17100 - UV spectra of the most metal-deficient galaxies

Cycle: 30, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*
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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) J0811+4730	COS/FUV COS/NUV	5	14-Jun-2024 11:00:52.0	yes
02	(2) J0837+1921	COS/FUV COS/NUV	5	14-Jun-2024 11:00:53.0	yes
52	(2) J0837+1921	COS/FUV COS/NUV	2	14-Jun-2024 11:00:54.0	yes
03	(3) J1004+3256	COS/FUV COS/NUV	5	14-Jun-2024 11:00:54.0	yes
53	(3) J1004+3256	COS/FUV COS/NUV	5	14-Jun-2024 11:00:55.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
04	(4) J1234+3901	COS/FUV COS/NUV	4	14-Jun-2024 11:00:56.0	yes
05	(4) J1234+3901	COS/FUV COS/NUV	4	14-Jun-2024 11:00:57.0	yes
06	(5) J1505+3721	COS/FUV COS/NUV	5	14-Jun-2024 11:00:57.0	yes
07	(6) J2229+2725	COS/FUV COS/NUV	5	14-Jun-2024 11:00:58.0	yes

40 Total Orbits Used

ABSTRACT

Extremely metal-deficient (XMD), compact and low-mass star-forming galaxies (SFGs) at low redshifts are considered to be the likely nearby counterparts of the high-z star-forming dwarf galaxies thought to be responsible for the reionization of the Universe. We propose to observe with the HST/COS a sample of the six most metal-deficient (12+logO/H=6.98-7.23) compact SFGs known in the local universe, to obtain low-resolution spectra from Lyman-alpha to ~1700 Ang (covering e.g. the Lya, CIV 1550, HeII 1640, OIII]1661,1666 emission lines) of all XMDs. Only one galaxy with such a low metallicity, I Zw 18, has been studied previously with the HST/COS. These SFGs were selected from the Data Release 16 and earlier releases of the Sloan Digital Sky Survey to be not only XMD, but also to be very compact and to have very young starbursts (EW(Hbeta)=159-177A). Among them one galaxy, J0811+4730 with 12+logO/H = 6.98, is one of the lowest-metallicity low-z SFG known to date. The spectra will be used to constrain the properties of extremely metal-deficient massive stars, the ISM, and the radiation field of these objects, which are extremely rare in the local Universe, but were common at high redshift. Obtaining the rest-UV spectra of these six XMD SFGs which will serve as templates for the analysis of spectra of high-z dwarf galaxies with active star formation, is thus both urgent and crucial for upcoming studies with the JWST and the largest ground-based facilities.

OBSERVING DESCRIPTION

The galaxies are relatively faint and satisfy safety conditions for observing with the COS. Furthermore, there are no sources brighter than the COS safety limits in circular regions with the diameter of 43 arcsec centered on the selected galaxies. All objects are planned for observing with the COS (Program GO 16672) but only with the G130M grating. No dublications exist for G140L grating. NUV acquisition images of the targets will be

obtained with the standard Mirror A and the ACQ/IMAGE mode to reach a S/N~20 inside a 9x9 pixel box centered on the brightest part of the galaxy. The adopted GALEX NUV magnitudes were used to estimate exposure times. The angular galaxy radius is chosen to be 0.2", inside which most of the galaxy light is concentrated. The total time for acquisition is up to 120s+2x500s=1120s per object. The UV lines of interest here (primarily C IV 1550, He II 1640, O III] 1661,1666) can be observed with the FUV channel of COS with the low-resolution G140L grating with a single setting for all the targets. Due to rapid decrease of the sensitivity at long wavelengths, C III] 1907,1909 cannot be detected with reasonable exposure times. The prime goal is to obtain spatially integrated flux measurements for the C IV 1550 and He II 1640 emission lines. The targets are very compact (by selection) from ground-based imaging (SDSS). Observations with the 2.5 arcsec aperture will thus capture most of the emission line flux, even if it was somewhat more extended than the UV continuum. We use the GALEX FUV magnitude and the spectroscopic COS ETC to estimate the exposure time needed to obtain SNR = 4 in the continuum at 1540A. The ETC run numbers of these calculations are given in the proposal for each exposure. We also computed detailed mock spectra of our faint targets to assess the detectability of the C IV 1550 doublet at the Poisson limit. We assumed an f(lambda) = const galaxy continuum normalized to the (relatively uncertain) GALEX FUV magnitude and a standard 2:1 CIV doublet ratio. [Note: For two targets, J0811+4730 and J1004+3256, the FUV and NUV magnitudes are derived from extrapolation of the SED in the optical range to the UV range.] Based on observations at higher metallicity and to constrain photoionization models we must conservatively detect EW(C IV)> 2 A. Mock spectra were simulated by adopting the G140L dispersion and line spread function, converting to predicted counts for a given exposure time with the G140L sensitivity and COS detector dark rate predicted from the COS ETC, and adding Poisson noise. We then computed the probability that the spectrum across the C IV doublet is consistent with Poisson noise of the galaxy continuum. For each of the five z < 0.08 galaxies we will be able to detect EW(C IV)= 2 A at 4-5sigma significance in 13, 200 s, i.e. 5 orbits including acquisition. Due to the decreasing G140L sensitivity the higher-redshift galaxy J1234+3901 will require a spectroscopic exposure of 20, 800 s, i.e. two visits with four orbits each. The sources are sufficiently bright and compact for standard target acquisition with short overheads. Our total request sums to 33 orbits.

Visit

Proposal 17100, J0811+4730 (01), completed Fri Jun 14 15:00:59 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J0811+4730 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J0811+4730 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J0811+4730 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J0811+4730 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J0811+4730 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

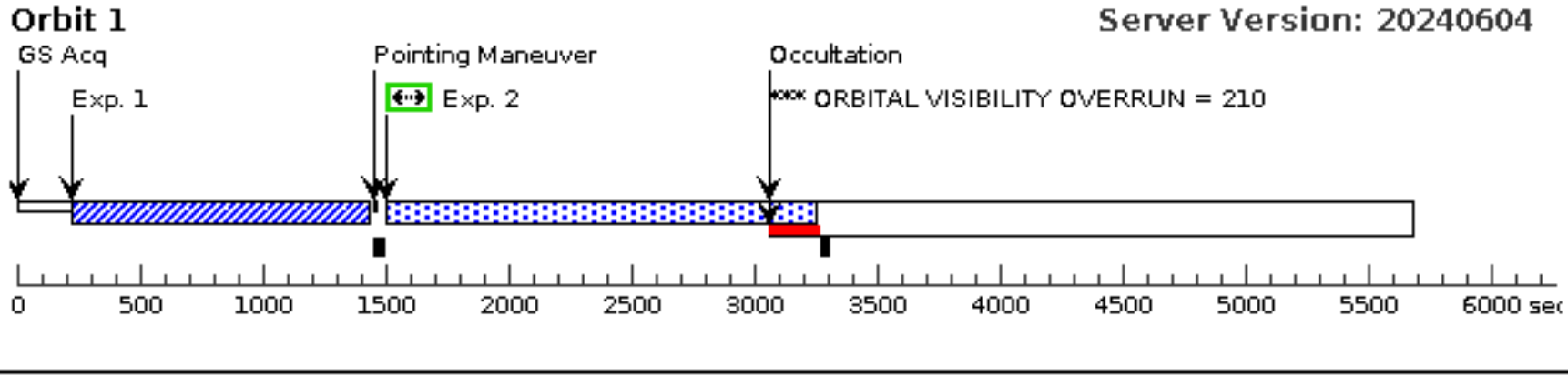
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	J0811+4730	RA: 08 11 52.1400 (122.9672500d) Dec: +47 30 26.30 (47.50731d) Equinox: J2000	Redshift: 0.04442	V=21.37+/-0.05 FUV=21.00+/-0.40, NUV=21.90+/-0.40	Reference Frame: ICRS

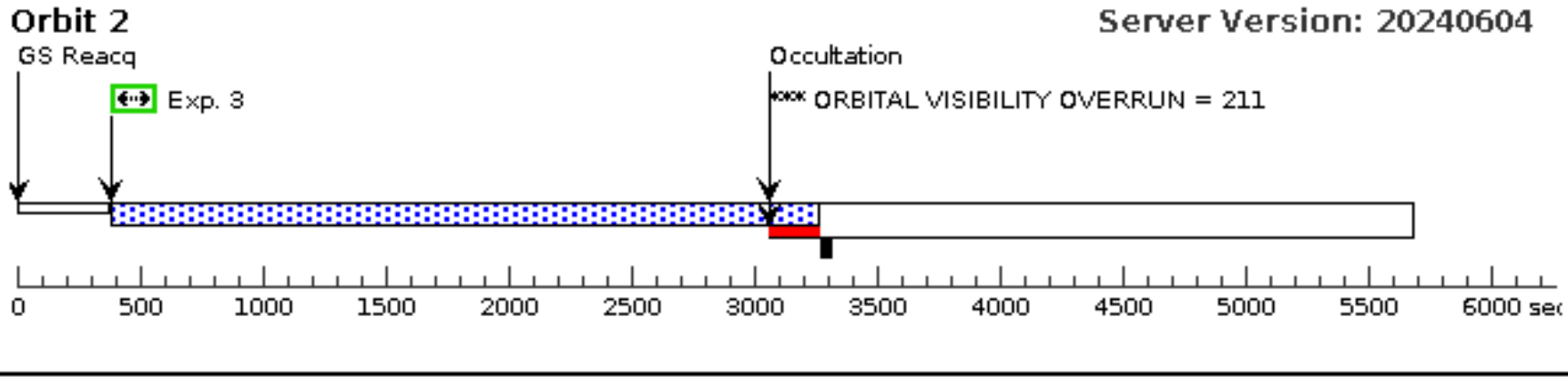
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

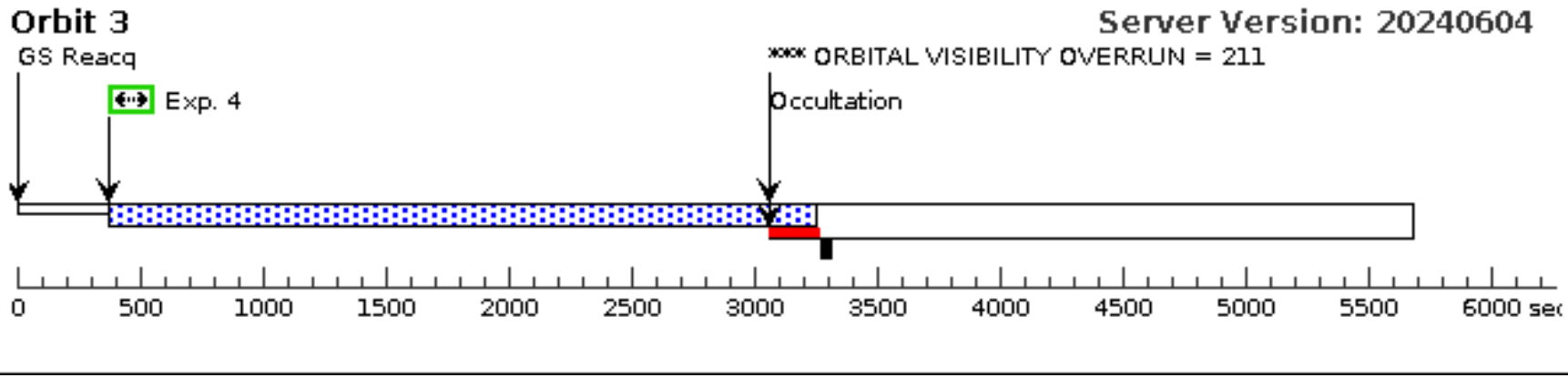
Exposures

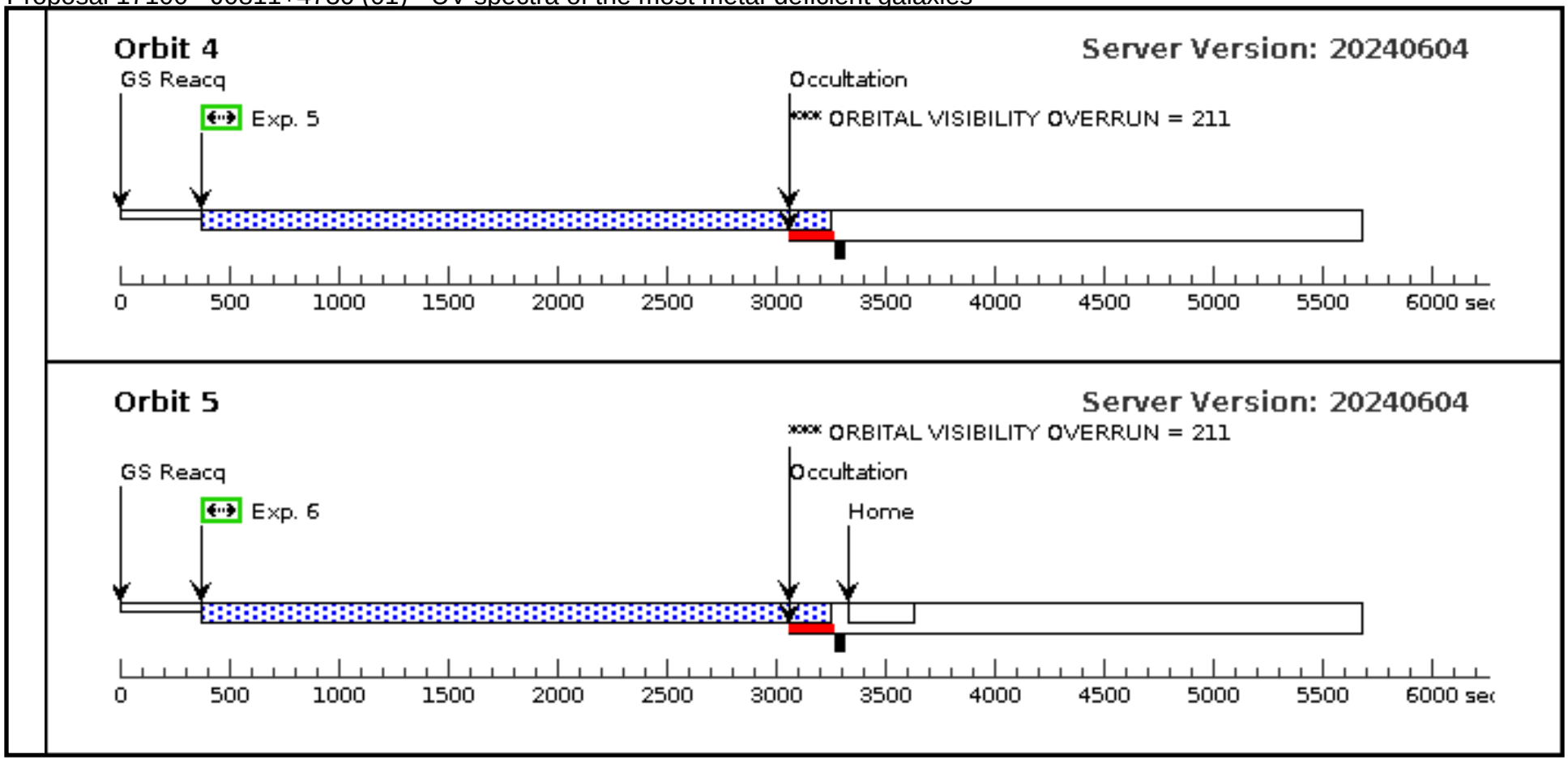
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J0811+4730 ACQ (COS.ta.1522147)	(1) J0811+4730	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				500 Secs (500 Secs) *[==>]*	*[1]*
2	J0811+4730 G140L1 (COS.sp.1808747)	(1) J0811+4730	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1200. Secs (1565 Secs) *[==>1565.0 Secs]*	*[1]*
3	J0811+4730 G140L2 (COS.sp.1808747)	(1) J0811+4730	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1400. Secs (2829 Secs) *[==>2829.0 Secs]*	*[2]*
4	J0811+4730 G140L3 (COS.sp.1808747)	(1) J0811+4730	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			1400. Secs (2829 Secs) *[==>2829.0 Secs]*	*[3]*
5	J0811+4730 G140L4 (COS.sp.1808747)	(1) J0811+4730	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=3; SEGMENT=A			2800. Secs (2829 Secs) *[==>2829.0 Secs]*	*[4]*
6	J0811+4730 G140L5 (COS.sp.1808747)	(1) J0811+4730	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=4; SEGMENT=A			1357. Secs (2829 Secs) *[==>2829.0 Secs]*	*[5]*

Orbit Structure





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Visit

Proposal 17100, J0837+1921 (02), failed Fri Jun 14 15:00:59 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J0837+1921 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J0837+1921 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J0837+1921 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J0837+1921 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J0837+1921 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

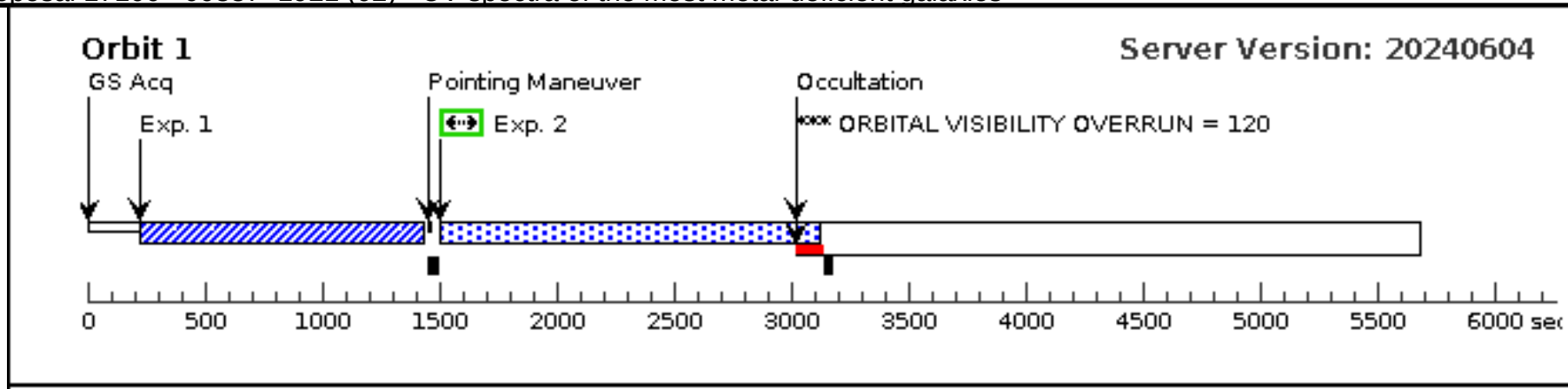
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J0837+1921	RA: 08 37 21.8700 (129.3411250d) Dec: +19 21 10.63 (19.35295d) Equinox: J2000	Redshift: 0.06734	V=21.91+/-0.06 FUV=21.25+/-0.33, NUV=21.53+/-0.49	Reference Frame: ICRS

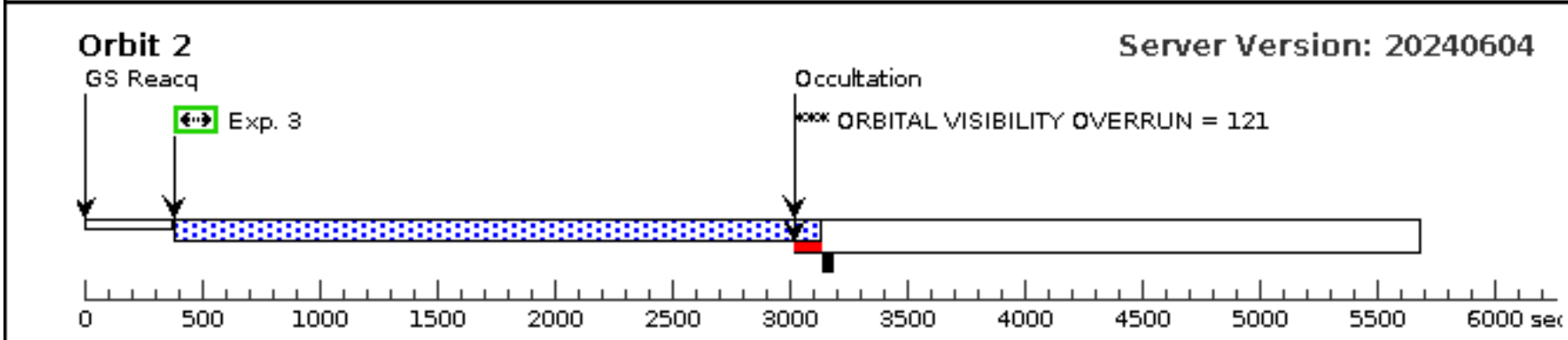
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

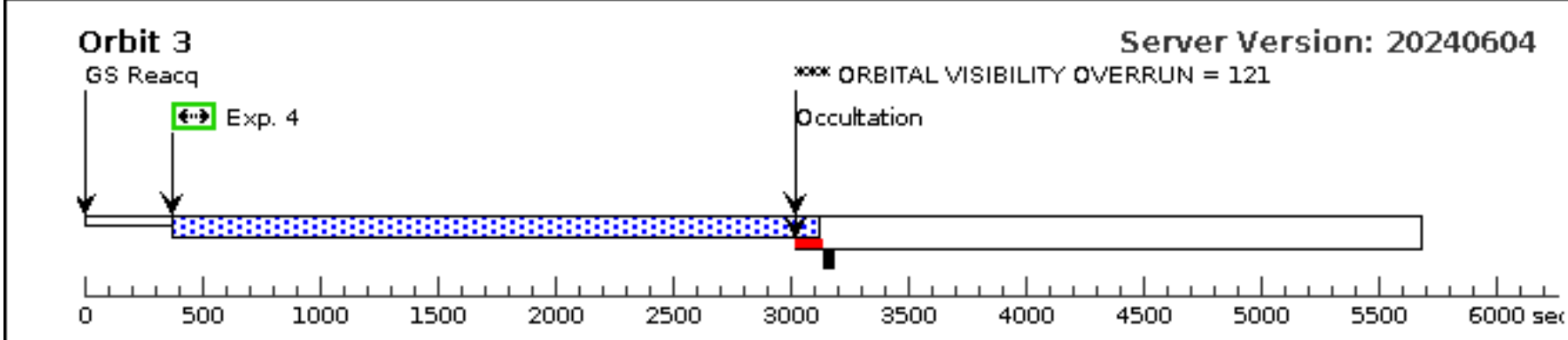
Exposures

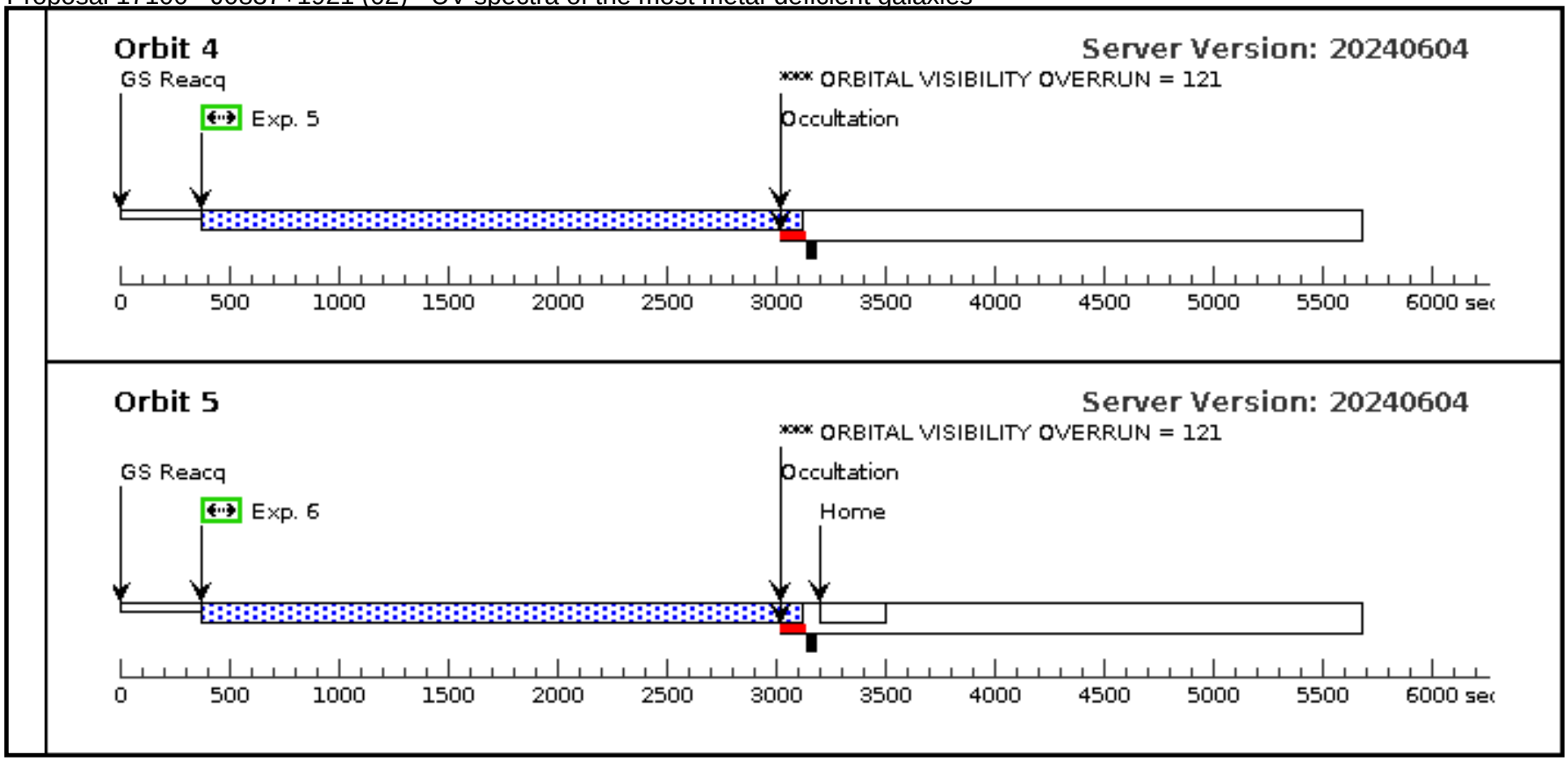
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J0837+1921 ACQ (COS.ta.1522147)	(2) J0837+1921	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				500. Secs (500 Secs) *[==>]*	*[1]*
2	J0837+1921 G140L1 (COS.sp.1808748)	(2) J0837+1921	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1180. Secs (1436 Secs) *[==>1436.0 Secs]*	*[1]*
3	J0837+1921 G140L2 (COS.sp.1808748)	(2) J0837+1921	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1300 Secs (2700 Secs) *[==>2700.0 Secs]*	*[2]*
4	J0837+1921 G140L3 (COS.sp.1808748)	(2) J0837+1921	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			1295 Secs (2700 Secs) *[==>2700.0 Secs]*	*[3]*
5	J0837+1921 G140L4 (COS.sp.1808748)	(2) J0837+1921	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=3; SEGMENT=A			2500. Secs (2700 Secs) *[==>2700.0 Secs]*	*[4]*
6	J0837+1921 G140L5 (COS.sp.1808748)	(2) J0837+1921	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=4; SEGMENT=A			1250 Secs (2700 Secs) *[==>2700.0 Secs]*	*[5]*

Orbit Structure





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Server Version: 20240604
**** ORBITAL VISIBILITY OVERRUN = 121
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Occultation
Exp. 6
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6000 sec

Visit

Proposal 17100, J0837+1921 (52), completed Fri Jun 14 15:00:59 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: HOPR repeat of orbits 2 & 3 from visit 2.

Diagnostics

(J0837+1921 (52)) 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.

(J0837+1921 (52)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0837+1921 (52)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

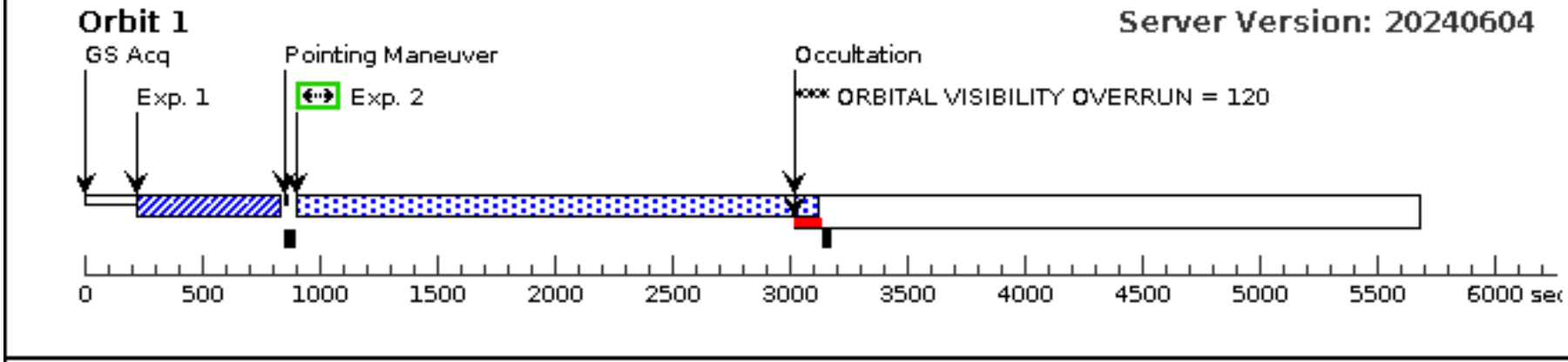
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J0837+1921	RA: 08 37 21.8700 (129.3411250d) Dec: +19 21 10.63 (19.35295d) Equinox: J2000	Redshift: 0.06734	V=21.91+/-0.06 FUV=21.25+/-0.33, NUV=21.53+/-0.49	Reference Frame: ICRS

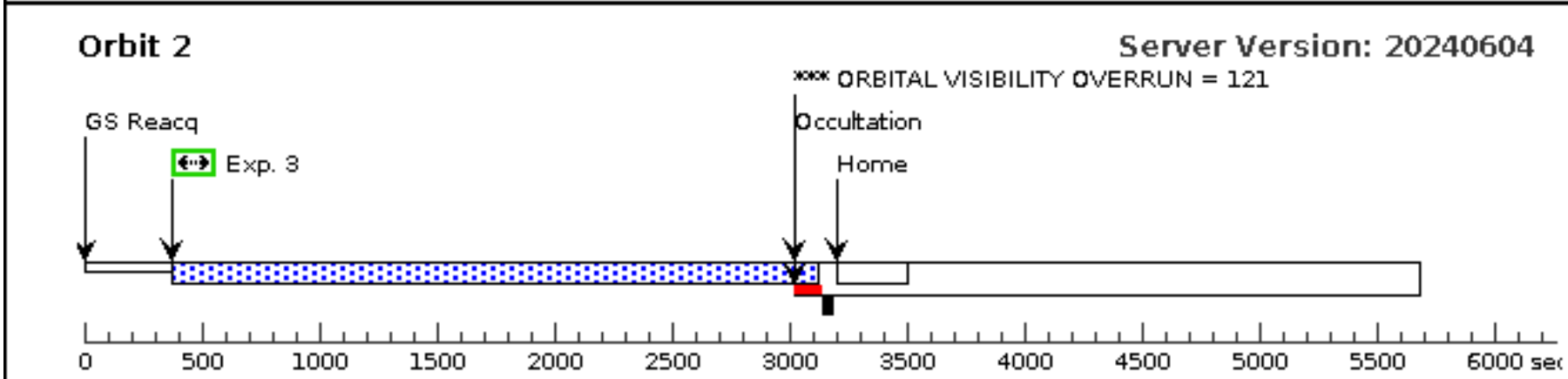
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J0837+1921 ACQ (COS.ta.1522147)	(2) J0837+1921	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				200. Secs (200 Secs) *[==>]*	 ***[1]***
2	J0837+1921 G140L1 (COS.sp.1808748)	(2) J0837+1921	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			2036 Secs (2036 Secs) *[==>]*	 ***[1]***
3	J0837+1921 G140L2 (COS.sp.1808748)	(2) J0837+1921	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			1300 Secs (2700 Secs) *[==>2700.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 17100, J1004+3256 (03), failed Fri Jun 14 15:00:59 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J1004+3256 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J1004+3256 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J1004+3256 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J1004+3256 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J1004+3256 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

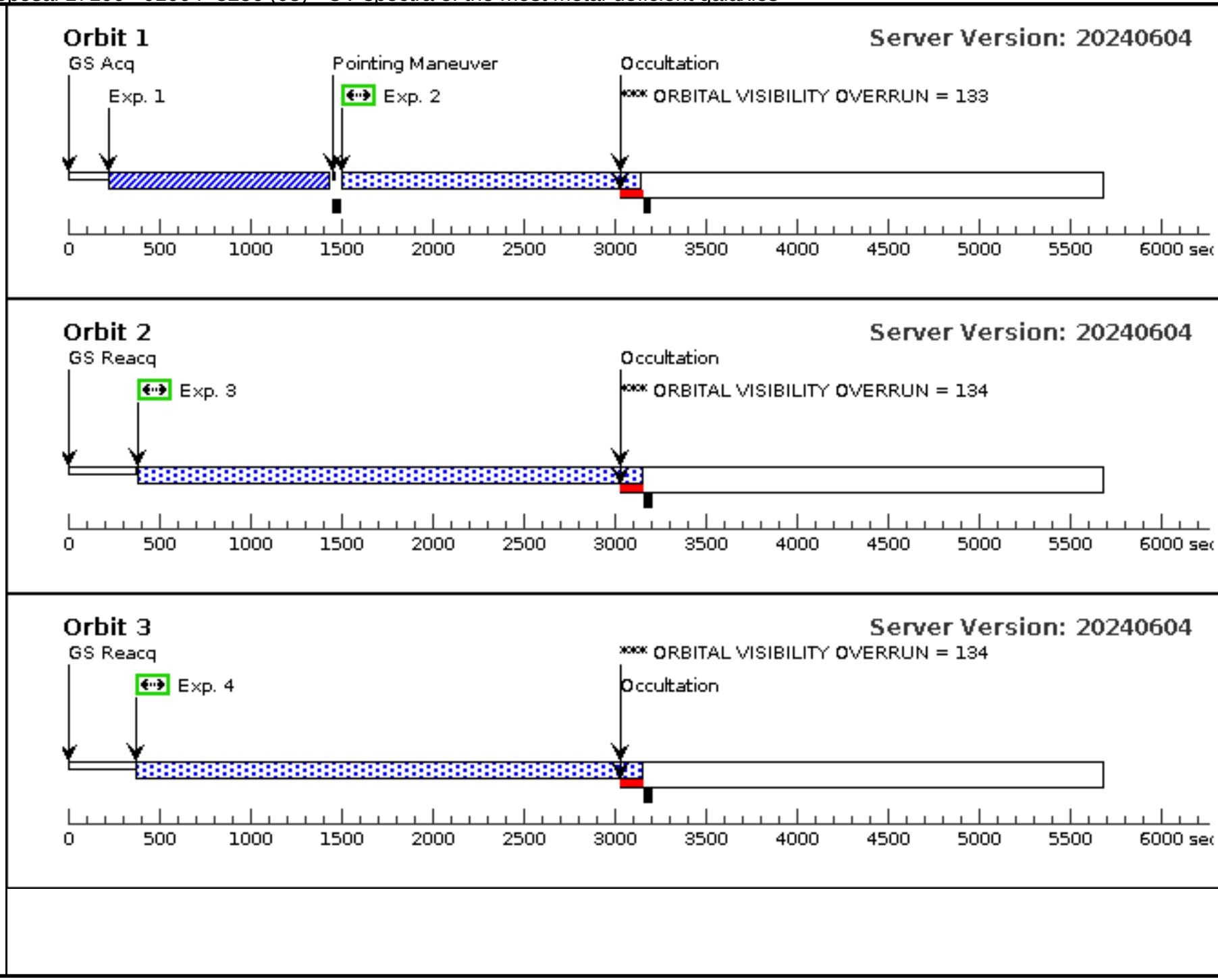
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J1004+3256	RA: 10 04 9.9200 (151.0413333d) Dec: +32 56 12.51 (32.93681d) Equinox: J2000	Redshift: 0.06639	V=21.33+/-0.05 FUV=21.55+/-0.40, NUV=21.77+/-0.40	Reference Frame: ICRS

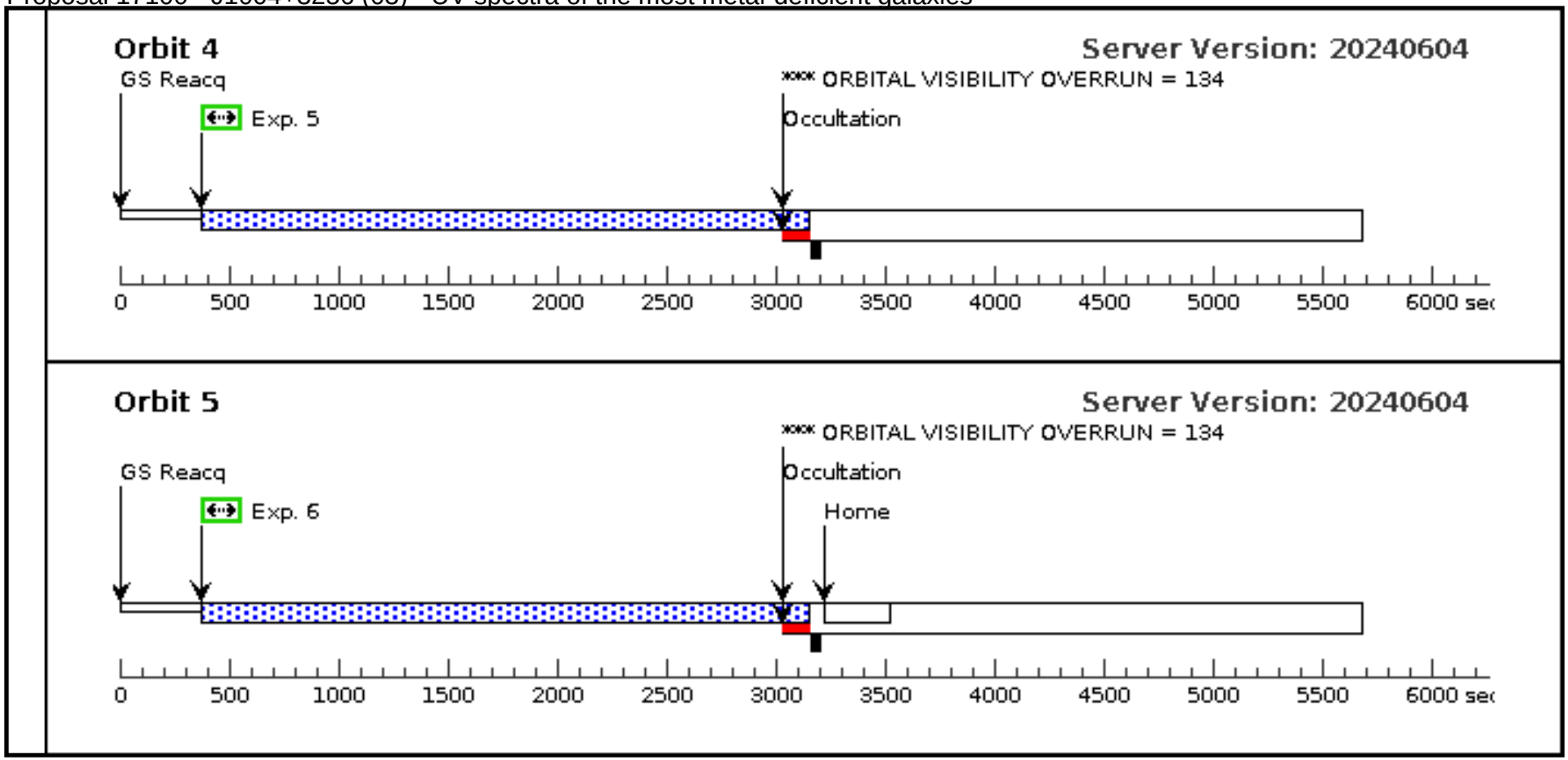
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1004+3256 ACQ (COS.ta.1522147)	(3) J1004+3256	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				500. Secs (500 Secs) *[==>]*	*[1]*
2	J1004+3256 G140L1 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1250. Secs (1460 Secs) *[==>1460.0 Secs]*	*[1]*
3	J1004+3256 G140L2 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1250. Secs (2724 Secs) *[==>2724.0 Secs]*	*[2]*
4	J1004+3256 G140L3 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			1250. Secs (2724 Secs) *[==>2724.0 Secs]*	*[3]*
5	J1004+3256 G140L4 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=3; SEGMENT=A			2400. Secs (2724 Secs) *[==>2724.0 Secs]*	*[4]*
6	J1004+3256 G140L5 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=4; SEGMENT=A			1250. Secs (2724 Secs) *[==>2724.0 Secs]*	*[5]*

Orbit Structure

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Orbit 5
Server Version: 20240604
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Occultation
Exp. 6
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Visit

Proposal 17100, J1004+3256 (53), completed Fri Jun 14 15:00:59 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: HOPR repeat of visit 53.

Diagnostics

(J1004+3256 (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J1004+3256 (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J1004+3256 (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

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(J1004+3256 (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

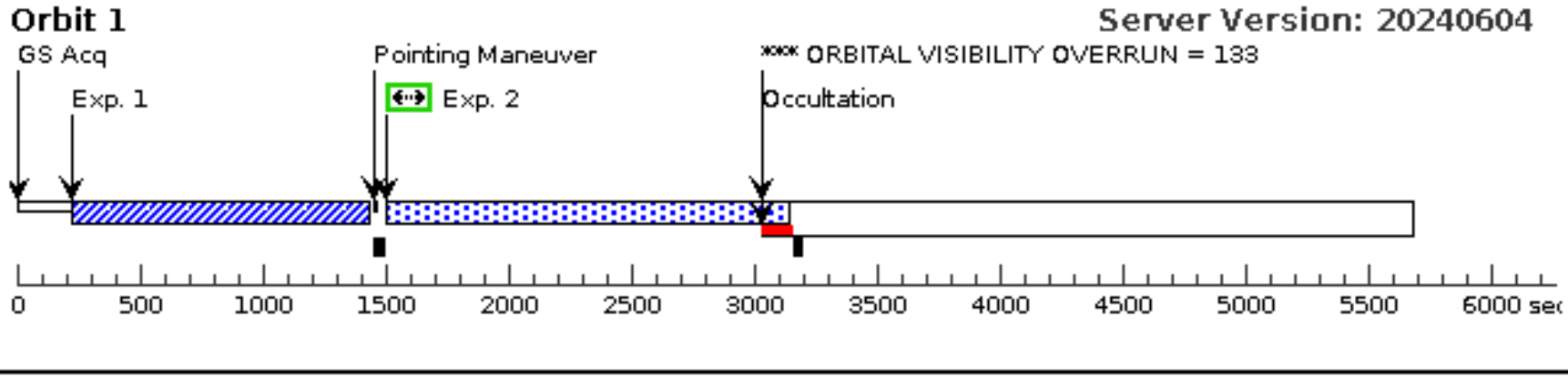
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J1004+3256	RA: 10 04 9.9200 (151.0413333d) Dec: +32 56 12.51 (32.93681d) Equinox: J2000	Redshift: 0.06639	V=21.33+/-0.05 FUV=21.55+/-0.40, NUV=21.77+/-0.40	Reference Frame: ICRS

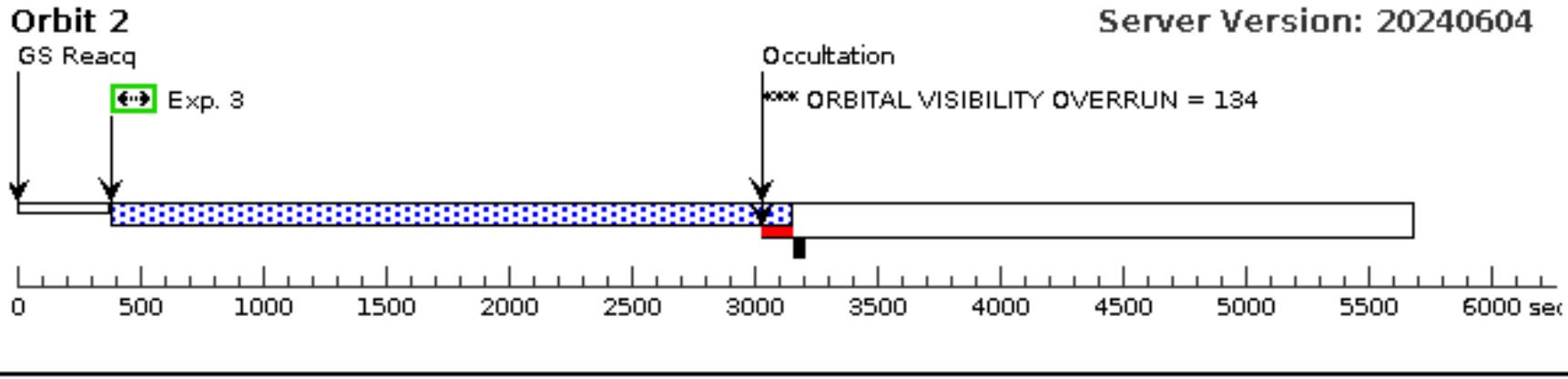
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

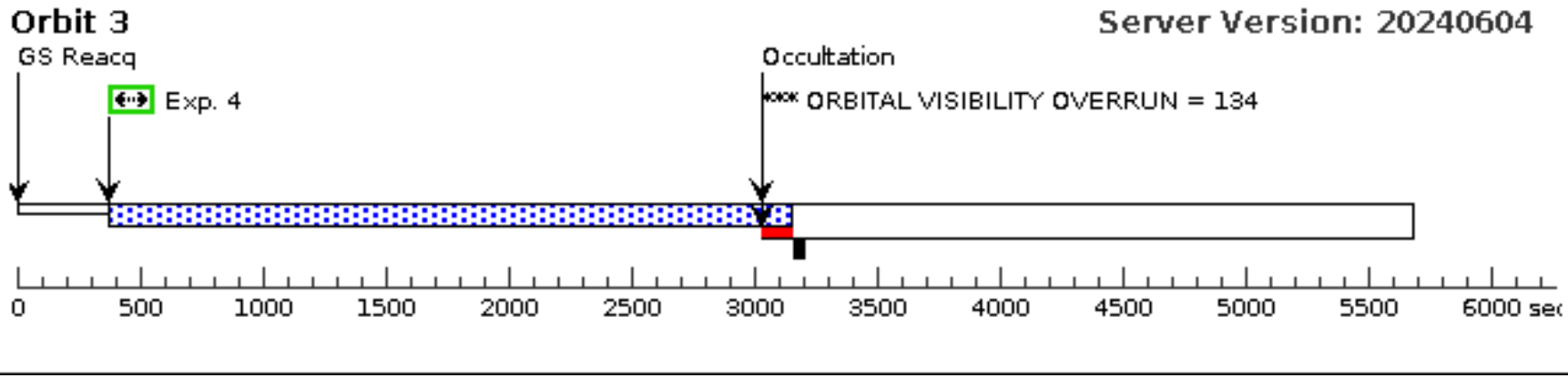
Exposures

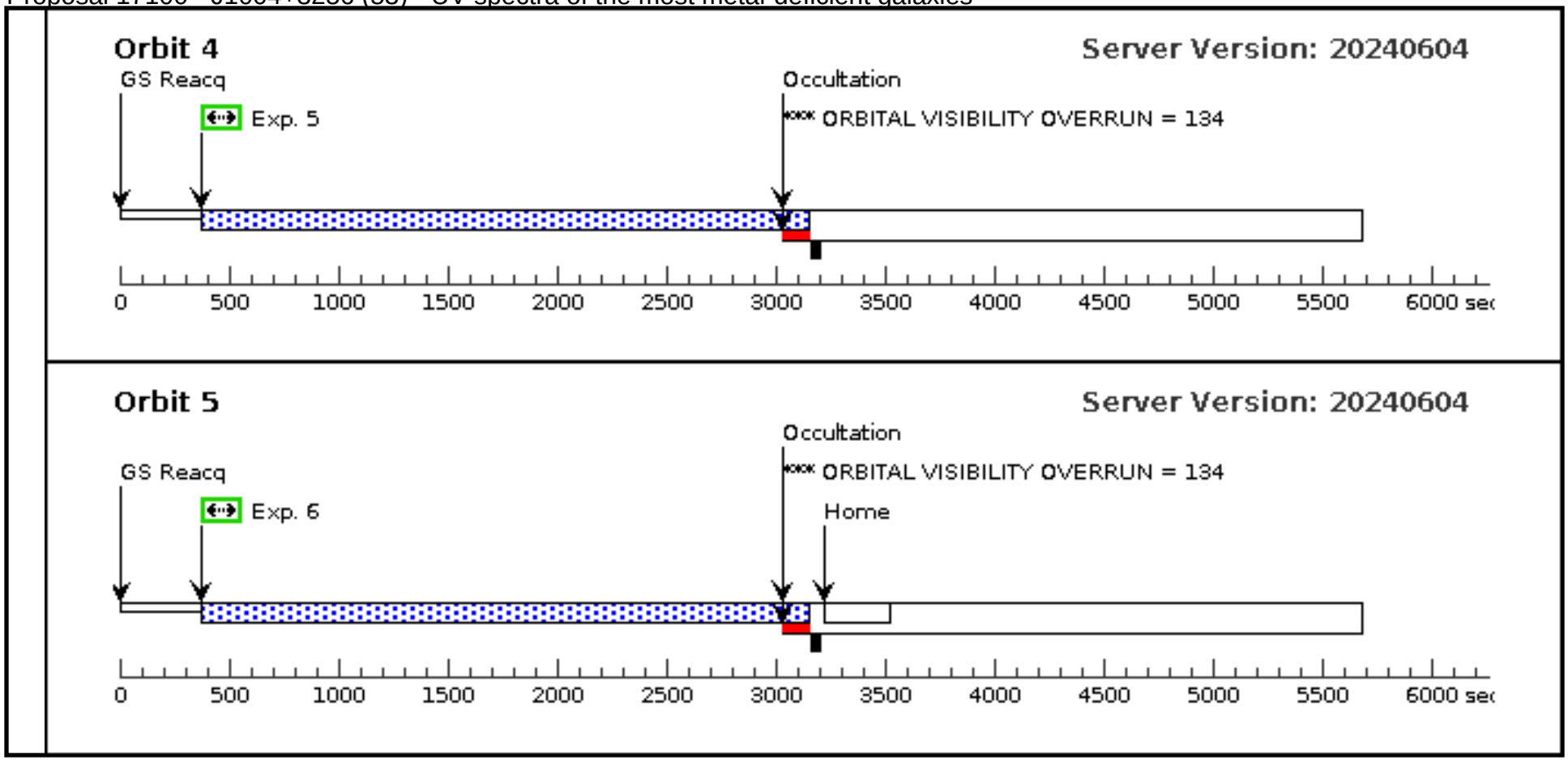
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1004+3256 ACQ (COS.ta.1522147)	(3) J1004+3256	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				500. Secs (500 Secs) *[==>]*	*[1]*
2	J1004+3256 G140L1 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1250. Secs (1460 Secs) *[==>1460.0 Secs]*	*[1]*
3	J1004+3256 G140L2 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1250. Secs (2724 Secs) *[==>2724.0 Secs]*	*[2]*
4	J1004+3256 G140L3 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			1250. Secs (2724 Secs) *[==>2724.0 Secs]*	*[3]*
5	J1004+3256 G140L4 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=3; SEGMENT=A			2400. Secs (2724 Secs) *[==>2724.0 Secs]*	*[4]*
6	J1004+3256 G140L5 (COS.sp.1808749)	(3) J1004+3256	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=4; SEGMENT=A			1250. Secs (2724 Secs) *[==>2724.0 Secs]*	*[5]*

Orbit Structure





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GS Reacq
Exp. 5
Occultation
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3500
4000
4500
5000
5500
6000 sec
Orbit 5
Server Version: 20240604
Occultation
GS Reacq
**** ORBITAL VISIBILITY OVERRUN = 134
Exp. 6
Home
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3500
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4500
5000
5500
6000 sec

Visit

Proposal 17100, J1234+3901 (04), implementation Fri Jun 14 15:00:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

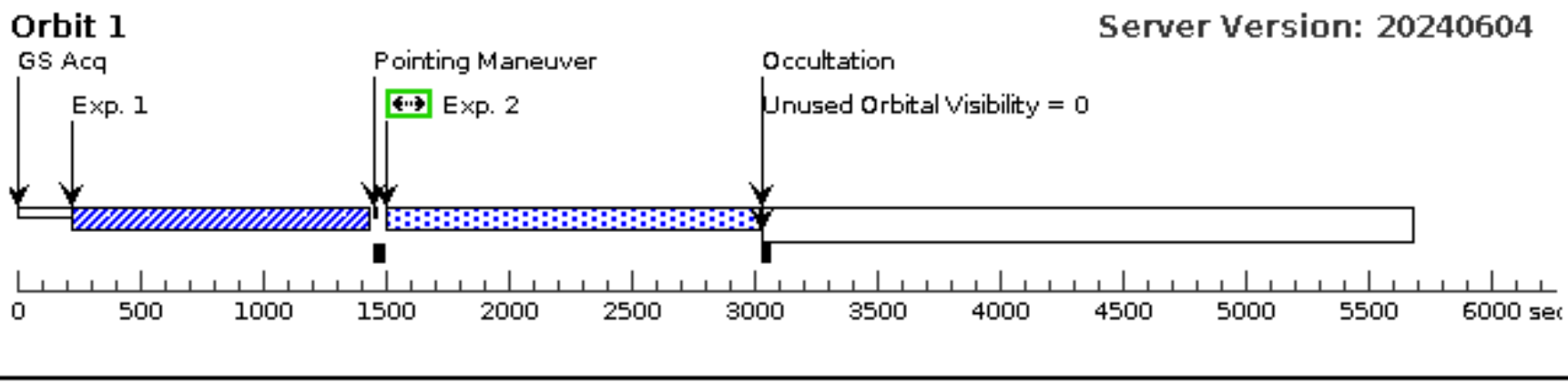
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	J1234+3901	RA: 12 34 15.7000 (188.5654167d) Dec: +39 01 16.41 (39.02123d) Equinox: J2000	Redshift: 0.13320	V=21.92+/-0.06 FUV=21.24+/-0.38, NUV=22.17+/-0.57	Reference Frame: ICRS

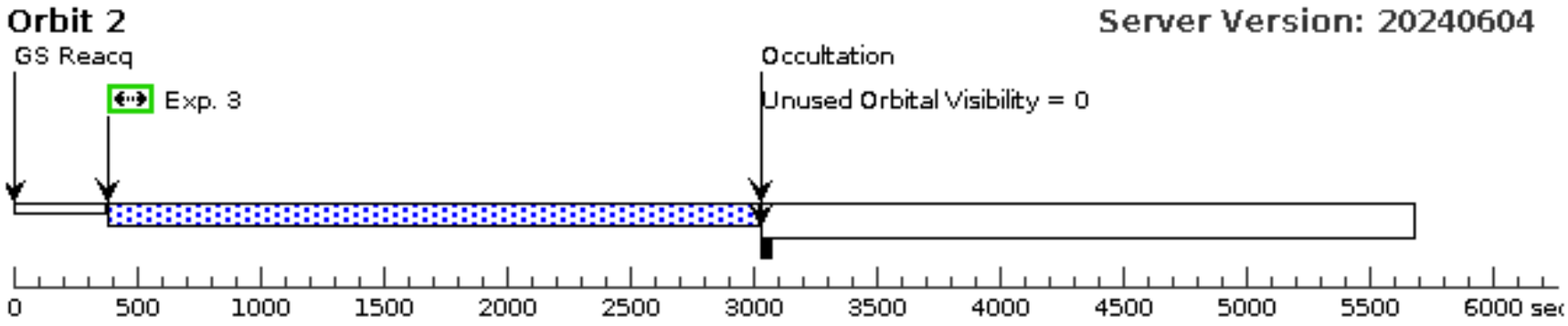
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

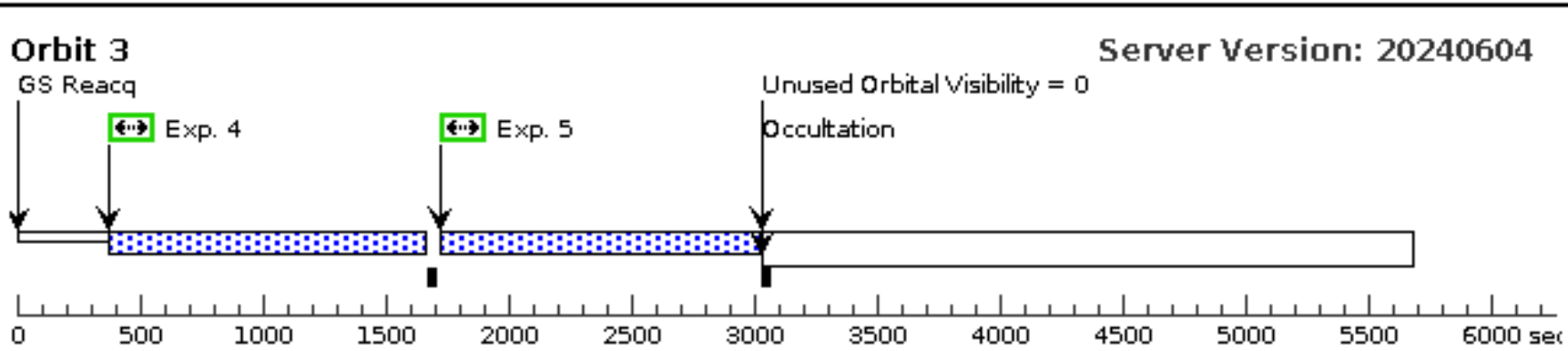
Exposures

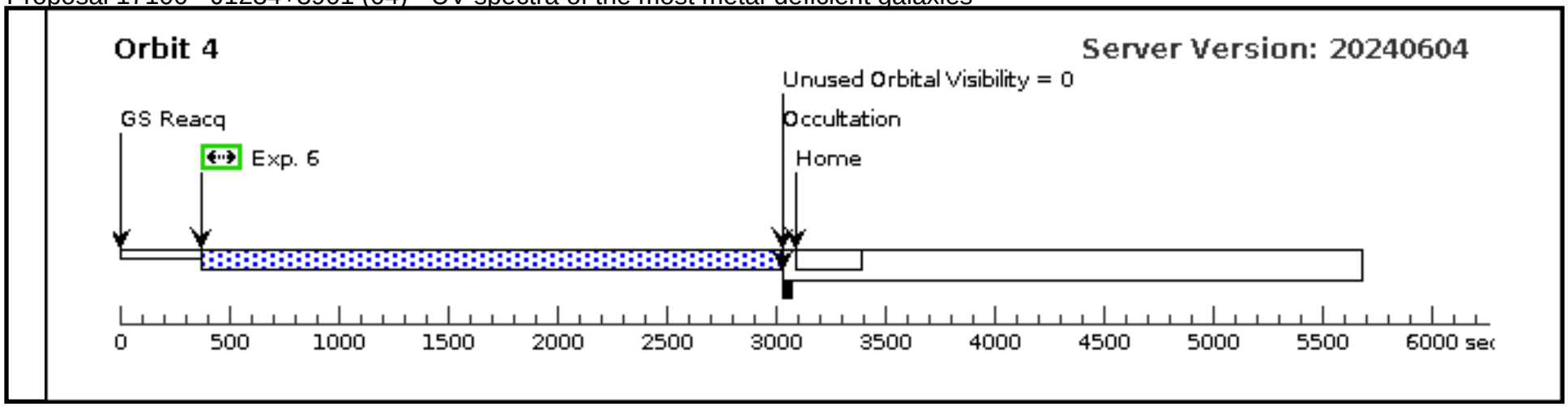
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1234+3901 ACQ (COS.ta.1522147)	(4) J1234+3901	COS/NUV, ACQ/IMAGE, PSA	MIRRORA		GS ACQ SCENARIO BASE1O3		500. Secs (500 Secs) *[==>]*	***[1]***
2	J1234+3901 G140L1 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1240. Secs (1332 Secs) *[==>1332.0 Secs]*	***[1]***
3	J1234+3901 G140L2 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1240. Secs (2595 Secs) *[==>2595.0 Secs]*	***[2]***
4	J1234+3901 G140L3 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			1240. Secs (1233 Secs) *[==>1233.0 Secs]*	***[3]***
5	J1234+3901 G140L4 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=3; SEGMENT=A			2300. Secs (1247 Secs) *[==>1247.0 Secs]*	***[3]***
6	J1234+3901 G140L5 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=4; SEGMENT=A			1240. Secs (2595 Secs) *[==>2595.0 Secs]*	***[4]***

Orbit Structure





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Server Version: 20240604
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 6
Home
0
500
1000
1500
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3000
3500
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4500
5000
5500
6000 sec

Visit

Proposal 17100, J1234+3901 (05), implementation Fri Jun 14 15:00:59 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

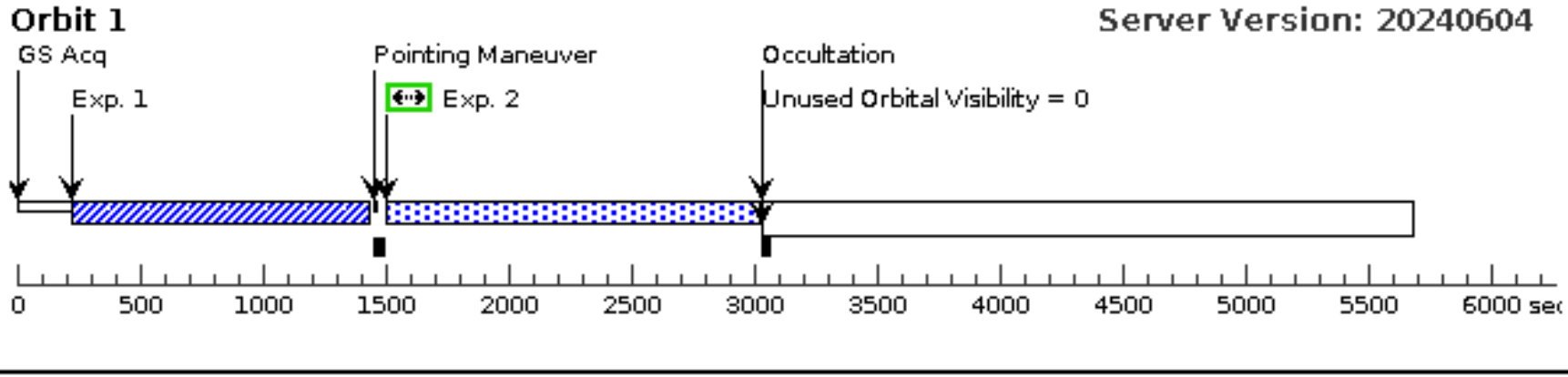
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	J1234+3901	RA: 12 34 15.7000 (188.5654167d) Dec: +39 01 16.41 (39.02123d) Equinox: J2000	Redshift: 0.13320	V=21.92+/-0.06 FUV=21.24+/-0.38, NUV=22.17+/-0.57	Reference Frame: ICRS

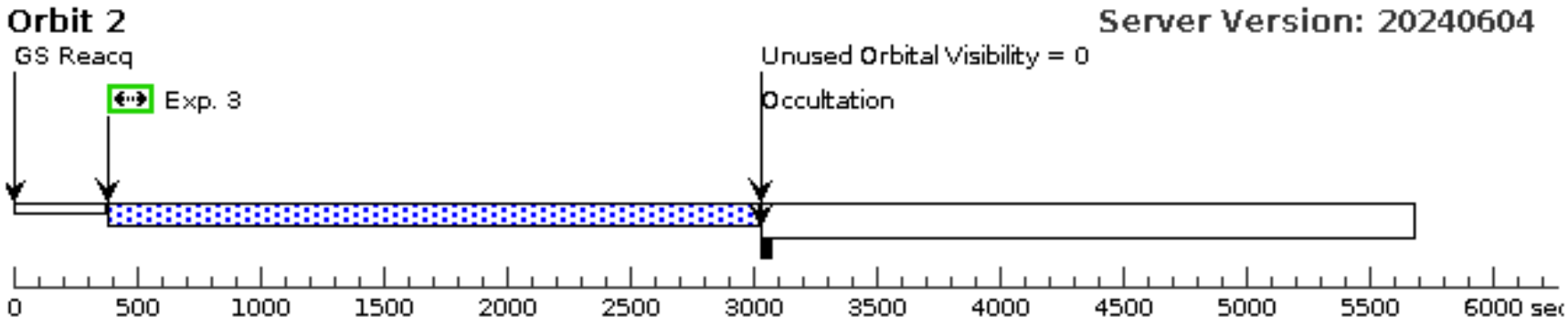
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

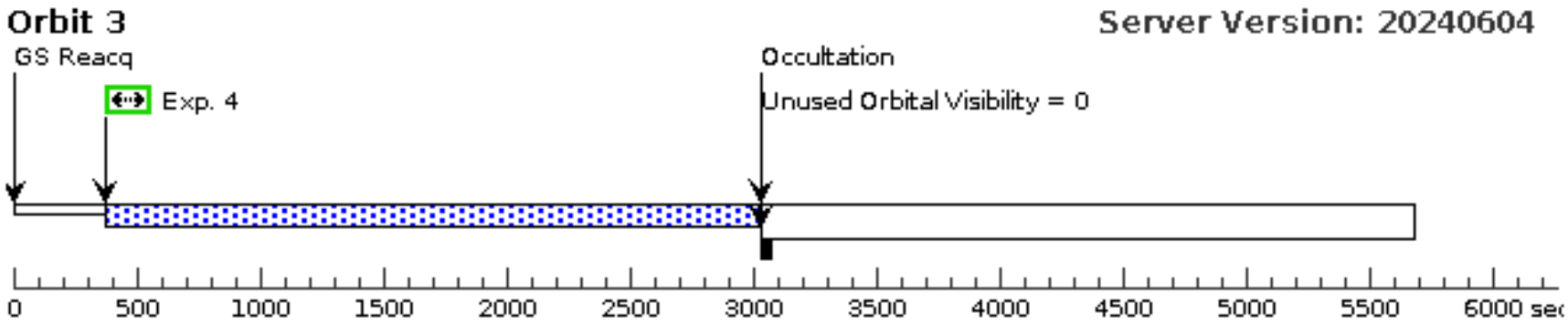
Exposures

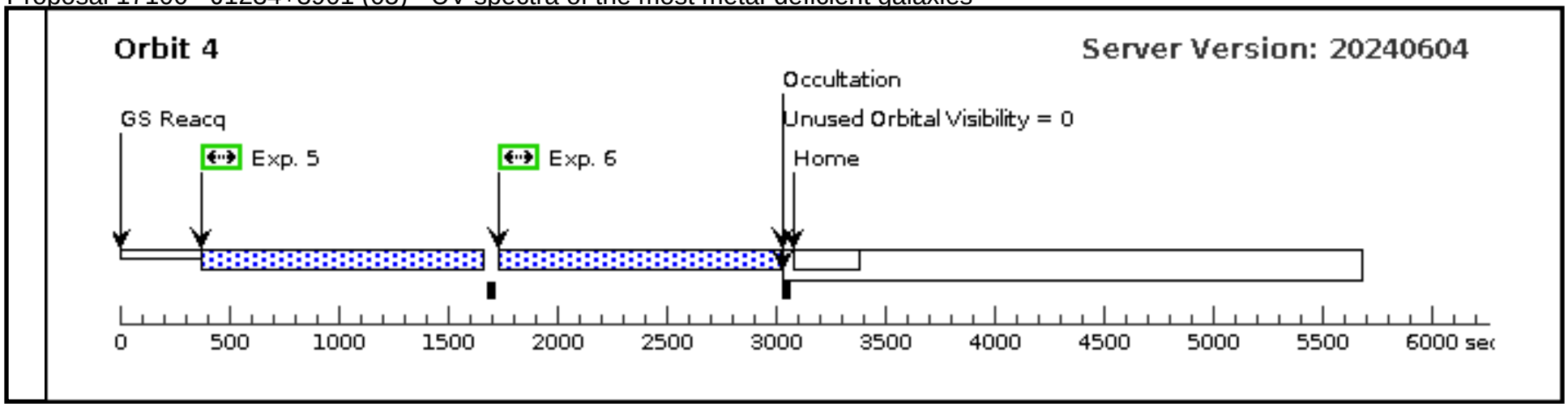
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1234+3901 ACQ (COS.ta.1522147)	(4) J1234+3901	COS/NUV, ACQ/IMAGE, PSA	MIRRORA		GS ACQ SCENARIO BASE1O3		500. Secs (500 Secs) *[==>]*	***[1]***
2	J1234+3901 G140L1 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1240. Secs (1332 Secs) *[==>1332.0 Secs]*	***[1]***
3	J1234+3901 G140L2 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1240. Secs (2595 Secs) *[==>2595.0 Secs]*	***[2]***
4	J1234+3901 G140L3 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			1240. Secs (2595 Secs) *[==>2595.0 Secs]*	***[3]***
5	J1234+3901 G140L4 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=3; SEGMENT=A			2300. Secs (1240 Secs) *[==>1240.0 Secs]*	***[4]***
6	J1234+3901 G140L5 (COS.sp.1808750)	(4) J1234+3901	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=4; SEGMENT=A			1240. Secs (1240 Secs) *[==>1240.0 Secs]*	***[4]***

Orbit Structure








Orbit 4
Server Version: 20240604
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 5
Exp. 6
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17100, J1505+3721 (06), completed Fri Jun 14 15:01:00 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J1505+3721 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J1505+3721 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J1505+3721 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J1505+3721 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J1505+3721 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

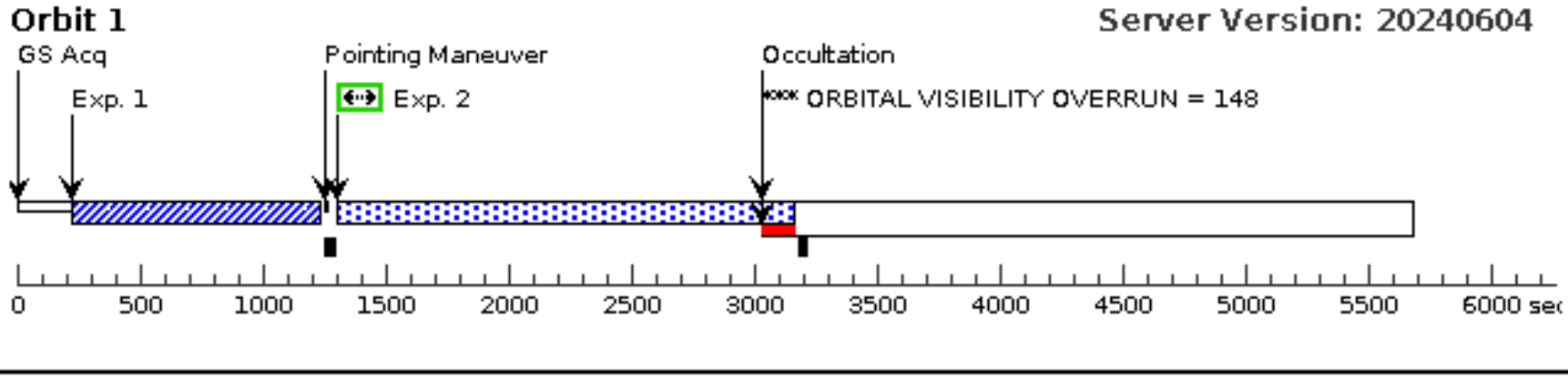
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	J1505+3721	RA: 15 05 8.5800 (226.2857500d) Dec: +37 21 40.22 (37.36117d) Equinox: J2000	Redshift: 0.07235	V=20.97+/-0.06 FUV=21.54+/-0.32, NUV=21.29+/-0.18	Reference Frame: ICRS

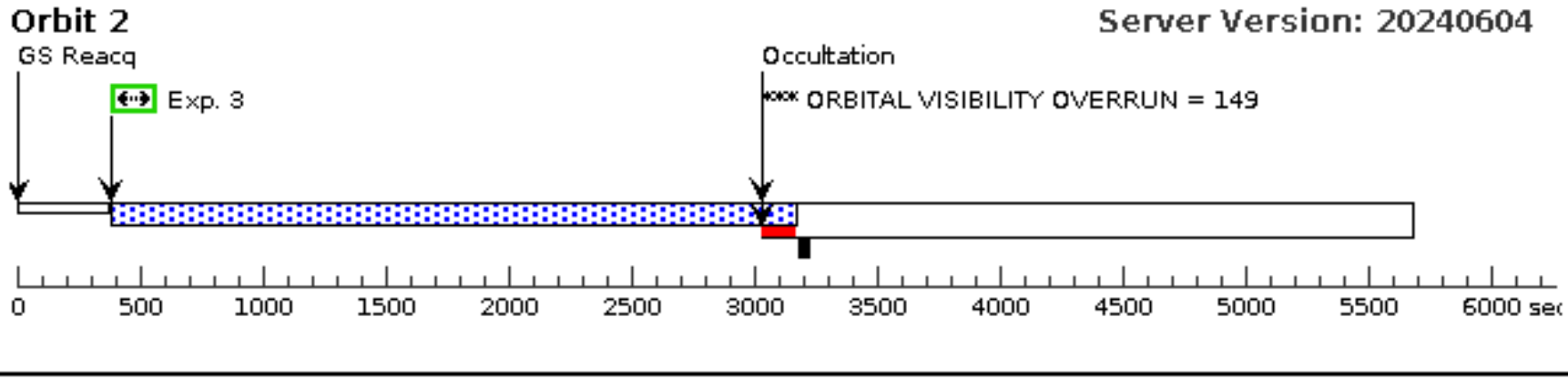
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

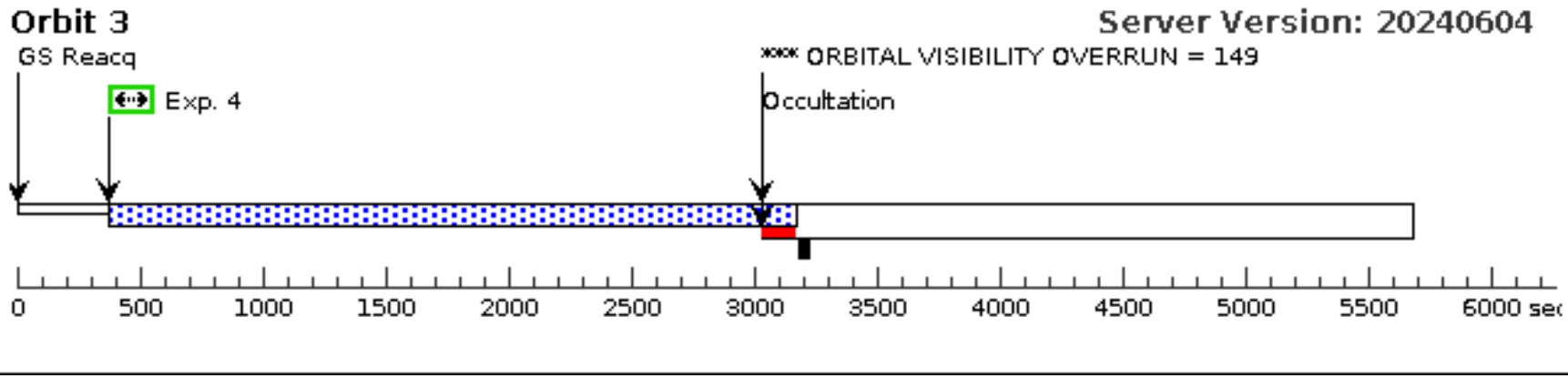
Exposures

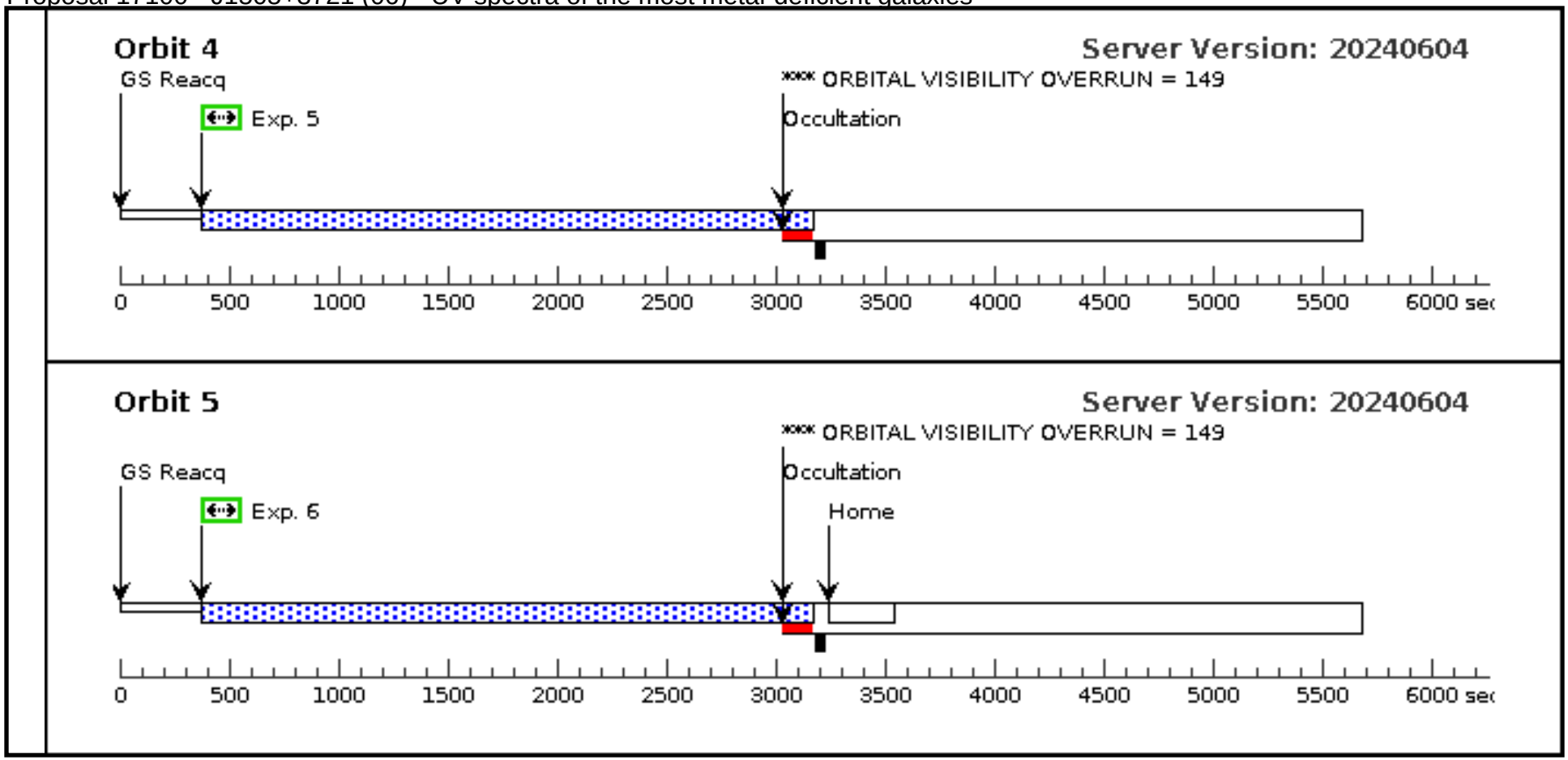
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1505+3721 ACQ (COS.ta.1522158)	(5) J1505+3721	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				400. Secs (400 Secs) *[==>]*	*[1]*
2	J1505+3721 G140L1 (COS.sp.1808750)	(5) J1505+3721	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1300. Secs (1680 Secs) *[==>1680.0 Secs]*	*[1]*
3	J1505+3721 G140L2 (COS.sp.1808750)	(5) J1505+3721	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1230. Secs (2744 Secs) *[==>2744.0 Secs]*	*[2]*
4	J1505+3721 G140L3 (COS.sp.1808750)	(5) J1505+3721	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			2300. Secs (2744 Secs) *[==>2744.0 Secs]*	*[3]*
5	J1505+3721 G140L4 (COS.sp.1808750)	(5) J1505+3721	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=3; SEGMENT=A			2300. Secs (2744 Secs) *[==>2744.0 Secs]*	*[4]*
6	J1505+3721 G140L5 (COS.sp.1808750)	(5) J1505+3721	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=4; SEGMENT=A			1240. Secs (2744 Secs) *[==>2744.0 Secs]*	*[5]*

Orbit Structure





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GS Reacq
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3000
3500
4000
4500
5000
5500
6000 sec
Orbit 5
Server Version: 20240604
*** ORBITAL VISIBILITY OVERRUN = 149
GS Reacq
Occultation
Exp. 6
Home
0
500
1000
1500
2000
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3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17100, J2229+2725 (07), completed Fri Jun 14 15:01:00 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J2229+2725 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J2229+2725 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J2229+2725 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J2229+2725 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(J2229+2725 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

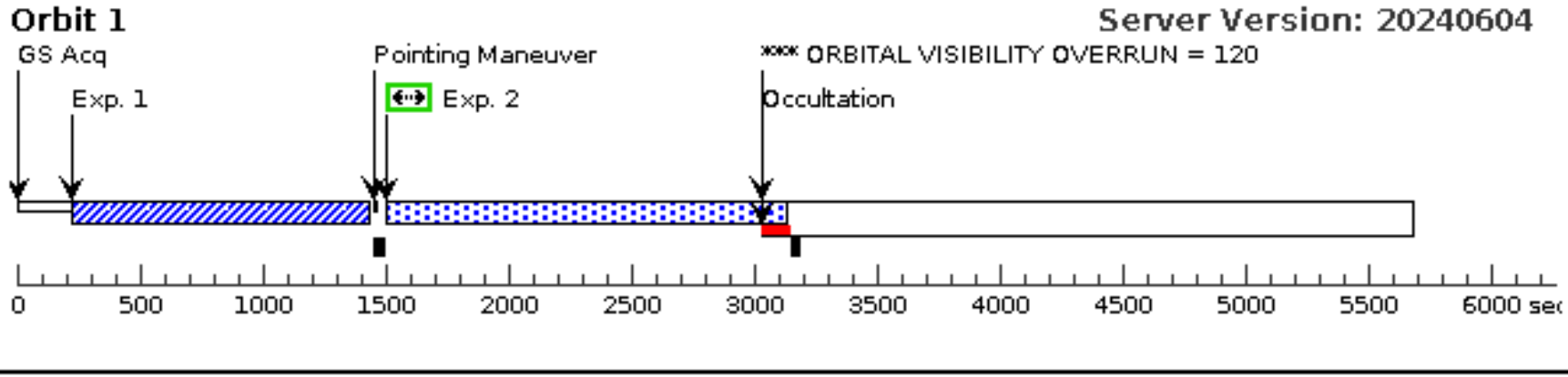
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	J2229+2725	RA: 22 29 33.1900 (337.3882917d) Dec: +27 25 25.60 (27.42378d) Equinox: J2000	Redshift: 0.07622	V=21.47+/-0.06 FUV=21.45+/-0.28, NUV=21.88+/-0.37	Reference Frame: ICRS

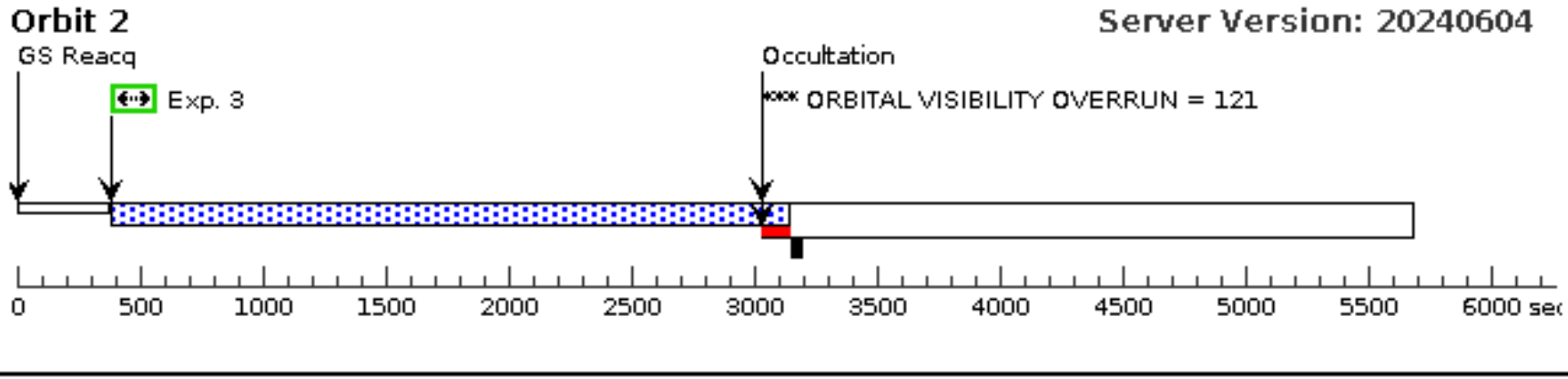
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=NO

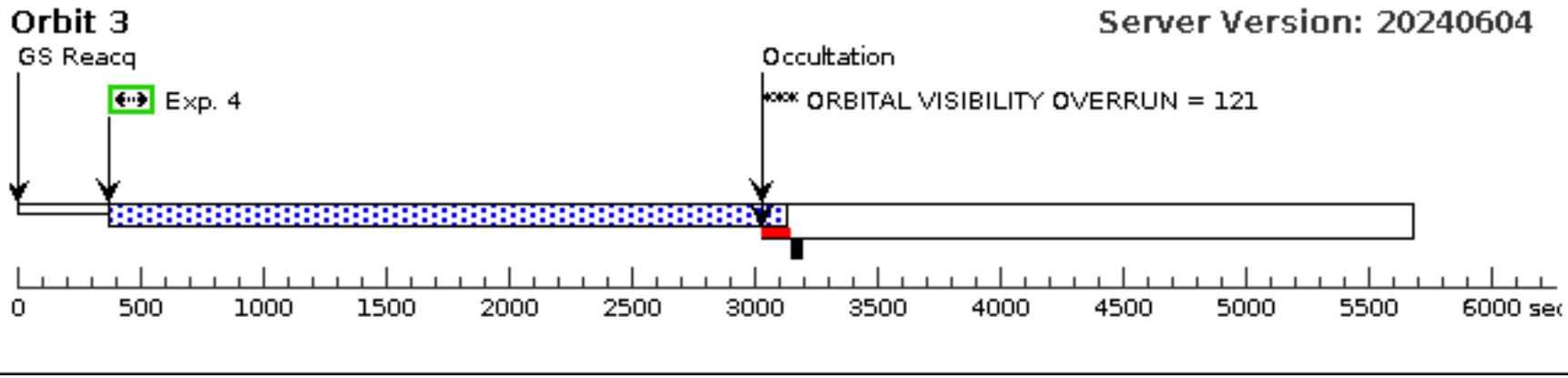
Exposures

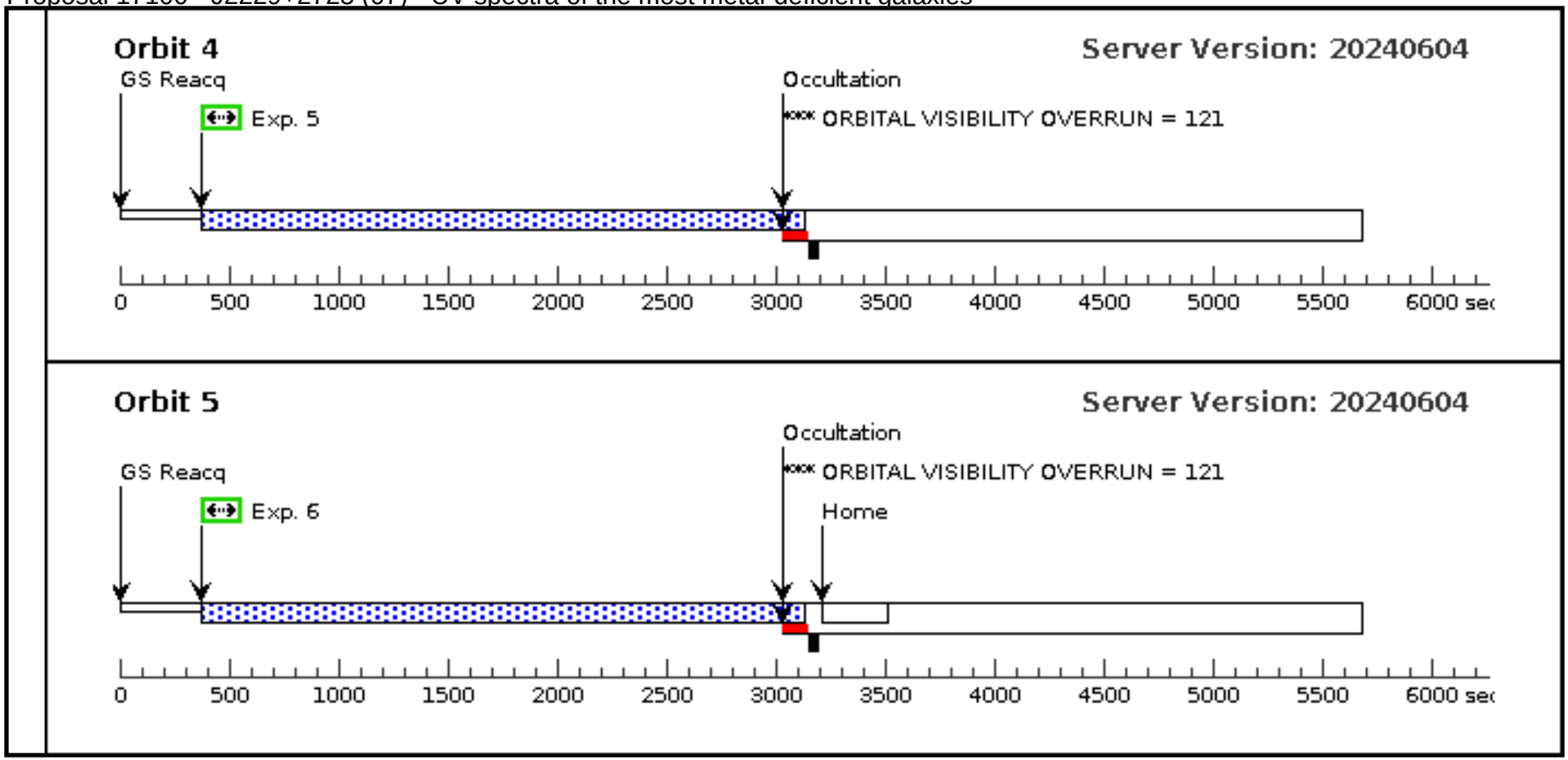
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1229+2725 ACQ (COS.ta.1522147)	(6) J2229+2725	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				500. Secs (500 Secs) *[==>]*	*[1]*
2	J2229+2725 G140L1 (COS.sp.1808751)	(6) J2229+2725	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1230. Secs (1445 Secs) *[==>1445.0 Secs]*	*[1]*
3	J2229+2725 G140L2 (COS.sp.1808751)	(6) J2229+2725	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=1; SEGMENT=A			1230. Secs (2709 Secs) *[==>2709.0 Secs]*	*[2]*
4	J2229+2725 G140L3 (COS.sp.1808751)	(6) J2229+2725	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=2; SEGMENT=A			1230. Secs (2709 Secs) *[==>2709.0 Secs]*	*[3]*
5	J2229+2725 G140L4 (COS.sp.1808751)	(6) J2229+2725	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=3; SEGMENT=A			2300. Secs (2709 Secs) *[==>2709.0 Secs]*	*[4]*
6	J2229+2725 G140L5 (COS.sp.1808751)	(6) J2229+2725	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=10000.; FLASH=YES; FP-POS=4; SEGMENT=A			1230. Secs (2709 Secs) *[==>2709.0 Secs]*	*[5]*

Orbit Structure





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GS Reacq
Exp. 5
Occultation
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4500
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5500
6000 sec
Orbit 5
Server Version: 20240604
Occultation
GS Reacq
**** ORBITAL VISIBILITY OVERRUN = 121
Exp. 6
Home
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec