16763 - Tracking down the origin of UV photons in local high-z analogues with FUV emission line imaging

Cycle: 29, Proposal Category: GO

(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	(2) J141851	ACS/SBC	3	03-Aug-2023 18:00:21.0	yes
02	(2) J141851	ACS/SBC	4	03-Aug-2023 18:00:22.0	yes
03	(2) J141851	STIS/NUV-MAMA	4	03-Aug-2023 18:00:22.0	yes
04	(2) J141851	STIS/NUV-MAMA	4	03-Aug-2023 18:00:23.0	yes
05	(2) J141851	WFC3/UVIS	3	03-Aug-2023 18:00:24.0	yes
06	(1) SBS-0335-052	STIS/NUV-MAMA	4	03-Aug-2023 18:00:25.0	yes
14	(1) SBS-0335-052	STIS/NUV-MAMA	1	03-Aug-2023 18:00:26.0	yes
07	(1) SBS-0335-052	WFC3/UVIS	1	03-Aug-2023 18:00:26.0	yes
08	(3) J104457	ACS/SBC	2	03-Aug-2023 18:00:27.0	yes
12	(3) J104457	ACS/SBC	1	03-Aug-2023 18:00:27.0	yes
09	(3) J104457	STIS/NUV-MAMA	4	03-Aug-2023 18:00:28.0	yes
15	(3) J104457	STIS/NUV-MAMA	2	03-Aug-2023 18:00:28.0	yes
10	(3) J104457	STIS/NUV-MAMA	2	03-Aug-2023 18:00:29.0	yes
16	(3) J104457	STIS/NUV-MAMA	1	03-Aug-2023 18:00:29.0	yes
11	(3) J104457	WFC3/UVIS	1	03-Aug-2023 18:00:30.0	yes
13	(2) J141851	ACS/SBC	1	03-Aug-2023 18:00:30.0	yes

38 Total Orbits Used

ABSTRACT

Far ultraviolet emission lines are fundamental to interpret the ionized interstellar medium (ISM) properties of the first generation of galaxies that will be observed with the James Webb Space Telescope (JWST). The COS Legacy Archive Spectroscopic SurveY (CLASSY) HST/COS treasury program provided the first high-resolution spectral catalog of local high-z analogues to investigate their stellar and gas properties to improve the diagnostic power of UV lines. However, in order to fully understand the physical conditions that give rise to their excitation, we need to spatially tackle these diagnostics. This will allow us to trace their spatial distribution and to isolate the origin of the UV photons within these systems. Here we

propose to obtain emission line images down to ~10 pc resolution, using the high resolution imaging from ACS and STIS, of three nearby well-known low-metallicity starbursts selected from CLASSY. These sources are remarkably characterized by strong CIV1548,1551, HeII1640, [OIII]1661,6 and [CIII]1907,CIII]1909, and by different Ly-alpha profiles. The powerful combination of available optical integral field spectroscopy data, archival and new HST observations in concert with state-of-the-art models will allow us to investigate and interpret the morphology of the emission line diagnostics. Hence, not only we will be able to track the ionization source(s) of the gas and the ionization structure in our targets, but also test indirect tracers of leaking ionizing radiation (i.e., Lyman continuum escape). This study will provide us with an extremely powerful toolkit, pivotal for understanding the ISM conditions of the earliest galaxies.

OBSERVING DESCRIPTION

The goal of this proposal is to map with ACS/SBC and STIS/NUV the extended Ly alpha, CIV, HeII1640+[OIII]1661,6 and CIII]1907,09 to compare their morphologies and study their line ratios with spatial resolution down to ~10 pc in three local extreme galaxies:
1) J1418+2102
2) J1044+0353
3) SBS 0335-052.

Target 1: we request ACS/SBC F125LP, F140LP, F150LP and F165LP to cover Ly alpha, FUV continuum, CIV1548,51 and HeII1640+[OIII]1661,6, respectively. We additionally request STIS/NUV F25CIII to isolate CIII]. WFC3/UVIS F336W, F438W, F606W and F814W filters, combined with with STIS/NUV F25QTZ and ACS/SBC F140LP filters, will be used to model the stellar spectral energy distribution (SED). Finally, we will exploit archival data for Halpha and Hbeta imaging.

Target 2 and 3: both have ongoing observations to perform CIV1548,51, HeII1640 and [OIII]1661,6 imaging (PID: 16209). For SBS0335-052, Lyalpha imaging has been already performed by Ostlin+2009. Moreover, these two sources have already all the necessary broad-band optical imaging, including Halpha. As such, here we request only WFC3/UVIS FQ492N to cover Hbeta, STIS/NUV F25CIII and F25QTZ to isolate CIII]1907,09 for both targets. For target 2, we request also ACS/SBC F125LP and F140LP to isolate Ly alpha.

We expect that the targeted emission will be well captured in one pointing of the ACS/SBC (34.6"x30") and STIS/NUV (25"x25"), with sufficient space for background subtraction.

ETCs: In order to estimate exposure times, we took advantage of each target's archival COS spectrum, from which we measured the stellar continuum and emission line surface brightnesses in the COS aperture (2.5"x2.5"). We used these values as input for the ACS and STIS Exposure Time Calculators (ETC). For the WFC3 optical filters, we estimated the continuum and Hbeta surface brightness from the MUSE data, extracting a spectrum from a region comparable to the COS aperture. Moreover, we assumed that the targeted line emission is coming from an extended region with an aperture of 2.5".

ACS/SBC observations:
The F125LP filter omits the bright geocoronal Ly-alpha background, but unfortunately includes the geocoronal line OI1302. Therefore, we require the special requirement SHADOW just for the F125LP filter. We packed the visits using our own sub-pixel dithering pattern using POS-TARGs, dividing the exposure time of each filter in 4 exposures in a way that the SHADOW part of the orbit is covered by the F125LP filter, while the remaining parts are used for the observations with the other ACS/SBC filters.

STIS/NUV observations:
For the STIS dithering strategy we selected the box pattern, dividing each exposure in 4 sub-exposures. For target 1 and target 2, we divided the observations in two visits to avoid visits longer than 5 orbits.

WFC3/UVIS:
For the WFC3 dithering strategy we selected the 3-point pattern, dividing each filter exposure into 3 sub-exposures.

Visit

Proposal 16763, J141851 ACS/SBC F125LP+F140LP (Shadow with manual dithering) (01), completed Thu Aug 03 22:00:31 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

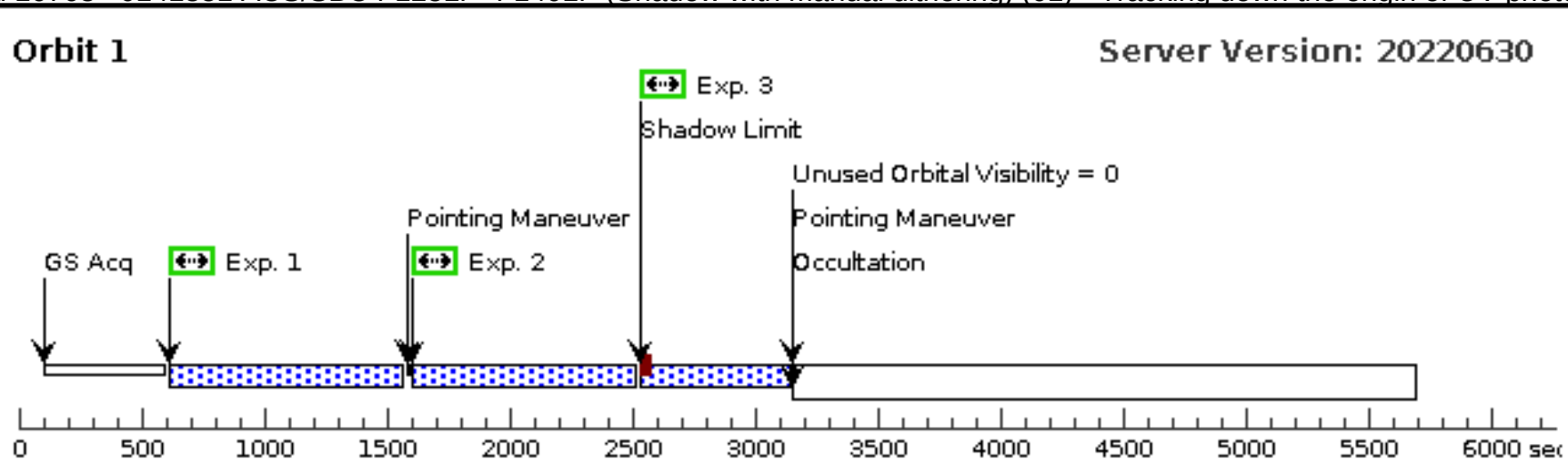
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J141851	RA: 14 18 51.1190 (214.7129958d) Dec: +21 02 39.84 (21.04440d) Equinox: J2000	Epoch of Position: 2015.5	V=17.74	Reference Frame: ICRS

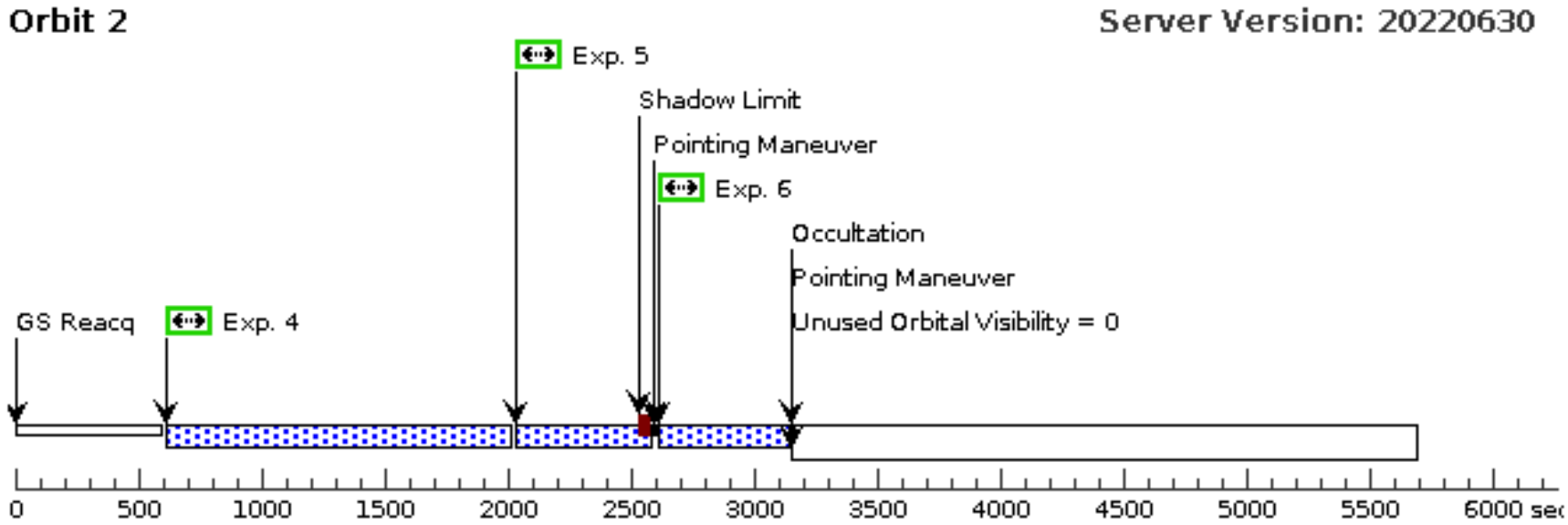
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

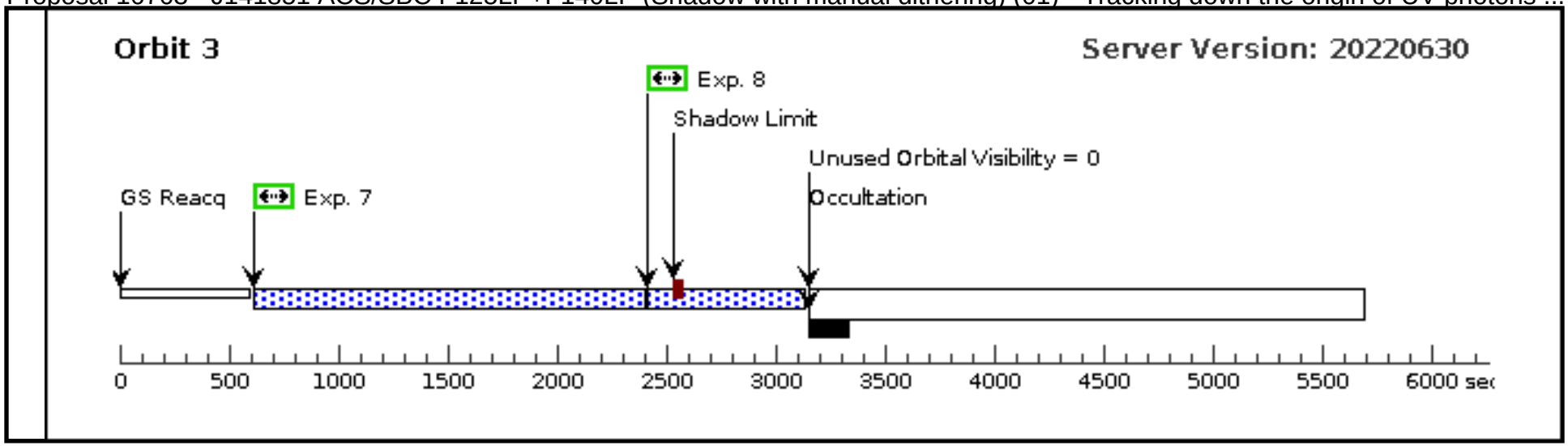
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F125LP - Lyalpha - Pos 1 (ACS.im.15 30529)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 0.252,0.2505; SHADOW		1260 Secs (888 Secs) *[==>888.0 Secs]*	***[1]***
2	F125LP - Lyalpha - Pos 2 (ACS.im.15 30529)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 0.252,-0.2505; SHADOW		1260 Secs (888 Secs) *[==>888.0 Secs]*	***[1]***
3	F140 LP - FUV cont - Pos 2 (ACS.im.15 30530)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 2		567 Secs (560 Secs) *[==>560 Secs]*	***[1]***
4	F125LP - Lyalpha - Pos 3 (ACS.im.15 30529)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -0.252,0.504; SHADOW		1260 Secs (1354 Secs) *[==>1354.0 Secs]*	***[2]***
5	F140 LP - FUV cont - Pos 3 (ACS.im.15 26475)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 4		567 Secs (500 Secs) *[==>500.0 Secs]*	***[2]***
6	F140 LP - FUV cont - Pos 2 (ACS.im.15 26475)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 1		567 Secs (500 Secs) *[==>500.0 Secs]*	***[2]***
7	F125LP - Lyalpha - Pos 4 (ACS.im.15 30529)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -0.252,0; SHADOW		1260 Secs (1737 Secs) *[==>1737.0 Secs]*	***[3]***
8	F140 LP - FUV cont - Pos 4 (ACS.im.15 26475)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 7		567 Secs (677 Secs) *[==>677.0 Secs]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20220630
Exp. 8
Shadow Limit
Unused Orbital Visibility = 0
GS Reacq
Exp. 7
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16763, J141851 ACS/SBC F150LP+F165LP (02), failed Thu Aug 03 22:00:31 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

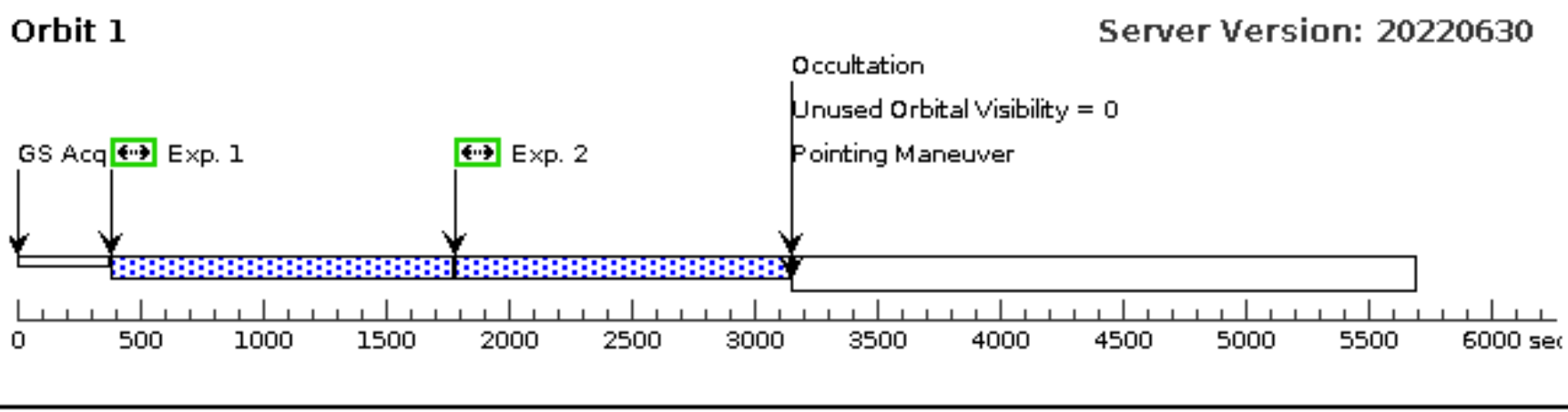
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J141851	RA: 14 18 51.1190 (214.7129958d) Dec: +21 02 39.84 (21.04440d) Equinox: J2000	Epoch of Position: 2015.5	V=17.74	Reference Frame: ICRS

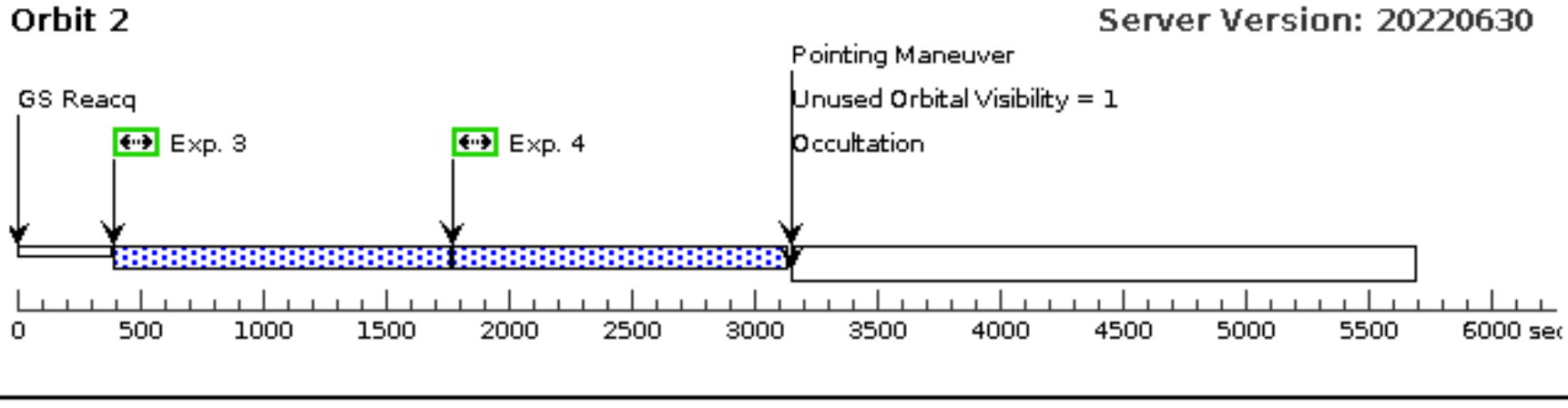
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

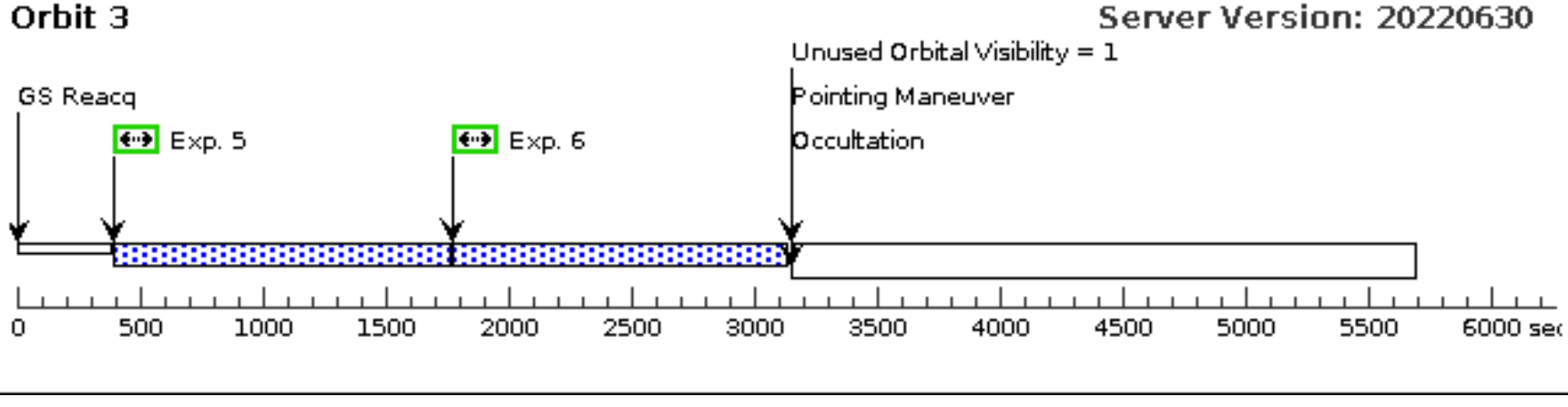
Exposures

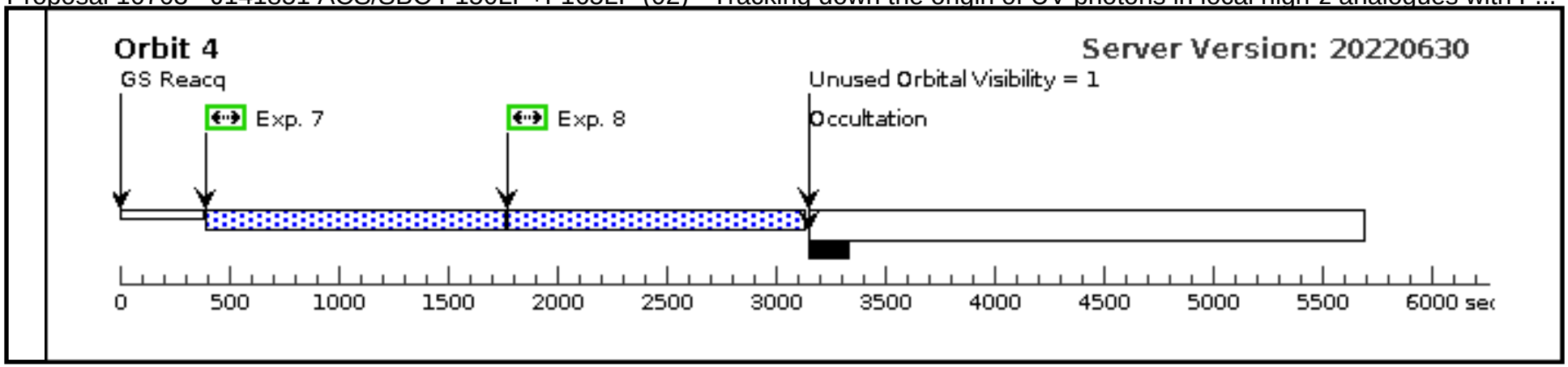
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F150LP - CIV - Pos 1 (ACS.im.1526707)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG 0.252,0.2505		1267 Secs (1319 Secs) *[==>1319.0 Secs]*	***[1]***
2	F165LP - HeII+OIII - Pos 1 (ACS.im.1526709)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 1		1260 Secs (1312 Secs) *[==>1312.0 Secs]*	***[1]***
3	F150LP - CIV - Pos 2 (ACS.im.1526707)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG 0.252,-0.2505		1267 Secs (1323 Secs) *[==>1323.0 Secs]*	***[2]***
4	F165LP - HeII+OIII - Pos 2 (ACS.im.1526709)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 3		1260 Secs (1316 Secs) *[==>1316.0 Secs]*	***[2]***
5	F150LP - CIV - Pos 3 (ACS.im.1526707)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG -0.252,0.504		1267 Secs (1323 Secs) *[==>1323.0 Secs]*	***[3]***
6	F165LP - HeII+OIII - Pos 3 (ACS.im.1526709)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 5		1260 Secs (1316 Secs) *[==>1316.0 Secs]*	***[3]***
7	F150LP - CIV - Pos 4 (ACS.im.1526707)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG -0.252,0		1267 Secs (1323 Secs) *[==>1323.0 Secs]*	***[4]***
8	F165LP - HeII+OIII - Pos 4 (ACS.im.1526709)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 7		1260 Secs (1316 Secs) *[==>1316.0 Secs]*	***[4]***

Orbit Structure








Orbit 4
Server Version: 20220630
GS Reacq
Exp. 7
Exp. 8
Unused Orbital Visibility = 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16763, J141851 STIS/NUV (03), completed Thu Aug 03 22:00:31 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=STIS-MAMA-BOX	Coordinate Frame=POS-TARG		(1)
	Purpose=DITHER	Pattern Orientation=26.6		
	Number Of Points=4	Angle Between Sides=143.130102		
	Point Spacing=0.275	Center Pattern=false		
	Line Spacing=0.275			

Fixed Targets

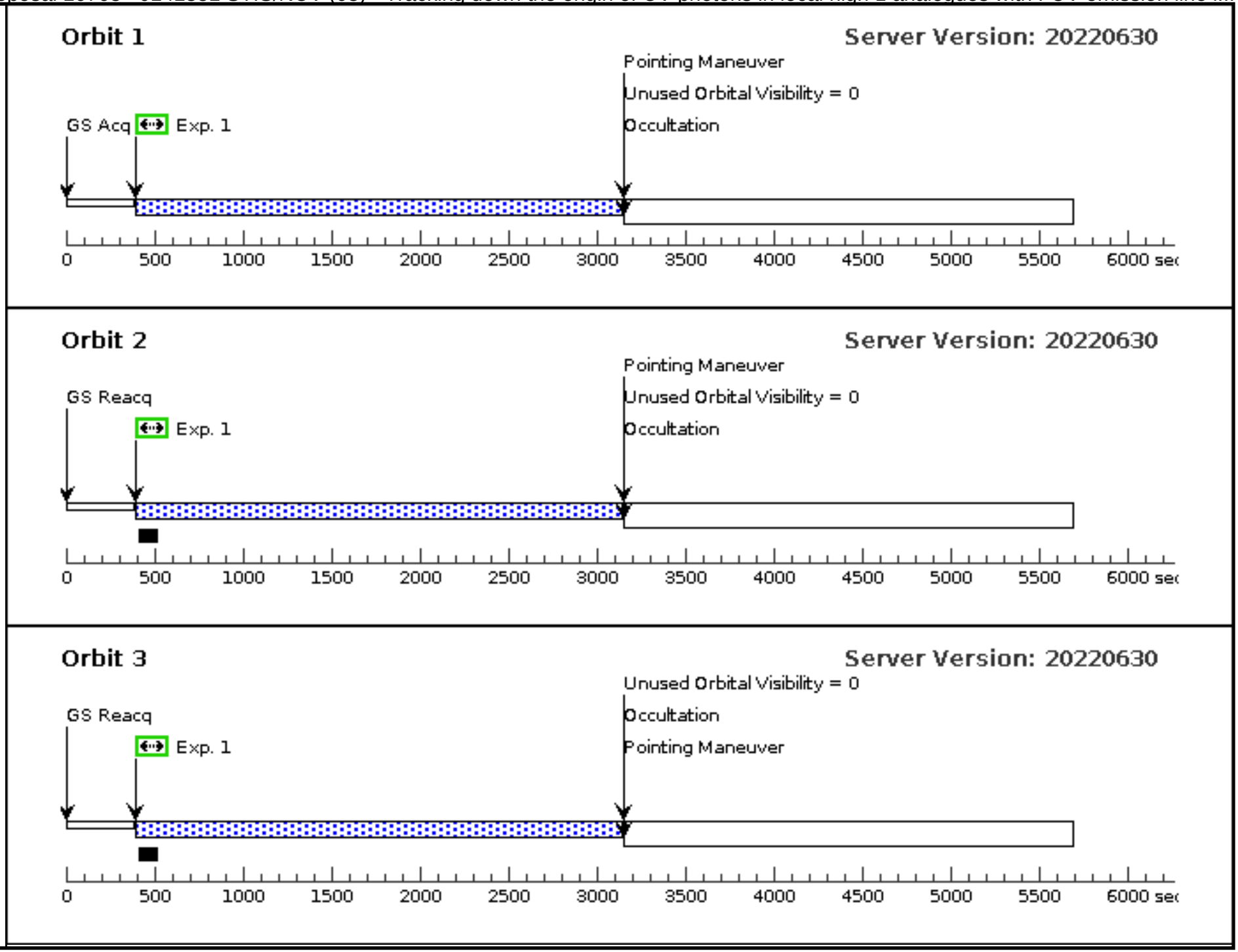
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J141851	RA: 14 18 51.1190 (214.7129958d) Dec: +21 02 39.84 (21.04440d) Equinox: J2000	Epoch of Position: 2015.5	V=17.74	Reference Frame: ICRS

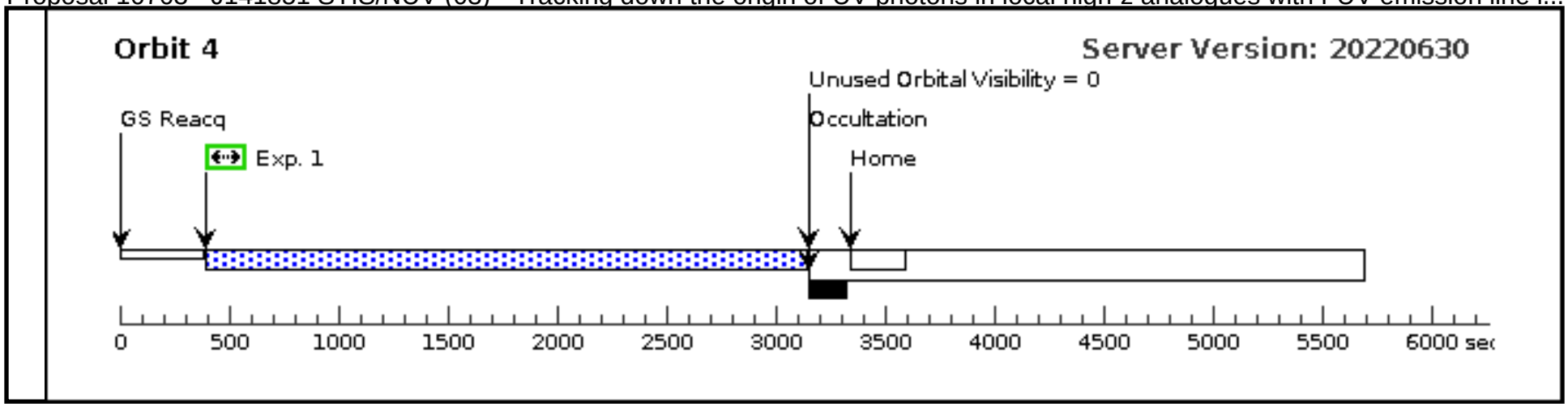
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F25CIII - CI II] (STIS.im.1526921)	(2) J141851	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR			Pattern 2, Exps 1-1 in J141851 STIS/NUV (03) (2)	2625 Secs (10802 Secs)	
								[==>2591.0 Secs (Pattern 1)]	***[1]***
								[==>2737.0 Secs (Pattern 2)]	***[2]***
								[==>2737.0 Secs (Pattern 3)]	***[3]***
								[==>2737.0 Secs (Pattern 4)]	***[4]***

Orbit Structure




Orbit 4
Server Version: 20220630
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 1
Home
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16763, J141851 STIS/NUV (04), completed Thu Aug 03 22:00:31 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=STIS-MAMA-BOX	Coordinate Frame=POS-TARG		(1), (2)
	Purpose=DITHER	Pattern Orientation=26.6		
	Number Of Points=4	Angle Between Sides=143.130102		
	Point Spacing=0.275	Center Pattern=false		
	Line Spacing=0.275			

Fixed Targets

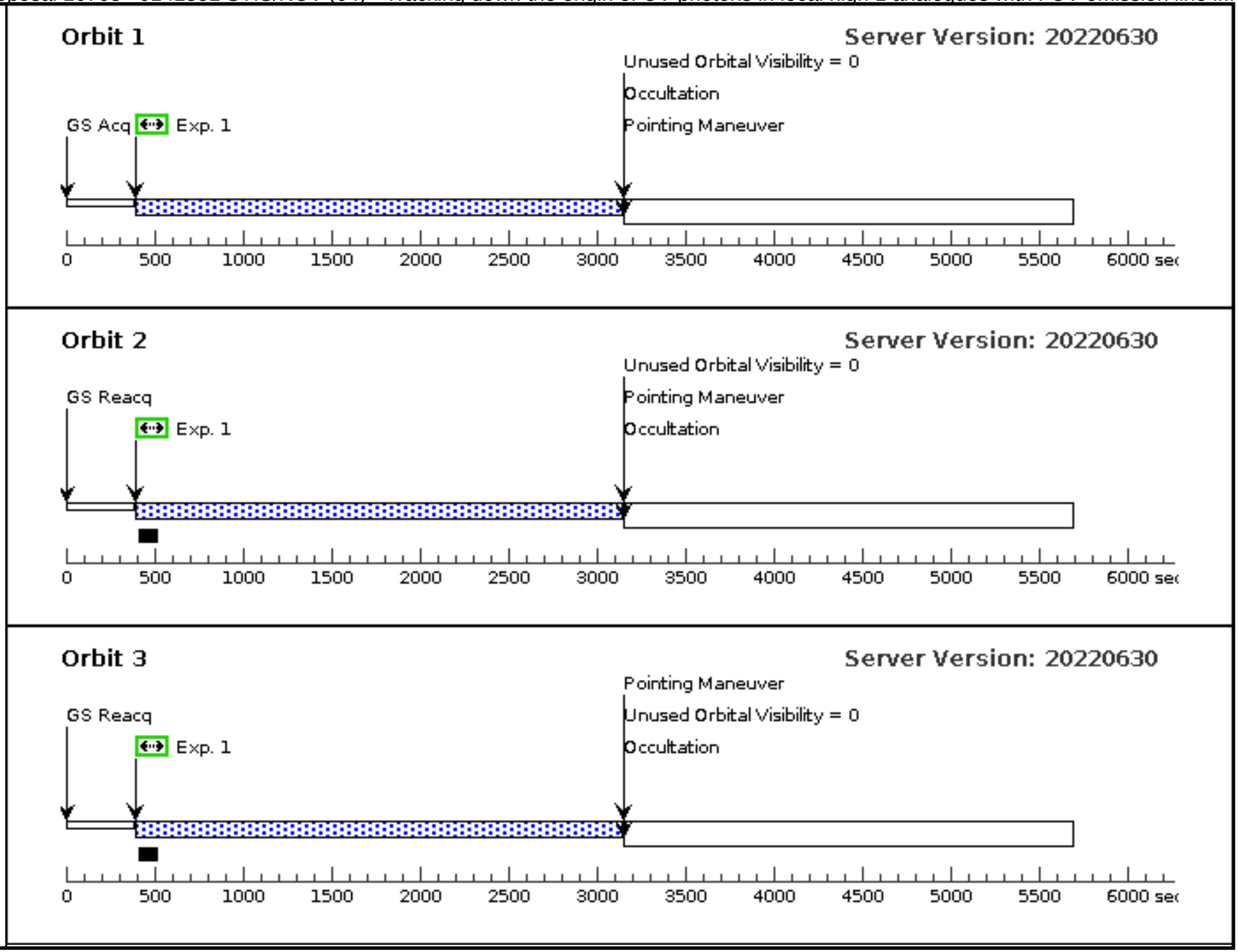
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J141851	RA: 14 18 51.1190 (214.7129958d) Dec: +21 02 39.84 (21.04440d) Equinox: J2000	Epoch of Position: 2015.5	V=17.74	Reference Frame: ICRS

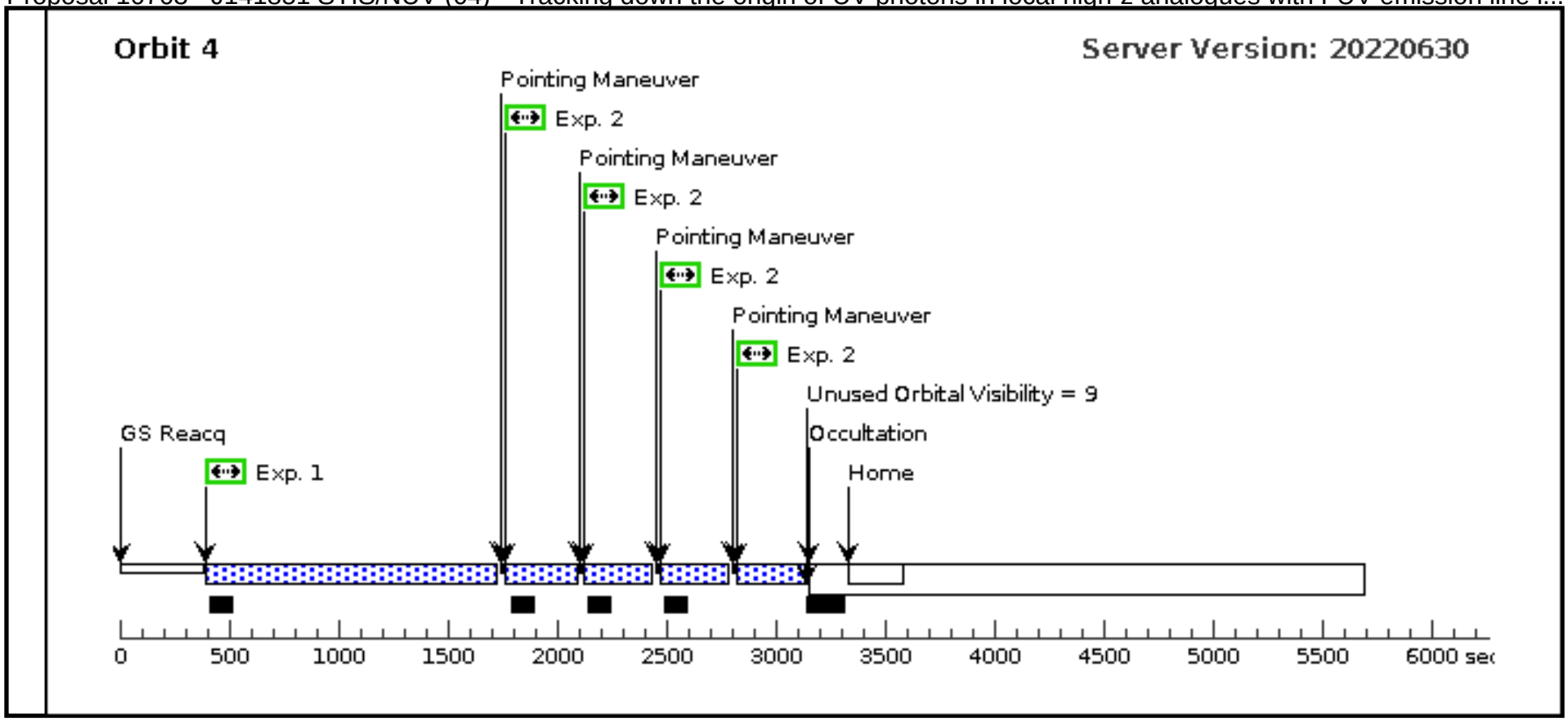
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F25CIII - CI II] (STIS.im.15 26921)	(2) J141851	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR			Pattern 2, Exps 1-1 in J141851 STIS/NUV (04) (2)	2100 Secs (9385 Secs)	
								[==>2591.0 Secs (Pattern 1)]	***[1]***
								[==>2737.0 Secs (Pattern 2)]	***[2]***
								[==>2737.0 Secs (Pattern 3)]	***[3]***
								[==>1320.0 Secs (Pattern 4)]	***[4]***
2	F25QTZ - cont (STIS.im.15 26920)	(2) J141851	STIS/NUV-MAMA, ACCUM, F25QTZ	MIRROR			Pattern 2, Exps 2-2 in J141851 STIS/NUV (04) (2)	300 Secs (1200 Secs)	
								[==>300.0 Secs (Pattern 1)] *[==>300.0 Secs (Pattern 2)]* *[==>300 Secs (Pattern 3)]* *[==>300 Secs (Pattern 4)]*	***[4]***

Orbit Structure




Orbit 4
Server Version: 20220630
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 9
Occultation
Home
GS Reacq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16763, J141851 WFC3/UVIS (05), completed Thu Aug 03 22:00:31 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Diagnostics

(F606W (05.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(5)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-4)

Fixed Targets

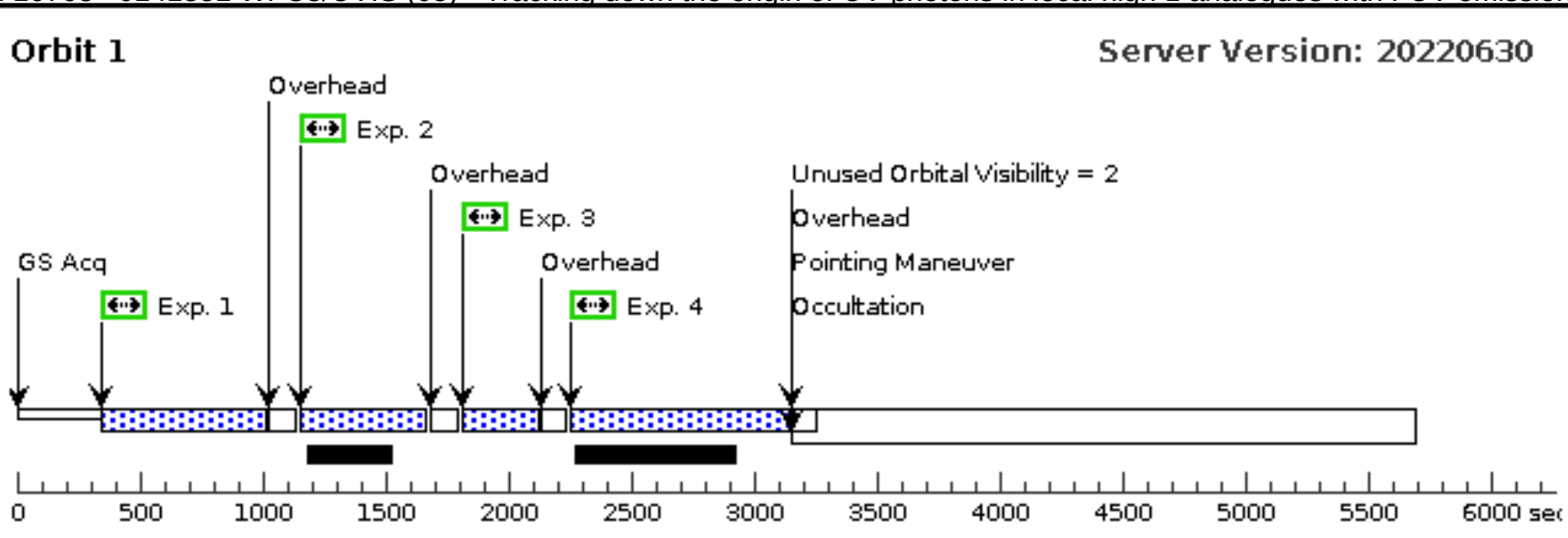
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J141851	RA: 14 18 51.1190 (214.7129958d) Dec: +21 02 39.84 (21.04440d) Equinox: J2000	Epoch of Position: 2015.5	V=17.74	Reference Frame: ICRS

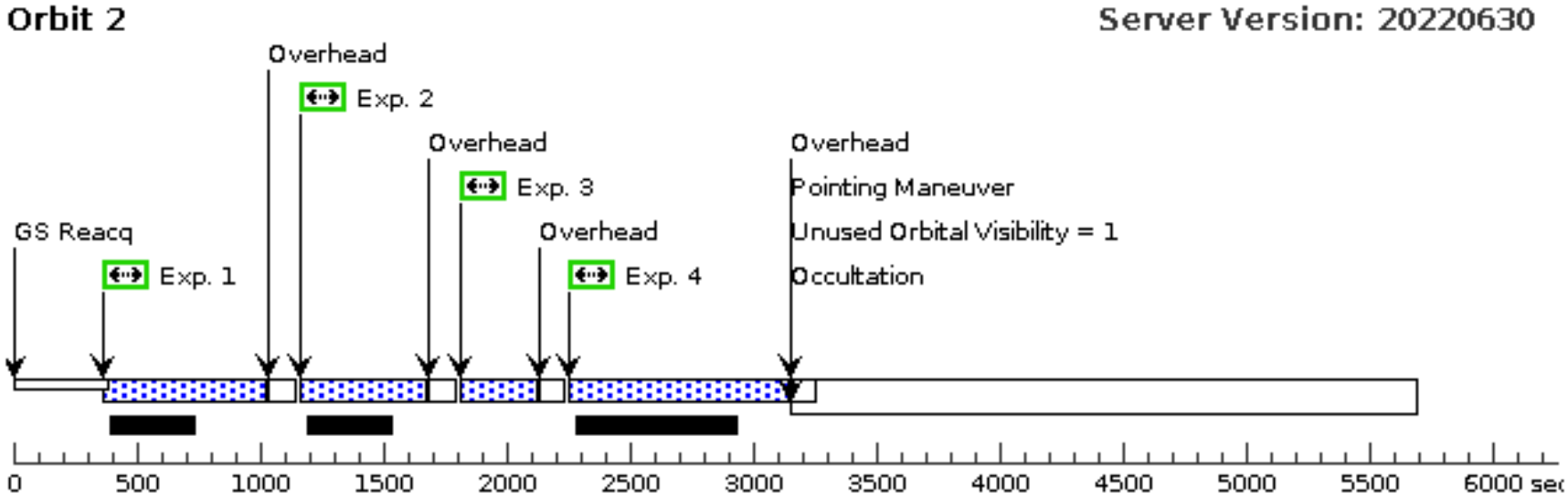
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

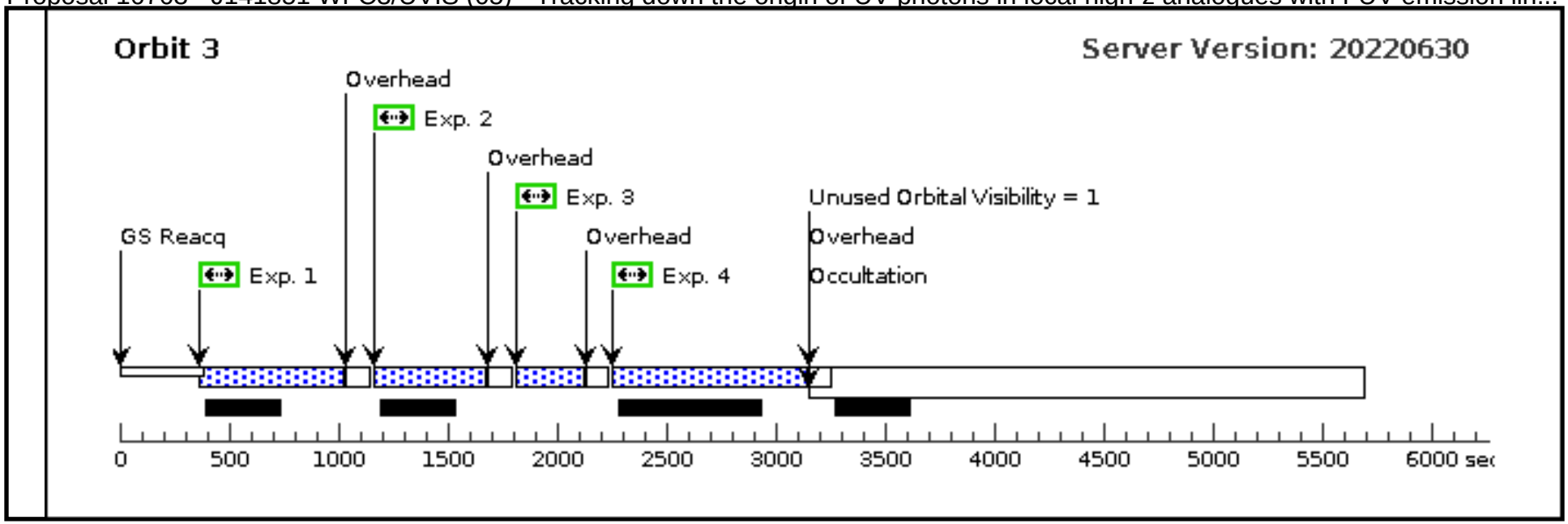
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1506739)	(2) J141851	WFC3/UVIS, ACCUM, UVIS2	F336W	FLASH=20		Pattern 5, Exps 1-4 in J141851 WFC3/UVIS (05) (5)	666 Secs (1910 Secs)	
								[==>638.0 Secs (Pattern 1)]	***[1]***
								[==>636.0 Secs (Pattern 2)]	***[2]***
								[==>636.0 Secs (Pattern 3)]	***[3]***
2	F438W (WFC3UVIS.im.1505323)	(2) J141851	WFC3/UVIS, ACCUM, UVIS2	F438W	FLASH=20		Pattern 5, Exps 1-4 in J141851 WFC3/UVIS (05) (5)	520 Secs (1472 Secs)	
								[==>492.0 Secs (Pattern 1)]	***[1]***
								[==>490.0 Secs (Pattern 2)]	***[2]***
								[==>490.0 Secs (Pattern 3)]	***[3]***
3	F606W (WFC3UVIS.im.1505307)	(2) J141851	WFC3/UVIS, ACCUM, UVIS2	F606W			Pattern 5, Exps 1-4 in J141851 WFC3/UVIS (05) (5)	320 Secs (872 Secs)	
								[==>292.0 Secs (Pattern 1)]	***[1]***
								[==>290.0 Secs (Pattern 2)]	***[2]***
								[==>290.0 Secs (Pattern 3)]	***[3]***
4	F814W (WFC3UVIS.im.1505303)	(2) J141851	WFC3/UVIS, ACCUM, UVIS2	F814W			Pattern 5, Exps 1-4 in J141851 WFC3/UVIS (05) (5)	898 Secs (2606 Secs)	
								[==>870.0 Secs (Pattern 1)]	***[1]***
								[==>868.0 Secs (Pattern 2)]	***[2]***
								[==>868.0 Secs (Pattern 3)]	***[3]***

Orbit Structure






Orbit 3
Server Version: 20220630
Overhead
Exp. 2
Overhead
Exp. 3
Unused Orbital Visibility = 1
GS Reacq
Overhead
Overhead
Exp. 1
Exp. 4
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16763, SBS-0335-052 STIS/NUV (06), failed Thu Aug 03 22:00:31 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=STIS-MAMA-BOX	Coordinate Frame=POS-TARG		(1), (2)
	Purpose=DITHER	Pattern Orientation=26.6		
	Number Of Points=4	Angle Between Sides=143.130102		
	Point Spacing=0.275	Center Pattern=false		
	Line Spacing=0.275			

Fixed Targets

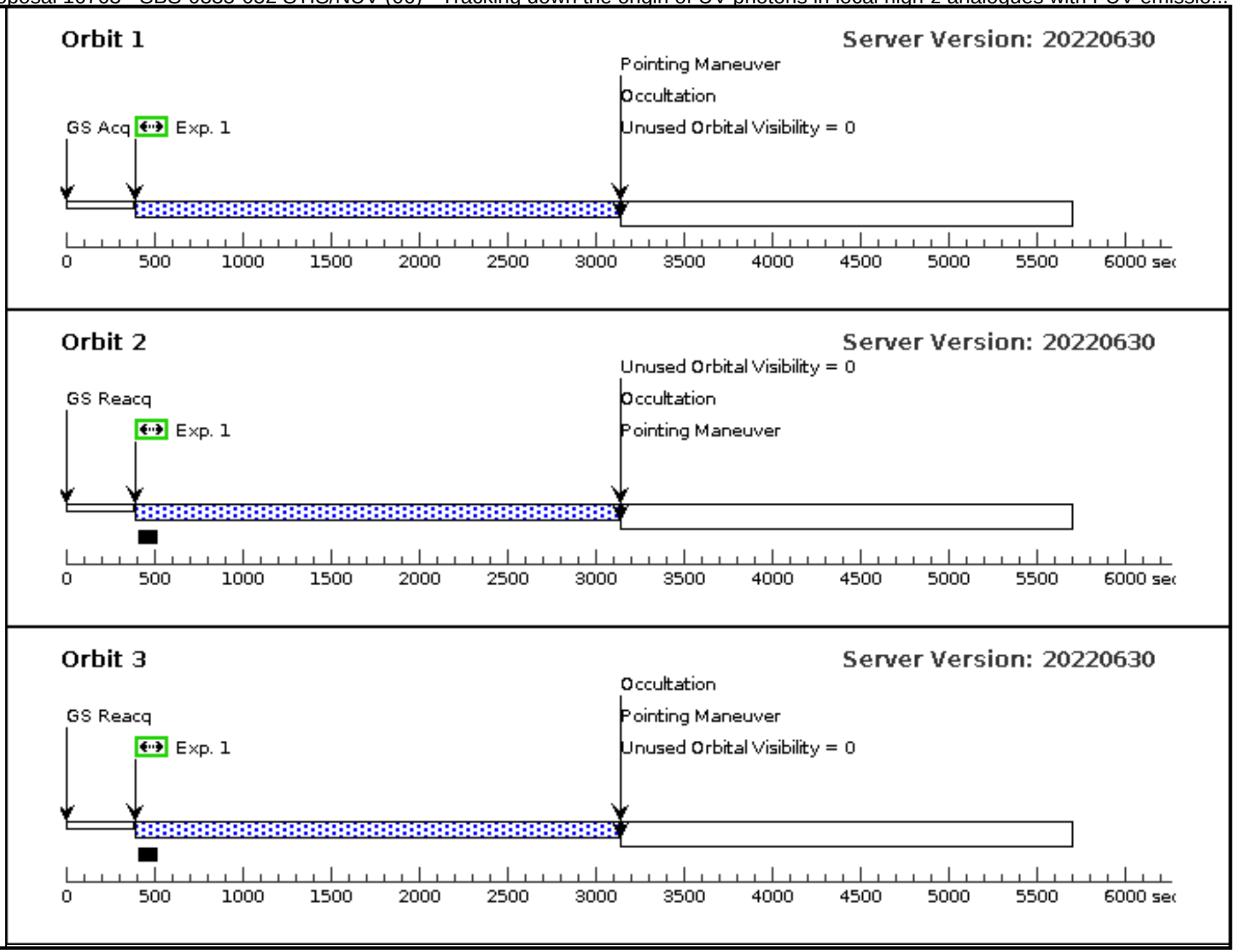
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SBS-0335-052	RA: 03 37 44.0616 (54.4335900d) Dec: -05 02 40.20 (-5.04450d) Equinox: J2000	Epoch of Position: 2015.5	V=18.2	Reference Frame: ICRS

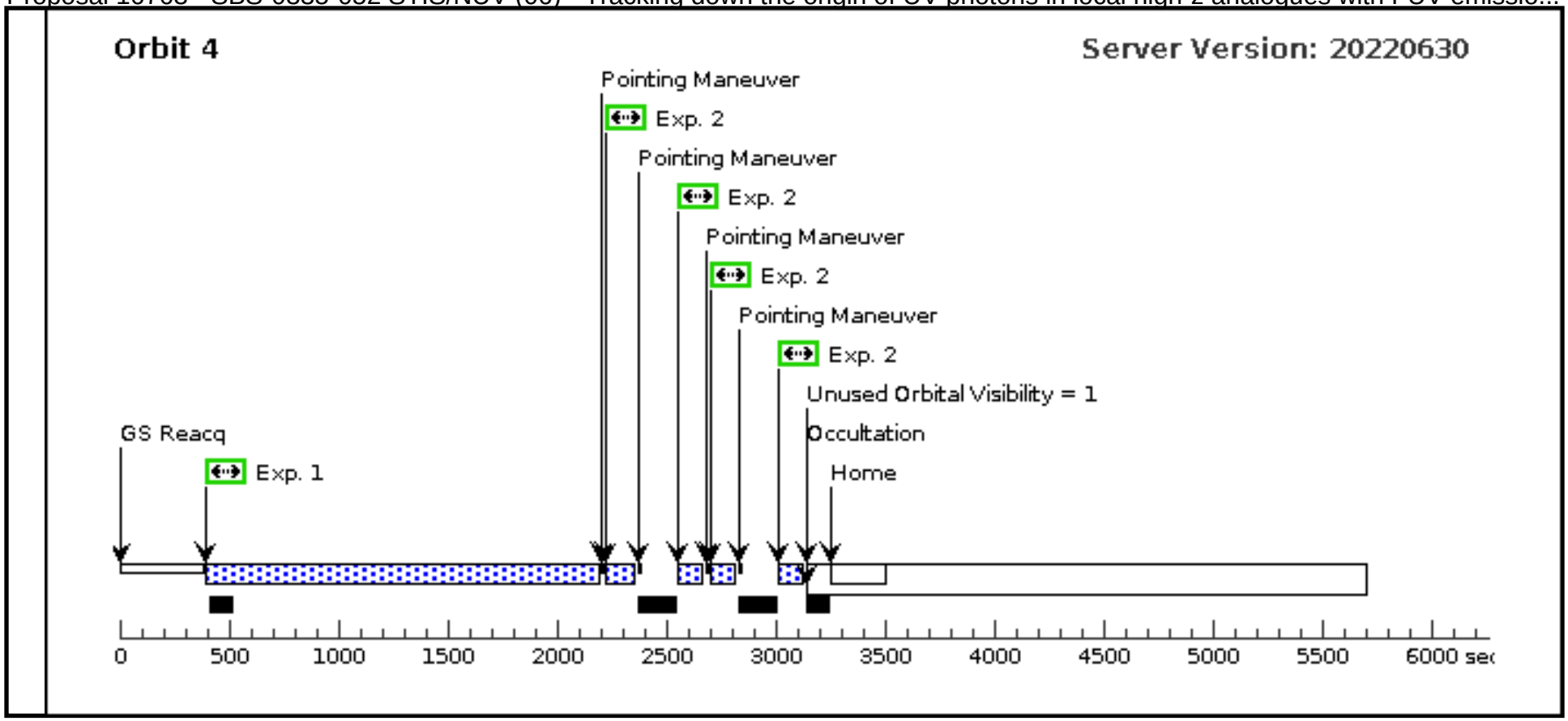
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F25CIII - CIII] (STIS.im.15 26931)	(1) SBS-0335-052	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR			Pattern 2, Exps 1-1 in SBS-0335-052 STIS/NUV (06) (2)	2550 Secs (9817 Secs)	
								[==>2579.0 Secs (Pattern 1)]	***[1]***
								[==>2725.0 Secs (Pattern 2)]	***[2]***
								[==>2725.0 Secs (Pattern 3)]	***[3]***
								[==>1788.0 Secs (Pattern 4)]	***[4]***
2	F25QTZ - cont (STIS.im.15 26934)	(1) SBS-0335-052	STIS/NUV-MAMA, ACCUM, F25QTZ	MIRROR			Pattern 2, Exps 2-2 in SBS-0335-052 STIS/NUV (06) (2)	115 Secs (392 Secs)	
								[==>98.0 Secs (Pattern 1)]	***[4]***
								[==>98.0 Secs (Pattern 2)]	
								[==>98.0 Secs (Pattern 3)]	
								[==>98.0 Secs (Pattern 4)]	

Orbit Structure




Orbit 4
Server Version: 20220630
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 1
Occultation
Home
GS Reacq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16763, SBS-0335-052 STIS/NUV (repeat visit06) (14), scheduling Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA

Special Requirements: SAME ORIENT AS 06

Comments: This visit is to repeat the first orbit of visit 06, that failed because the Fine Guidance Sensors did not acquire the guide stars.

Fixed Targets

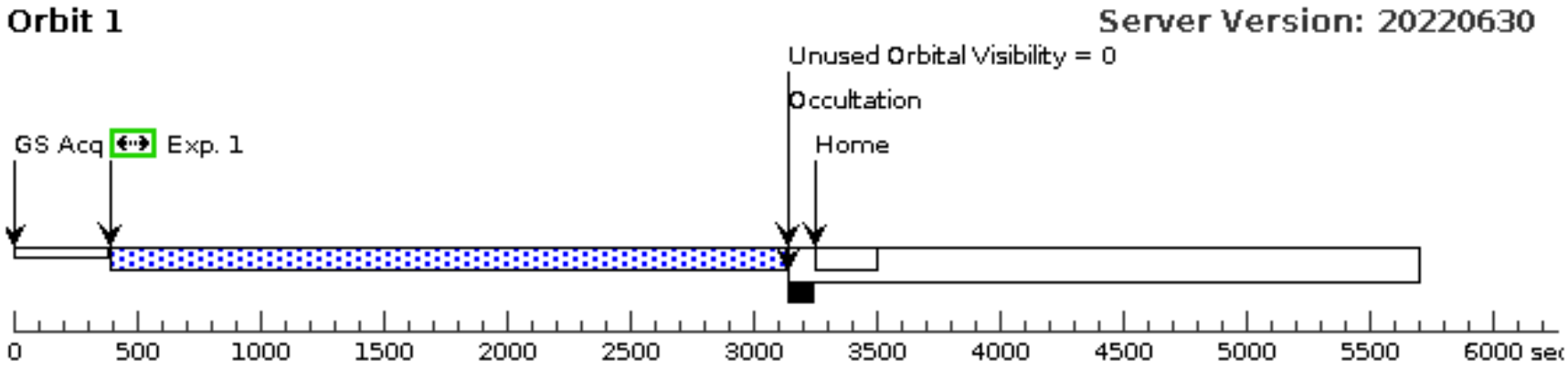
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SBS-0335-052	RA: 03 37 44.0616 (54.4335900d) Dec: -05 02 40.20 (-5.04450d) Equinox: J2000	Epoch of Position: 2015.5	V=18.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F25CIII - CI II] (STIS.im.15 26931)	(1) SBS-0335-052	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR				2550 Secs (2579 Secs) *[==>2579.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 16763, SBS-0335-052 WFC3 (07), completed Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Diagnostics

(FQ492N - Hbeta (07.001)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(5)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

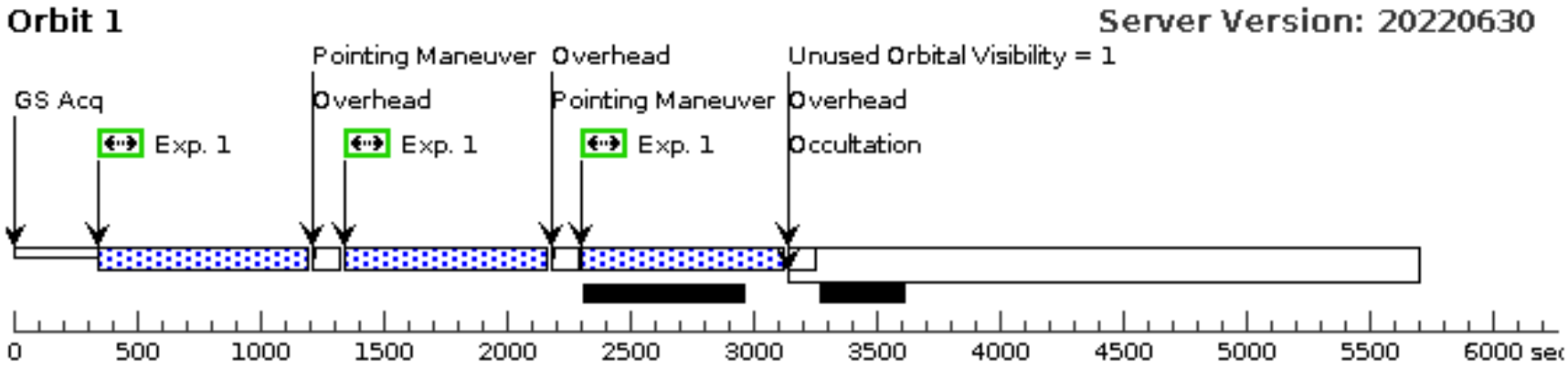
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SBS-0335-052	RA: 03 37 44.0616 (54.4335900d) Dec: -05 02 40.20 (-5.04450d) Equinox: J2000	Epoch of Position: 2015.5	V=18.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	FQ492N - Hbeta (WFC3UVIS.im.1506321)	(1) SBS-0335-052	WFC3/UVIS, ACCUM, UVIS-QUAD-FIX	FQ492N	FLASH=20		Pattern 5, Exps 1-1 in SBS-0335-052 WFC3 (07) (5)	810 Secs (2475 Secs) *[==>825.0 Secs (Pattern 1)]* *[==>825.0 Secs (Pattern 2)]* *[==>825.0 Secs (Pattern 3)]*	***[1]***

Orbit Structure



Visit

Proposal 16763, J104457 ACS/SBC F15LP+F140LP (Shadow with manual dithering) (08), failed Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

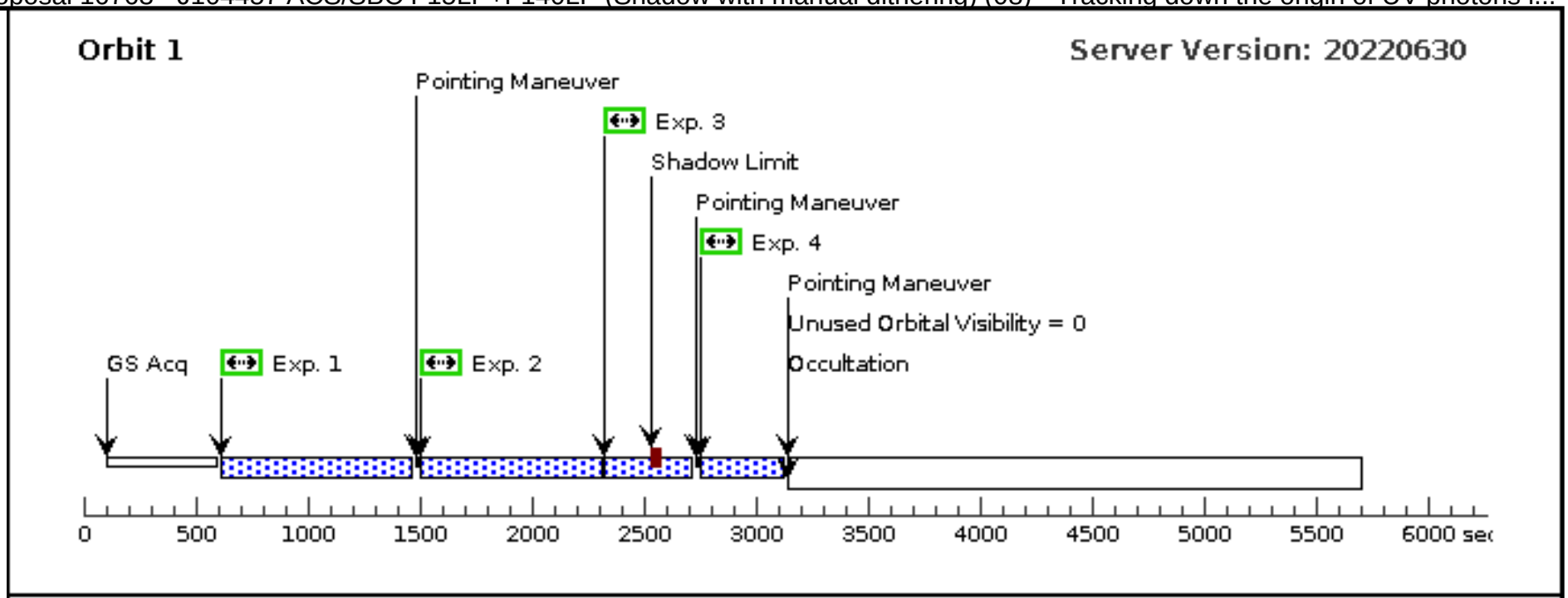
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J104457	RA: 10 44 57.7900 (161.2407917d) Dec: +03 53 13.15 (3.88699d) Equinox: J2000	Epoch of Position: 2015.5	V=17.5	Reference Frame: ICRS

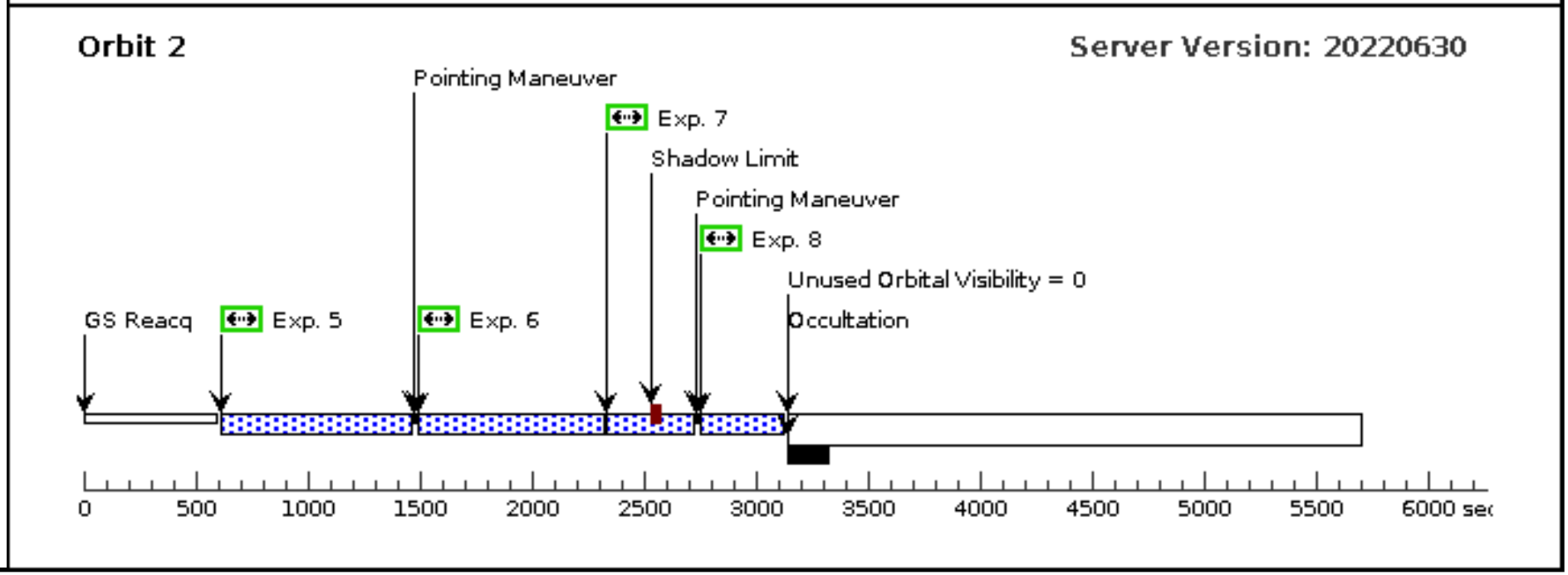
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F125LP - Lyalpha - Pos1 (ACS.im.15 30524)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 0.252,0.2505; SHADOW		602 Secs (788 Secs) *[==>788 Secs]*	***[1]***
2	F125LP - Lyalpha - Pos 2 (ACS.im.15 30524)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 0.252,-0.2505; SHADOW		602 Secs (788 Secs) *[==>788 Secs]*	***[1]***
3	F140 LP - FUV cont - Pos 2 (ACS.im.15 30523)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 2		122 Secs (346 Secs) *[==>346.0 Secs]*	***[1]***
4	F140 LP - FUV cont - Pos 1 (ACS.im.15 30523)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 1		122 Secs (346 Secs) *[==>346.0 Secs]*	***[1]***
5	F125LP - Lyalpha - Pos 3 (ACS.im.15 30524)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -0.252,0.504; SHADOW		602 Secs (800 Secs) *[==>800 Secs]*	***[2]***
6	F125LP - Lyalpha - Pos 4 (ACS.im.15 30524)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -0.252,0; SHADOW		602 Secs (800 Secs) *[==>800 Secs]*	***[2]***
7	F140 LP - FUV cont - Pos 4 (ACS.im.15 30523)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 6		122 Secs (343 Secs) *[==>343.0 Secs]*	***[2]***
8	F140 LP - FUV cont - Pos 3 (ACS.im.15 30523)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 5		122 Secs (343 Secs) *[==>343.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 16763, J104457 ACS/SBC F125LP+F140LP (Shadow with manual dithering) (12), completed Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: SAME ORIENT AS 08

Comments: This is the repetition of the second orbit of Visit 08, using the filters F125LP and F140LP for the target J04457. In particular, we packed the two orbits of visit 08 using our own sub-pixel dithering pattern using POS-TARGs and asking the special constraint SHADOW. We divided the exposure time of each filter in 4 exposures in a way that the SHADOW part of the orbit is covered by the F125LP filter, while the remaining parts are used for the observations with the F140LP filter. We require that the repeat observations of the second orbit are performed with the same orient and special constraints of the observations of the first orbit taken on 02/19/22.

Fixed Targets

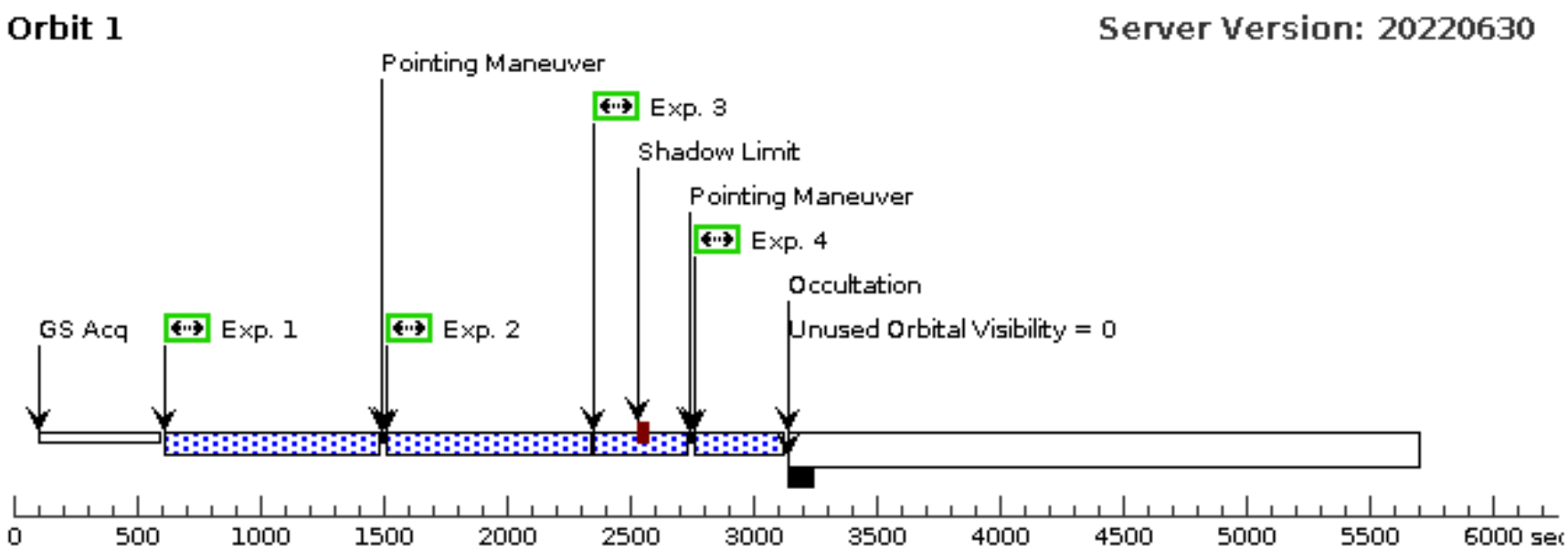
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J104457	RA: 10 44 57.7900 (161.2407917d) Dec: +03 53 13.15 (3.88699d) Equinox: J2000	Epoch of Position: 2015.5	V=17.5	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F125LP - Ly alpha - Pos 3 (ACS.im.15 30524)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -0.252,0 .504; SHADOW		602 Secs (800 Secs) *[==>800 Secs]*	 ***[1]***
2	F125LP - Ly alpha - Pos 4 (ACS.im.15 30524)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -0.252,0 ; SHADOW		602 Secs (800 Secs) *[==>800 Secs]*	 ***[1]***
3	F140 LP - F UV cont - P os 4 (ACS.im.15 30523)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 2		122 Secs (334 Secs) *[==>334.0 Secs]*	 ***[1]***
4	F140 LP - F UV cont - P os 3 (ACS.im.15 30523)	(3) J104457	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 1		122 Secs (334 Secs) *[==>334.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 16763, J104457 STIS/NUV (09), failed Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=STIS-MAMA-BOX	Coordinate Frame=POS-TARG		(1)
	Purpose=DITHER	Pattern Orientation=26.6		
	Number Of Points=4	Angle Between Sides=143.130102		
	Point Spacing=0.275	Center Pattern=false		
	Line Spacing=0.275			

Fixed Targets

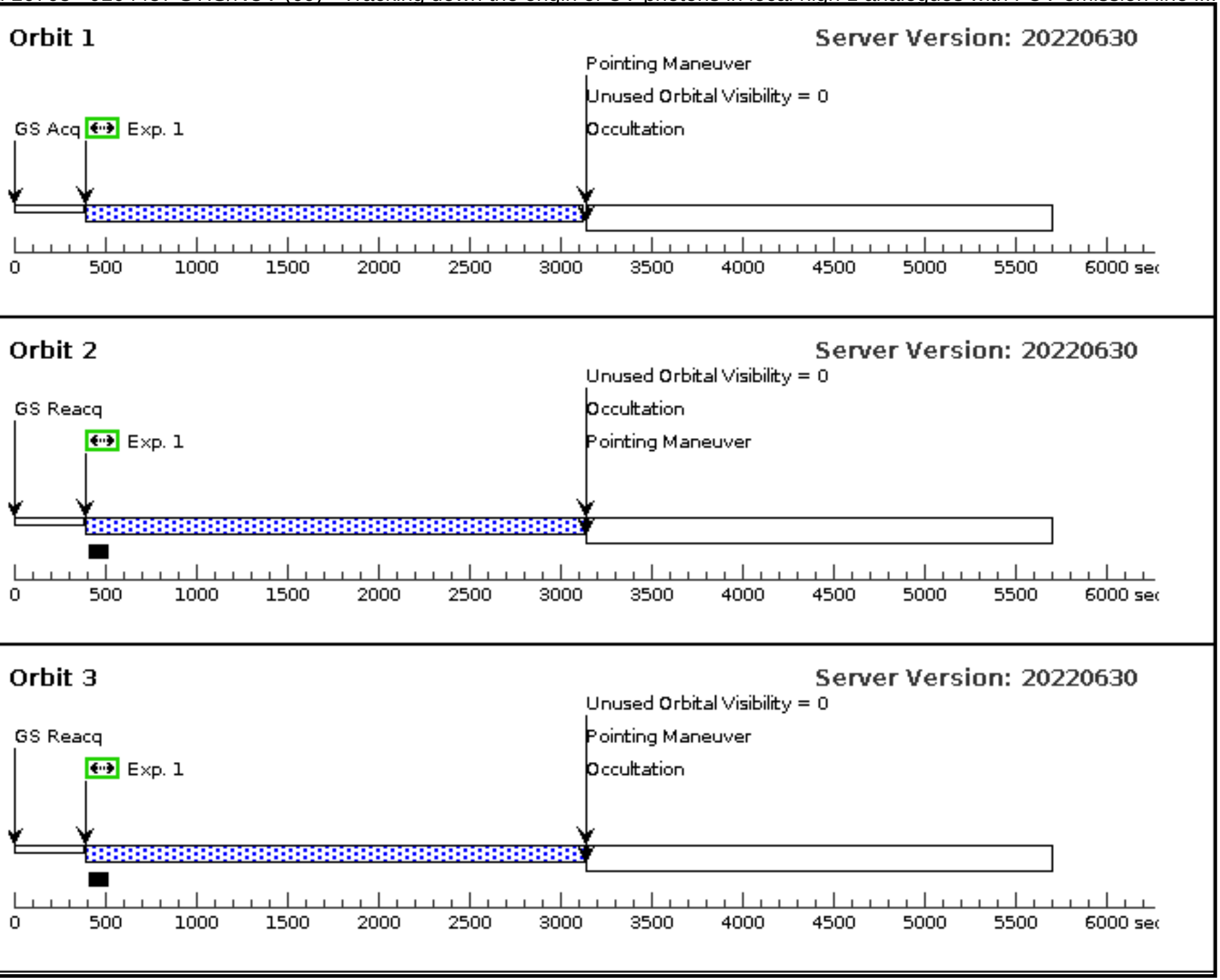
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J104457	RA: 10 44 57.7900 (161.2407917d) Dec: +03 53 13.15 (3.88699d) Equinox: J2000	Epoch of Position: 2015.5	V=17.5	Reference Frame: ICRS

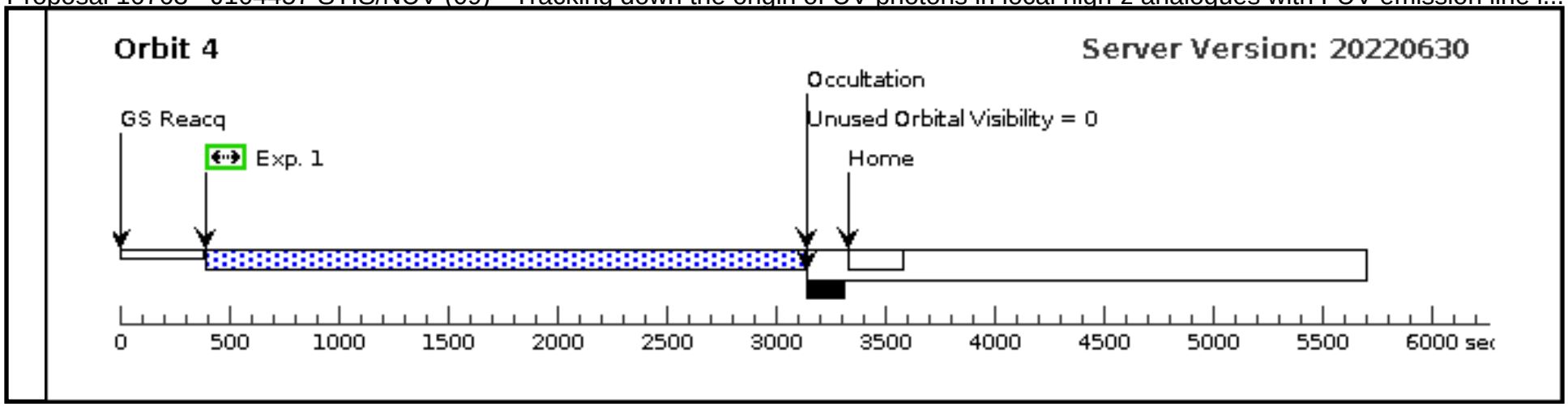
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F25CIII -CII I] (STIS.im.1526926)	(3) J104457	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR			Pattern 2, Exps 1-1 in J104457 STIS/NUV (09) (2)	1340 Secs (10742 Secs)	
								[==>2576.0 Secs (Pattern 1)]	***[1]***
								[==>2722.0 Secs (Pattern 2)]	***[2]***
								[==>2722.0 Secs (Pattern 3)]	***[3]***
								[==>2722.0 Secs (Pattern 4)]	***[4]***

Orbit Structure




Orbit 4
Server Version: 20220630
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 1
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16763, J104457 STIS/NUV (repeat visit 09) (15) Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA

Special Requirements: SAME ORIENT AS 09

Comments: This visit is to repeat the second and third orbits of visit 09 (second and third exposures of the STIS-MAMA-BOX dithering pattern).

Fixed Targets

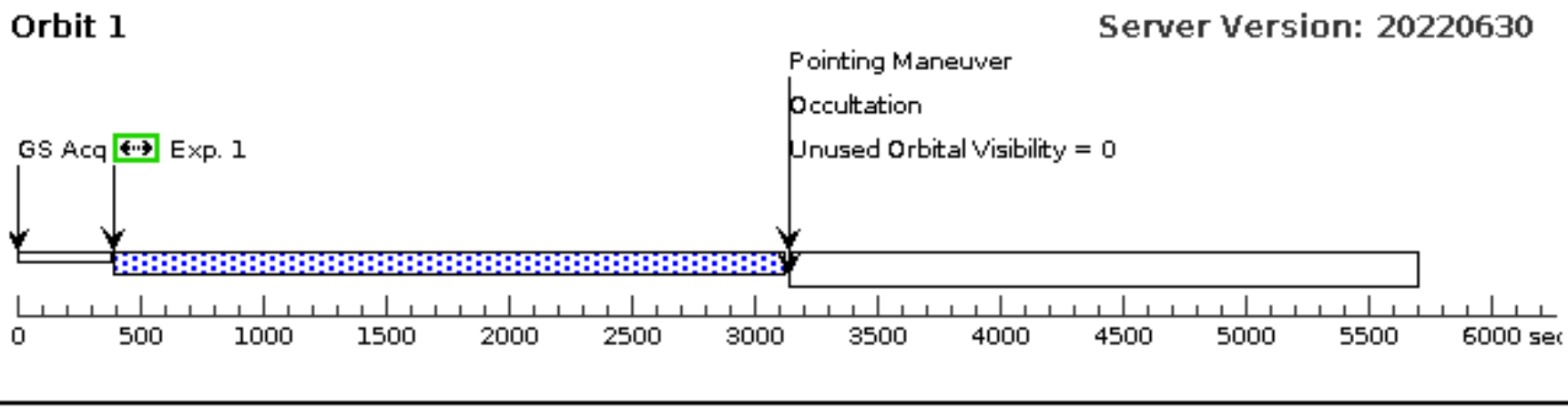
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J104457	RA: 10 44 57.7900 (161.2407917d) Dec: +03 53 13.15 (3.88699d) Equinox: J2000	Epoch of Position: 2015.5	V=17.5	Reference Frame: ICRS

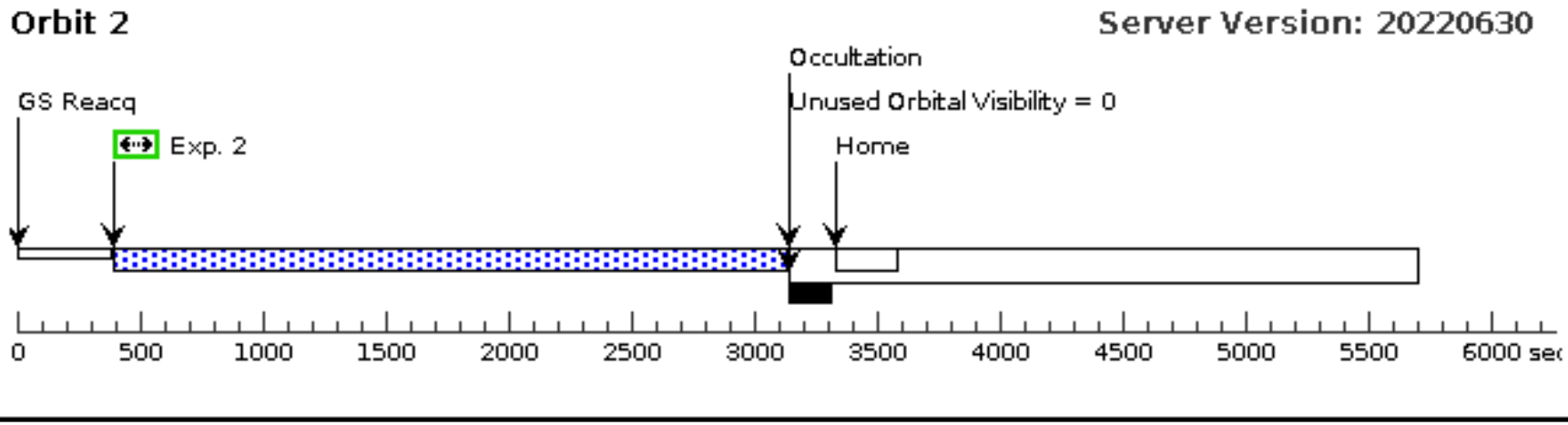
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F25CIII -CII I] (STIS.im.1526926)	(3) J104457	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR		POS TARG 0.246,0.123		1340 Secs (2576 Secs) *[==>2576.0 Secs]*	 ***[1]***
2	F25CIII -CII I] (STIS.im.1526926)	(3) J104457	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR		POS TARG 0.369,0.369		1340 Secs (2722 Secs) *[==>2722 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16763, J104457 STIS/NUV (10), failed Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=STIS-MAMA-BOX	Coordinate Frame=POS-TARG		(1), (2)
	Purpose=DITHER	Pattern Orientation=26.6		
	Number Of Points=4	Angle Between Sides=143.130102		
	Point Spacing=0.275	Center Pattern=false		
	Line Spacing=0.275			

Fixed Targets

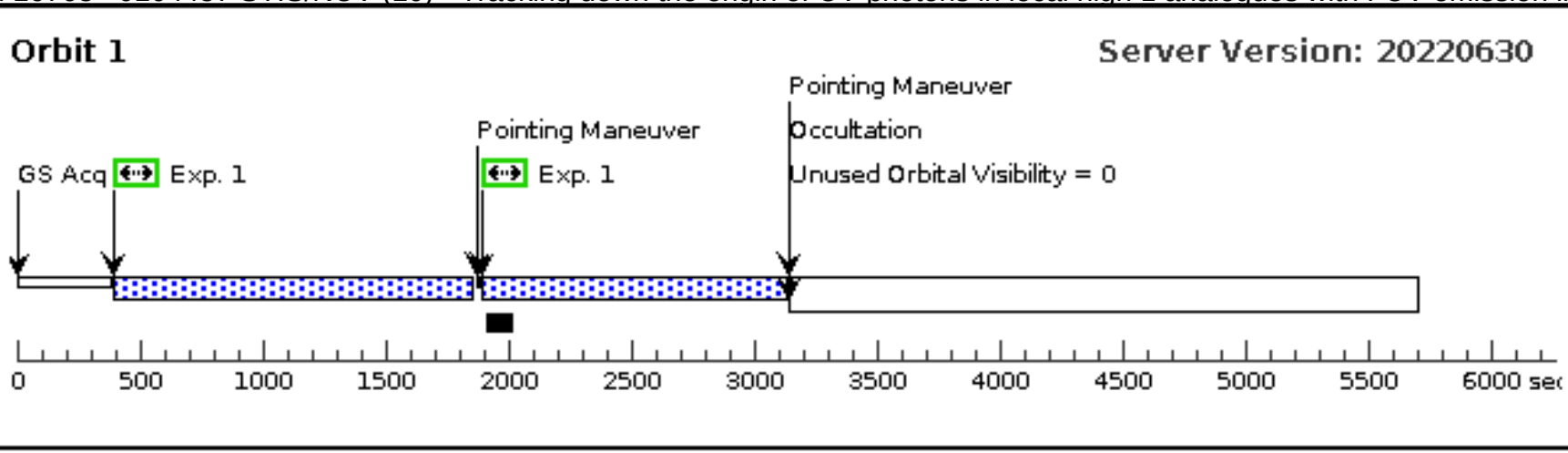
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J104457	RA: 10 44 57.7900 (161.2407917d) Dec: +03 53 13.15 (3.88699d) Equinox: J2000	Epoch of Position: 2015.5	V=17.5	Reference Frame: ICRS

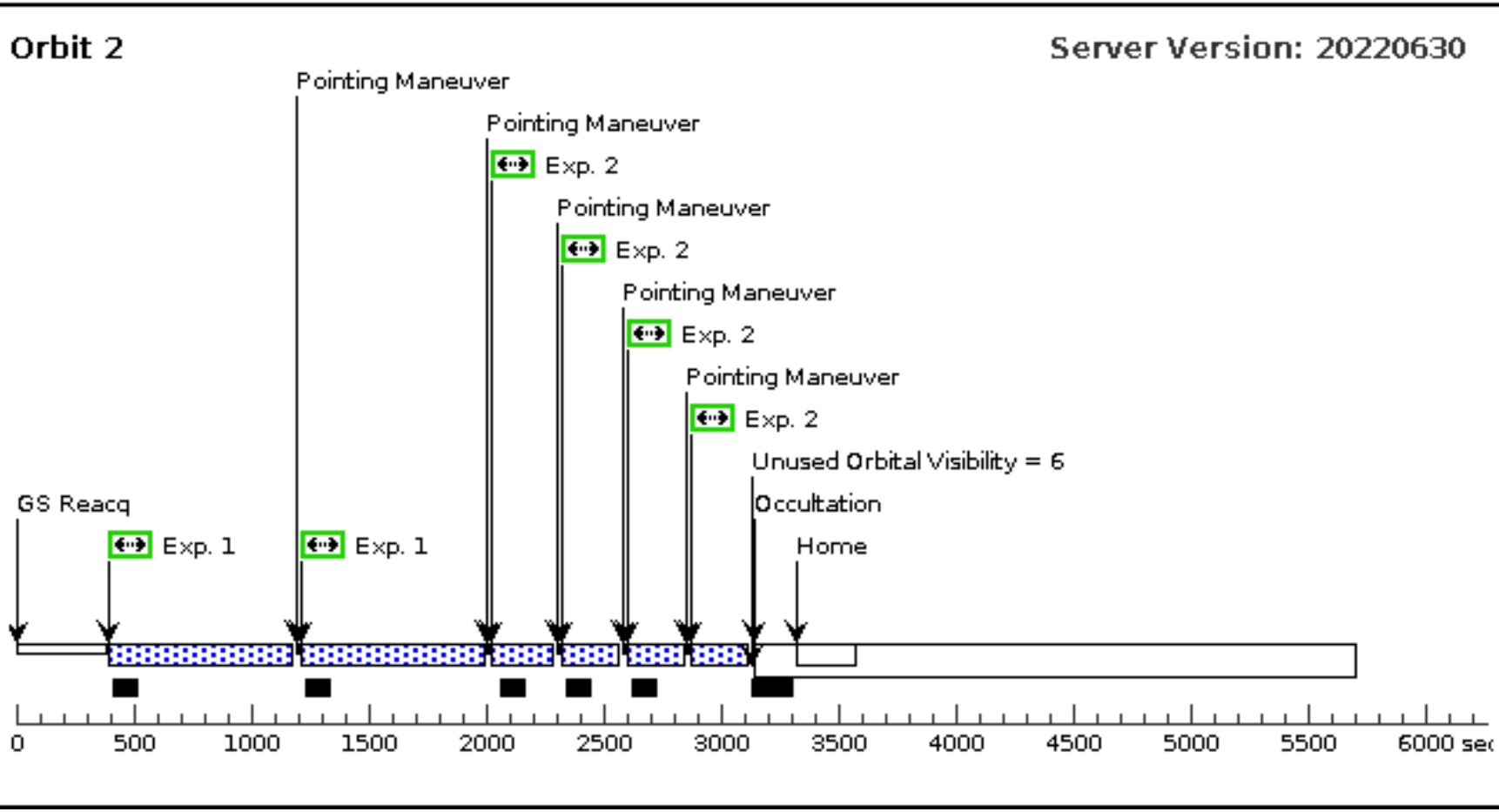
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F25CIII - CI II] (STIS.im.15 26926)	(3) J104457	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR			Pattern 2, Exps 1-1 in J104457 STIS/NUV (10) (2)	1330 Secs (4068 Secs)	
								[==>1306.0 Secs (Pattern 1)] *[==>1222.0 Secs (Pattern 2)]*	***[1]***
								[==>770.0 Secs (Pattern 3)] *[==>770.0 Secs (Pattern 4)]*	***[2]***
2	F25QTZ - cont (STIS.im.15 26924)	(3) J104457	STIS/NUV-MAMA, ACCUM, F25QTZ	MIRROR			Pattern 2, Exps 2-2 in J104457 STIS/NUV (10) (2)	230 Secs (920 Secs)	
								[==>230.0 Secs (Pattern 1)] *[==>230.0 Secs (Pattern 2)]* *[==>230.0 Secs (Pattern 3)]* *[==>230.0 Secs (Pattern 4)]*	***[2]***

Orbit Structure





Visit

Proposal 16763, J104457 STIS/NUV (repeat visit 10) (16) Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA

Special Requirements: SAME ORIENT AS 10

Comments: This visit is to repeat the first orbit of visit 10 (first and second exposures of the STIS-MAMA-BOX dithering pattern).

Fixed Targets

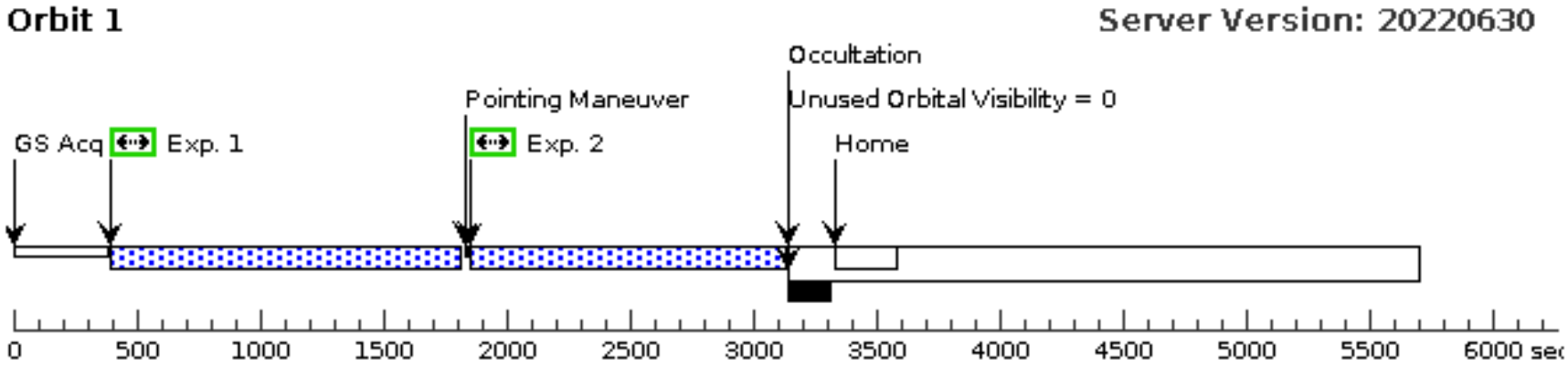
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J104457	RA: 10 44 57.7900 (161.2407917d) Dec: +03 53 13.15 (3.88699d) Equinox: J2000	Epoch of Position: 2015.5	V=17.5	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F25CIII - CI II] (STIS.im.1526926)	(3) J104457	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR		POS TARG 0,0		1330 Secs (1264 Secs) *[==>1264.0 Secs]*	*[1]*
2	F25CIII - CI II] (STIS.im.1526926)	(3) J104457	STIS/NUV-MAMA, ACCUM, F25CIII	MIRROR		POS TARG 0.246,0.123		1330 Secs (1264 Secs) *[==>1264.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 16763, J104457 WFC3 (11), completed Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Diagnostics

(FQ492N - Hbeta (11.001)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(5)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

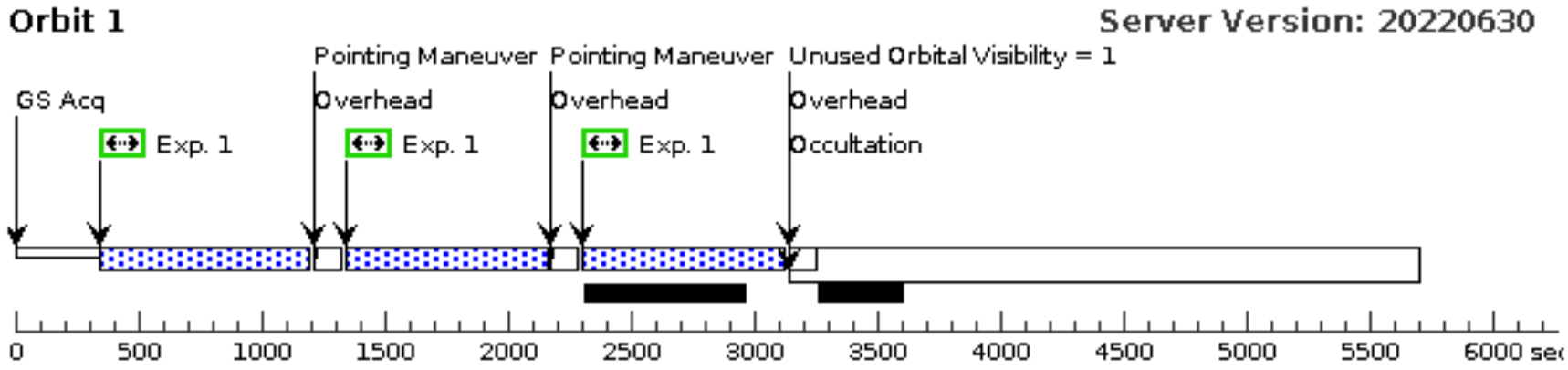
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J104457	RA: 10 44 57.7900 (161.2407917d) Dec: +03 53 13.15 (3.88699d) Equinox: J2000	Epoch of Position: 2015.5	V=17.5	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	FQ492N - Hbeta (WFC3UVIS.im.1505235)	(3) J104457	WFC3/UVIS, ACCUM, UVIS-QUAD-FIX	FQ492N	FLASH=20		Pattern 5, Exps 1-1 in J104457 WFC3 (11) (5)	685 Secs (2472 Secs) *[==>824.0 Secs (Pattern 1)]* *[==>824.0 Secs (Pattern 2)]* *[==>824.0 Secs (Pattern 3)]*	***[1]***

Orbit Structure



Visit

Proposal 16763, J141851 ACS/SBC F150LP+F165LP - repeat (13), scheduling Thu Aug 03 22:00:32 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: SAME ORIENT AS 02

Comments: This is the repetition of the first orbit of Visit 02, using the filters F150LP and F165LP for the target J141851. In particular, we packed the four orbits of visit 02 using our own sub-pixel dithering pattern using POS-TARGs. We divided the exposure time of each filter in 4 exposures in a way that each of the four orbits of Visit 02 includes one F150LP and one F165LP exposure. Here we require that the repeat observations of the first orbit are performed with the same orient of the observations of the other 3 orbits taken on 08/24/22.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J141851	RA: 14 18 51.1190 (214.7129958d) Dec: +21 02 39.84 (21.04440d) Equinox: J2000	Epoch of Position: 2015.5	V=17.74	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[STARBURST]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F150LP - CIV - Pos 1 (ACS.im.1526707)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG 0.252,0.2505		1267 Secs (1319 Secs) *[==>1319.0 Secs]*	 ***[1]***
2	F165LP - HeII+OIII - Pos 1 (ACS.im.1526709)	(2) J141851	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 1		1260 Secs (1312 Secs) *[==>1312.0 Secs]*	 ***[1]***

Orbit Structure