17589 - Legacy Observations of BHXRBs: wind driving mechanism and relation with the jet

Cycle: 31, 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	(1) BHXRB-TRANSIENT	COS/FUV COS/NUV	3	22-Jan-2024 16:00:22.0	yes
04	(1) BHXRB-TRANSIENT	COS/FUV COS/NUV	3	22-Jan-2024 16:00:23.0	yes
03	(1) BHXRB-TRANSIENT	COS/FUV COS/NUV	3	22-Jan-2024 16:00:24.0	yes
02	(1) BHXRB-TRANSIENT	STIS/CCD STIS/NUV-MAMA	1	22-Jan-2024 16:00:25.0	yes

10 Total Orbits Used

ABSTRACT

Edge-on black hole transients show blue-shifted absorption lines in their X-ray spectra due to hot equatorial disk winds. Blue-shifted absorption lines also been discovered in optical and UV. These features must be produced in an outflow, but the physical conditions required to form them are very different. The three features have never been observed at the same time. It is unclear if they are linked to distinct outflows or simply to different regions. We propose to answer this question with simultaneous time-resolved spectroscopy of a transient BHXRB in X-ray, UV, optical and mid-IR during their hard- intermediate- and soft-states. This will allow us to test if all types of wind features are present simultaneously and whether they display correlated variability among them and with the jet

OBSERVING DESCRIPTION

This proposal aims follow the ouburst of a transient LMXB covering different parts of the outburst evolution.
The distribution of the orbits may vary based on the brigthness of the actual transient.

Visit

Proposal 17589, First FUV (01), implementation Mon Jan 22 21:00:25 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: TOO RESPONSE TIME 3.0D

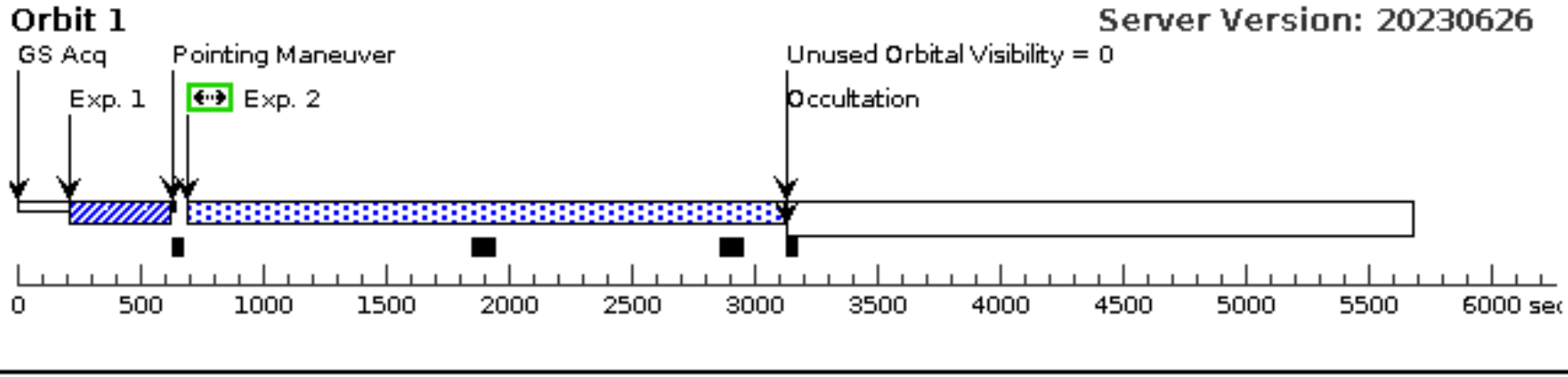
Generic Targets

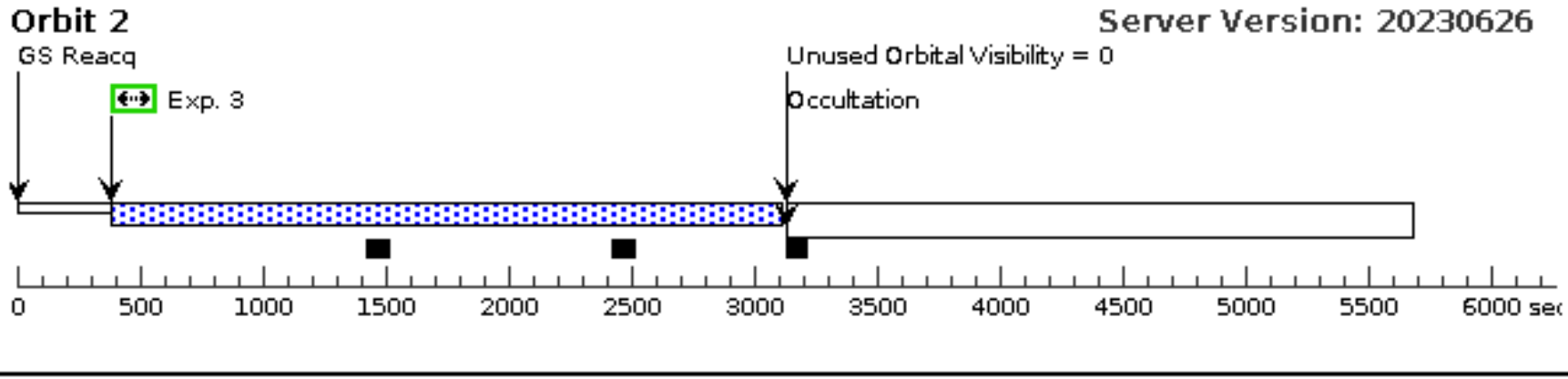
#	Name	Criteria	Description
(1)	BHXRB-TRANSIENT	Next LMXB in outburst	LMXB X-RAY NOVAE

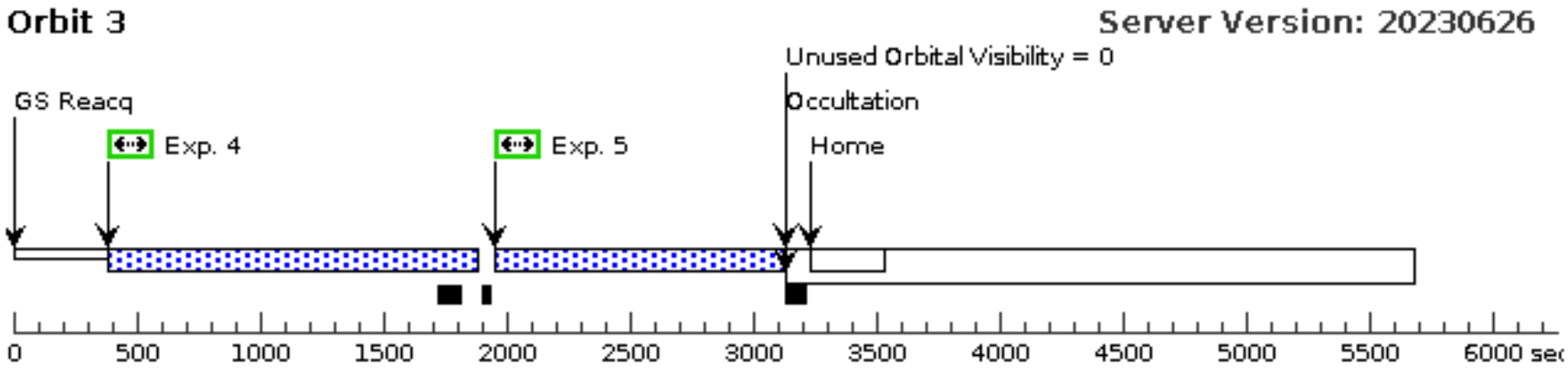
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1417131)	(1) BHXRB-TRANSIENT	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				60 Secs (60 Secs) *[==>]*	 ***[1]***
Comments: I tried different spectral configurations for the target aquisition: *COS.ta.1417131* *COS.ta.1417132* *COS.ta.1417134*									
2	SCI (COS.sp.1416844)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1000; FP-POS=1			2000 Secs (2246 Secs) *[==>2246.0 Secs]*	 ***[1]***
Comments: Otther spetral shapes are considered here: *COS.sp.1416844* *COS.sp.1416867* *COS.sp.1416865*									
3	SCI (COS.sp.1416867)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1000; FP-POS=2			2500 Secs (2680 Secs) *[==>2680.0 Secs]*	 ***[2]***
4	SCI (COS.sp.1416865)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1300; FP-POS=3			1400 Secs (1447 Secs) *[==>1447.0 Secs]*	 ***[3]***
5	SCI (COS.sp.1416865)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1500; FP-POS=4			1071 Secs (1118 Secs) *[==>1118.0 Secs]*	 ***[3]***

Orbit Structure







Visit

Proposal 17589, Scond FUV (04) Mon Jan 22 21:00:25 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: TOO RESPONSE TIME 3.0D

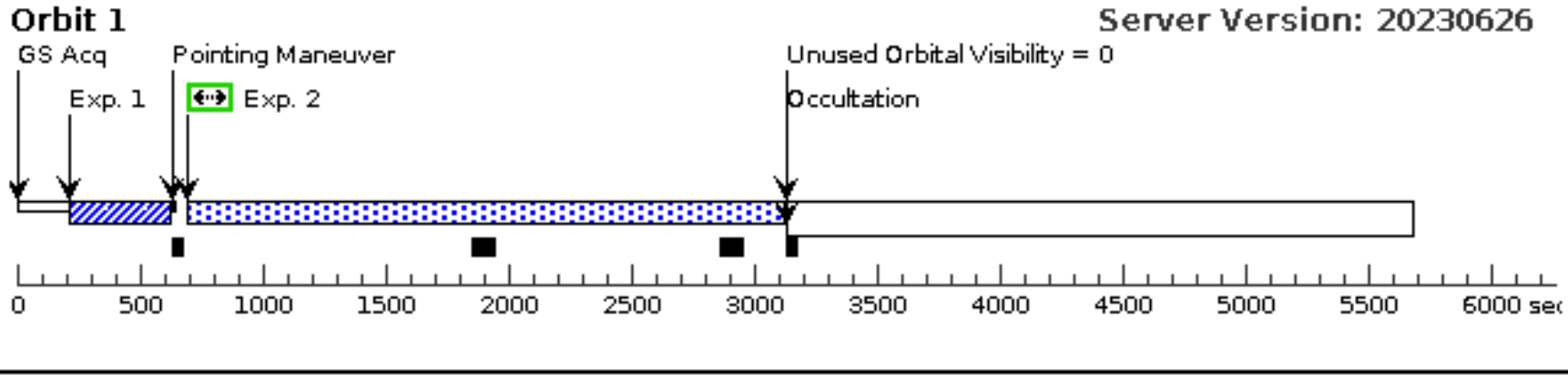
Generic Targets

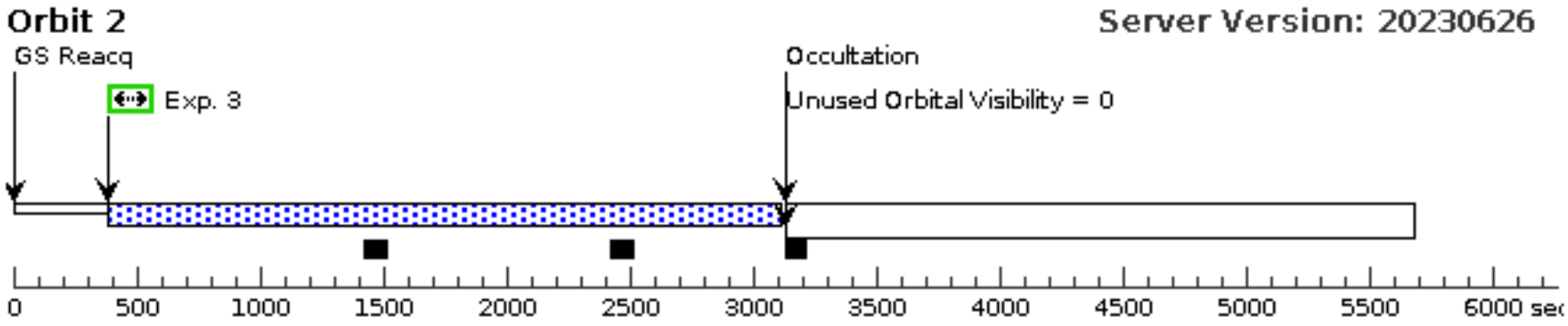
#	Name	Criteria	Description
(1)	BHXRB-TRANSIENT	Next LMXB in outburst	LMXB X-RAY NOVAE

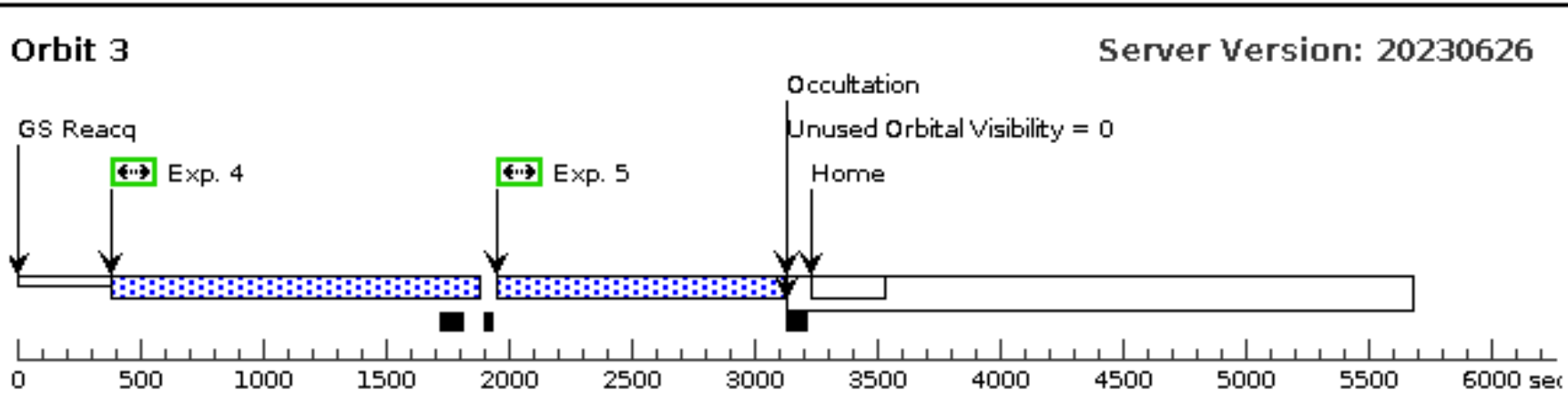
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1417131)	(1) BHXRB-TRANSIENT	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				60 Secs (60 Secs) *[==>]*	 ***[1]***
Comments: I tried different spectral configurations for the target aquisition: *COS.ta.1417131* *COS.ta.1417132* *COS.ta.1417134*									
2	SCI (COS.sp.1416844)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1000; FP-POS=1			2000 Secs (2246 Secs) *[==>2246.0 Secs]*	 ***[1]***
Comments: Otther spetral shapes are considered here: *COS.sp.1416844* *COS.sp.1416867* *COS.sp.1416865*									
3	SCI (COS.sp.1416867)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1000; FP-POS=2			2500 Secs (2680 Secs) *[==>2680.0 Secs]*	 ***[2]***
4	SCI (COS.sp.1416865)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1300; FP-POS=3			1400 Secs (1447 Secs) *[==>1447.0 Secs]*	 ***[3]***
5	SCI (COS.sp.1416865)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1500; FP-POS=4			1071 Secs (1118 Secs) *[==>1118.0 Secs]*	 ***[3]***

Orbit Structure







Visit

Proposal 17589, Third FUV (03) Mon Jan 22 21:00:26 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: TOO RESPONSE TIME 3.0D

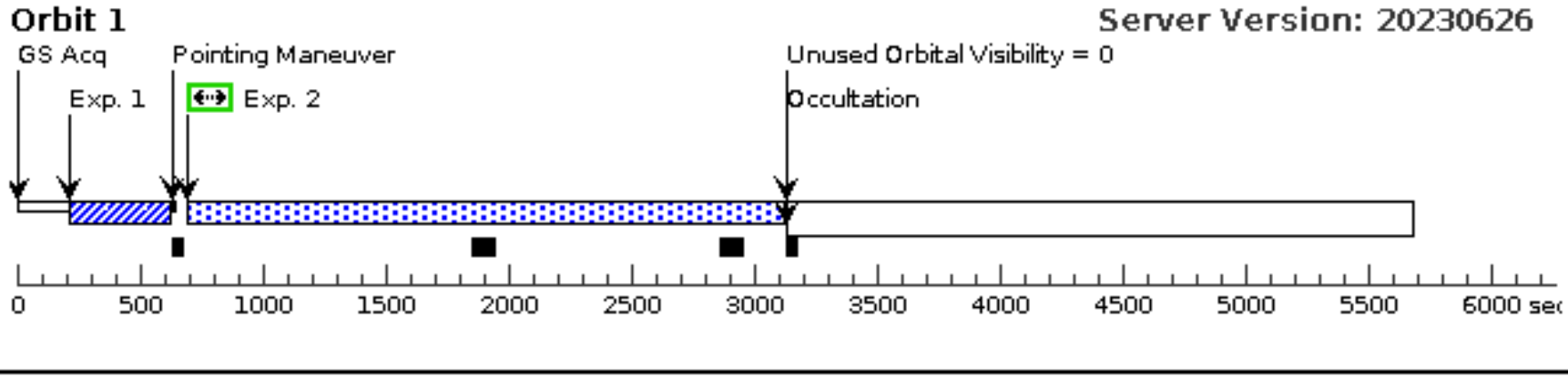
Generic Targets

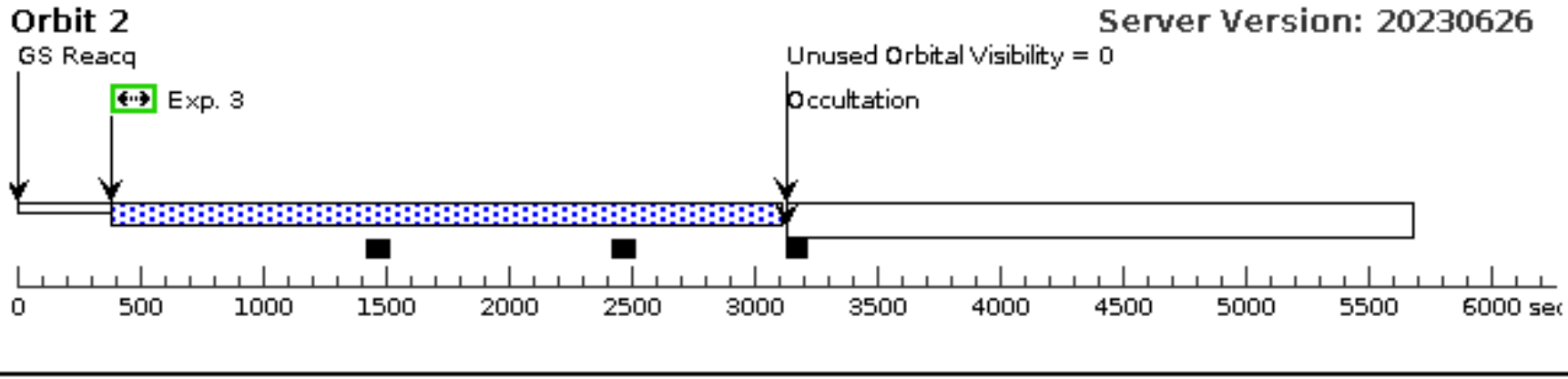
#	Name	Criteria	Description
(1)	BHXRB-TRANSIENT	Next LMXB in outburst	LMXB X-RAY NOVAE

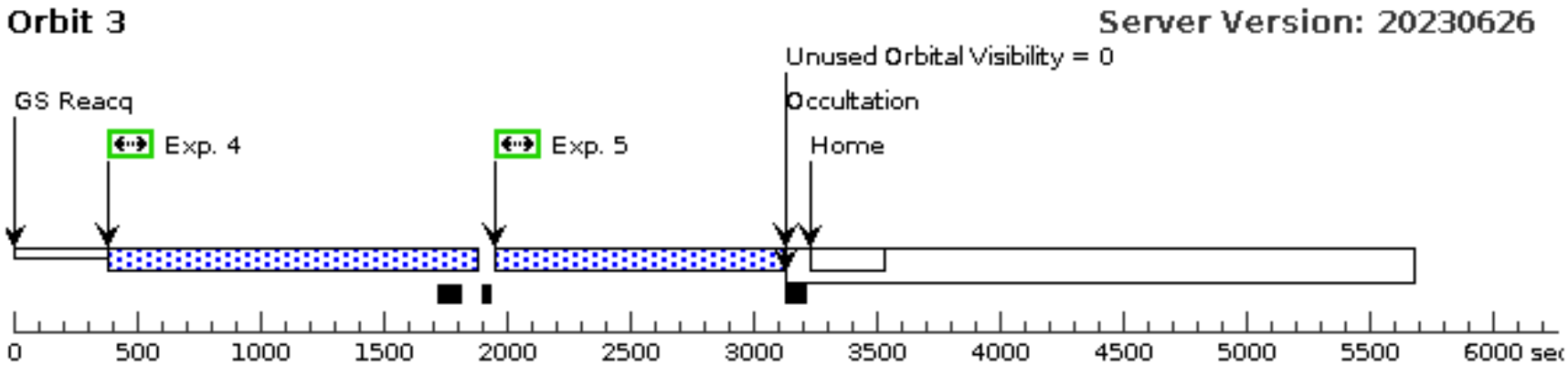
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1417131)	(1) BHXRB-TRANSIENT	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				60 Secs (60 Secs) *[==>]*	***[1]***
	Comments: I tried different spectral configurations for the target aquisition: *COS.ta.1417131* *COS.ta.1417132* *COS.ta.1417134*								
2	SCI (COS.sp.1416844)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1000; FP-POS=1			2000 Secs (2246 Secs) *[==>2246.0 Secs]*	***[1]***
	Comments: Otther spetral shapes are considered here: *COS.sp.1416844* *COS.sp.1416867* *COS.sp.1416865*								
3	SCI (COS.sp.1416867)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1000; FP-POS=2			2500 Secs (2680 Secs) *[==>2680.0 Secs]*	***[2]***
4	SCI (COS.sp.1416865)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1300; FP-POS=3			1400 Secs (1447 Secs) *[==>1447.0 Secs]*	***[3]***
5	SCI (COS.sp.1416865)	(1) BHXRB-TRANSIENT	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1500; FP-POS=4			1071 Secs (1118 Secs) *[==>1118.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 17589, NUV (1orbit) (02) Mon Jan 22 21:00:26 GMT 2024

Diagnostic Status: No Diagnostics

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

Special Requirements: TOO RESPONSE TIME 3.0D

Generic Targets

#	Name	Criteria	Description
(1)	BHXRB-TRANSIENT	Next LMXB in outburst	LMXB X-RAY NOVAE

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.1900470)	(1) BHXRB-TRANSIENT	STIS/CCD, ACQ, 50CCD	MIRROR				4 Secs (4 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.1900472)	(1) BHXRB-TRANSIENT	STIS/NUV-MAMA, TIME-TAG, 52X0.2	G230L 2376 A	BUFFER-TIME=500			2000 Secs (2133 Secs) *[==>2133.0 Secs]*	 ***[1]***

Orbit Structure