17503 - Hot Rock Stars: Capturing high-energy spectra of 5 M dwarfs hosting terrestrial exoplanets that JWST will test for atmospheres

Cycle: 31, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) HD-260655	COS/FUV COS/NUV	1	17-Jun-2024 10:00:18.0	yes
02	(1) HD-260655 WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	5	17-Jun-2024 10:00:20.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
03	(2) LHS-1478	COS/FUV COS/NUV	3	17-Jun-2024 10:00:21.0	yes
04	(2) LHS-1478	COS/FUV COS/NUV	3	17-Jun-2024 10:00:22.0	yes
05	(2) LHS-1478	COS/FUV COS/NUV	4	17-Jun-2024 10:00:23.0	yes
06	(2) LHS-1478	STIS/CCD STIS/NUV-MAMA	1	17-Jun-2024 10:00:24.0	yes
07	(3) LTT-3780	COS/FUV COS/NUV	5	17-Jun-2024 10:00:25.0	yes
08	(3) LTT-3780	COS/FUV COS/NUV	4	17-Jun-2024 10:00:27.0	yes
09	(3) LTT-3780	STIS/CCD STIS/NUV-MAMA	1	17-Jun-2024 10:00:28.0	yes
10	(4) TOI-1468	COS/FUV COS/NUV	3	17-Jun-2024 10:00:28.0	yes
11	(4) TOI-1468	COS/FUV COS/NUV	3	17-Jun-2024 10:00:29.0	yes
12	(4) TOI-1468	COS/FUV COS/NUV	4	17-Jun-2024 10:00:30.0	yes
13	(4) TOI-1468	STIS/CCD STIS/NUV-MAMA	1	17-Jun-2024 10:00:31.0	yes
14	(5) L-231-32	COS/FUV COS/NUV	4	17-Jun-2024 10:00:32.0	yes
15	(5) L-231-32	COS/FUV COS/NUV	4	17-Jun-2024 10:00:33.0	yes
16	(5) L-231-32	STIS/CCD STIS/NUV-MAMA	1	17-Jun-2024 10:00:34.0	yes

47 Total Orbits Used

ABSTRACT

With the launch of JWST we are finally in a position to determine if terrestrial exoplanets orbiting M dwarfs can develop and retain atmospheres in the presence of their hosts' harsh high-energy environments. Necessary to the interpretation of any planetary atmospheric data is the measured high-energy spectra, from the UV to the X-ray, of the M dwarf hosts. A JWST Cycle 2 Large program will survey nine rocky worlds orbiting nearby M dwarfs for the presence of atmospheres. If the rocky worlds in the JWST sample show evidence of having atmospheres, high-energy spectra of their host stars are needed to determine photochemical production rates of key molecular species, such as water, methane, carbon dioxide, and ozone. These constraints will alert us to disequilibrium chemistry, which can be a sign of surface processes such as volcanism and mantle outgassing. On the other hand, if the rocky worlds in the JWST sample are airless, high-energy spectra of their host stars are needed to calculate atmospheric mass-loss rates, which can explain how an atmosphere was lost, or could never form. Of the nine M dwarf planet hosts in the large JWST program, five are amenable to high-energy spectral observations, yet lack them. Only HST can capture the critical UV information, which we will supplement with X-ray observations, to provide a complete picture of the high-energy output of these M dwarf hosts. We request 47 HST orbits to capture the UV spectra of these five M dwarfs. Making these UV observations while HST is still operational is critical to the scientific output of JWST, and will further our understanding of the complexities of M dwarfs as long-lived exoplanet hosts.

OBSERVING DESCRIPTION

We will observe the complete UV spectra into the blue optical of five nearby M dwarfs hosting terrestrial exoplanets that are the subject of atmospheric investigations by JWST (the Hot Rocks Survey), as well as five sibling planets that are enhanced in volatiles. We will use HST/COS and STIS to measure the UV spectra of these five stars from 1050--5700 Angstroms. Where possible, data will be obtained in TIME-TAG mode so that we can monitor the stars' flaring activity during the exposures. Where possible, we will use the FLASH=YES setting to maximize exposure time on target.

For the purposes of estimating exposure times, we scale HST/COS and STIS data from M dwarfs in the (Mega-)MUSCLES programs (France et al., 2016; Froning et al., 2019) to each star in our sample. We choose the (Mega-)MUSCLES star to scale by their similarity in radius and effective temperature to each target star. For example, we take the M3 dwarf GJ 436 and scale it to the distance and stellar radius of HD 260655 to compute the exposure times we need to reach the target S/N in key transition region lines, Ly-alpha line wings, or NUV continuum. The stars in our sample can be considered inactive based on low activity indicators and long stellar rotation periods.

FUV: To measure prominent emission lines in the FUV we will use COS G130M (C iii, Si iii, N v, C ii) and COS G160M (Si iv, C iv, He ii). Exposure times for each target will provide S/N ~5 for N v, C ii, and C iv, the most prominent lines in the FUV. Remaining lines should also be detectable, but at a minimum S/N of 2 to 4. In alignment with the COS2025 policies, we choose a central wavelength of 1222 Angstrom for the G130M grating to place the Ly-alpha line in the gap between the A and B segments. We choose a central wavelength of 1533 Angstrom for the G160M observations so that they overlap the G130M observations without leaving a gap. Following the recommendation of the COS User Manual for G160M, we will use 2 FP-POS positions at LP6 to minimize overheads since our S/N requirements are <20.

NUV: For the NUV we will use short (< 1 orbit) exposures with COS G230L. COS G230L has a high sensitivity to the 1750--2100 Angstrom wavelength region, however, this grating misses a chunk of the NUV continuum, which is an important input to photochemical models. We make up for the missing NUV flux with the STIS G230L grating, where we also capture Fe ii and Mg ii lines. For COS/G230L observations we use two of the four FP-POS offsets to save overhead. Four FP-POS offset positions are available: a nominal position (0), two positions toward longer wavelengths (-2 and -1), and one position toward shorter wavelengths (+1). Positions -2, -1, 0, and +1 are designated respectively as FP-POS=1, 2, 3, and 4. The nominal position, FP-POS=3, is the setting used to define the wavelength range associated with the grating central wavelengths. We use FP-POS=3 and 4 becuase in these positions the Mg II line at ~2800 A is still observed. At FP-POS = 1 and 2 the Mg II line is cut off. We will take brief exposures with the STIS G430L grating which provides coverage from 2900|--5700 Angstroms. For all targets, we spend ~1 orbit each to capture NUV flux with the G230L and G430L gratings; we already expect plenty of S/N in these filters so separating out the wavelength calibration is not necessary.

Ly-alpha : For the brightest star in our sample, HD 260655, the Ly-alpha line profile can be reconstructed by measuring flux in the line wings (Youngblood et al., 2016). We set WAVECAL=NO and add a specific Wavecal observation after the orbit in order to increase exposure time. We do this becuase we want the highest S/N possible in the wings of the Ly-alpha line in order to perform a reconstruction.

Visit

Proposal 17503, HD-260655_01 (01), pi Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

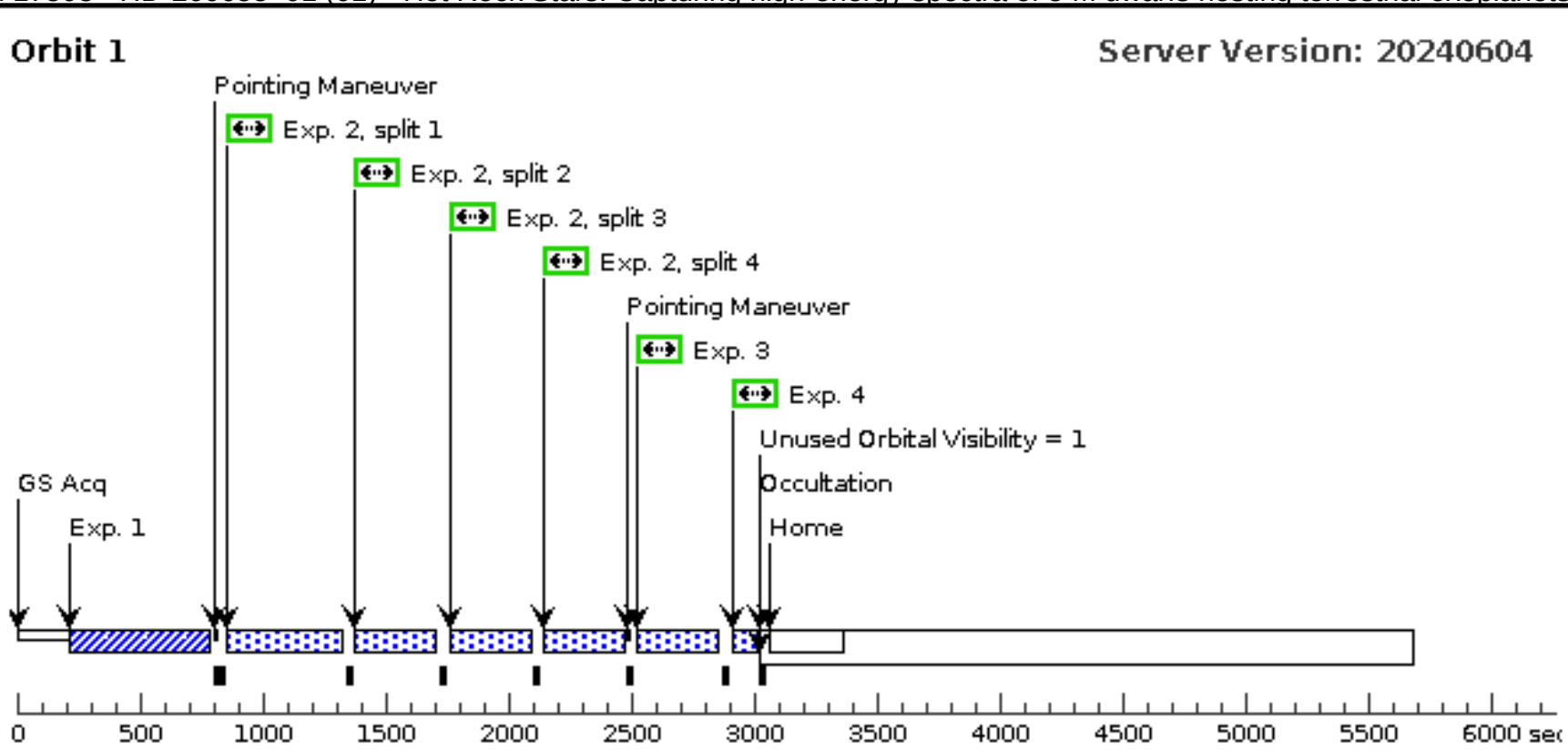
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-260655	RA: 06 37 9.9436 (99.2914317d) Dec: +17 33 58.74 (17.56632d) Equinox: J2000	Proper Motion RA: -764.4141395476029 mas/yr Proper Motion Dec: 337.88323421402026 mas/yr Parallax: 0.10002319547433648" Epoch of Position: 2016	V=9.77+/-0.11	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery. V-magnitude from Luque, et al. 2022.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1899033)	(1) HD-260655	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				175 Secs (175 Secs) *[==>]*	***[1]***
2	FUV_G130M (COS.sp.1905317)	(1) HD-260655	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=9190; FP-POS=ALL; FLASH=YES			280 Secs (1108 Secs) *[==>277.0 Secs (Split 1)]* *[==>277.0 Secs (Split 2)]* *[==>277.0 Secs (Split 3)]* *[==>277.0 Secs (Split 4)]*	***[1]***
3	NUV_G230L (COS.sp.1905318)	(1) HD-260655	COS/NUV, TIME-TAG, PSA	G230L 2950 A	BUFFER-TIME=1432; FP-POS=3; FLASH=YES			85 Secs (82 Secs) *[==>82.0 Secs]*	***[1]***
4	NUV_G230L (COS.sp.1859989)	(1) HD-260655	COS/NUV, TIME-TAG, PSA	G230L 2950 A	BUFFER-TIME=1432; FP-POS=4; FLASH=YES			85 Secs (82 Secs) *[==>82.0 Secs]*	***[1]***

Orbit Structure



Visit

Proposal 17503, HD-260655_02 (02), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: BETWEEN 03-JUL-2023:00:00:00 AND 28-DEC-2023:00:00:00; BETWEEN 03-JUL-2024:00:00:00 AND 28-DEC-2024:00:00:00; BETWEEN 03-JUL-2025:00:00:00 AND 28-DEC-2025:00:00:00

Fixed Targets

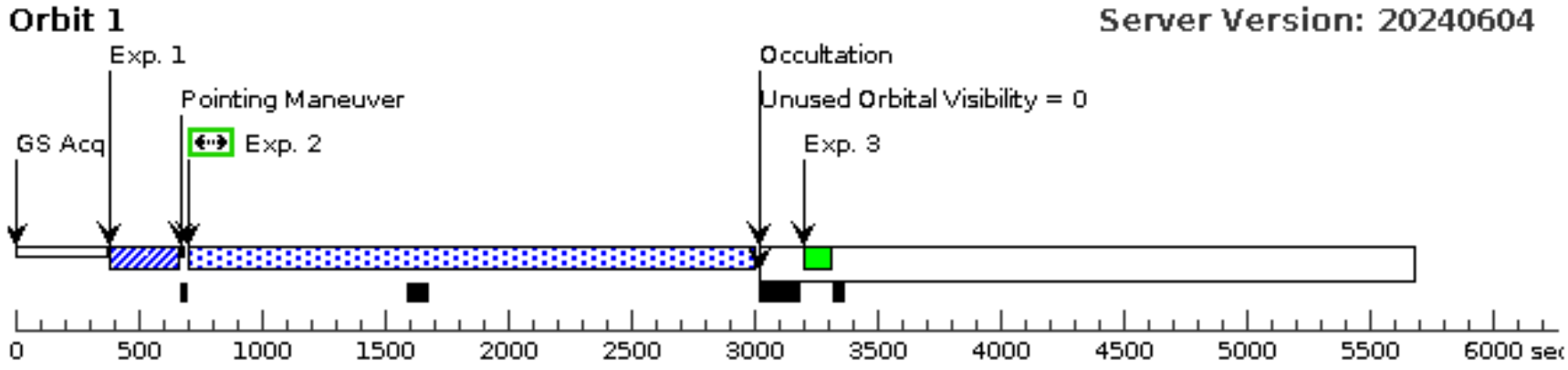
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-260655	RA: 06 37 9.9436 (99.2914317d) Dec: +17 33 58.74 (17.56632d) Equinox: J2000	Proper Motion RA: -764.4141395476029 mas/yr Proper Motion Dec: 337.88323421402026 mas/yr Parallax: 0.10002319547433648" Epoch of Position: 2016	V=9.77+/-0.11	Reference Frame: ICRS

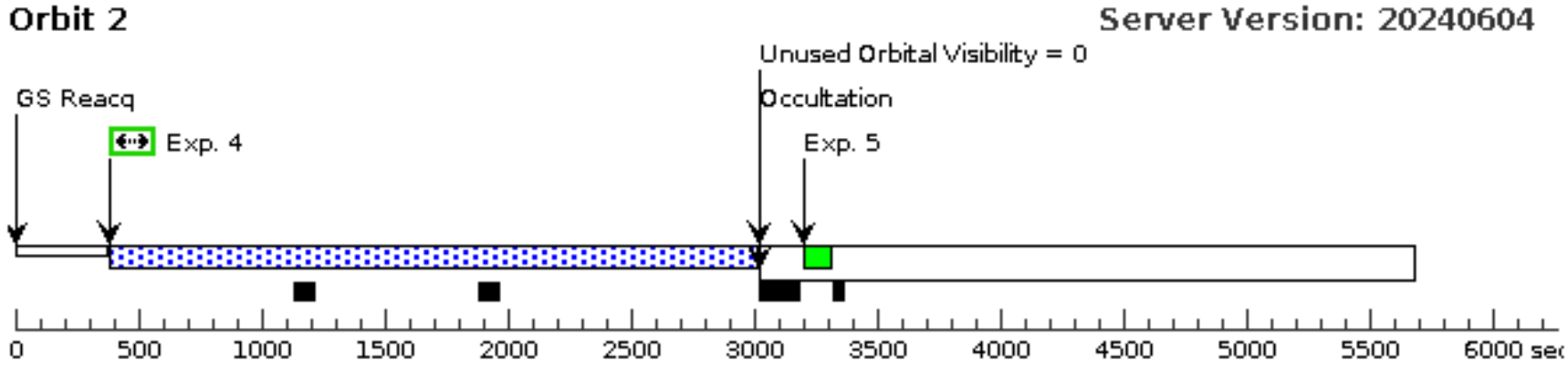
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery. V-magnitude from Luque, et al. 2022.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

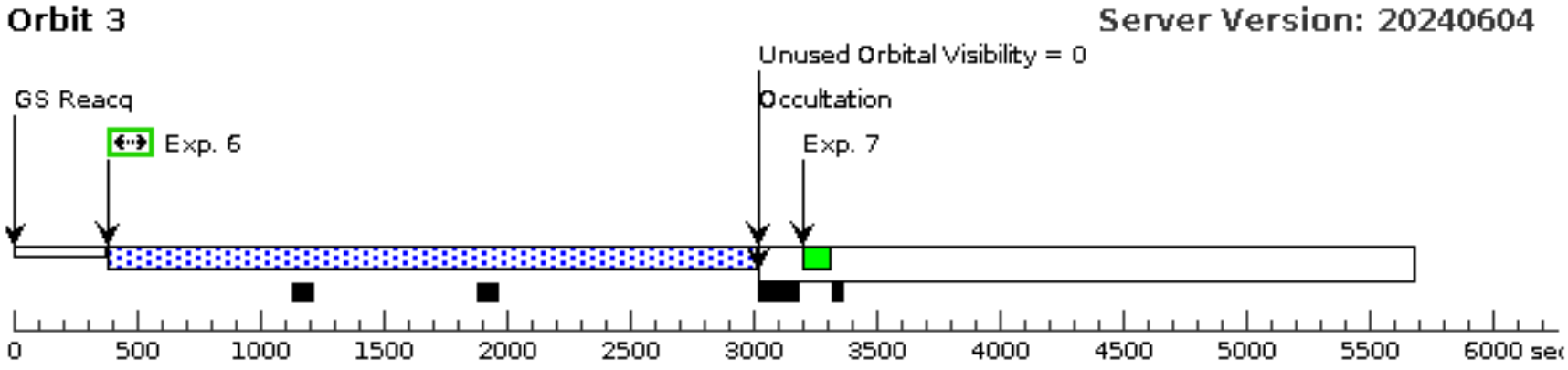
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (STIS.ta.1889078)	(1) HD-260655	STIS/CCD, ACQ, F28X50OII	MIRROR	ACQTYPE=POINT			4.5 Secs (4.5 Secs) *[==>]*	***[1]***
2	LyA (STIS.sp.1897746)	(1) HD-260655	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140M 1222 A	BUFFER-TIME=751; WAVECAL=NO			2199 Secs (2146 Secs) *[==>2146 Secs]*	***[1]***
3	Wavecal	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140M 1222 A				*[==>]*	***[1]***
4	LyA (STIS.sp.1897746)	(1) HD-260655	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140M 1222 A	BUFFER-TIME=751; WAVECAL=NO			2717 Secs (2613 Secs) *[==>2613 Secs]*	***[2]***
5	Wavecal	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140M 1222 A				*[==>]*	***[2]***
6	LyA (STIS.sp.1897746)	(1) HD-260655	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140M 1222 A	BUFFER-TIME=751; WAVECAL=NO			2717 Secs (2613 Secs) *[==>2613.0 Secs]*	***[3]***
7	Wavecal	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140M 1222 A				*[==>]*	***[3]***
8	LyA (STIS.sp.1897746)	(1) HD-260655	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140M 1222 A	BUFFER-TIME=751; WAVECAL=NO			2261 Secs (2157 Secs) *[==>2157.0 Secs]*	***[4]***
9	NUV_G430L (STIS.sp.1897747)	(1) HD-260655	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2; WAVECAL=NO			60 Secs (60 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	***[4]***
10	Wavecal	WAVE	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A				*[==>]*	***[4]***
11	NUV_G230L (STIS.sp.1889085)	(1) HD-260655	STIS/NUV-MAMA, TIME-TAG, 52X0.2	G230L 2376 A	BUFFER-TIME=755; WAVECAL=NO			500 Secs (466 Secs) *[==>466.0 Secs]*	***[5]***
12	Wavecal	WAVE	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				*[==>]*	***[5]***
13	FUV_E140M (STIS.sp.1912316)	(1) HD-260655	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=18782; WAVECAL=NO			1576 Secs (1470 Secs) *[==>1470.0 Secs]*	***[5]***
14	Wavecal	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	***[5]***

Orbit Structure



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Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 6
Exp. 7
0
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1000
1500
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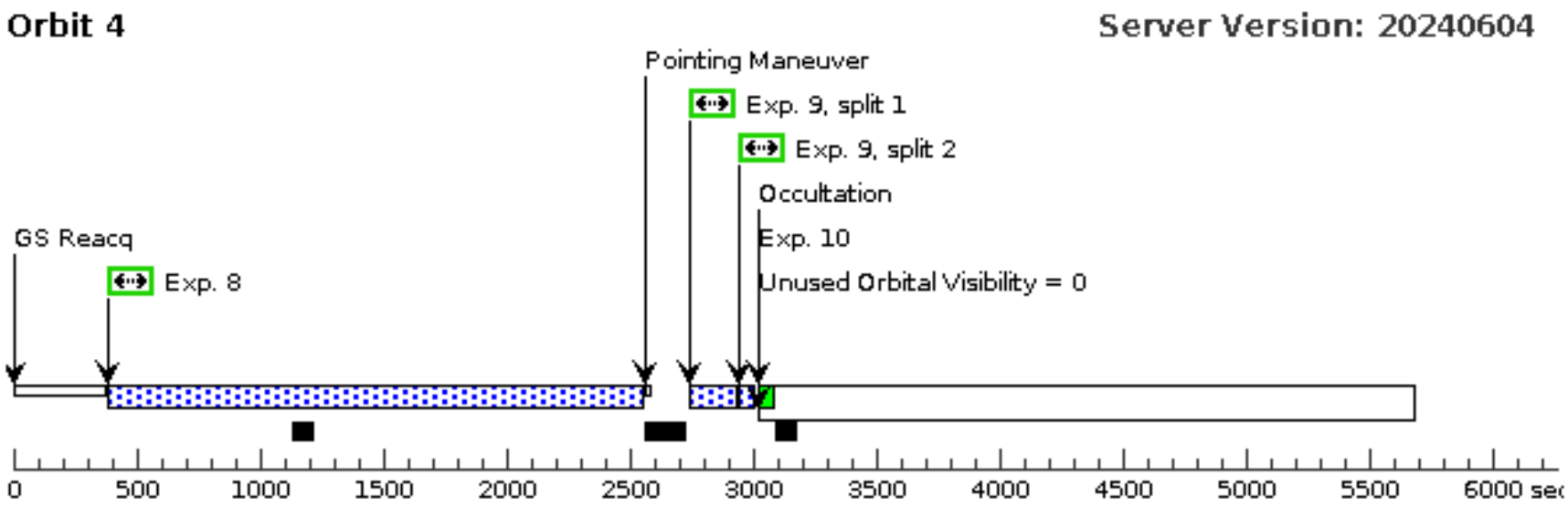
5000
5500
6000 sec


Orbit 4
Server Version: 20240604
Pointing Maneuver
Exp. 9, split 1
Exp. 9, split 2
Occultation
Exp. 10
Unused Orbital Visibility = 0
GS Reacq
Exp. 8
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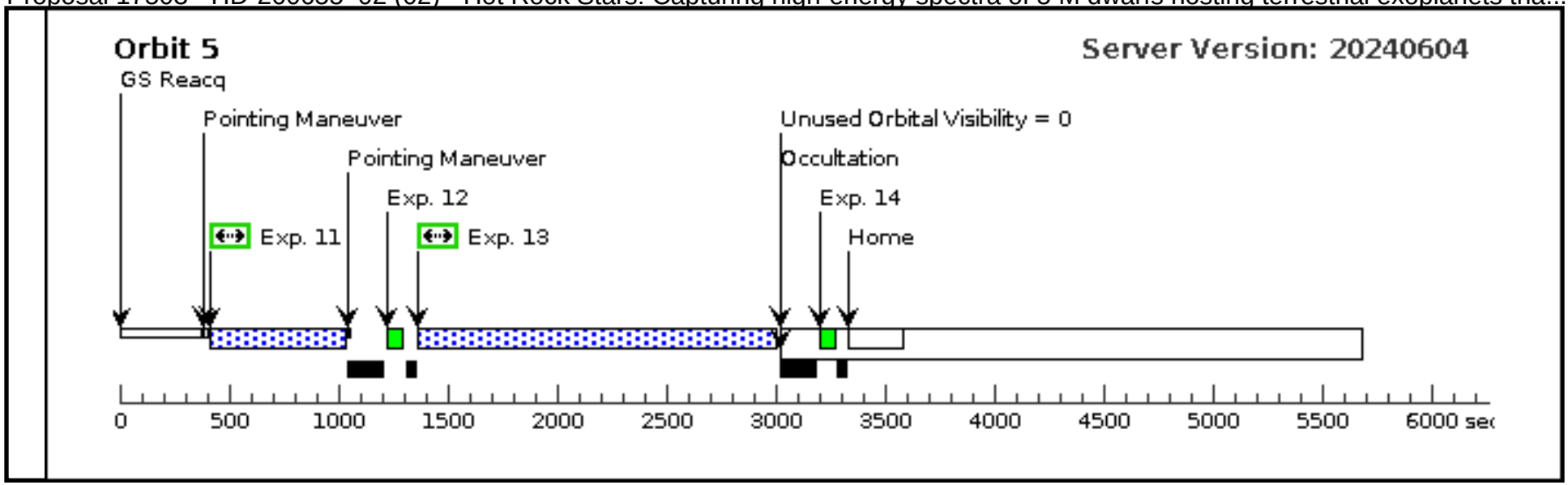
5000
5500
6000 sec


Orbit 5
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GS Reacq
Pointing Maneuver
Pointing Maneuver
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Occultation
Exp. 12
Exp. 14
Exp. 11
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17503, LHS-1478_01 (03), completed Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(LHS-1478_01 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(LHS-1478_01 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(LHS-1478_01 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

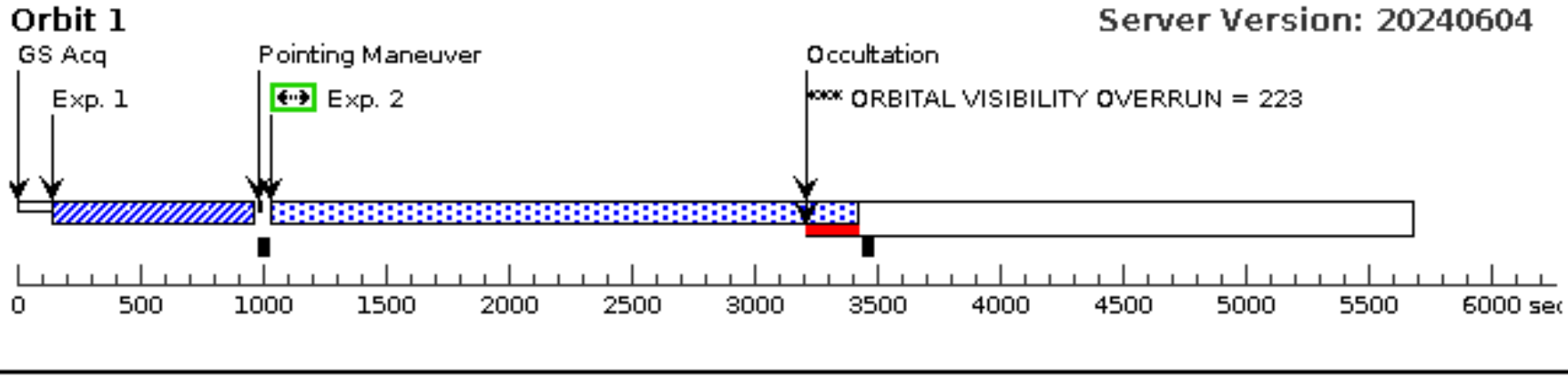
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	LHS-1478	RA: 02 57 21.4288 (44.3392867d) Dec: +76 33 4.86 (76.55135d) Equinox: J2000	Proper Motion RA: 690.9197545650943 mas/yr Proper Motion Dec: -399.8937562024991 mas/yr Parallax: 0.05490364921822687" Epoch of Position: 2016.0	V=13.304	Reference Frame: ICRS

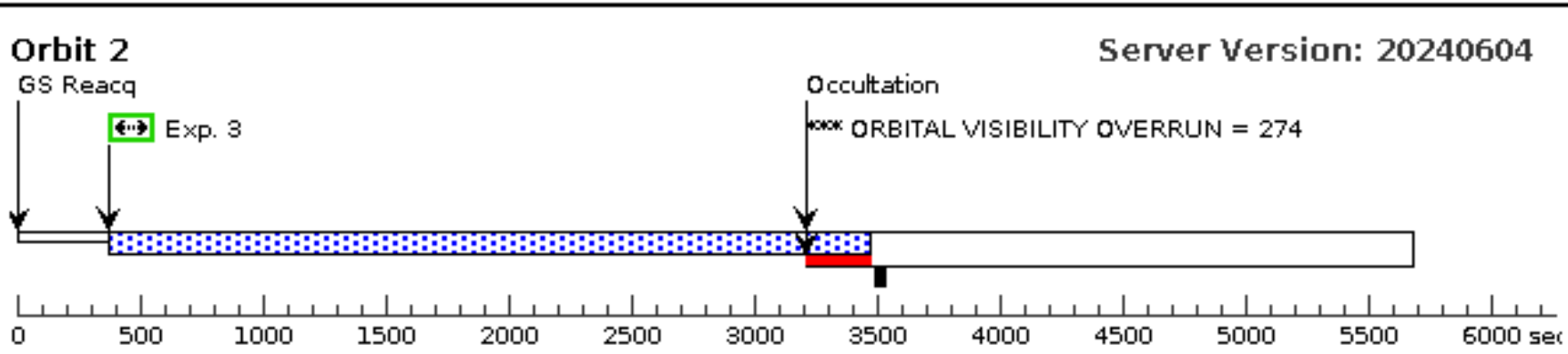
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

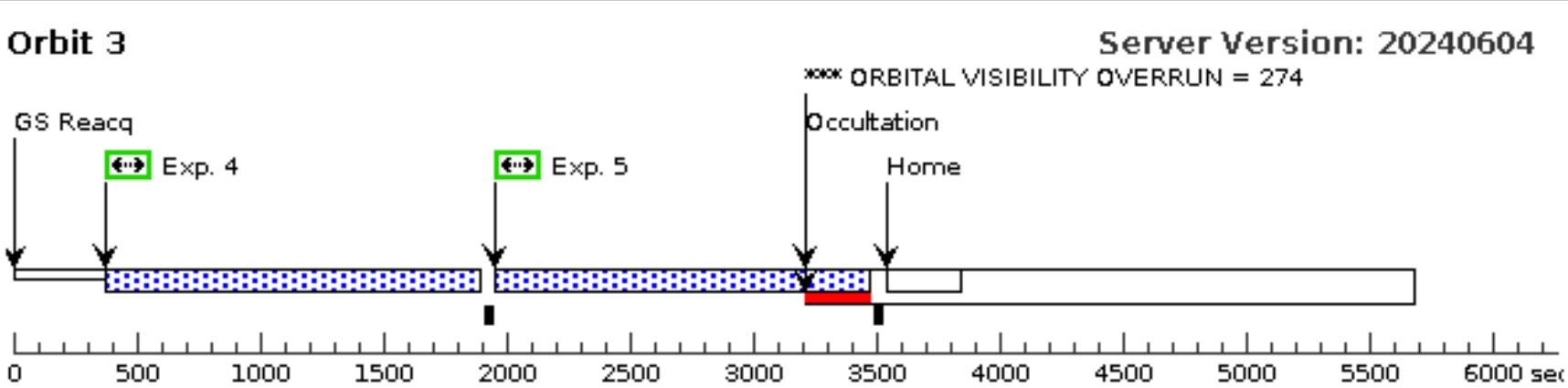
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1899034)	(2) LHS-1478	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				264 Secs (264 Secs) *[==>]*	***[1]***
2	FUV_G130M (COS.sp.1889091)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=1; FLASH=YES; BUFFER-TIME=9600			2712 Secs (2206 Secs) *[==>2206.0 Secs]*	***[1]***
3	FUV_G130M (COS.sp.1889091)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=2; FLASH=YES; BUFFER-TIME=9600			3048 Secs (3048 Secs) *[==>]*	***[2]***
4	FUV_G130M (COS.sp.1889091)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=3; FLASH=YES; BUFFER-TIME=9600			1467 Secs (1467 Secs) *[==>]*	***[3]***
5	FUV_G130M (COS.sp.1889091)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=4; FLASH=YES; BUFFER-TIME=9600			1466 Secs (1466 Secs) *[==>]*	***[3]***

Orbit Structure







Visit

Proposal 17503, LHS-1478_02 (04), completed Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(LHS-1478_02 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(LHS-1478_02 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(LHS-1478_02 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

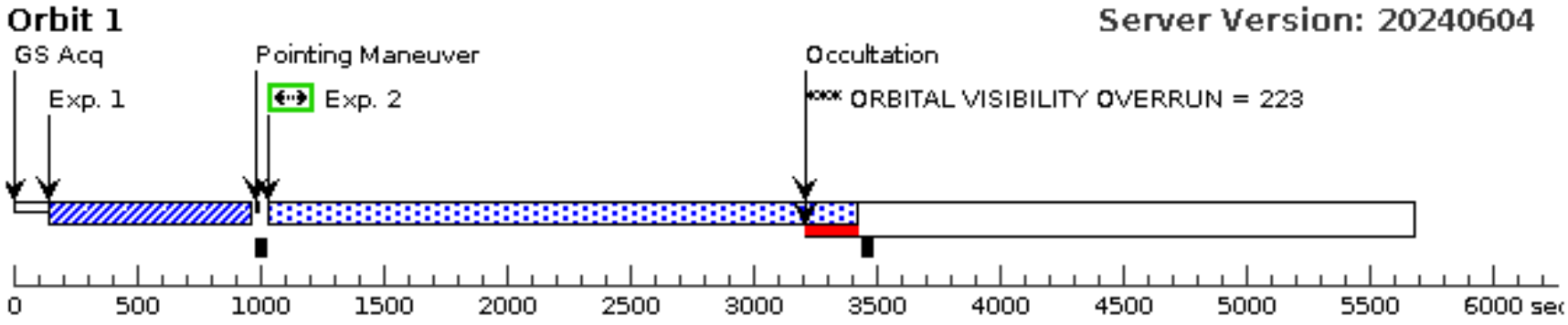
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	LHS-1478	RA: 02 57 21.4288 (44.3392867d) Dec: +76 33 4.86 (76.55135d) Equinox: J2000	Proper Motion RA: 690.9197545650943 mas/yr Proper Motion Dec: -399.8937562024991 mas/yr Parallax: 0.05490364921822687" Epoch of Position: 2016.0	V=13.304	Reference Frame: ICRS

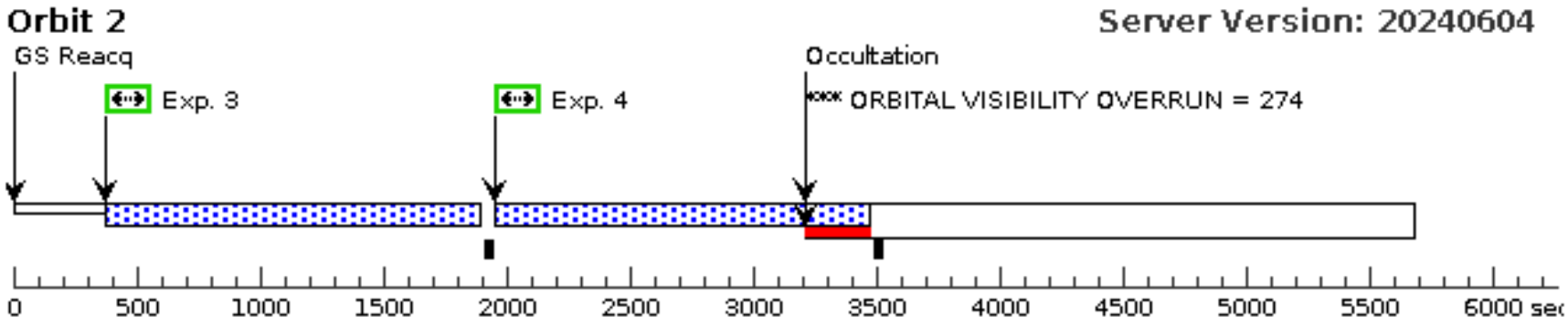
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

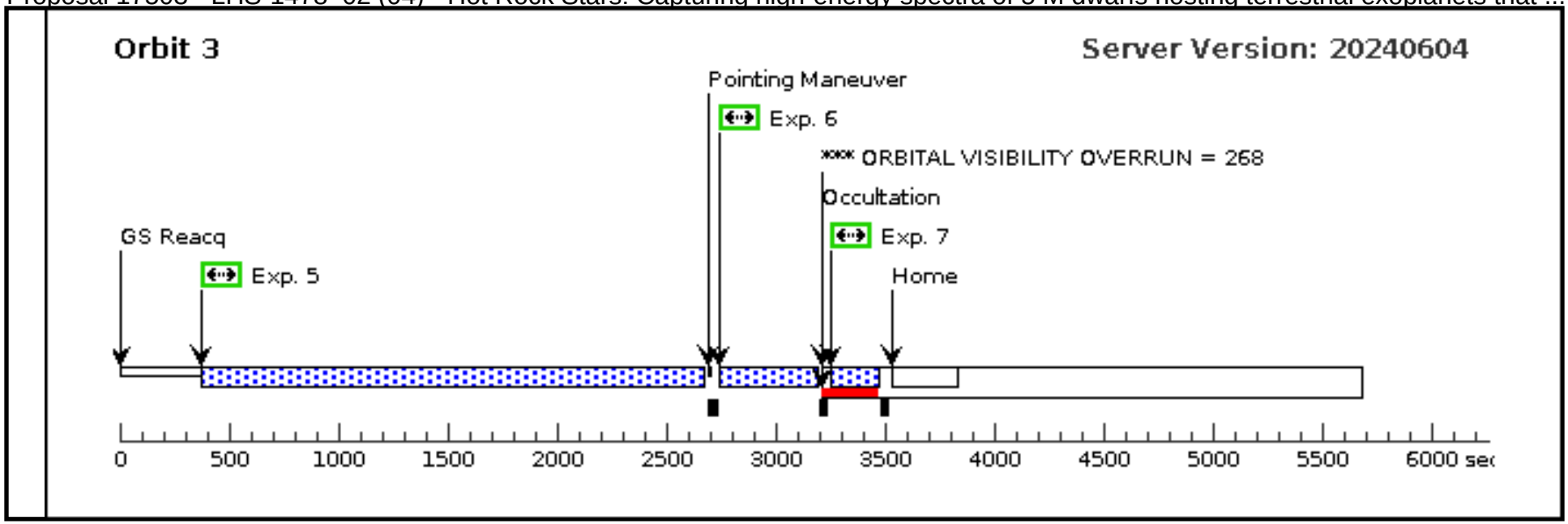
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1899034)	(2) LHS-1478	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				264 Secs (264 Secs) *[==>]*	***[1]***
2	FUV_G130M (COS.sp.1889091)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=1; FLASH=YES; BUFFER-TIME=9600			2712 Secs (2206 Secs) *[==>2206.0 Secs]*	***[1]***
3	FUV_G130M (COS.sp.1889091)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=2; FLASH=YES; BUFFER-TIME=9600			1467 Secs (1467 Secs) *[==>]*	***[2]***
4	FUV_G130M (COS.sp.1889091)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=3; FLASH=YES; BUFFER-TIME=9600			1466 Secs (1466 Secs) *[==>]*	***[2]***
5	FUV_G130M (COS.sp.1889091)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=4; FLASH=YES; BUFFER-TIME=9600			2247 Secs (2247 Secs) *[==>]*	***[3]***
6	NUV_G230L (COS.sp.1889105)	(2) LHS-1478	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; FP-POS=3; BUFFER-TIME=1200			200 Secs (200 Secs) *[==>]*	***[3]***
7	NUV_G230L (COS.sp.1889105)	(2) LHS-1478	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; FP-POS=4; BUFFER-TIME=1200			200 Secs (200 Secs) *[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
Pointing Maneuver
Exp. 6
*** ORBITAL VISIBILITY OVERRUN = 268
Occultation
Exp. 7
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17503, LHS-1478_03 (05), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

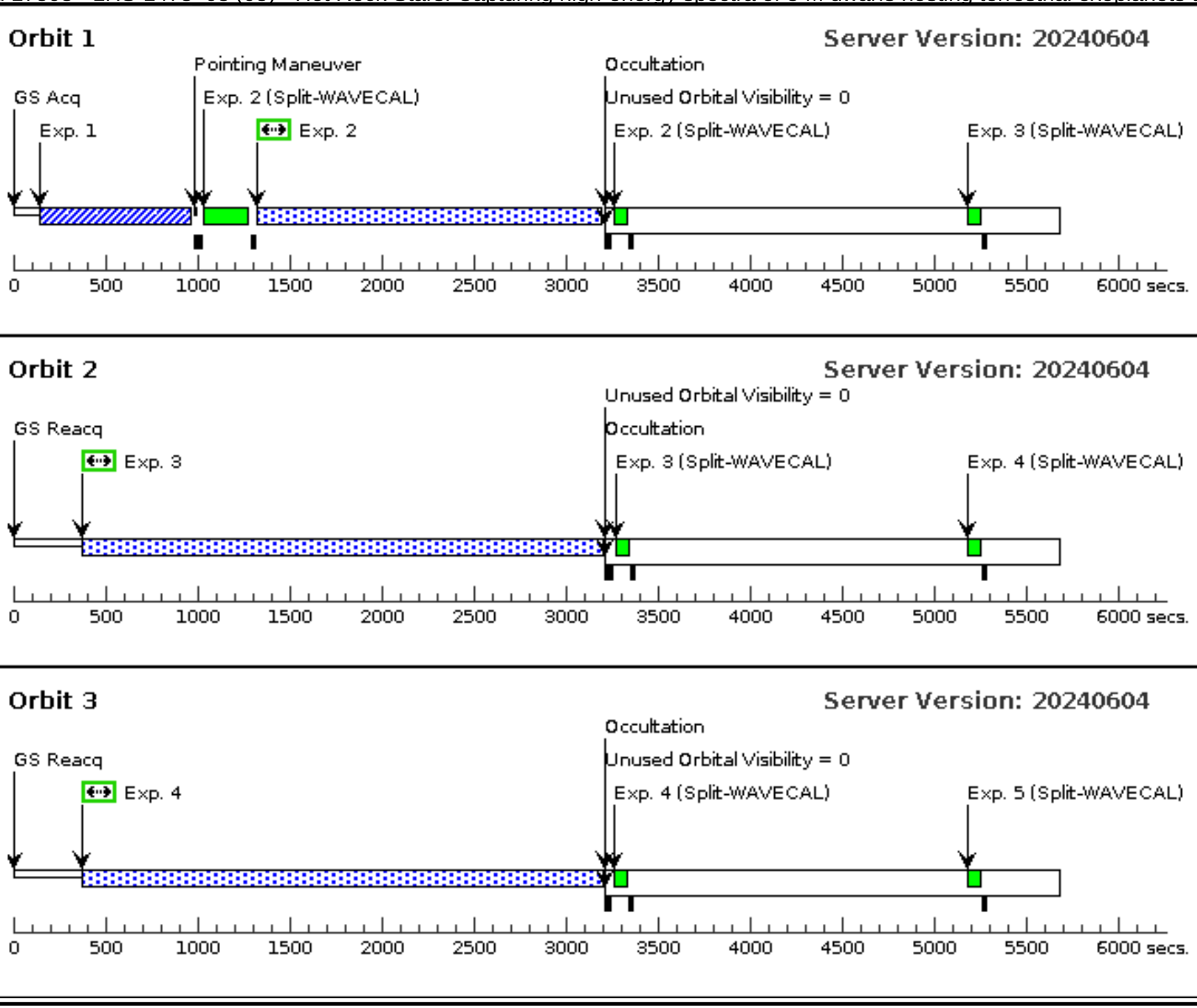
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	LHS-1478	RA: 02 57 21.4288 (44.3392867d) Dec: +76 33 4.86 (76.55135d) Equinox: J2000	Proper Motion RA: 690.9197545650943 mas/yr Proper Motion Dec: -399.8937562024991 mas/yr Parallax: 0.05490364921822687" Epoch of Position: 2016.0	V=13.304	Reference Frame: ICRS

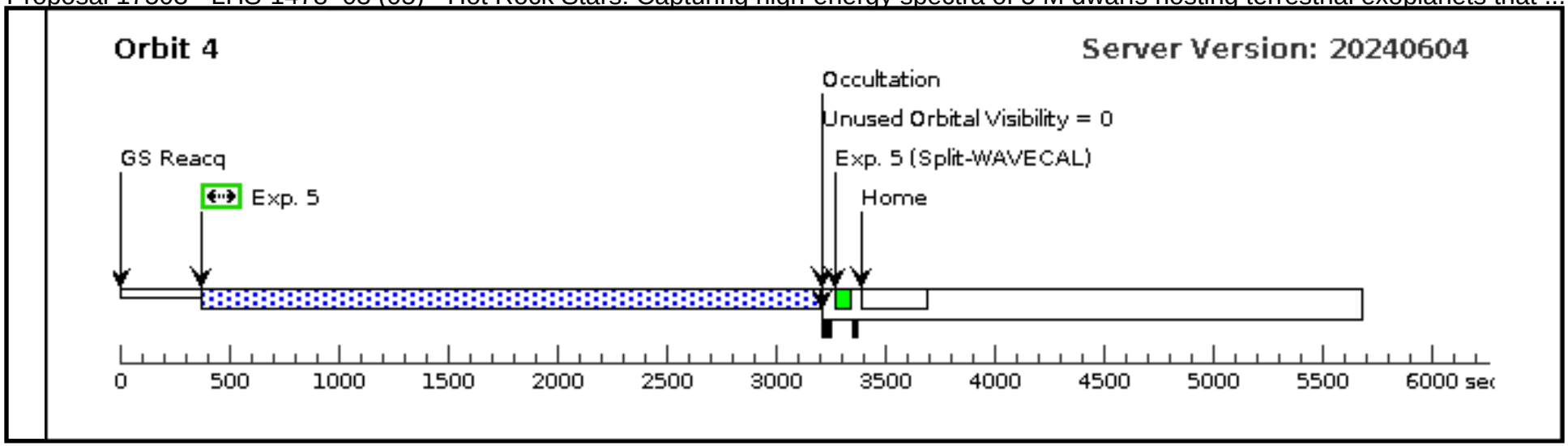
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1899034)	(2) LHS-1478	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				264 Secs (264 Secs) *[==>]*	***[1]***
2	FUV_G160M (COS.sp.1889103)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=1			2553 Secs (1824 Secs) *[==>1824 Secs]*	***[1]***
3	FUV_G160M (COS.sp.1889104)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=2			3052 Secs (2778 Secs) *[==>2778 Secs]*	***[2]***
4	FUV_G160M (COS.sp.1889104)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=20585; FP-POS=3			3052 Secs (2778 Secs) *[==>2778 Secs]*	***[3]***
5	FUV_G160M (COS.sp.1889104)	(2) LHS-1478	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=4			3052 Secs (2778 Secs) *[==>2778 Secs]*	***[4]***

Orbit Structure




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

Visit

Proposal 17503, LHS-1478_04 (06), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD

Special Requirements: (none)

Fixed Targets

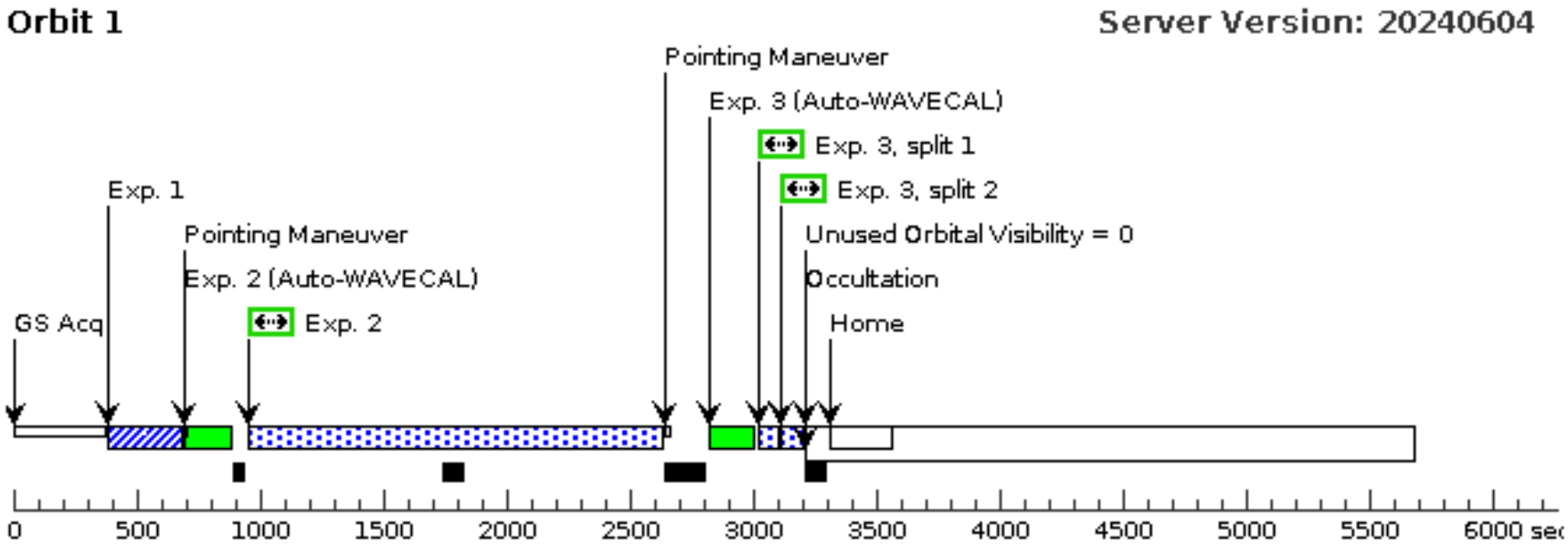
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	LHS-1478	RA: 02 57 21.4288 (44.3392867d) Dec: +76 33 4.86 (76.55135d) Equinox: J2000	Proper Motion RA: 690.9197545650943 mas/yr Proper Motion Dec: -399.8937562024991 mas/yr Parallax: 0.05490364921822687" Epoch of Position: 2016.0	V=13.304	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (STIS.ta.1889111)	(2) LHS-1478	STIS/CCD, ACQ, F28X50OIII	MIRROR	ACQTYPE=POINT			7 Secs (7 Secs) *[==>]*	*[1]*
2	NUV_G230L (STIS.sp.1889107)	(2) LHS-1478	STIS/NUV-MAMA, TIME-TAG, 52X0.2	G230L 2376 A	BUFFER-TIME=800			1890 Secs (1667 Secs) *[==>1667 Secs]*	*[1]*
3	NUV_G430L (STIS.sp.1889108)	(2) LHS-1478	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			100 Secs (100 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17503, LTT-3780_01 (07), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(LTT-3780_01 (07)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

Fixed Targets

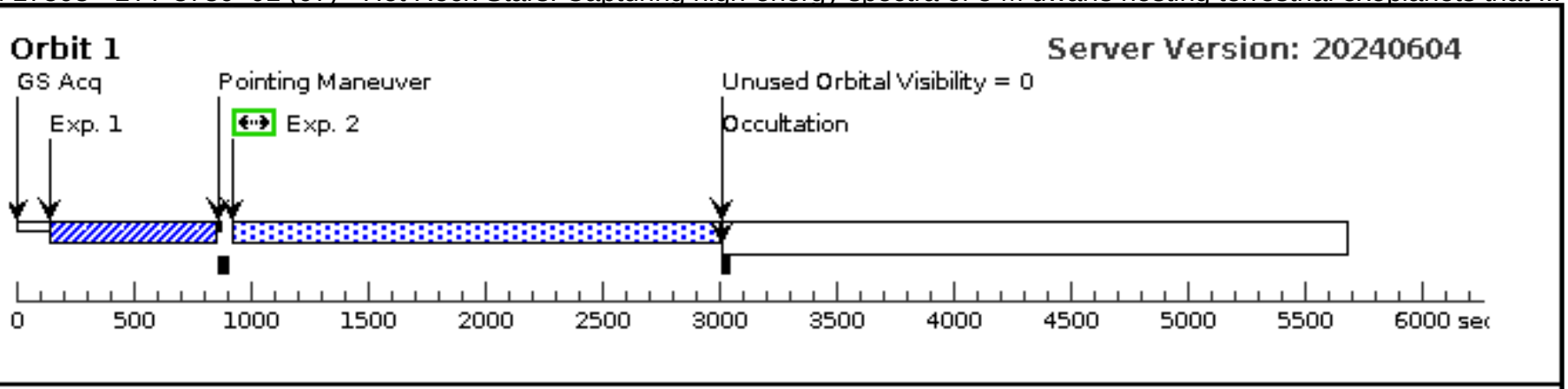
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LTT-3780	RA: 10 18 34.7652 (154.6448550d) Dec: -11 43 4.21 (-11.71784d) Equinox: J2000	Proper Motion RA: -341.5372660862644 mas/yr Proper Motion Dec: -247.74725247160802 mas/yr Parallax: 0.04539719520705794" Epoch of Position: 2016.0	V=13.07+/-0.015	Reference Frame: ICRS

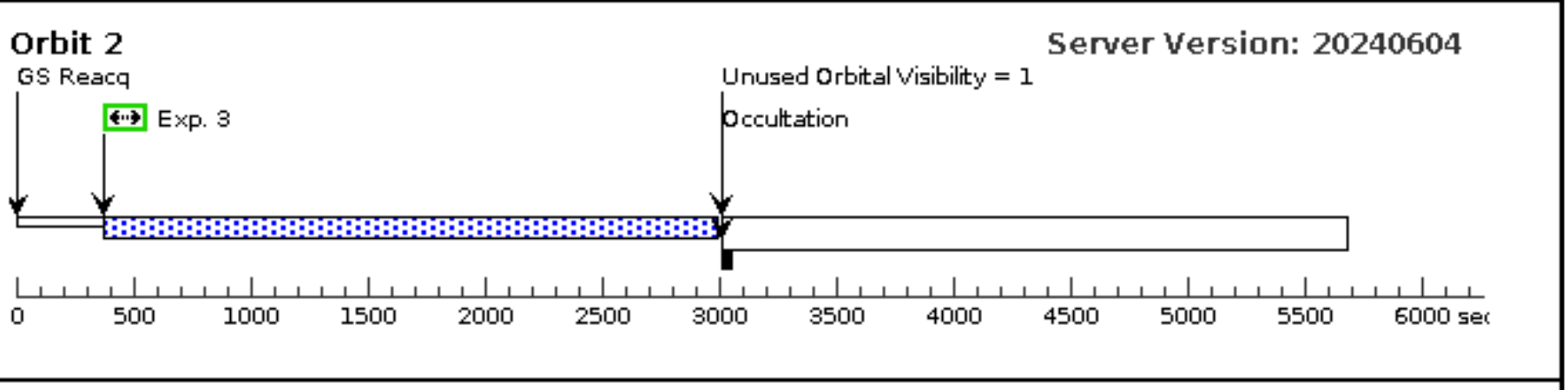
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery. V-magnitude from Cloutier, et al. 2020.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

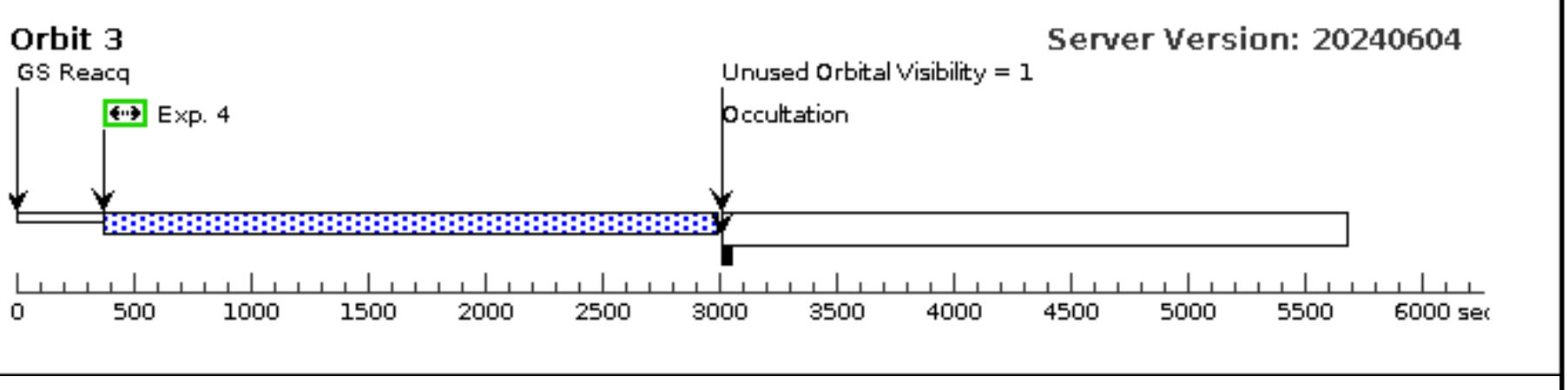
Exposures

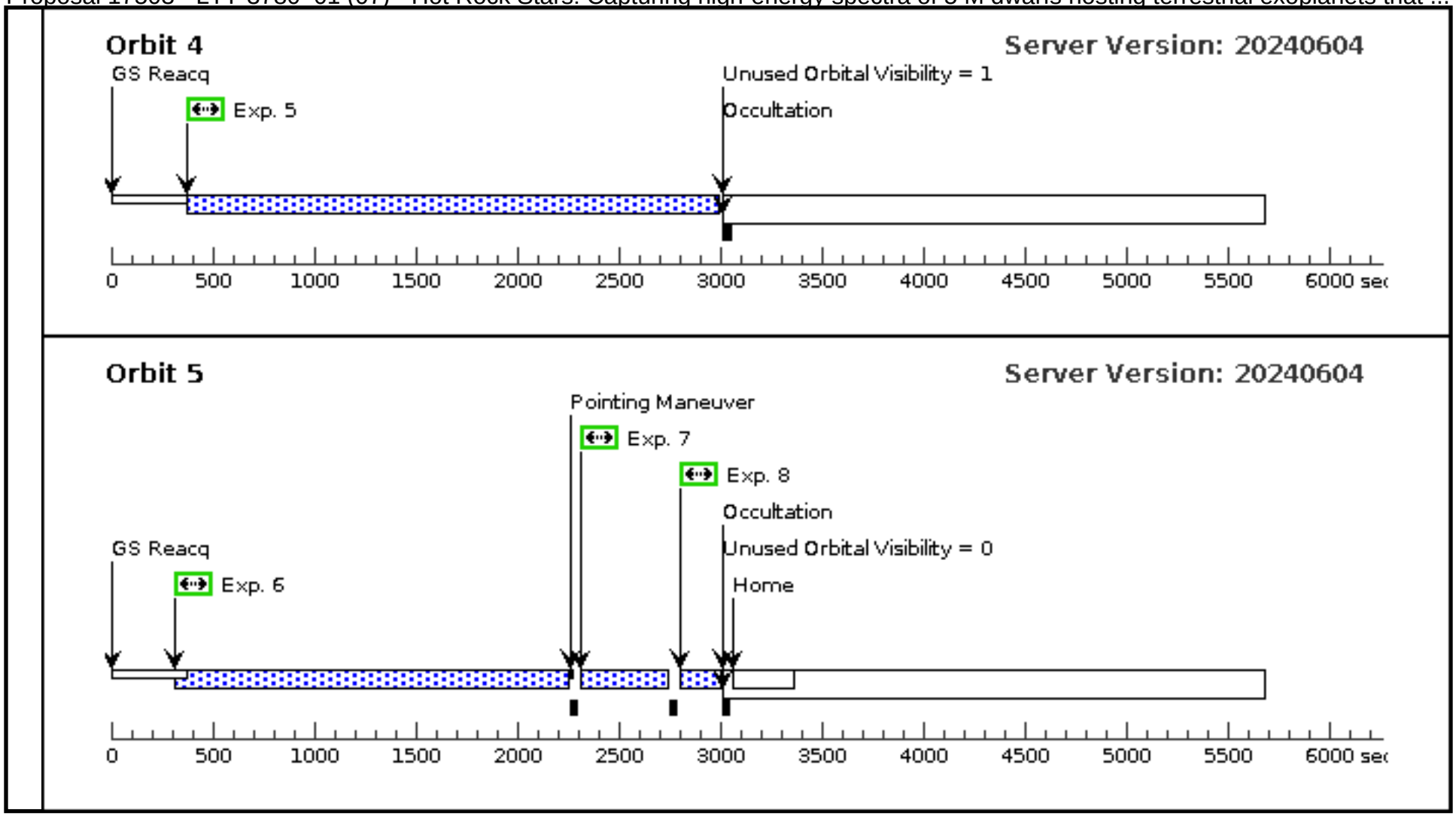
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1889861)	(3) LTT-3780	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				208 Secs (208 Secs) *[==>]*	***[1]***
2	FUV_G130M (COS.sp.1889113)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=1; FLASH=YES; BUFFER-TIME=9600			1950 Secs (1892 Secs) *[==>1892 Secs]*	***[1]***
3	FUV_G130M (COS.sp.1889113)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=2; FLASH=YES; BUFFER-TIME=9600			1282 Secs (2570 Secs) *[==>2570.0 Secs]*	***[2]***
4	FUV_G130M (COS.sp.1889113)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=3; FLASH=YES; BUFFER-TIME=9600			1283 Secs (2570 Secs) *[==>2570.0 Secs]*	***[3]***
5	FUV_G130M (COS.sp.1889113)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=4; FLASH=YES; BUFFER-TIME=9600			1283 Secs (2570 Secs) *[==>2570.0 Secs]*	***[4]***
6	FUV_G130M (COS.sp.1889113)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=3; FLASH=YES; BUFFER-TIME=9600			1928 Secs (1825 Secs) *[==>1825 Secs]*	***[5]***
7	NUV_G230L (COS.sp.1889123)	(3) LTT-3780	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; FP-POS=3; BUFFER-TIME=1200			180 Secs (180 Secs) *[==>]*	***[5]***
8	NUV_G230L (COS.sp.1889123)	(3) LTT-3780	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; FP-POS=4; BUFFER-TIME=1200			180 Secs (180 Secs) *[==>]*	***[5]***

Orbit Structure








Orbit 4
Server Version: 20240604
GS Reacq
Exp. 5
Unused Orbital Visibility = 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec
Orbit 5
Server Version: 20240604
Pointing Maneuver
Exp. 7
Exp. 8
Occultation
GS Reacq
Exp. 6
Unused Orbital Visibility = 0
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17503, LTT-3780_02 (08), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

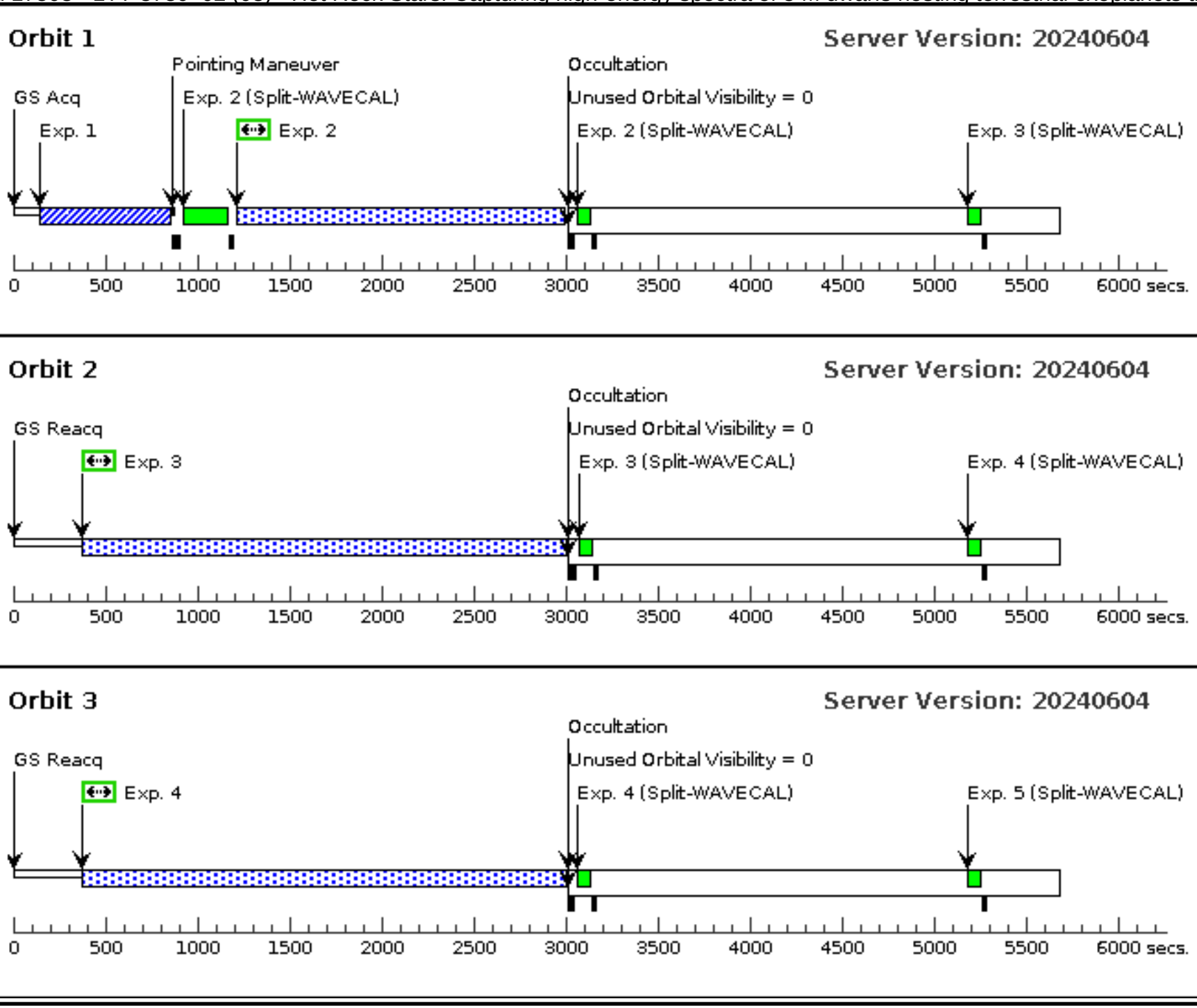
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LTT-3780	RA: 10 18 34.7652 (154.6448550d) Dec: -11 43 4.21 (-11.71784d) Equinox: J2000	Proper Motion RA: -341.5372660862644 mas/yr Proper Motion Dec: -247.74725247160802 mas/yr Parallax: 0.04539719520705794" Epoch of Position: 2016.0	V=13.07+/-0.015	Reference Frame: ICRS

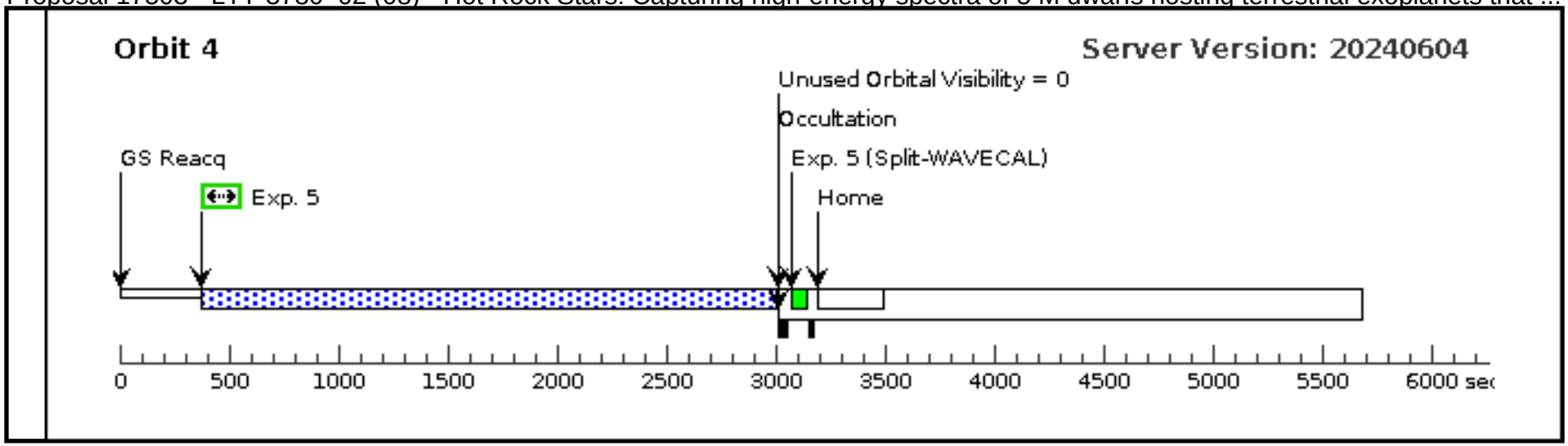
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery. V-magnitude from Cloutier, et al. 2020.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1889861)	(3) LTT-3780	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				208 Secs (208 Secs) *[==>]*	***[1]***
2	FUV_G160M (COS.sp.1889115)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=1			1791 Secs (1733 Secs) *[==>1733 Secs]*	***[1]***
3	FUV_G160M (COS.sp.1889115)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=2			2684 Secs (2575 Secs) *[==>2575 Secs]*	***[2]***
4	FUV_G160M (COS.sp.1889115)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=20585; FP-POS=3			2684 Secs (2575 Secs) *[==>2575 Secs]*	***[3]***
5	FUV_G160M (COS.sp.1889115)	(3) LTT-3780	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=4			2684 Secs (2575 Secs) *[==>2575 Secs]*	***[4]***

Orbit Structure




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

Visit

Proposal 17503, LTT-3780_03 (09), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD

Special Requirements: (none)

Fixed Targets

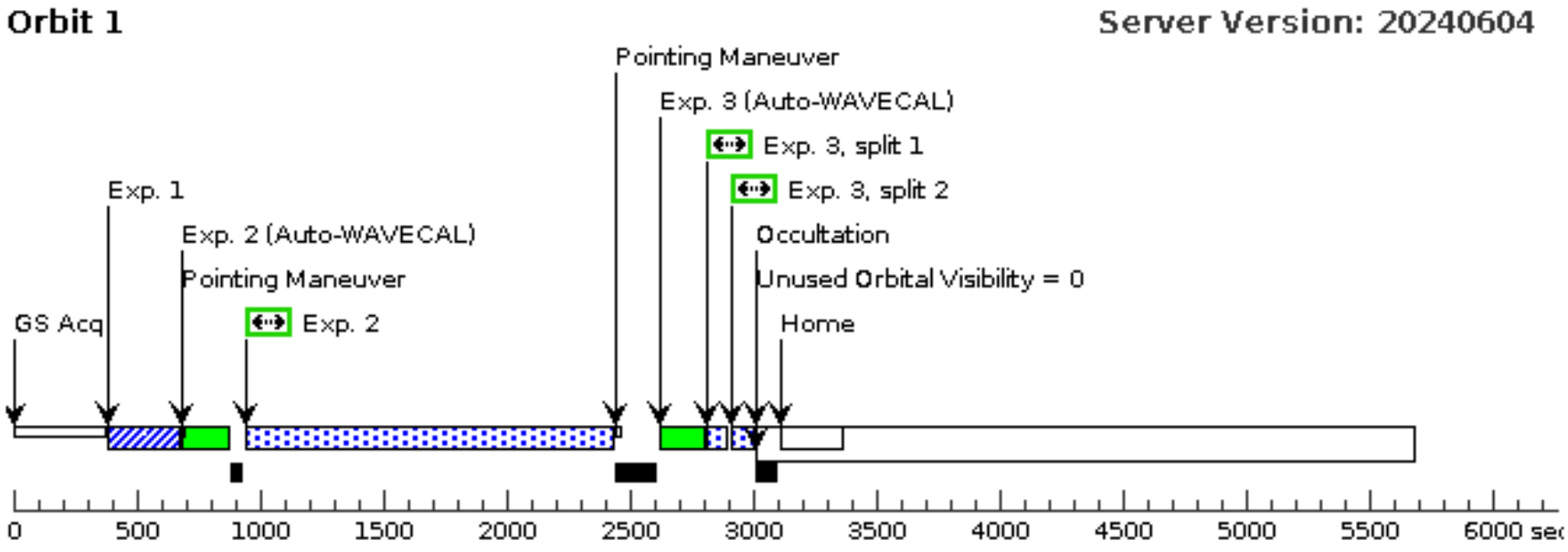
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LTT-3780	RA: 10 18 34.7652 (154.6448550d) Dec: -11 43 4.21 (-11.71784d) Equinox: J2000	Proper Motion RA: -341.5372660862644 mas/yr Proper Motion Dec: -247.74725247160802 mas/yr Parallax: 0.04539719520705794" Epoch of Position: 2016.0	V=13.07+/-0.015	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery. V-magnitude from Cloutier, et al. 2020.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (STIS.ta.1889321)	(3) LTT-3780	STIS/CCD, ACQ, F28X50OIII	MIRROR	ACQTYPE=POINT			5 Secs (5 Secs) *[==>]*	*[1]*
2	NUV_G230L (STIS.sp.1889322)	(3) LTT-3780	STIS/NUV-MAMA, TIME-TAG, 52X0.2	G230L 2376 A	BUFFER-TIME=760			1530 Secs (1472 Secs) *[==>1472 Secs]*	*[1]*
3	NUV_G430L (STIS.sp.1889323)	(3) LTT-3780	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			100 Secs (100 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17503, TOI-1468_01 (10), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

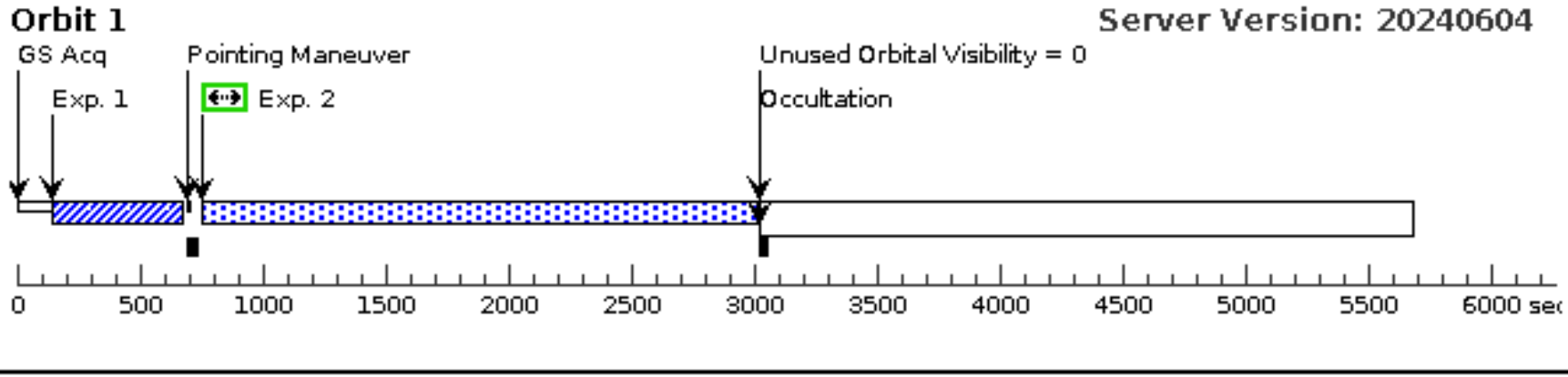
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390714" Epoch of Position: 2016.0	V=12.5	Reference Frame: ICRS

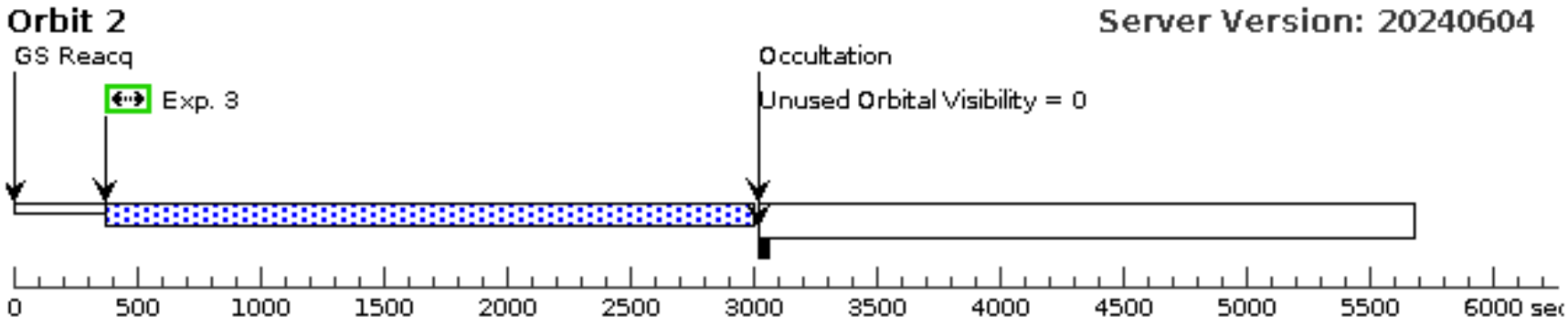
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

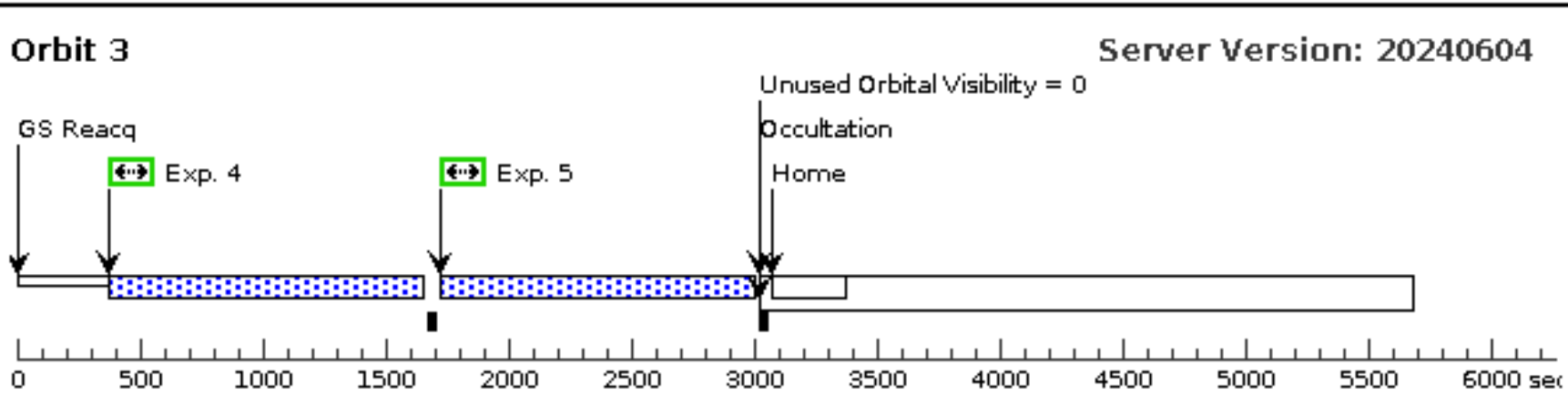
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1889865)	(4) TOI-1468	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				121 Secs (121 Secs) *[==>]*	***[1]***
2	FUV_G130M (COS.sp.1889292)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=1; FLASH=YES; BUFFER-TIME=9600			2127 Secs (2074 Secs) *[==>2074 Secs]*	***[1]***
3	FUV_G130M (COS.sp.1889292)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=2; FLASH=YES; BUFFER-TIME=9600			2683 Secs (2579 Secs) *[==>2579.0 Secs]*	***[2]***
4	FUV_G130M (COS.sp.1889292)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=3; FLASH=YES; BUFFER-TIME=9600			1284 Secs (1232 Secs) *[==>1232.0 Secs]*	***[3]***
5	FUV_G130M (COS.sp.1889292)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=4; FLASH=YES; BUFFER-TIME=9600			1284 Secs (1232 Secs) *[==>1232.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 17503, TOI-1468_02 (11), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

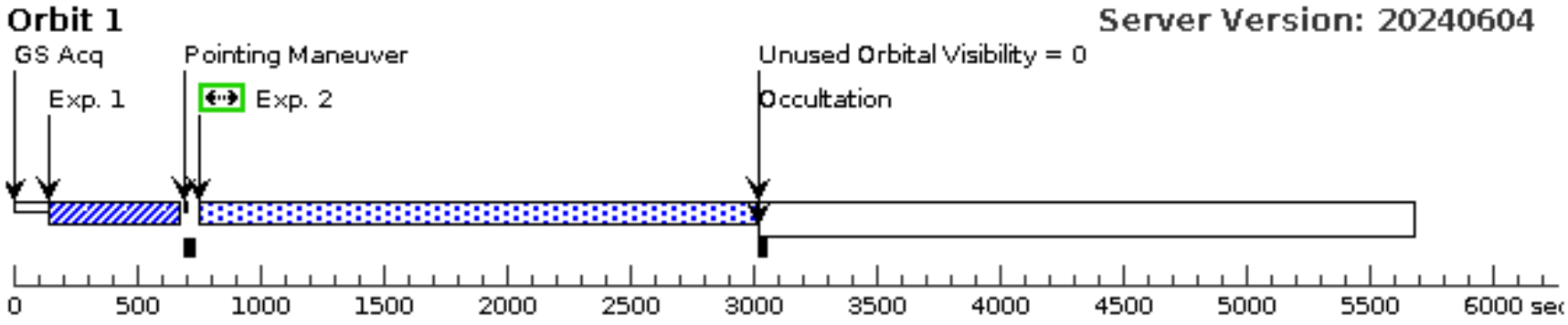
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390714" Epoch of Position: 2016.0	V=12.5	Reference Frame: ICRS

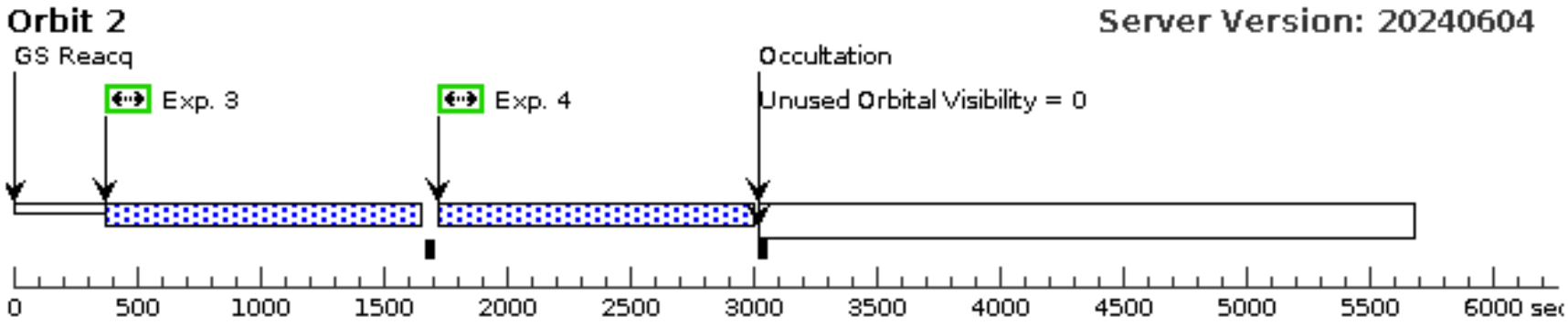
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

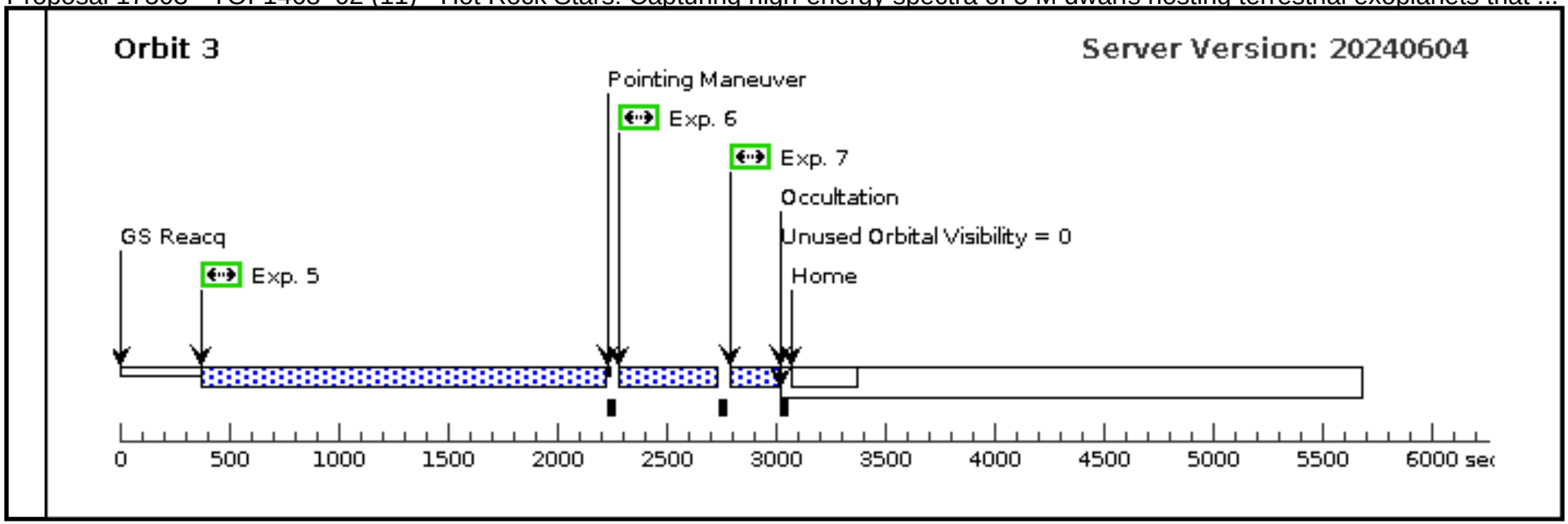
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1889865)	(4) TOI-1468	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				121 Secs (121 Secs) *[==>]*	***[1]***
2	FUV_G130M (COS.sp.1889292)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=1; FLASH=YES; BUFFER-TIME=9600			2127 Secs (2074 Secs) *[==>2074 Secs]*	***[1]***
3	FUV_G130M (COS.sp.1889292)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=2; FLASH=YES; BUFFER-TIME=9600			1284 Secs (1232 Secs) *[==>1232.0 Secs]*	***[2]***
4	FUV_G130M (COS.sp.1889292)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=3; FLASH=YES; BUFFER-TIME=9600			1284 Secs (1232 Secs) *[==>1232.0 Secs]*	***[2]***
5	FUV_G130M (COS.sp.1889292)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=4; FLASH=YES; BUFFER-TIME=9600			1891 Secs (1793 Secs) *[==>1793.0 Secs]*	***[3]***
6	NUV_G230L (COS.sp.1889293)	(4) TOI-1468	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; FP-POS=3; BUFFER-TIME=1200			200 Secs (200 Secs) *[==>]*	***[3]***
7	NUV_G230L (COS.sp.1889293)	(4) TOI-1468	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; FP-POS=4; BUFFER-TIME=1200			200 Secs (200 Secs) *[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
Pointing Maneuver
Exp. 6
Exp. 7
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17503, TOI-1468_03 (12), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Fixed Targets

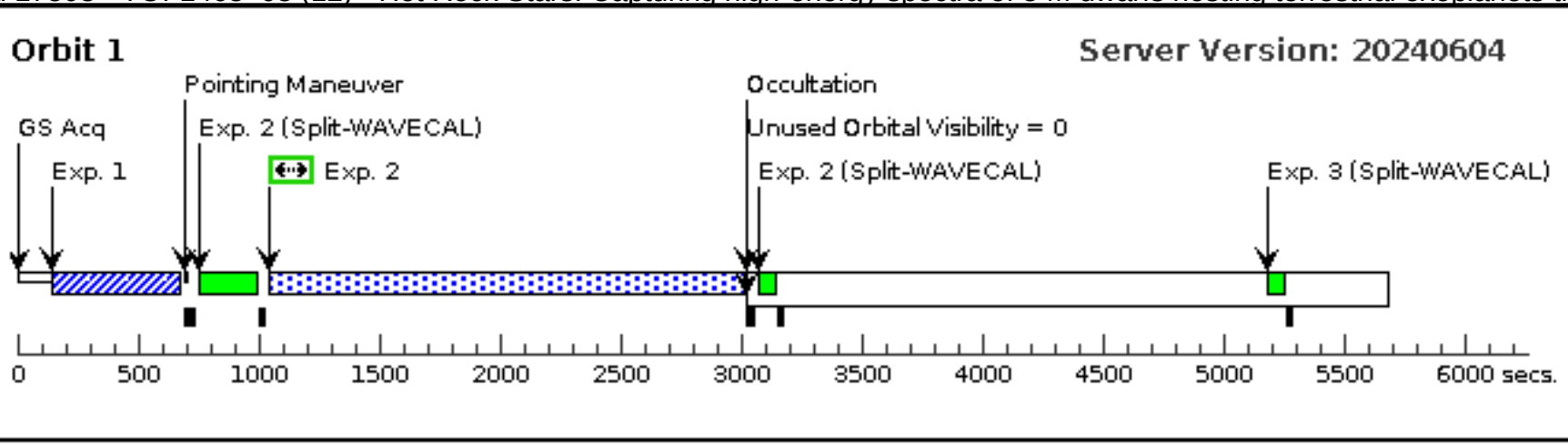
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390714" Epoch of Position: 2016.0	V=12.5	Reference Frame: ICRS

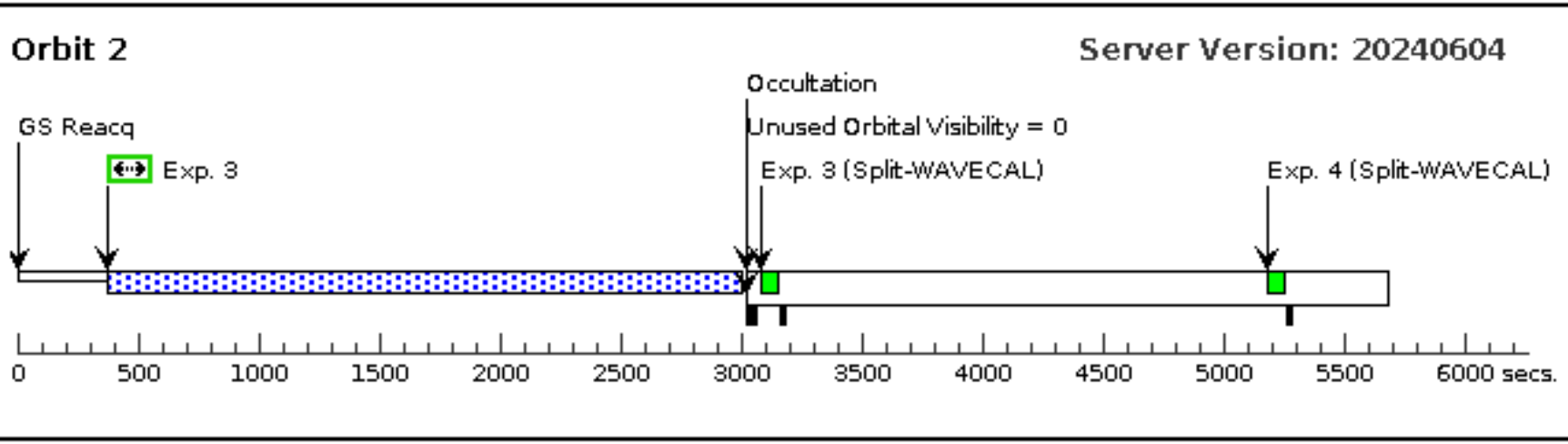
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

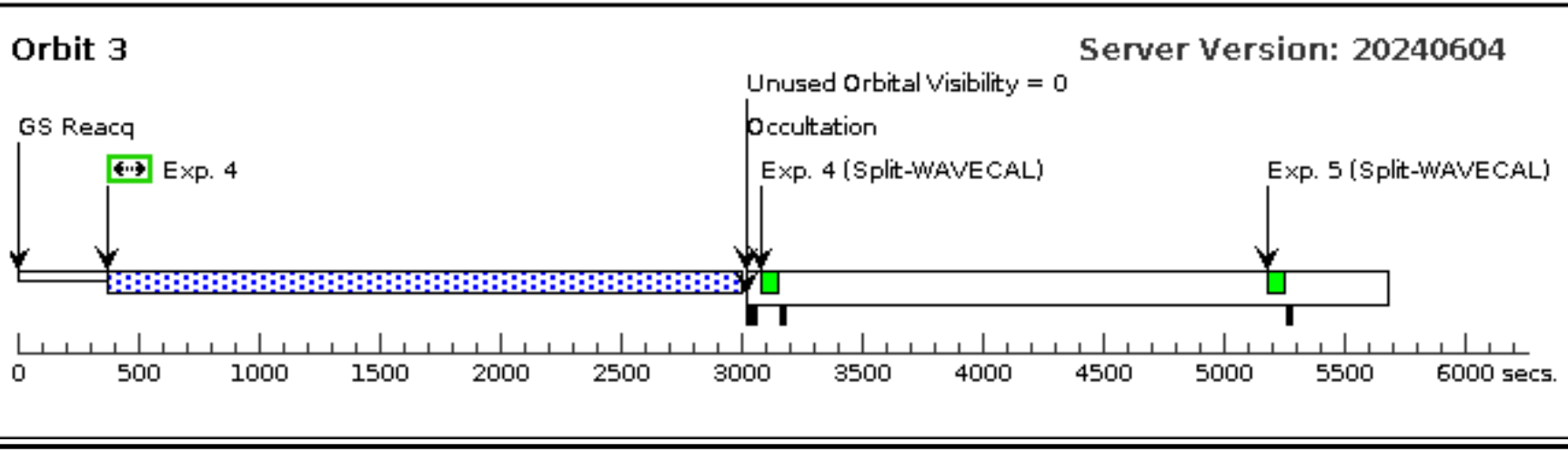
Exposures

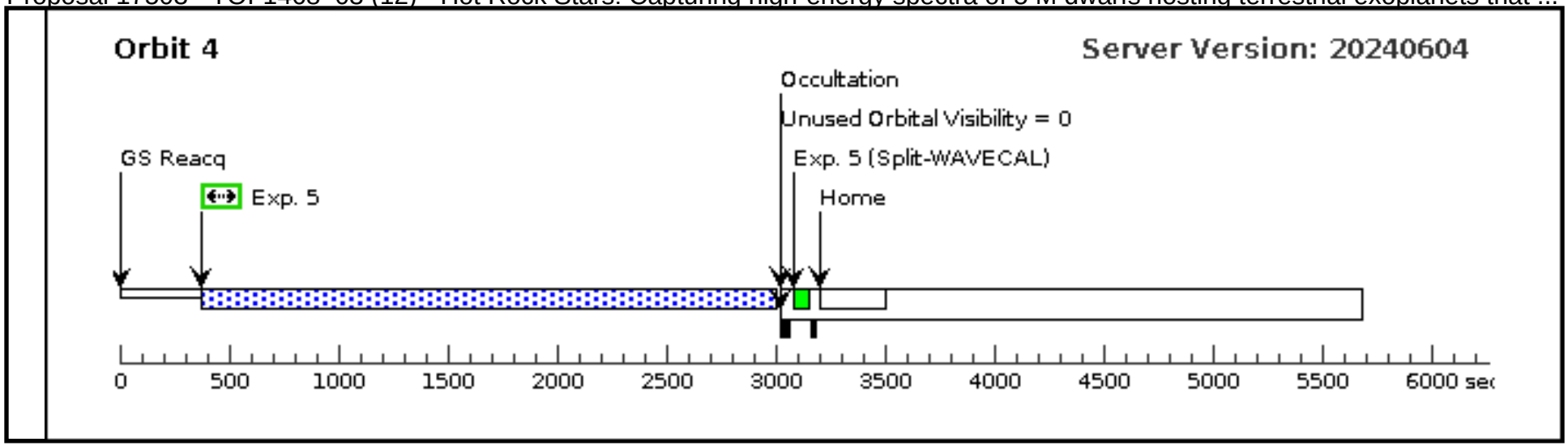
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1889865)	(4) TOI-1468	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				121 Secs (121 Secs) *[==>]*	*[1]*
2	FUV_G160M (COS.sp.1889294)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=1			1968 Secs (1915 Secs) *[==>1915 Secs]*	*[1]*
3	FUV_G160M (COS.sp.1889294)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=2			2687 Secs (2583 Secs) *[==>2583.0 Secs]*	*[2]*
4	FUV_G160M (COS.sp.1889294)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=3			2687 Secs (2583 Secs) *[==>2583.0 Secs]*	*[3]*
5	FUV_G160M (COS.sp.1889294)	(4) TOI-1468	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=4			2687 Secs (2583 Secs) *[==>2583.0 Secs]*	*[4]*

Orbit Structure








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

Visit

Proposal 17503, TOI-1468_04 (13), implementation Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD

Special Requirements: (none)

Fixed Targets

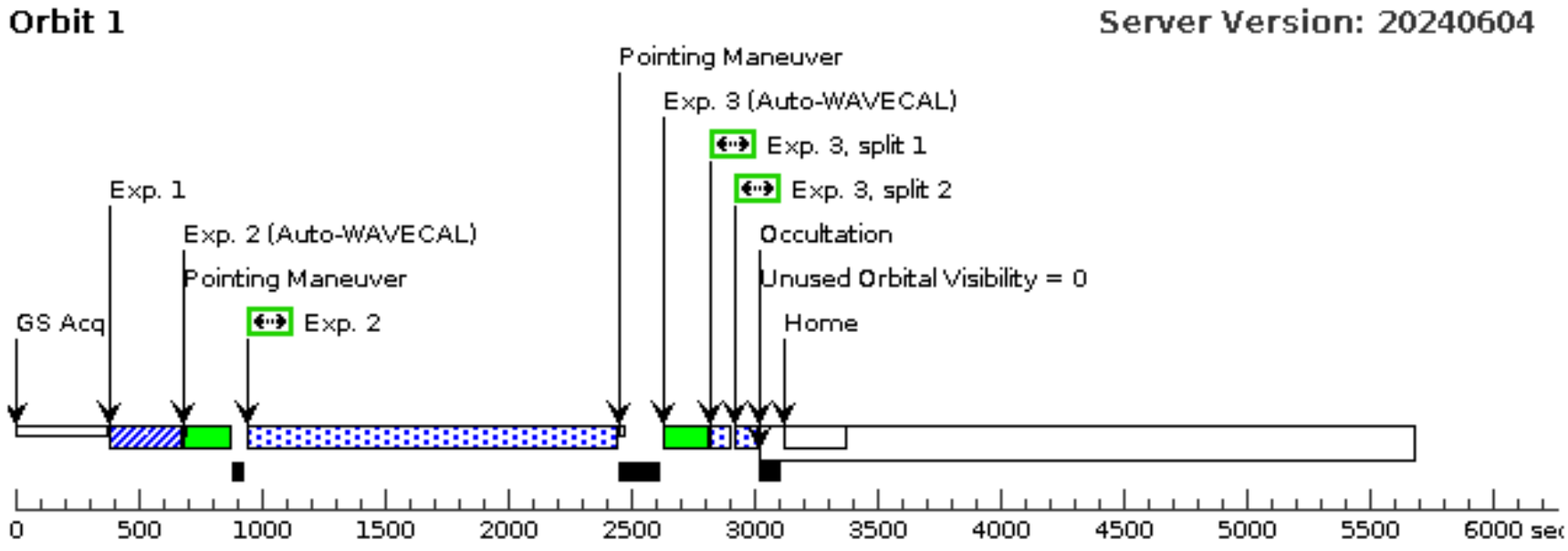
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390714" Epoch of Position: 2016.0	V=12.5	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (STIS.ta.1889299)	(4) TOI-1468	STIS/CCD, ACQ, F28X50OIII	MIRROR	ACQTYPE=POINT			4 Secs (4 Secs) *[==>]*	*[1]*
2	NUV_G230L (STIS.sp.1889308)	(4) TOI-1468	STIS/NUV-MAMA, TIME-TAG, 52X0.2	G230L 2376 A	BUFFER-TIME=760			1537 Secs (1484 Secs) *[==>1484 Secs]*	*[1]*
3	NUV_G430L (STIS.sp.1889310)	(4) TOI-1468	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			100 Secs (100 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17503, L-231-32_01 (14), completed Mon Jun 17 14:00:35 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(L-231-32_01 (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(L-231-32_01 (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(L-231-32_01 (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(L-231-32_01 (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

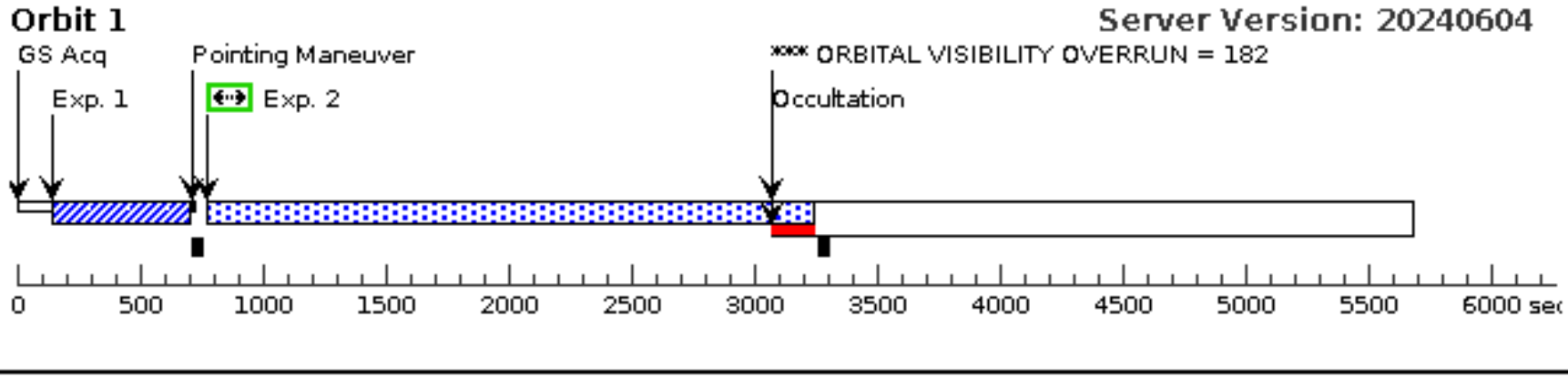
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	L-231-32	RA: 04 33 39.8638 (68.4160992d) Dec: -51 57 26.75 (-51.95743d) Equinox: J2000	Proper Motion RA: 83.08204378717042 mas/yr Proper Motion Dec: -269.8034870673143 mas/yr Parallax: 0.044489913488441966" Epoch of Position: 2016.0	V=12.617	Reference Frame: ICRS

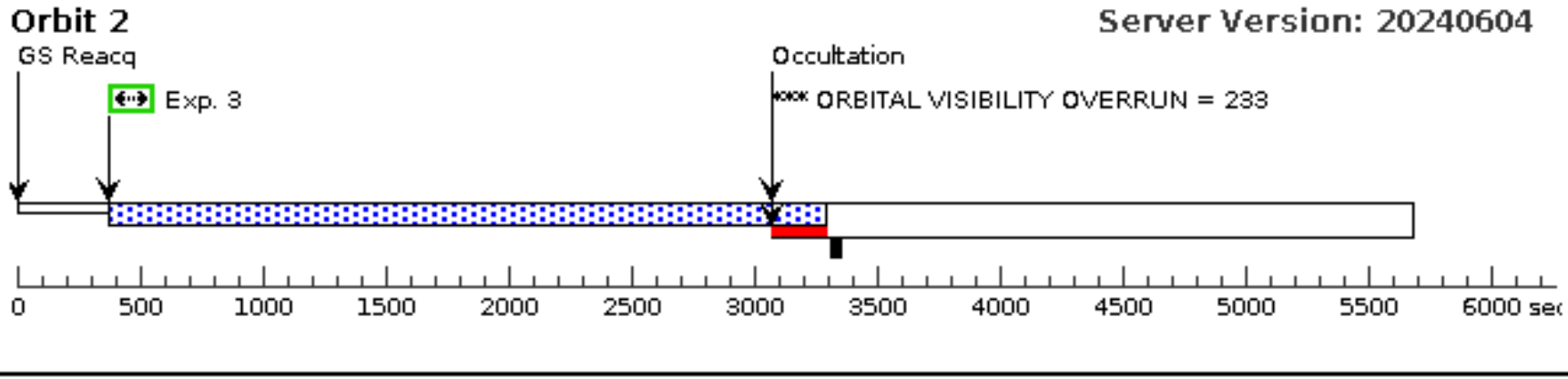
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

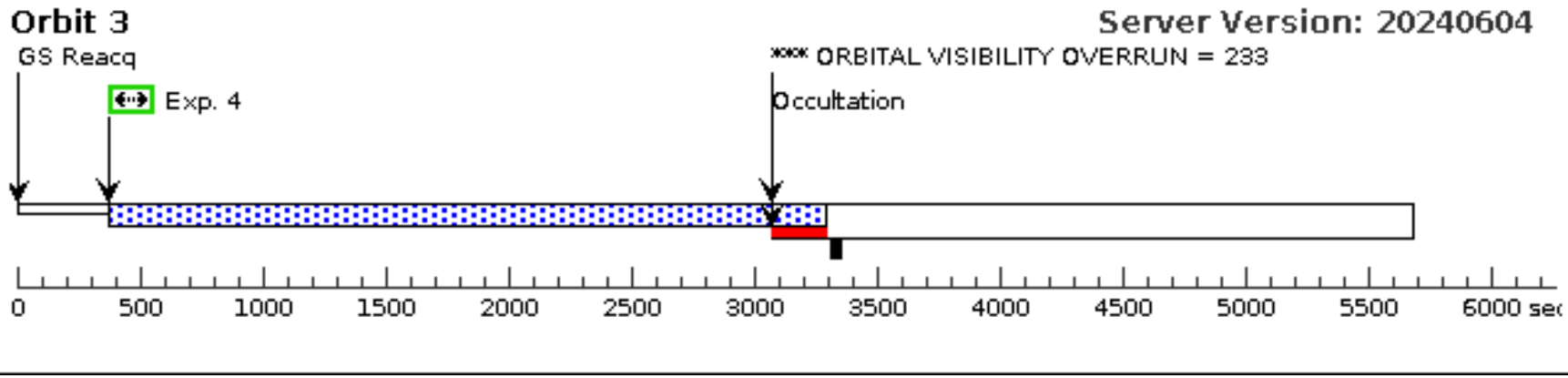
Exposures

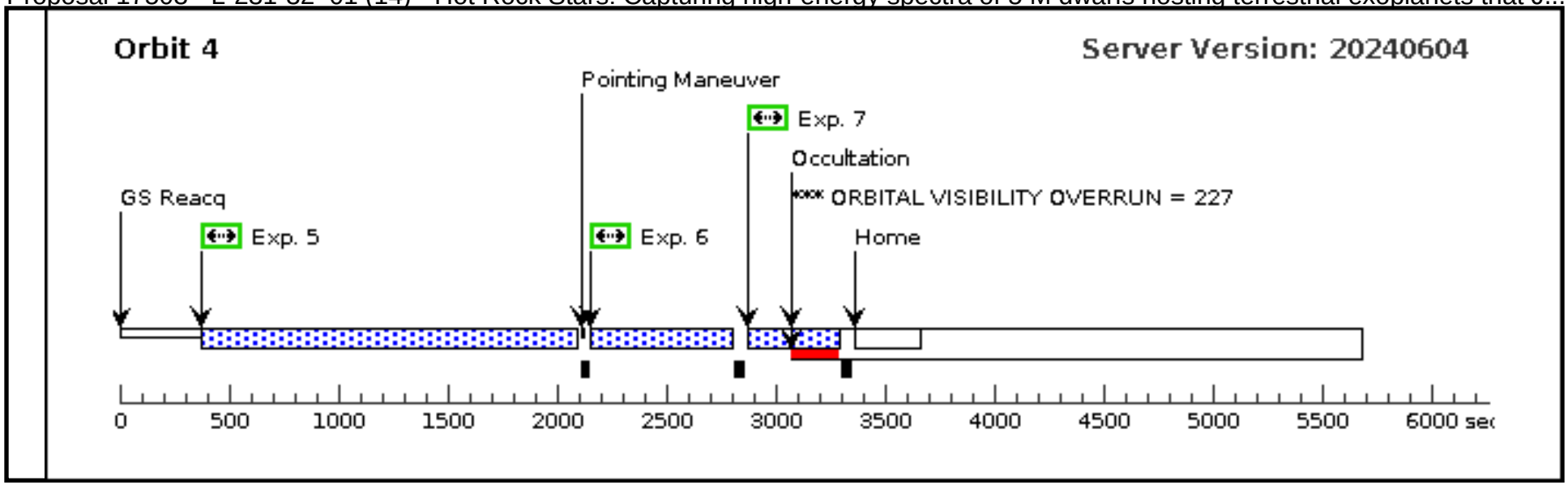
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1899032)	(5) L-231-32	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				133 Secs (133 Secs) *[==>]*	***[1]***
2	FUV_G130M (COS.sp.1889315)	(5) L-231-32	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=1; FLASH=YES; BUFFER-TIME=9600			2348 Secs (2287 Secs) *[==>2287.0 Secs]*	***[1]***
3	FUV_G130M (COS.sp.1889315)	(5) L-231-32	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=2; FLASH=YES; BUFFER-TIME=9600			2348 Secs (2867 Secs) *[==>2867.0 Secs]*	***[2]***
4	FUV_G130M (COS.sp.1889315)	(5) L-231-32	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=3; FLASH=YES; BUFFER-TIME=9600			1282 Secs (2867 Secs) *[==>2867.0 Secs]*	***[3]***
5	FUV_G130M (COS.sp.1889315)	(5) L-231-32	COS/FUV, TIME-TAG, PSA	G130M 1222 A	FP-POS=4; FLASH=YES; BUFFER-TIME=9600			1283 Secs (1666 Secs) *[==>1666.0 Secs]*	***[4]***
6	NUV_G230L (COS.sp.1889316)	(5) L-231-32	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; FP-POS=3; BUFFER-TIME=1200			400 Secs (400 Secs) *[==>]*	***[4]***
7	NUV_G230L (COS.sp.1889316)	(5) L-231-32	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; FP-POS=4; BUFFER-TIME=1200			400 Secs (400 Secs) *[==>]*	***[4]***

Orbit Structure








Orbit 4
Server Version: 20240604
Pointing Maneuver
Exp. 7
Occultation
GS Reacq
**** ORBITAL VISIBILITY OVERRUN = 227
Exp. 5
Exp. 6
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17503, L-231-32_02 (15), scheduling Mon Jun 17 14:00:36 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(L-231-32_02 (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(L-231-32_02 (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(L-231-32_02 (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(L-231-32_02 (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

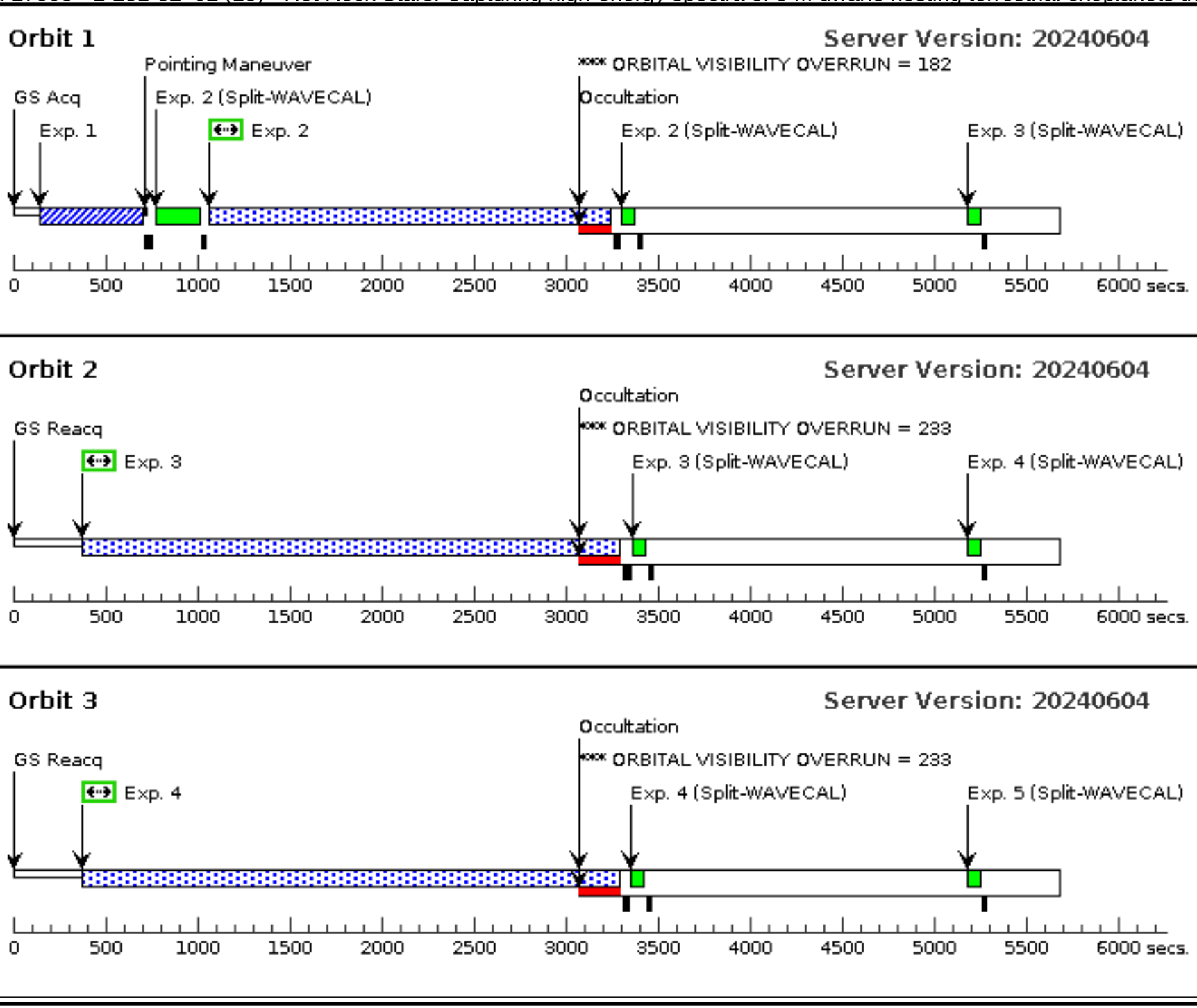
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	L-231-32	RA: 04 33 39.8638 (68.4160992d) Dec: -51 57 26.75 (-51.95743d) Equinox: J2000	Proper Motion RA: 83.08204378717042 mas/yr Proper Motion Dec: -269.8034870673143 mas/yr Parallax: 0.044489913488441966" Epoch of Position: 2016.0	V=12.617	Reference Frame: ICRS

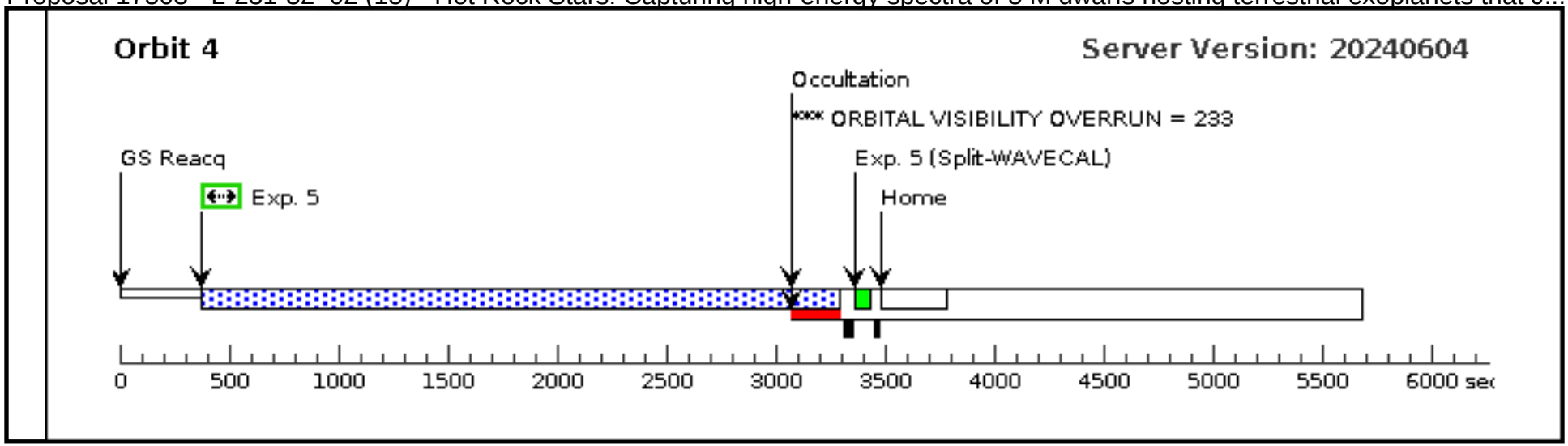
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (COS.ta.1899032)	(5) L-231-32	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				133 Secs (133 Secs) *[==>]*	***[1]***
2	FUV_G160M (COS.sp.1889317)	(5) L-231-32	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=1			2195 Secs (2128 Secs) *[==>2128.0 Secs]*	***[1]***
3	FUV_G160M (COS.sp.1889317)	(5) L-231-32	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=2			2684 Secs (2871 Secs) *[==>2871.0 Secs]*	***[2]***
4	FUV_G160M (COS.sp.1889317)	(5) L-231-32	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=20585; FP-POS=3			2684 Secs (2871 Secs) *[==>2871.0 Secs]*	***[3]***
5	FUV_G160M (COS.sp.1889317)	(5) L-231-32	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10585; FP-POS=4			2684 Secs (2871 Secs) *[==>2871.0 Secs]*	***[4]***

Orbit Structure




Orbit 4
Server Version: 20240604
Occultation
**** ORBITAL VISIBILITY OVERRUN = 233
GS Reacq
Exp. 5
Exp. 5 (Split-WAVECAL)
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17503, L-231-32_03 (16), scheduled Mon Jun 17 14:00:36 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD

Special Requirements: (none)

Diagnostics

(L-231-32_03 (16)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	L-231-32	RA: 04 33 39.8638 (68.4160992d) Dec: -51 57 26.75 (-51.95743d) Equinox: J2000	Proper Motion RA: 83.08204378717042 mas/yr Proper Motion Dec: -269.8034870673143 mas/yr Parallax: 0.044489913488441966" Epoch of Position: 2016.0	V=12.617	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Updated by PI Diamond-Lowe from Gaia DR3 using astroquery.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, M V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquiring (STIS.ta.1889325)	(5) L-231-32	STIS/CCD, ACQ, F28X50OIII	MIRROR	ACQTYPE=POINT			5 Secs (5 Secs) *[==>]*	 ***[1]***
2	NUV_G230L (STIS.sp.1889319)	(5) L-231-32	STIS/NUV-MAMA, TIME-TAG, 52X0.2	G230L 2376 A	BUFFER-TIME=800			1717 Secs (1717 Secs) *[==>]*	 ***[1]***
3	NUV_G430L (STIS.sp.1889320)	(5) L-231-32	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			100 Secs (100 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***

Orbit Structure