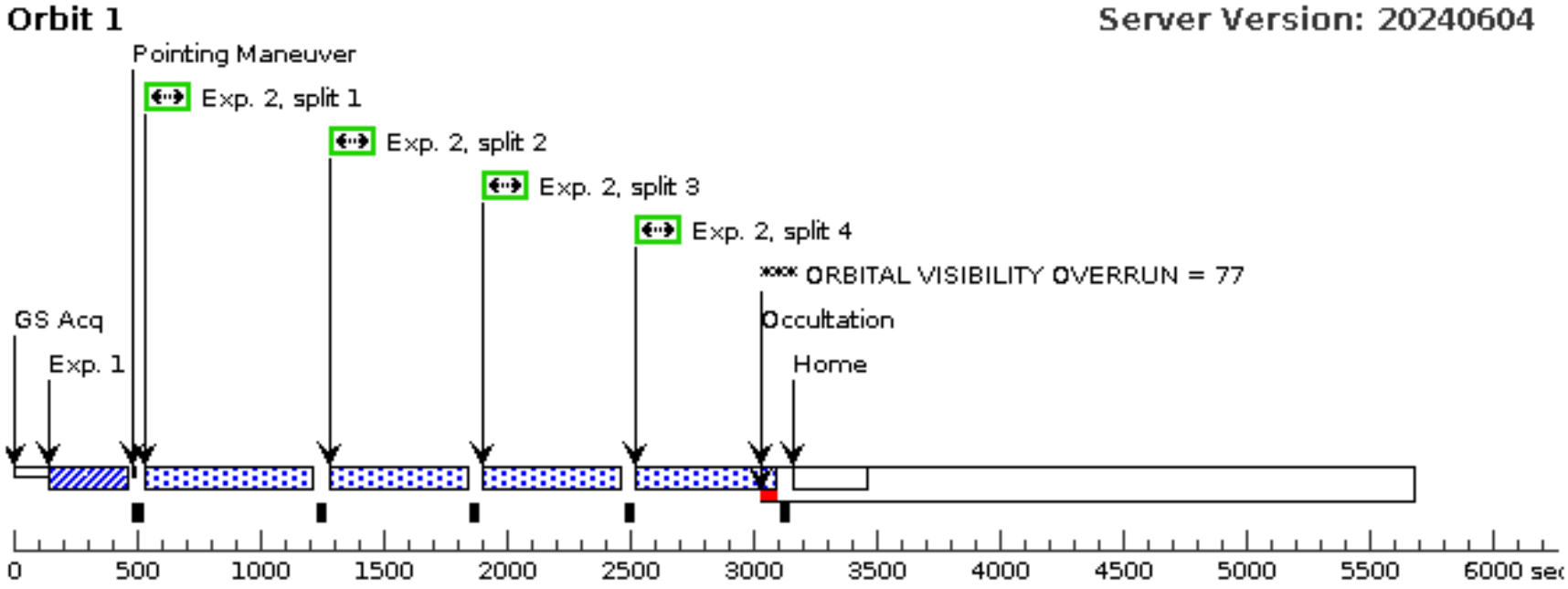
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	6DFGS-GJ033340.2-370655	RA: 03 33 40.1724 (53.4173850d) Dec: -37 06 54.22 (-37.11506d) Equinox: J2000	Proper Motion RA: -9.865082215482348E-6 sec of time/yr Proper Motion Dec: -1.5999899005691987E-5 arcsec/yr Epoch of Position: 2015.5	V=15.5 mFUV = 17.32	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891719)	(6) 6DFGS-GJ033340.2-370655	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				15 Secs (15 Secs) *[==>]*	 ***[1]***
2	(COS.sp.1888627)	(6) 6DFGS-GJ033340.2-370655	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=3238; LIFETIME-POS=LP3			633 Secs (2044 Secs) *[==>508.0 Secs (Split 1)]* *[==>508.0 Secs (Split 2)]* *[==>508.0 Secs (Split 3)]* *[==>520.0 Secs (Split 4)]*	 ***[1]***

Orbit Structure



Visit

Proposal 17478, Visit 02, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

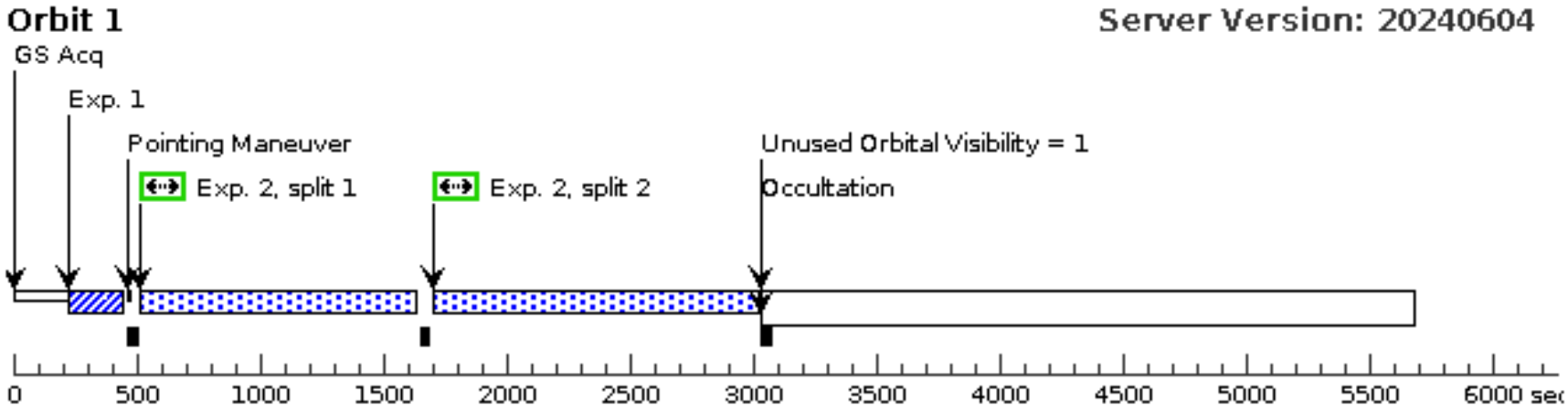
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	VV2006-J033736.7-353335	RA: 03 37 36.6378 (54.4026575d) Dec: -35 33 35.81 (-35.55995d) Equinox: J2000	Proper Motion RA: -3.523835547173809E-5 sec of time/yr Proper Motion Dec: -2.0700006189144915E-4 arcsec/yr Epoch of Position: 2015.5	V=17.93 mFUV = 19.35	Reference Frame: ICRS

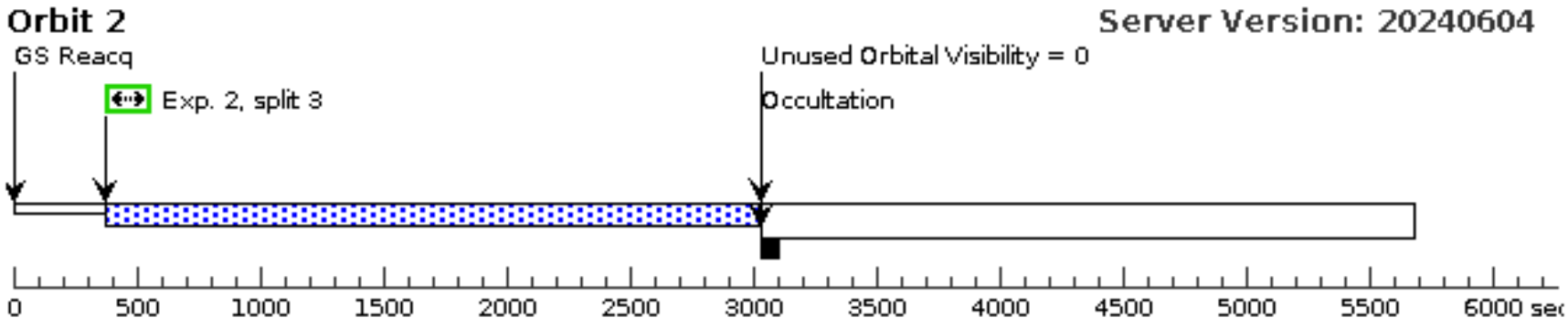
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

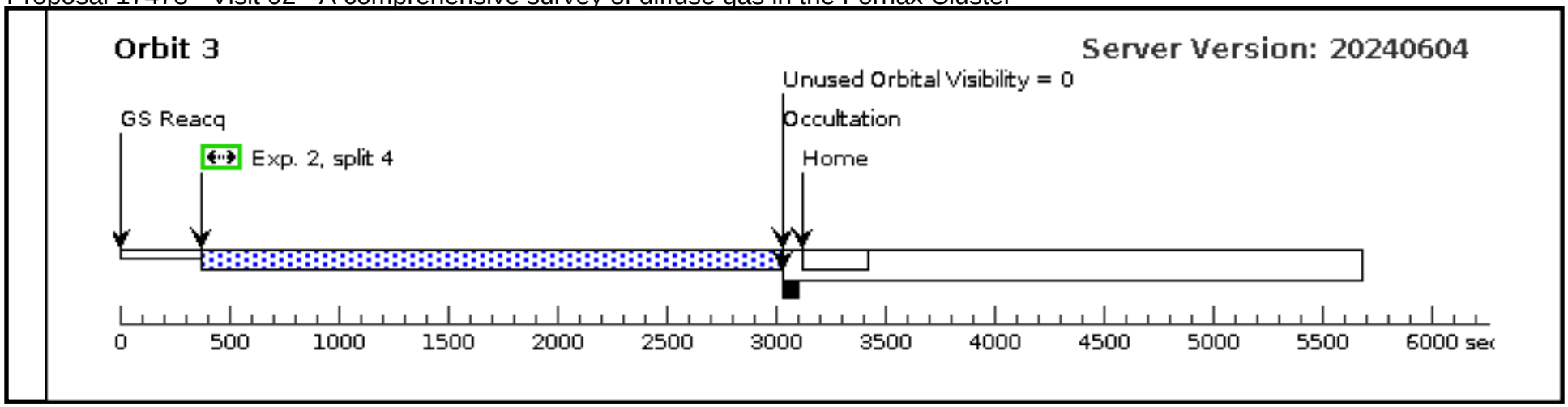
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891704)	(1) VV2006-J033736.7-353335	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				4 Secs (4 Secs)	
								[==>]	***[1]***
2	(COS.sp.1888621)	(1) VV2006-J033736.7-353335	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4451; LIFETIME-POS=LP3			4661 Secs (7408 Secs)	
								[==>950.0 Secs (Split 1)] *[==>1268.0 Secs (Split 2)]*	***[1]***
								[==>2595.0 Secs (Split 3)]	***[2]***
								[==>2595.0 Secs (Split 4)]	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 2, split 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17478, Visit 03, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

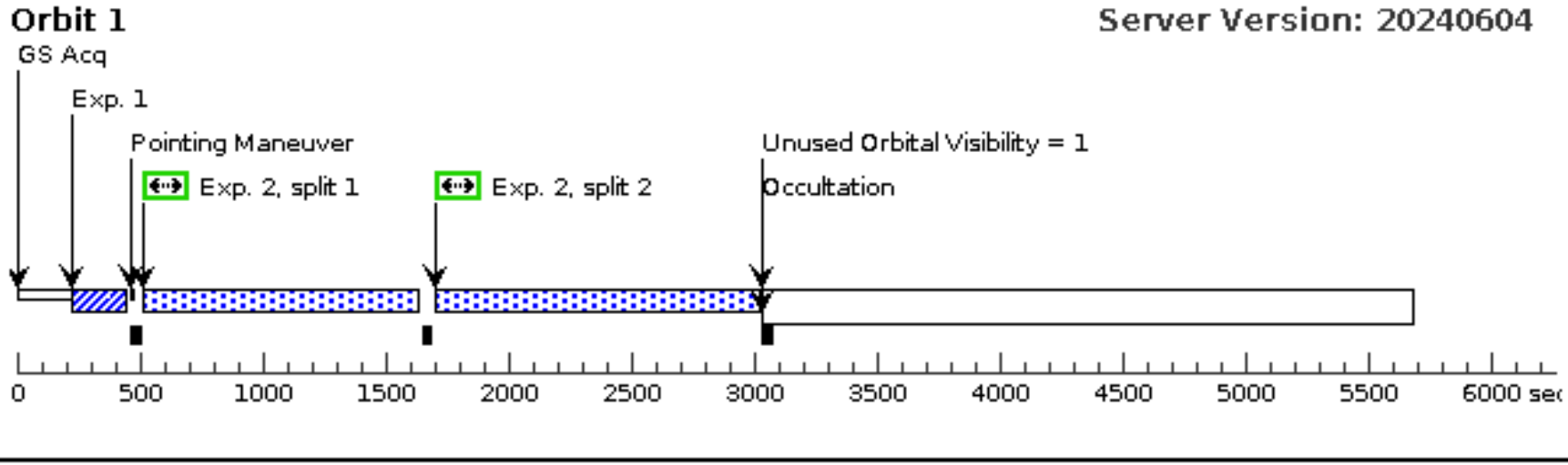
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	VV2006-J033736.7-353335	RA: 03 37 36.6378 (54.4026575d) Dec: -35 33 35.81 (-35.55995d) Equinox: J2000	Proper Motion RA: -3.523835547173809E-5 sec of time/yr Proper Motion Dec: -2.0700006189144915E-4 arcsec/yr Epoch of Position: 2015.5	V=17.93 mFUV = 19.35	Reference Frame: ICRS

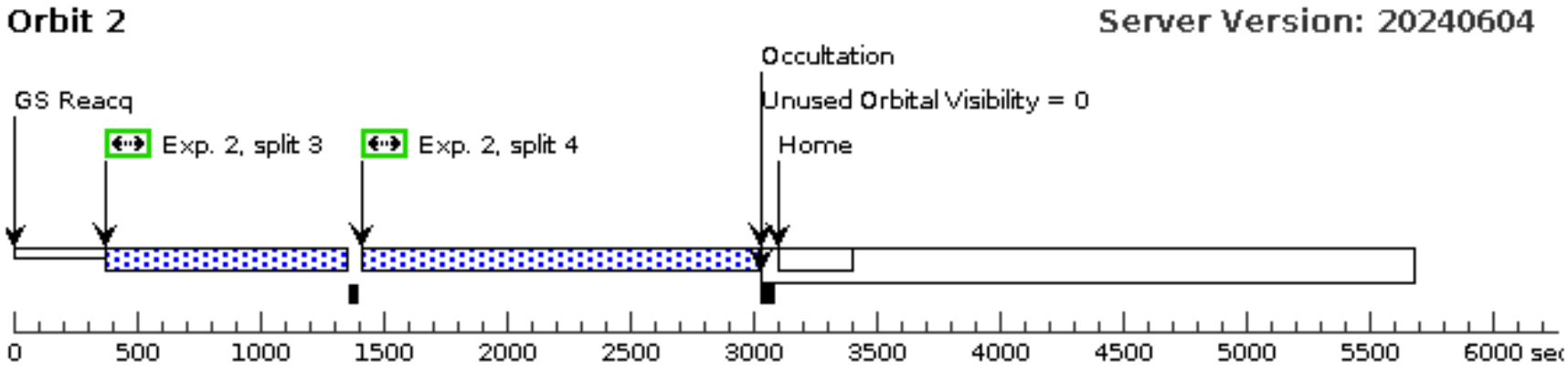
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891704)	(1) VV2006-J033736.7-353335	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				4 Secs (4 Secs) *[==>]*	 ***[1]***
2	(COS.sp.1888621)	(1) VV2006-J033736.7-353335	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4451; LIFETIME-POS=LP3			852 Secs (4698 Secs) *[==>950.0 Secs (Split 1)]* *[==>1268.0 Secs (Split 2)]* *[==>925.0 Secs (Split 3)]* *[==>1555.0 Secs (Split 4)]*	 ***[1]*** ***[2]***

Orbit Structure





Visit

Proposal 17478, Visit 04, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

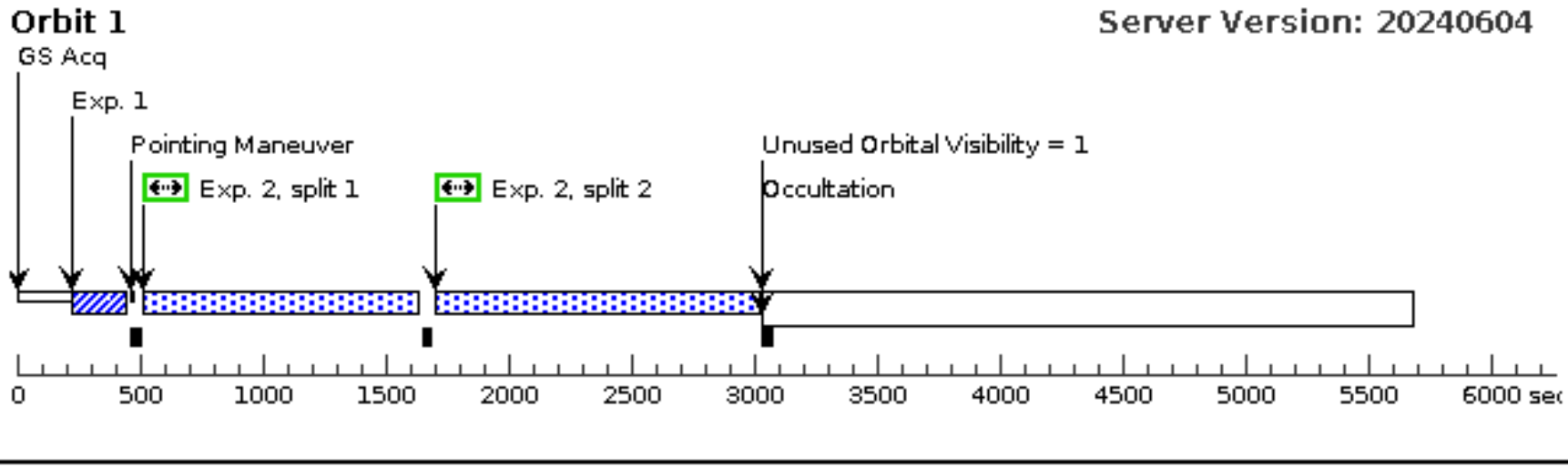
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	VV2006-J033736.7-353335	RA: 03 37 36.6378 (54.4026575d) Dec: -35 33 35.81 (-35.55995d) Equinox: J2000	Proper Motion RA: -3.523835547173809E-5 sec of time/yr Proper Motion Dec: -2.0700006189144915E-4 arcsec/yr Epoch of Position: 2015.5	V=17.93 mFUV = 19.35	Reference Frame: ICRS

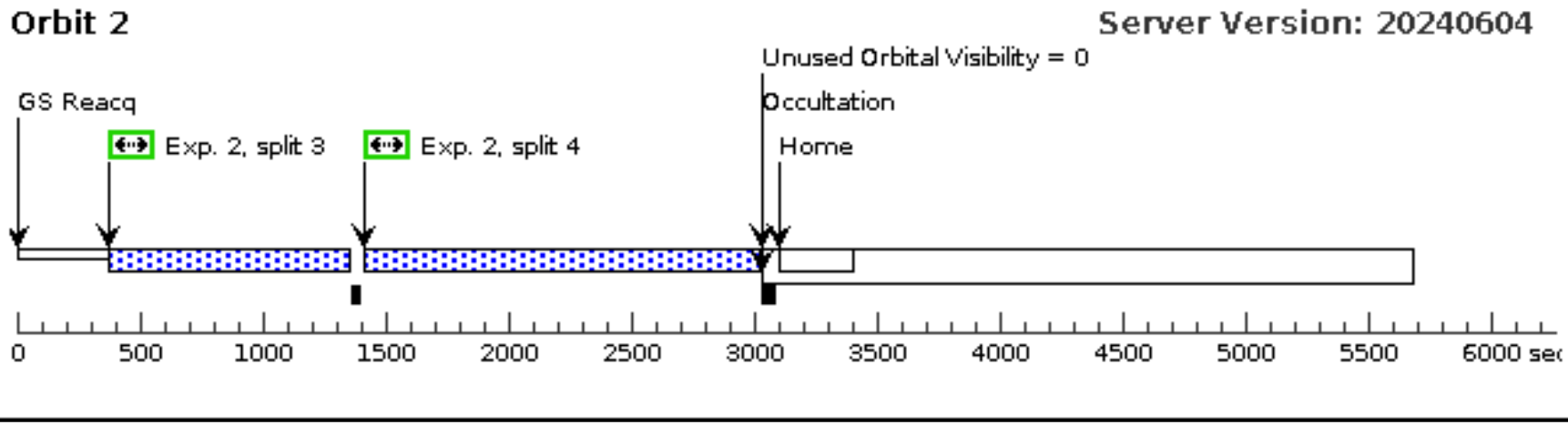
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891704)	(1) VV2006-J033736.7-353335	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				4 Secs (4 Secs) *[==>]*	 ***[1]***
2	(COS.sp.1888621)	(1) VV2006-J033736.7-353335	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4451; LIFETIME-POS=LP3			852 Secs (4698 Secs) *[==>950.0 Secs (Split 1)]* *[==>1268.0 Secs (Split 2)]* *[==>925.0 Secs (Split 3)]* *[==>1555.0 Secs (Split 4)]*	 ***[1]*** ***[2]***

Orbit Structure





Visit

Proposal 17478, Visit 05, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

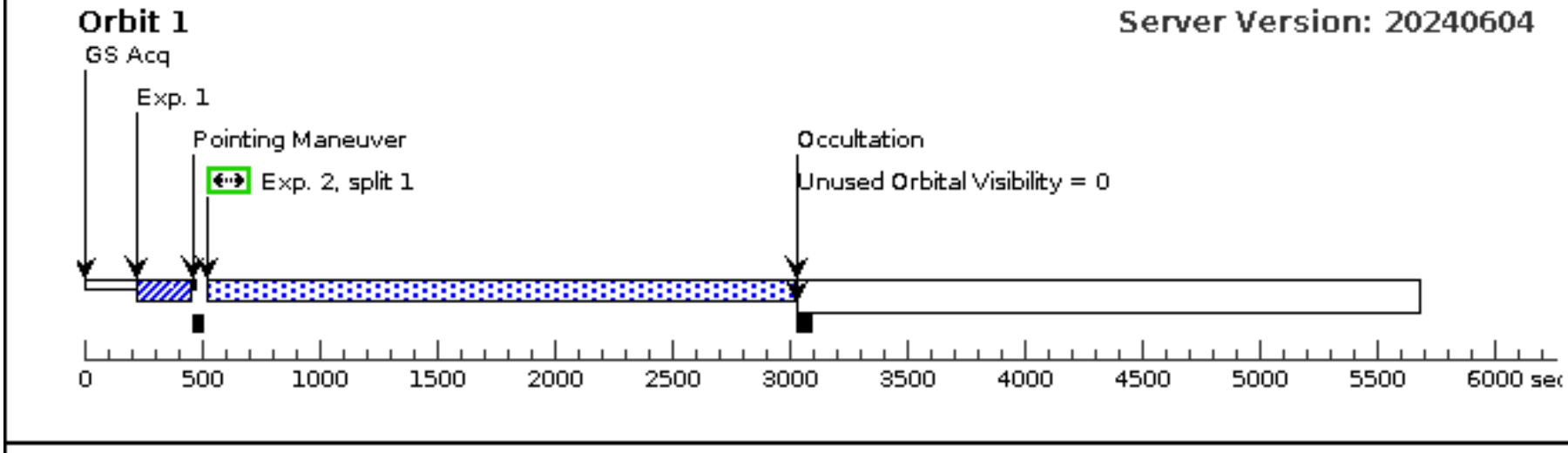
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VV2006-J034108.8-363459	RA: 03 41 8.5381 (55.2855754d) Dec: -36 35 15.04 (-36.58751d) Equinox: J2000	Proper Motion RA: 1.951144808012968E-5 sec of time/yr Proper Motion Dec: -5.840000994794536E-4 arcsec/yr Epoch of Position: 2015.5	V=17.5 mFUV = 19.69	Reference Frame: ICRS

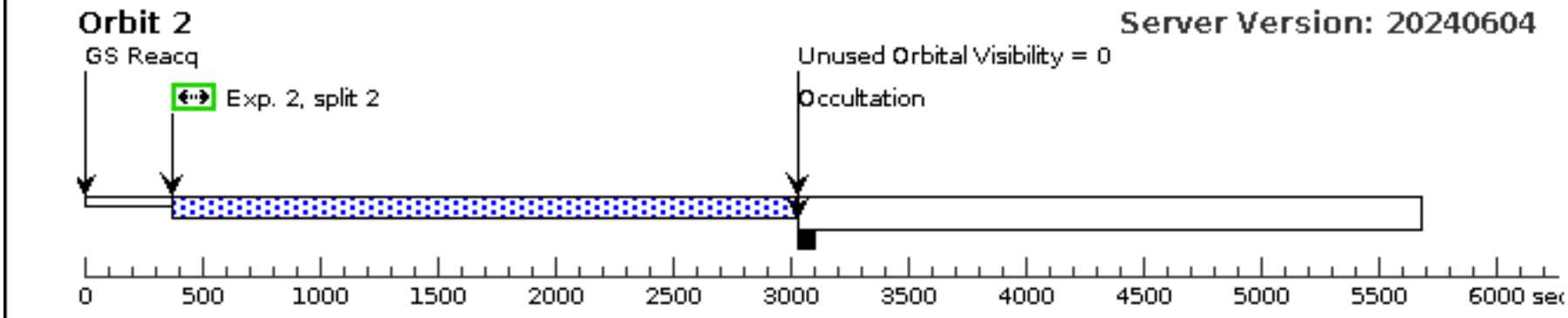
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

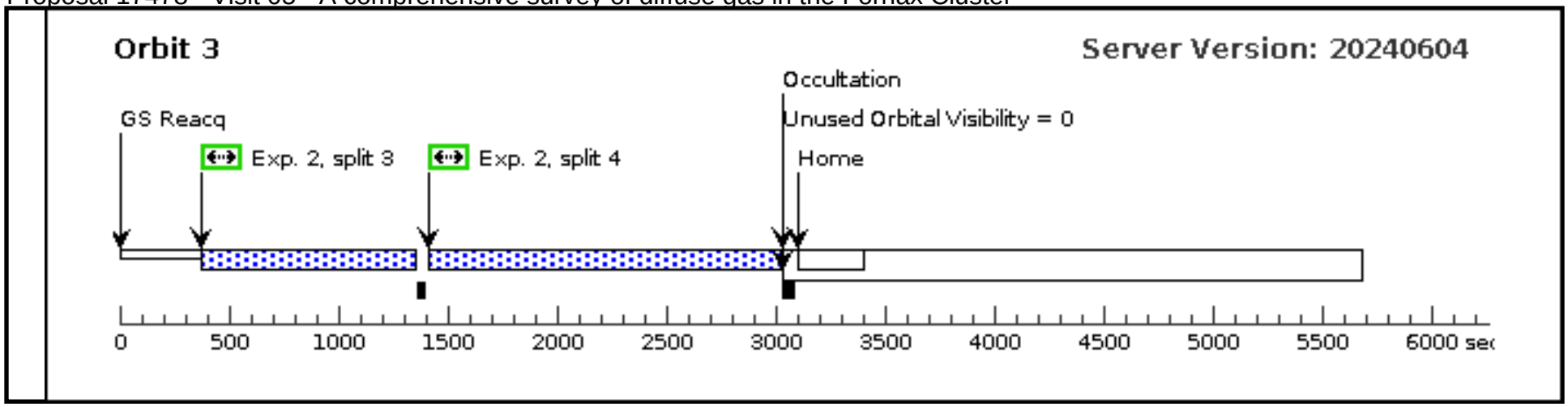
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891705)	(4) VV2006-J034108.8-363459	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				6 Secs (6 Secs)	
								[==>]	***[1]***
2	(COS.sp.1888622)	(4) VV2006-J034108.8-363459	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4533; LIFETIME-POS=LP3			6500 Secs (7405 Secs)	
								[==>2330.0 Secs (Split 1)]	***[1]***
								[==>2595.0 Secs (Split 2)]	***[2]***
								[==>925.0 Secs (Split 3)] *[==>1555.0 Secs (Split 4)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 2, split 3
Exp. 2, split 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17478, Visit 06, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

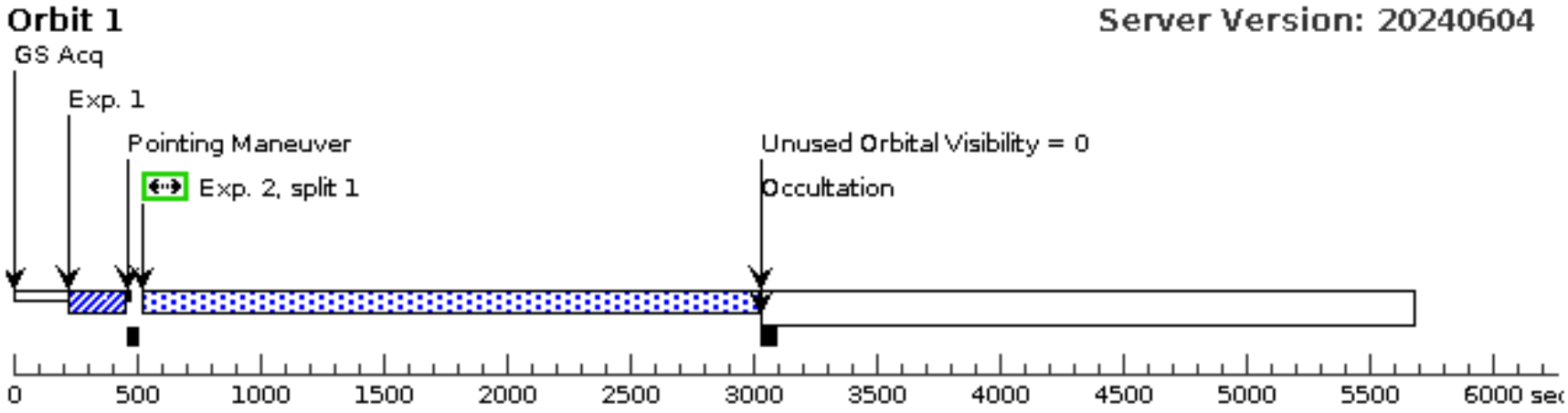
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VV2006-J034108.8-363459	RA: 03 41 8.5381 (55.2855754d) Dec: -36 35 15.04 (-36.58751d) Equinox: J2000	Proper Motion RA: 1.951144808012968E-5 sec of time/yr Proper Motion Dec: -5.840000994794536E-4 arcsec/yr Epoch of Position: 2015.5	V=17.5 mFUV = 19.69	Reference Frame: ICRS

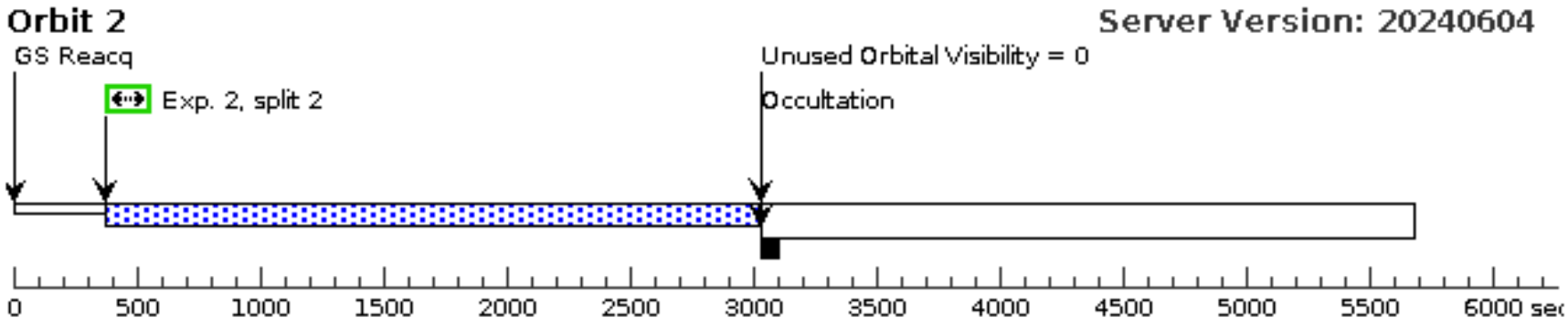
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

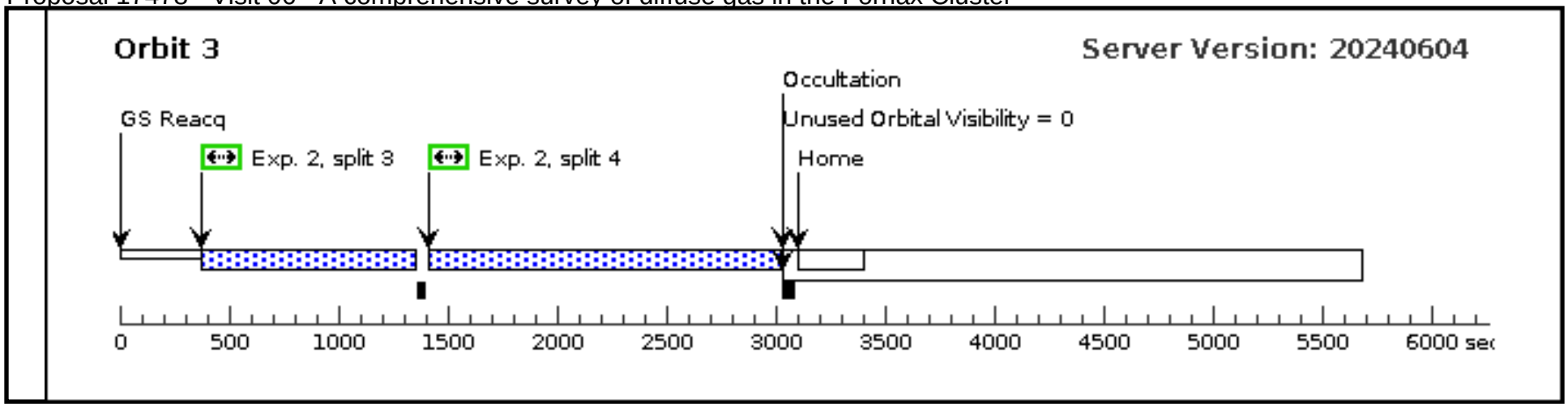
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891705)	(4) VV2006-J034108.8-363459	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				6 Secs (6 Secs)	
								[==>]	***[1]***
2	(COS.sp.1888622)	(4) VV2006-J034108.8-363459	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4533; LIFETIME-POS=LP3			6500 Secs (7405 Secs)	
								[==>2330.0 Secs (Split 1)]	***[1]***
								[==>2595.0 Secs (Split 2)]	***[2]***
								[==>925.0 Secs (Split 3)] *[==>1555.0 Secs (Split 4)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 2, split 3
Exp. 2, split 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17478, Visit 07, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

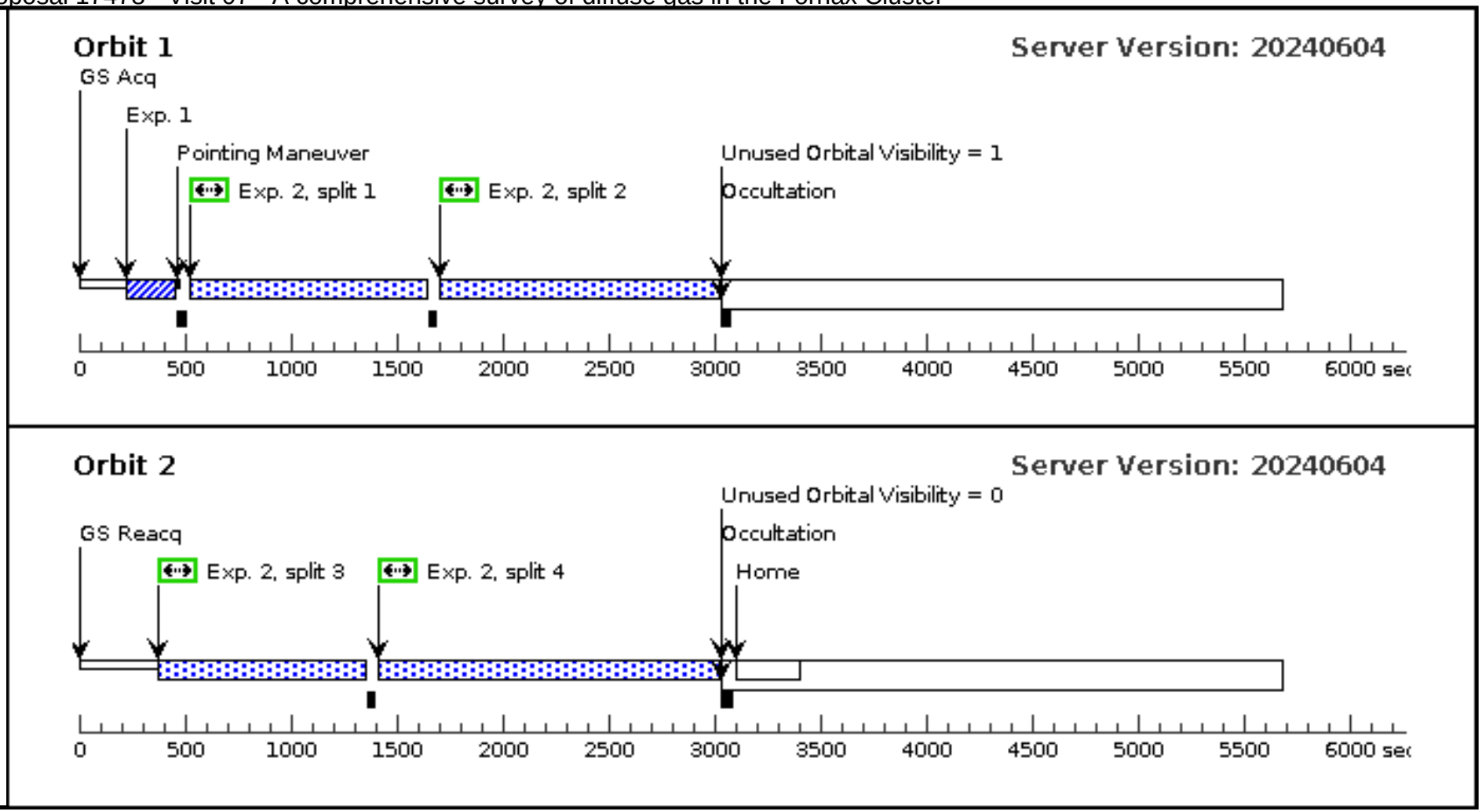
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VV2006-J034108.8-363459	RA: 03 41 8.5381 (55.2855754d) Dec: -36 35 15.04 (-36.58751d) Equinox: J2000	Proper Motion RA: 1.951144808012968E-5 sec of time/yr Proper Motion Dec: -5.840000994794536E-4 arcsec/yr Epoch of Position: 2015.5	V=17.5 mFUV = 19.69	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891705)	(4) VV2006-J034108.8-363459	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				6 Secs (6 Secs) *[==>]*	 ***[1]***
2	(COS.sp.1888622)	(4) VV2006-J034108.8-363459	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4533; LIFETIME-POS=LP3			6500 Secs (4694 Secs) *[==>950.0 Secs (Split 1)]* *[==>1264.0 Secs (Split 2)]* *[==>925.0 Secs (Split 3)]* *[==>1555.0 Secs (Split 4)]*	 ***[1]*** ***[2]***

Orbit Structure



Visit

Proposal 17478, Visit 08, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

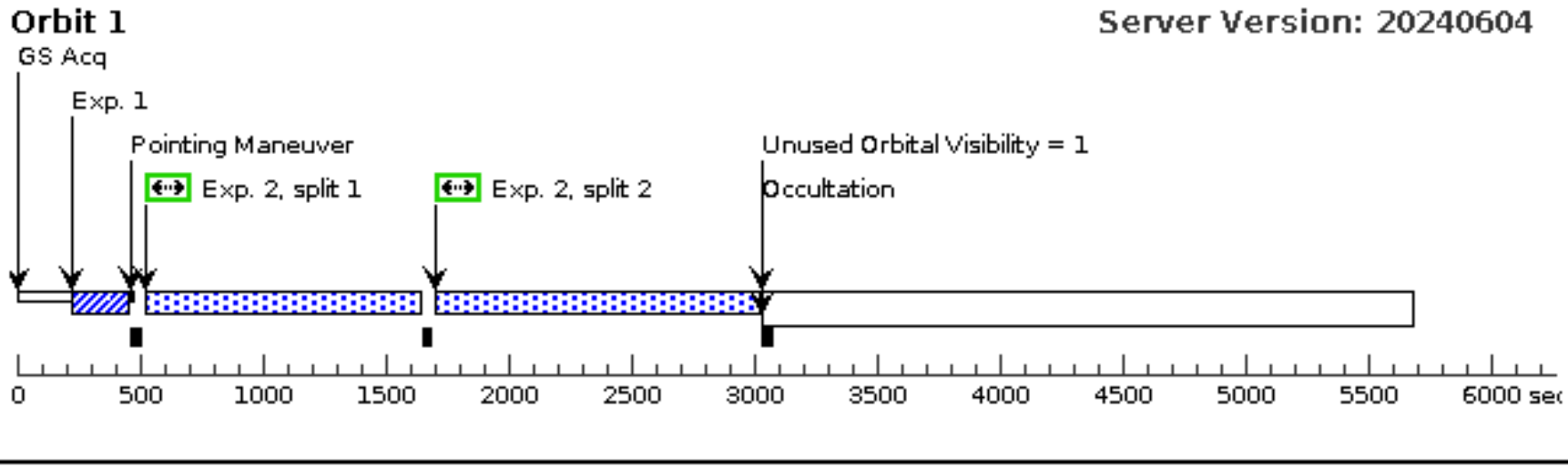
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VV2006-J034108.8-363459	RA: 03 41 8.5381 (55.2855754d) Dec: -36 35 15.04 (-36.58751d) Equinox: J2000	Proper Motion RA: 1.951144808012968E-5 sec of time/yr Proper Motion Dec: -5.840000994794536E-4 arcsec/yr Epoch of Position: 2015.5	V=17.5 mFUV = 19.69	Reference Frame: ICRS

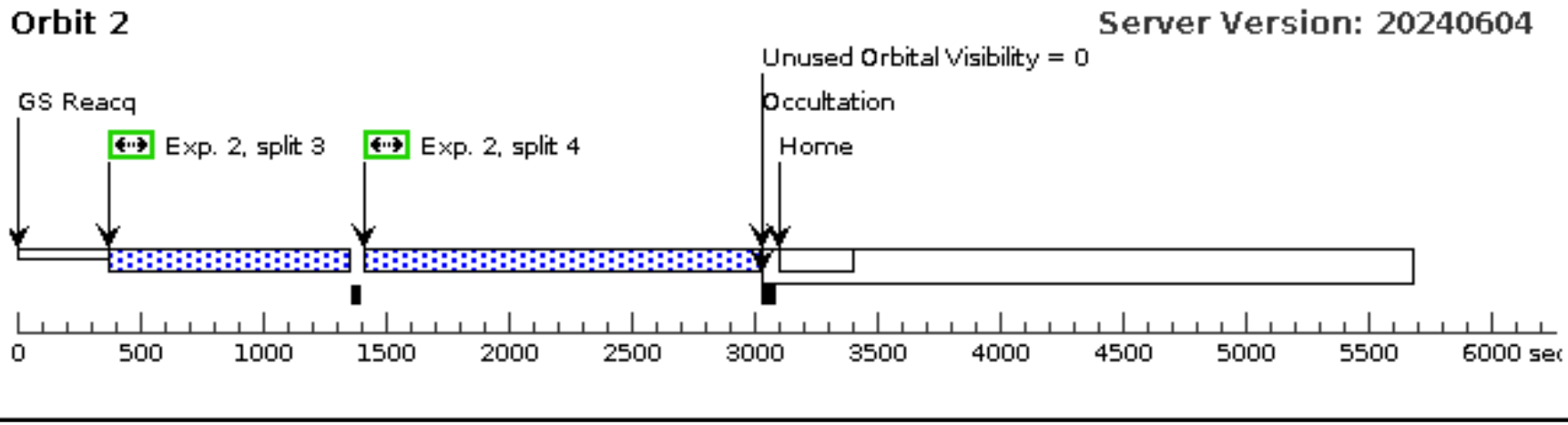
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891705)	(4) VV2006-J034108.8-363459	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				6 Secs (6 Secs) *[==>]*	 ***[1]***
2	(COS.sp.1888622)	(4) VV2006-J034108.8-363459	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4533; LIFETIME-POS=LP3			6500 Secs (4694 Secs) *[==>950.0 Secs (Split 1)]* *[==>1264.0 Secs (Split 2)]* *[==>925.0 Secs (Split 3)]* *[==>1555.0 Secs (Split 4)]*	 ***[1]*** ***[2]***

Orbit Structure





Visit

Proposal 17478, Visit 09, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

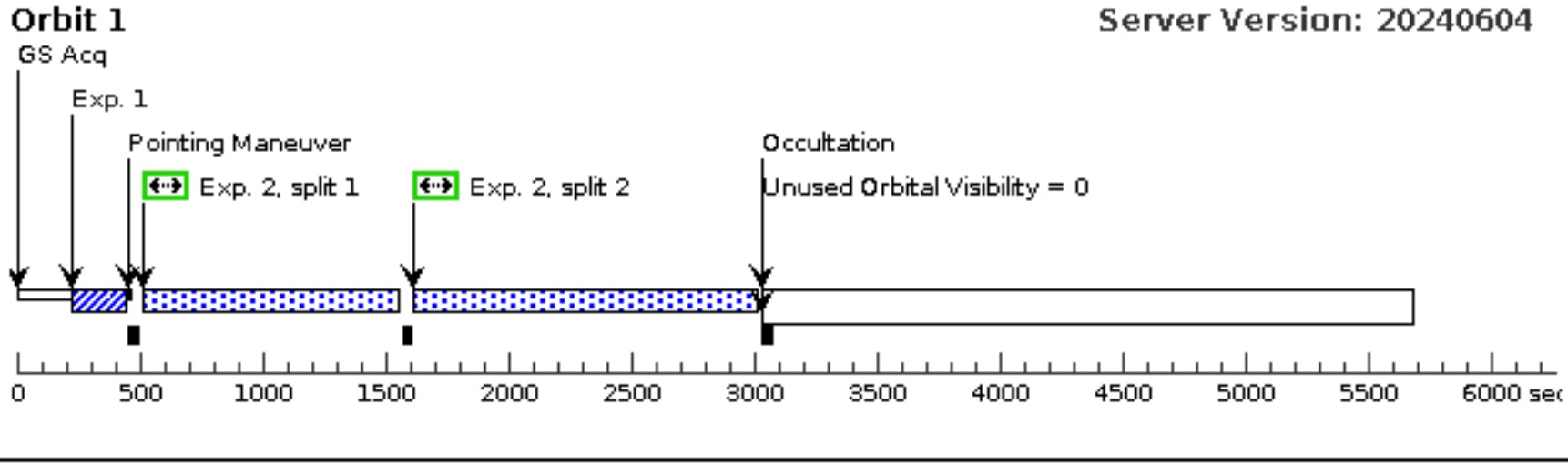
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	QSO-B0333-342	RA: 03 35 40.1562 (53.9173175d) Dec: -34 07 49.40 (-34.13039d) Equinox: J2000	Proper Motion RA: 7.731682987542701E-6 sec of time/yr Proper Motion Dec: 2.47E-4 arcsec/yr Epoch of Position: 2015.5	V=17.53 mFUV = 18.99	Reference Frame: ICRS

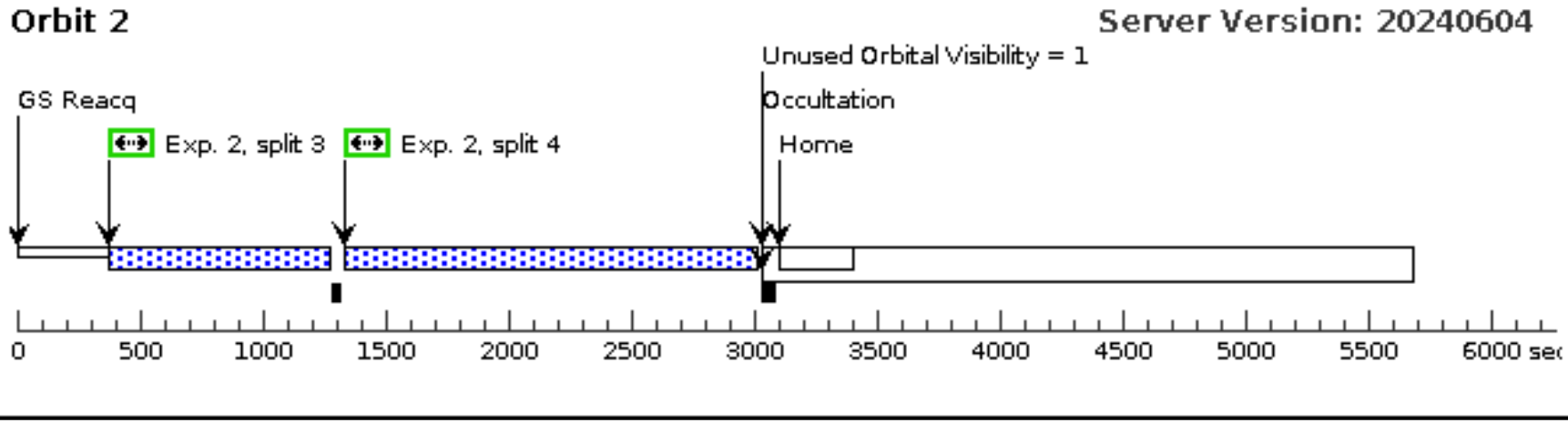
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891708)	(7) QSO-B0333-342	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				2 Secs (2 Secs)	
								[==>]	***[1]***
2	(COS.sp.1888624)	(7) QSO-B0333-342	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4334; LIFETIME-POS=LP3			633 Secs (4692 Secs)	
								[==>869.0 Secs (Split 1)] *[==>1349.0 Secs (Split 2)]*	***[1]***
								[==>843.0 Secs (Split 3)] *[==>1631.0 Secs (Split 4)]*	***[2]***

Orbit Structure





Visit

Proposal 17478, Visit 10, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

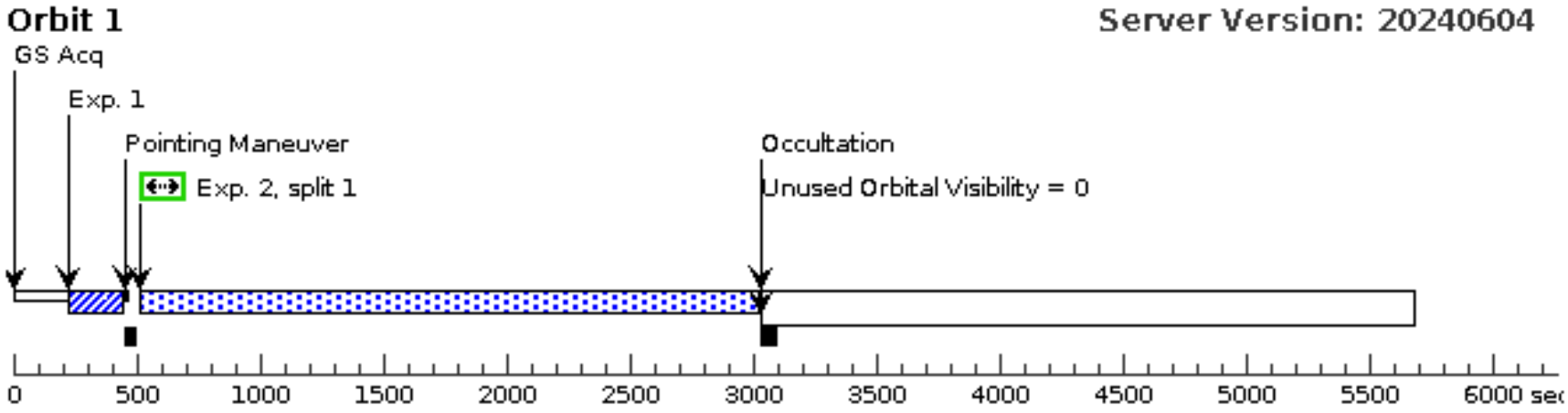
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	QSO-B0333-342	RA: 03 35 40.1562 (53.9173175d) Dec: -34 07 49.40 (-34.13039d) Equinox: J2000	Proper Motion RA: 7.731682987542701E-6 sec of time/yr Proper Motion Dec: 2.47E-4 arcsec/yr Epoch of Position: 2015.5	V=17.53 mFUV = 18.99	Reference Frame: ICRS

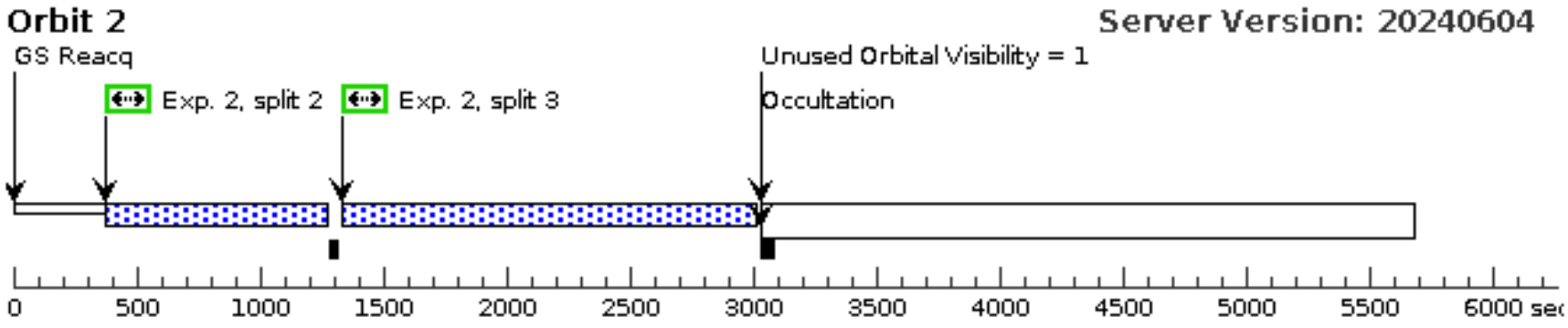
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

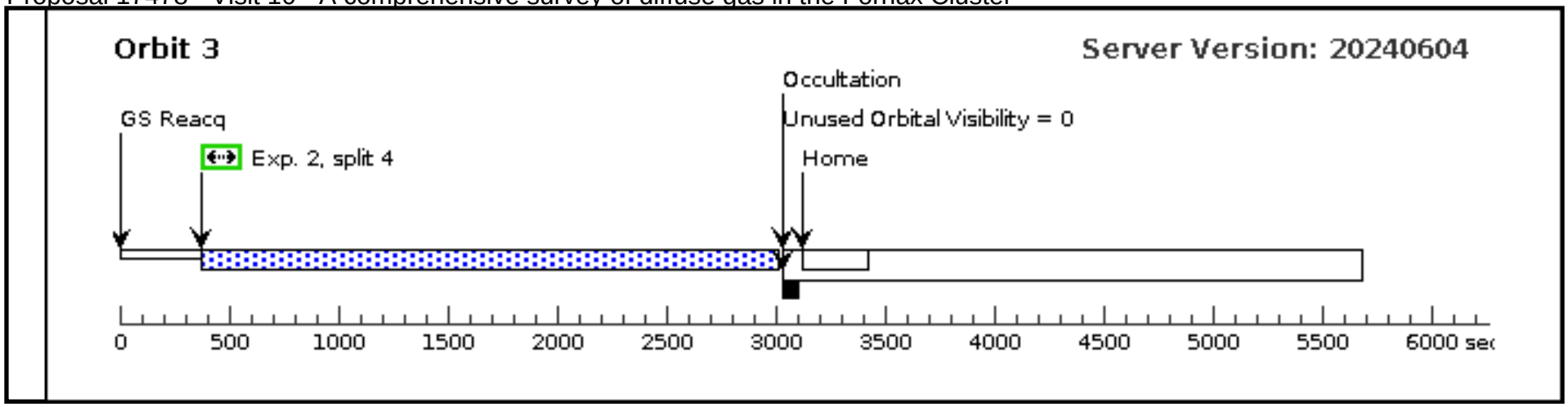
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891708)	(7) QSO-B0333-342	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				2 Secs (2 Secs)	
								[==>]	***[1]***
2	(COS.sp.1888624)	(7) QSO-B0333-342	COS/FUV, TIME-TAG, PSA	G130M 1309 A	FP-POS=ALL; BUFFER-TIME=4334; LIFETIME-POS=LP3			633 Secs (7397 Secs)	
								[==>2333.0 Secs (Split 1)]	***[1]***
								[==>843.0 Secs (Split 2)] *[==>1631.0 Secs (Split 3)]*	***[2]***
								[==>2590.0 Secs (Split 4)]	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
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 17478, Visit 11, scheduling Tue Jun 11 18:01:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

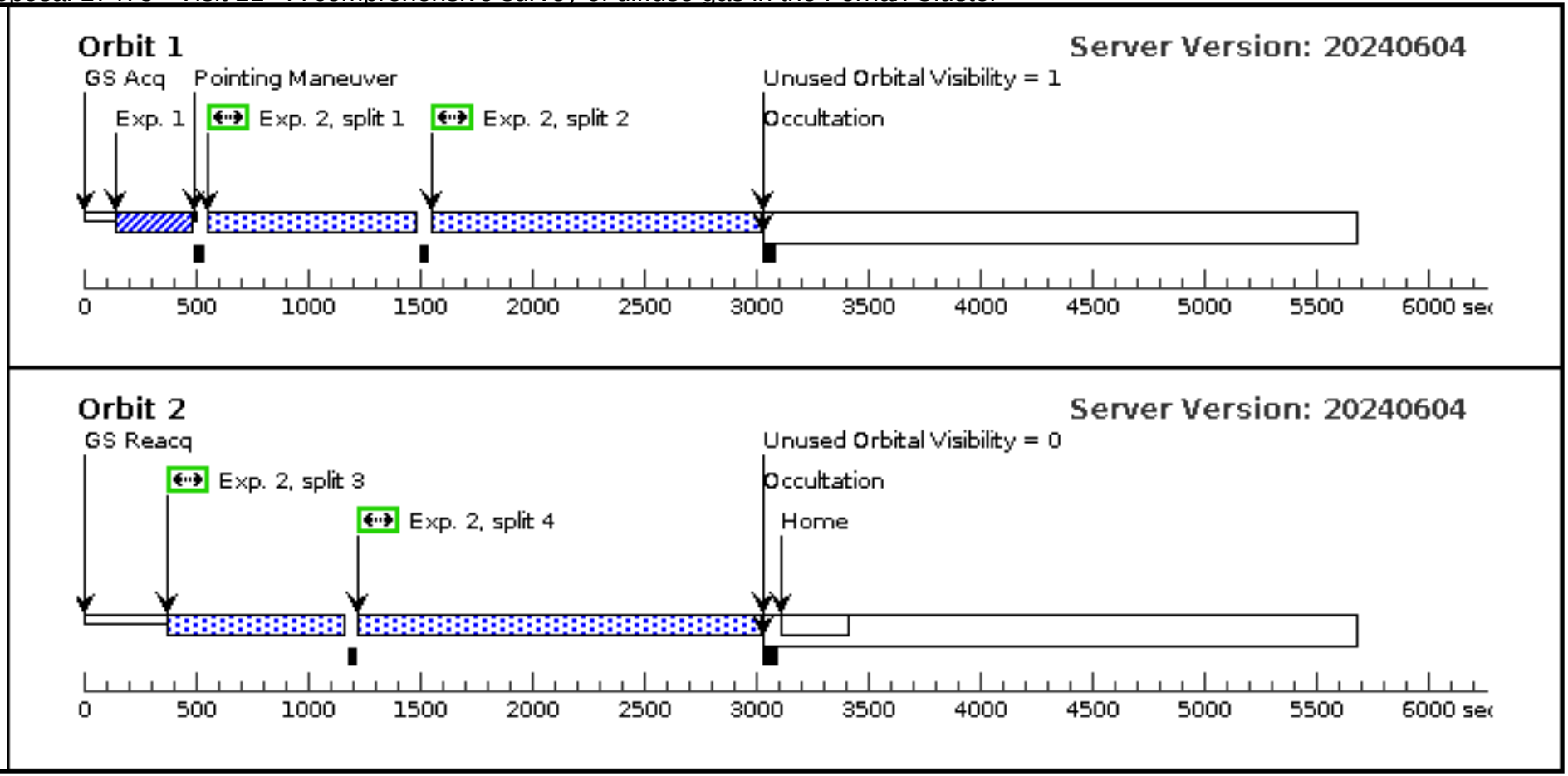
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	QSO-B0323-381	RA: 03 24 54.3276 (51.2263650d) Dec: -37 57 0.13 (-37.95004d) Equinox: J2000	Proper Motion RA: 5.410793377716263E-6 sec of time/yr Proper Motion Dec: -3.8400003177230246E-4 arcsec/yr Epoch of Position: 2015.5	V=16.44 mFUV = 17.85	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891725)	(2) QSO-B0323-381	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				23 Secs (23 Secs) *[==>]*	 ***[1]***
2	(COS.sp.1888629)	(2) QSO-B0323-381	COS/FUV, TIME-TAG, PSA	G130M 1309 A	BUFFER-TIME=3695; FP-POS=ALL; LIFETIME-POS=LP3			633 Secs (4660 Secs) *[==>761.0 Secs (Split 1)]* *[==>1419.0 Secs (Split 2)]* *[==>736.0 Secs (Split 3)]* *[==>1744.0 Secs (Split 4)]*	 ***[1]*** ***[2]***

Orbit Structure



Visit

Proposal 17478, Visit 12, completed Tue Jun 11 18:02:00 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Visit 12) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Visit 12) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

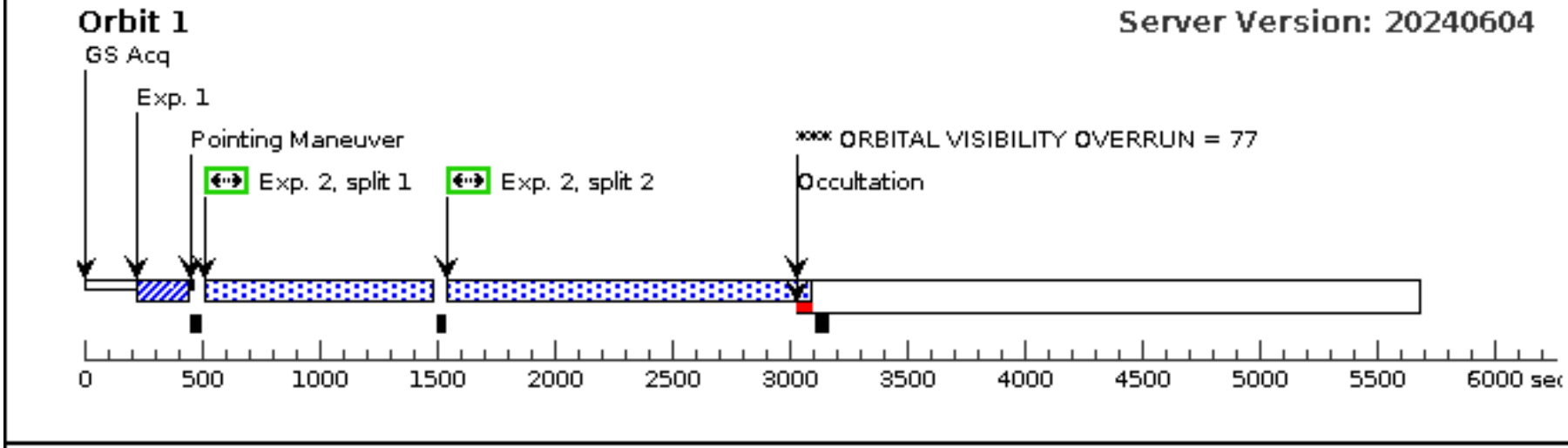
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	VV2000-J032601.0-364149	RA: 03 26 1.0724 (51.5044683d) Dec: -36 41 49.08 (-36.69697d) Equinox: J2000	Proper Motion RA: 3.741547432241414E-6 sec of time/yr Proper Motion Dec: 1.18E-4 arcsec/yr Epoch of Position: 2015.5	V=15.9 mFUV = 18.01	Reference Frame: ICRS

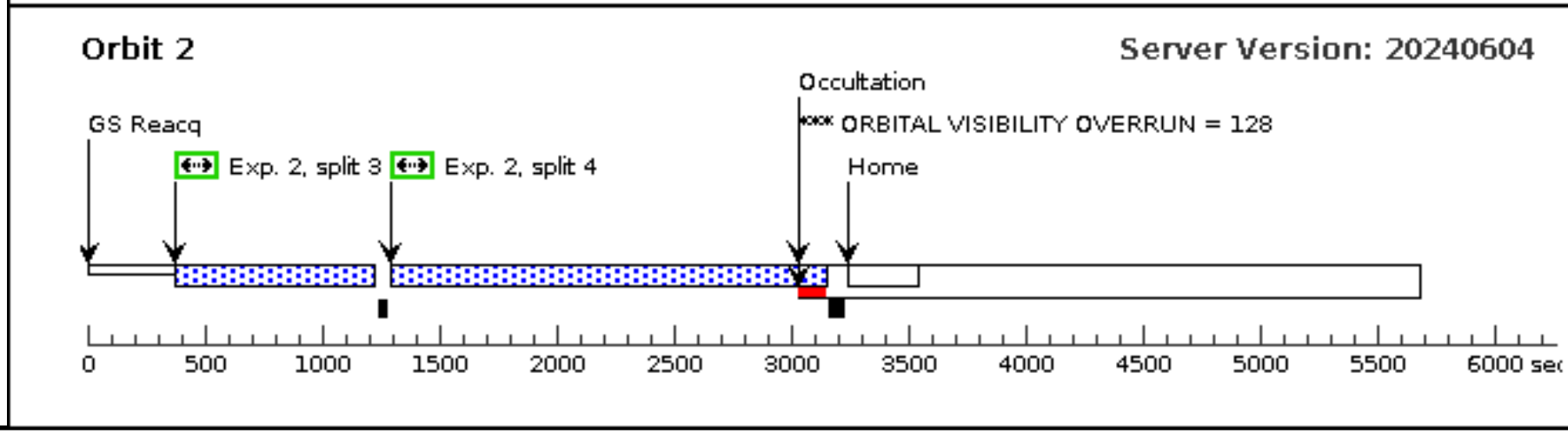
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891721)	(3) VV2000-J032601.0-364149	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				2 Secs (2 Secs)	
								[==>]	***[1]***
2	(COS.sp.1888628)	(3) VV2000-J032601.0-364149	COS/FUV, TIME-TAG, PSA	G130M 1309 A	BUFFER-TIME=3817; FP-POS=ALL; LIFETIME-POS=LP3			1300 Secs (4908 Secs)	
								[==>800.0 Secs (Split 1)] *[==>1500.0 Secs (Split 2)]*	***[1]***
								[==>800.0 Secs (Split 3)] *[==>1808.0 Secs (Split 4)]*	***[2]***

Orbit Structure





Visit

Proposal 17478, Visit 13, completed Tue Jun 11 18:02:00 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Visit 13) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Visit 13) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Visit 13) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

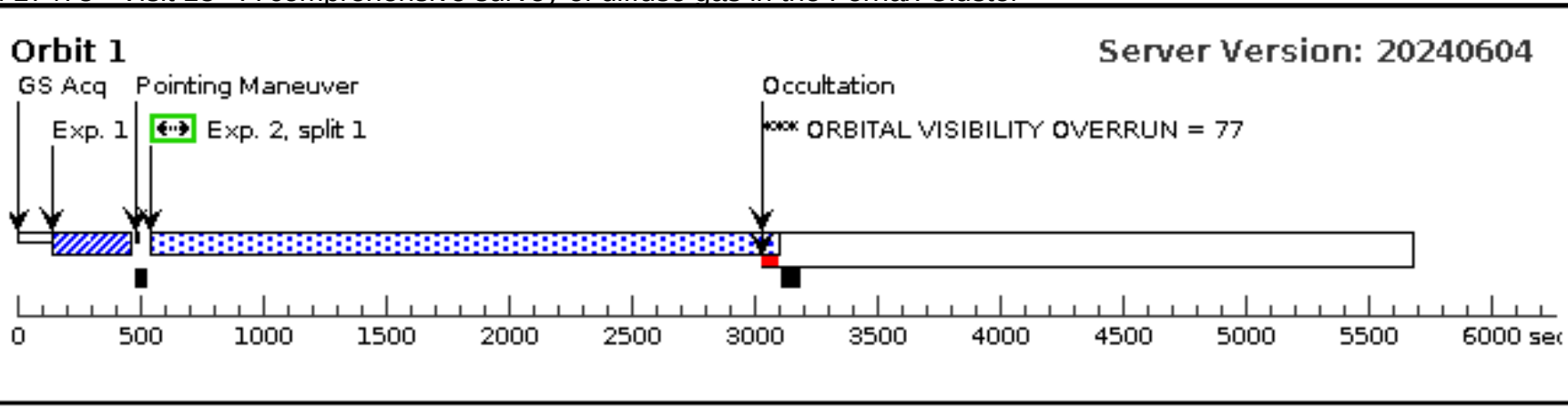
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	UVQS-J034209.28-370251.7	RA: 03 42 9.2800 (55.5386667d) Dec: -37 02 51.70 (-37.04769d) Equinox: J2000	Epoch of Position: 2015.5	V=17.12 mFUV = 18.19	Reference Frame: ICRS

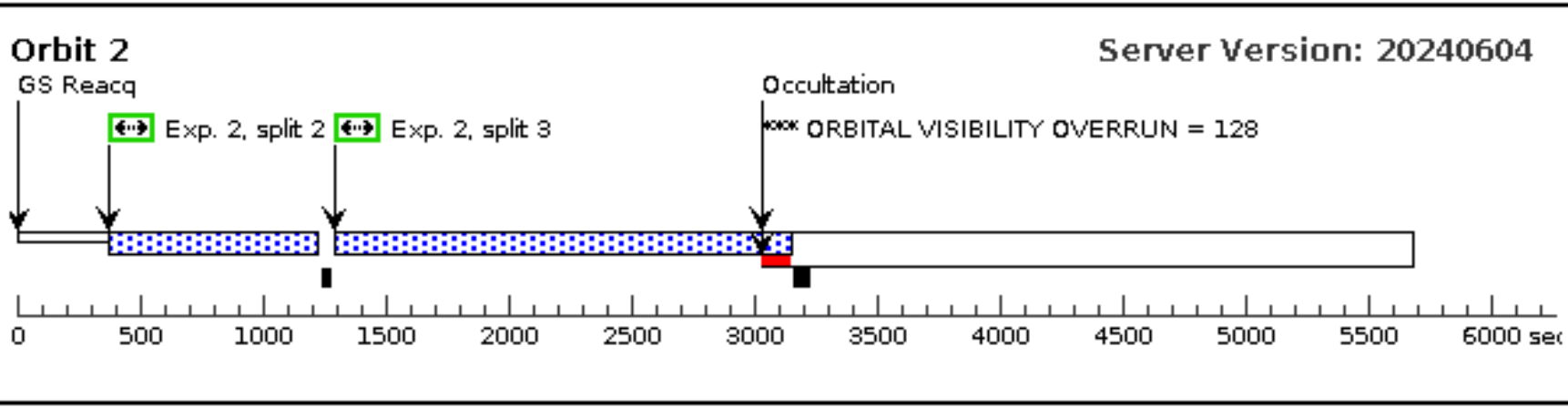
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

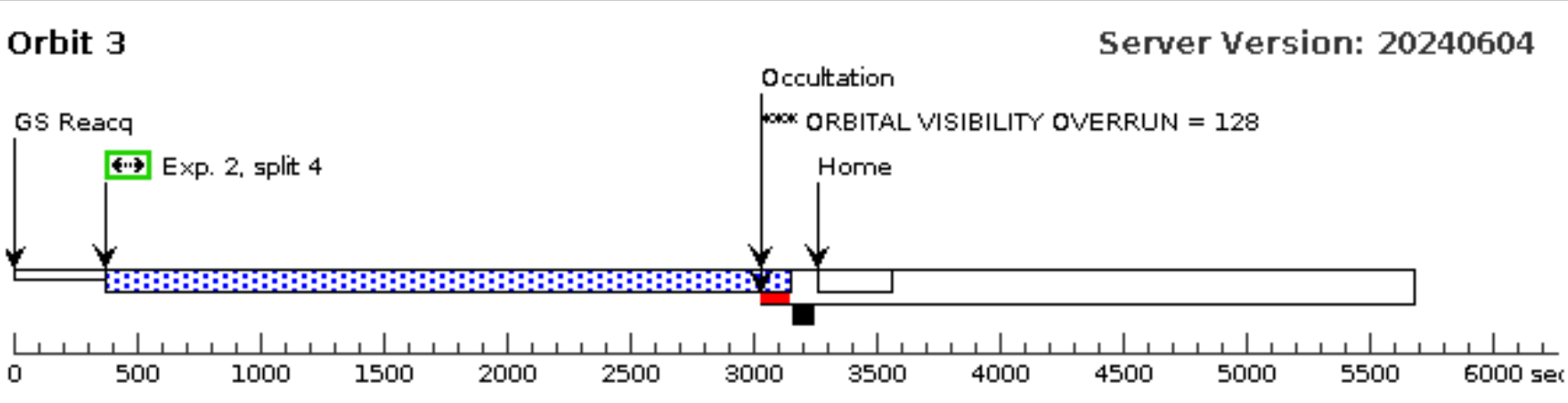
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891717)	(8) UVQS-J034209.28-370251.7	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				17 Secs (17 Secs)	
								[==>]	***[1]***
2	(COS.sp.1888626)	(8) UVQS-J034209.28-370251.7	COS/FUV, TIME-TAG, PSA	G130M 1309 A	BUFFER-TIME=3937; FP-POS=ALL; LIFETIME-POS=LP3			1600 Secs (7716 Secs)	
								[==>2385.0 Secs (Split 1)]	***[1]***
								[==>800.0 Secs (Split 2)]	***[2]***
								[==>1808 Secs (Split 3)]	
								[==>2723.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 17478, Visit 14, completed Tue Jun 11 18:02:00 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Visit 14) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Visit 14) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	QSO-B0330-368	RA: 03 32 8.1332 (53.0338883d) Dec: -36 34 58.08 (-36.58280d) Equinox: J2000	Proper Motion RA: -3.7360066316562103E-6 sec of time/yr Proper Motion Dec: 9.4E-5 arcsec/yr Epoch of Position: 2015.5	V=16.61 mFUV = 17.59	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[QSO, QUASAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1891713)	(5) QSO-B0330-368	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				10 Secs (10 Secs)	
								[==>]	***[1]***
2	(COS.sp.1888625)	(5) QSO-B0330-368	COS/FUV, TIME-TAG, PSA	G130M 1309 A	BUFFER-TIME=3486; FP-POS=ALL; LIFETIME-POS=LP3			800 Secs (4892 Secs)	
								[==>700.0 Secs (Split 1)] *[==>1584.0 Secs (Split 2)]*	***[1]***
								[==>700.0 Secs (Split 3)] *[==>1908.0 Secs (Split 4)]*	***[2]***

Orbit Structure