



17927 - Unveiling the origin of magnetars through a large proper motion sample

Cycle: 32, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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Dr. C. Kouveliotou (CoI)	George Washington University
Dr. Klaas Wiersema (CoI) (ESA Member)	University of Hertfordshire

VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) PSRJ1622-4950	WFC3/IR	1	13-May-2025 15:00:28.0	yes
02	(2) SGR1627-41	WFC3/IR	1	13-May-2025 15:00:28.0	yes
03	(3) 1RXS-J170849.0-400910	WFC3/IR	1	13-May-2025 15:00:29.0	yes
04	(4) CXOUJ171405.7-381031	WFC3/IR	1	13-May-2025 15:00:29.0	yes
05	(5) SWIFT-J1822.3-1606	WFC3/IR	1	13-May-2025 15:00:30.0	yes
06	(6) SGR-1833-0832	WFC3/IR	1	13-May-2025 15:00:31.0	yes
16	(6) SGR-1833-0832	WFC3/IR	1	13-May-2025 15:00:31.0	yes
07	(7) SWIFT-J1834.9-0846	WFC3/IR	1	13-May-2025 15:00:32.0	yes
08	(8) AX-J1818.8-1559	WFC3/IR	1	13-May-2025 15:00:32.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
09	(9) CXOUJ164710.2-455216	WFC3/IR	1	13-May-2025 15:00:33.0	yes
10	(10) SGR0501+4516	WFC3/IR	1	13-May-2025 15:00:33.0	yes
11	(11) SGR1935+2154	WFC3/IR	1	13-May-2025 15:00:34.0	yes
12	(12) SGR1806-20	WFC3/IR	1	13-May-2025 15:00:35.0	yes
13	(13) SGR1900+14	WFC3/IR	1	13-May-2025 15:00:35.0	yes
14	(14) 1E2259+586	WFC3/IR	1	13-May-2025 15:00:36.0	yes
15	(15) 4U0142+61	WFC3/IR	1	13-May-2025 15:00:36.0	yes
17	(9) CXOUJ164710.2-455216	WFC3/IR	1	13-May-2025 15:00:37.0	yes
18	(12) SGR1806-20	WFC3/IR	1	13-May-2025 15:00:37.0	yes

18 Total Orbits Used

ABSTRACT

We propose WFC3/IR imaging in F125W and F160W of 15 Galactic magnetars, closely matching observations taken in 2018 and 2020 in order to precisely measure the proper motions of their faint NIR counterparts. The origin of magnetars remains unclear. By re-measuring their positions with milliarcsecond precision ~6 years later, with the same instrument and using the 2018-2020 imaging as a reference, we will increase the number of magnetars with a precise transverse velocity measurement - or a strong upper limits on the velocity - by up to a factor of two. Combined with estimates for the magnetar ages, we can trace them back to an inferred birth site, to search for supernova remnants or star forming regions (or a lack thereof). Our proposed program will move us out of the realm of small number statistics, allowing a statistically robust comparison with the peculiar velocity distribution of other neutron stars (namely pulsars). This programme will therefore reveal much about the nature and origin of magnetars. This cycle 32 call for bridge programs is the last chance to obtain HST proper motions for these systems; it also acts as pathfinder programme for broader JWST studies in future cycles which could target proper motion measurements of a wider array of Galactic systems.

OBSERVING DESCRIPTION

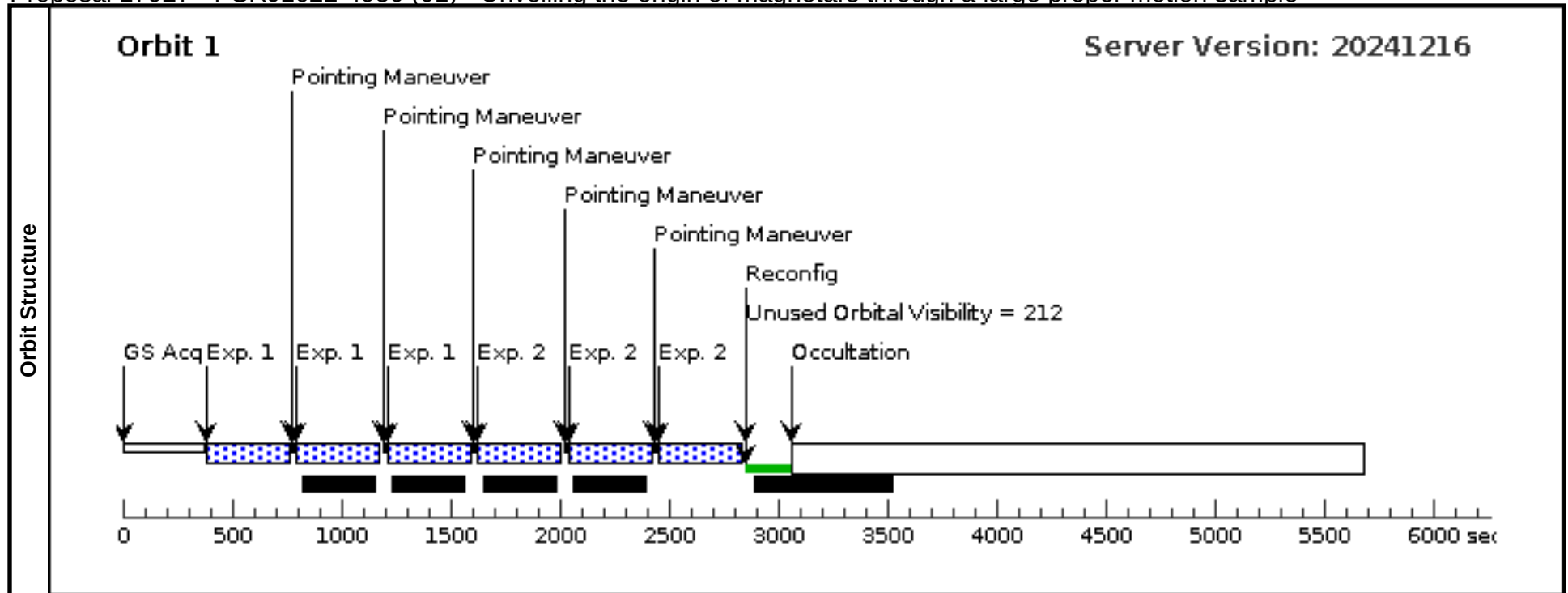
Imaging strategy and S/N: WFC3/IR observations of 15 magnetars in both F125W and F160W. These were previously imaged with HST between 2018-2020. Each field has 2400s (1 orbit) of exposure time, split between the two filters, with the exposures in each filter split with the WFC3-IR-DITHER-LINE-3PT dither pattern. The faintest counterpart candidate in the sample has magnitude F160W(AB)~25. Our exposure time yields a S/N of 20 for point sources of this magnitude, and gives 3 sigma limiting magnitudes of ~26.8. This ensures re-detections of the counterparts in both

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bands, even if they are variable by 1-2 mag (typical for magnetars) and fainter in this epoch. Total time: 15 targets will be observed for 1 orbit each, with half an orbit per filter (F125W+F160W), each split into three 400s dithered exposures. The total time usage is therefore 15 orbits.

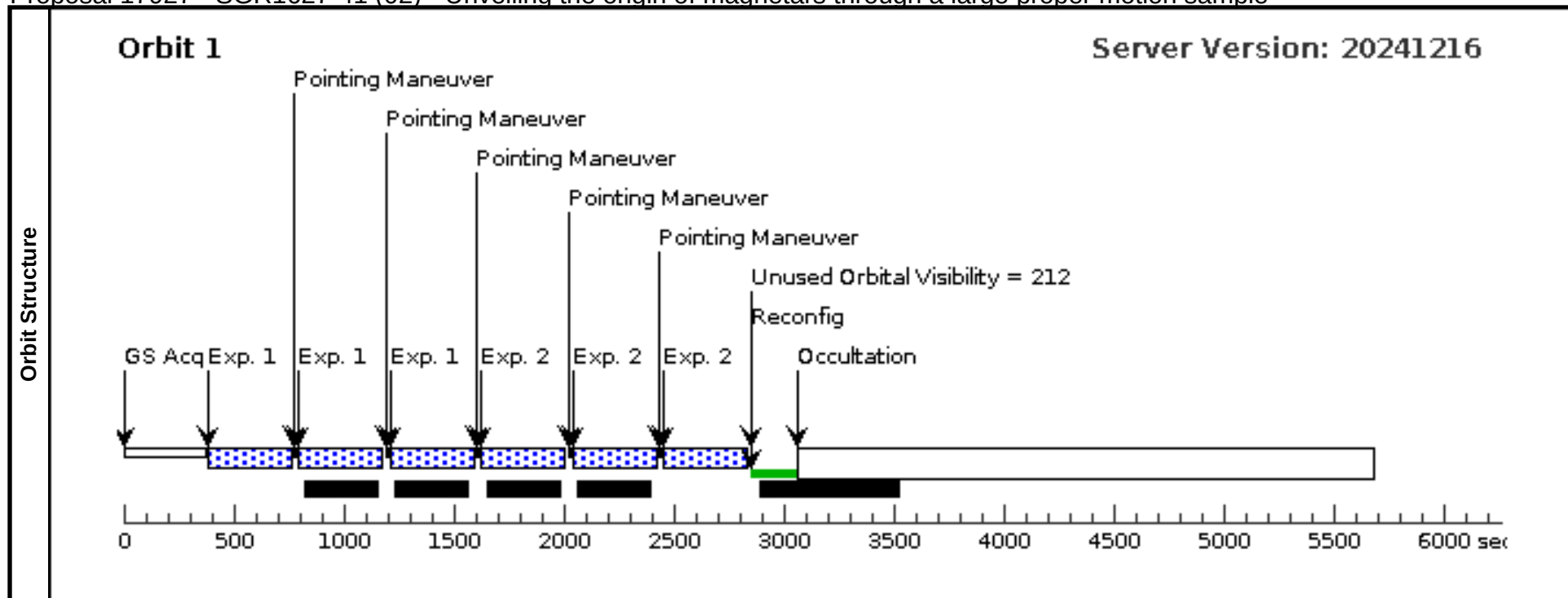
Proposal 17927 - PSRJ1622-4950 (01) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, PSRJ1622-4950 (01), completed										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	PSRJ1622-4950	RA: 16 22 44.8900 (245.6870417d) Dec: -49 50 52.70 (-49.84797d) Equinox: J2000				V=(?) F160W (AB) = 23.66		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(1) PSRJ1622-4950	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in PSRJ1622-4950 (01) (1)	352.939501 Secs (1058.819 Secs)				
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		
	2		(1) PSRJ1622-4950	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in PSRJ1622-4950 (01) (1)	352.939501 Secs (1058.819 Secs)				
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		



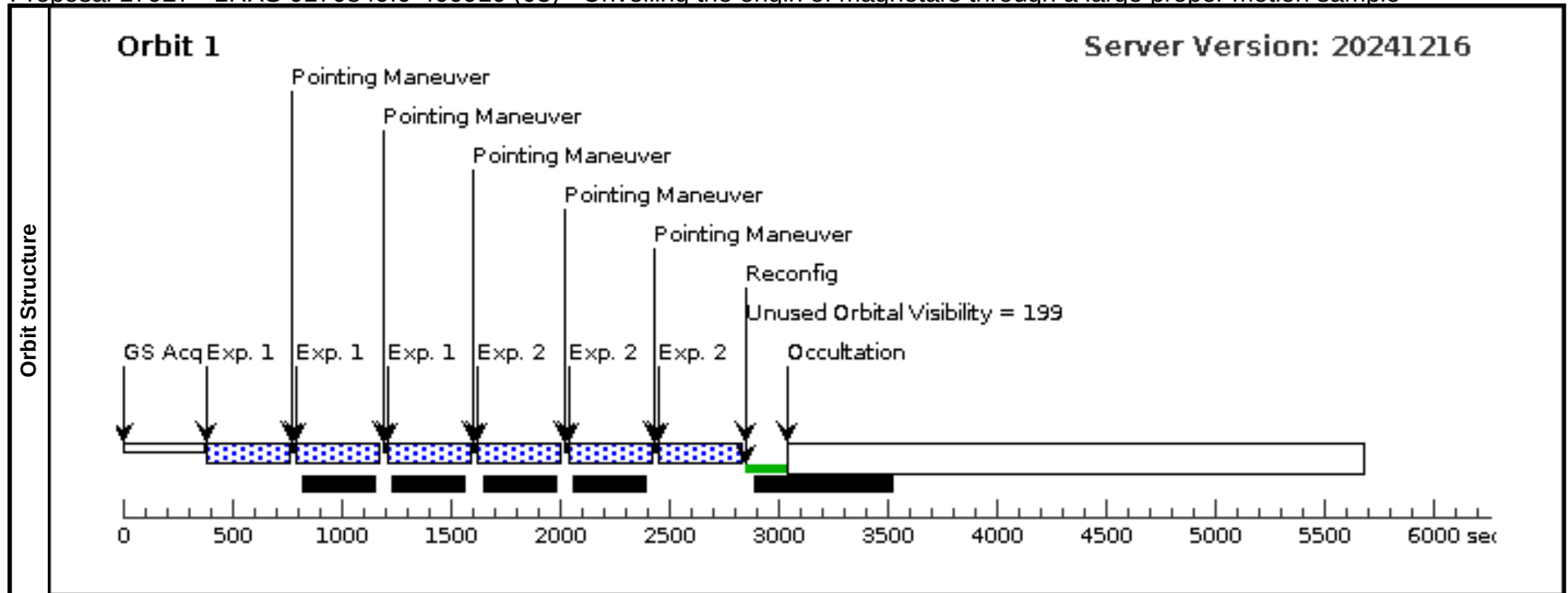
Proposal 17927 - SGR1627-41 (02) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SGR1627-41 (02), completed										Tue May 13 19:00:38 GMT 2025	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false						(1), (2)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	SGR1627-41	RA: 16 35 51.8440 (248.9660167d) Dec: -47 35 23.31 (-47.58981d) Equinox: J2000				V=(?) F160W (AB) = 21.75		Reference Frame: ICRS			
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(2) SGR1627-41	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in SGR1627-41 (02) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(2) SGR1627-41	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in SGR1627-41 (02) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



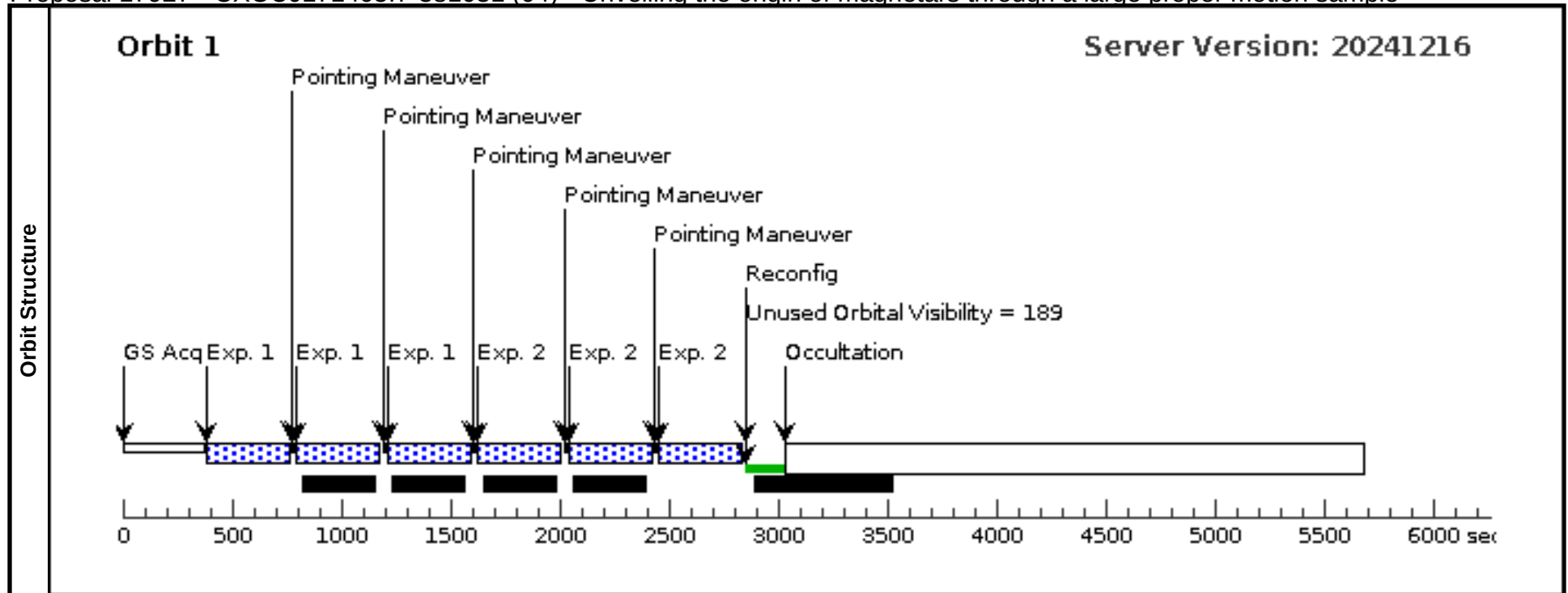
Proposal 17927 - 1RXS-J170849.0-400910 (03) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, 1RXS-J170849.0-400910 (03), completed										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(3)	1RXS-J170849.0-400910	RA: 17 08 46.8700 (257.1952917d) Dec: -40 08 52.44 (-40.14790d) Equinox: J2000				V=(?) F160W (AB) = 21.85		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(3) 1RXS-J170849.0-400910	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in 1RXS-J170849.0-400910 (03) (1)	352.939501 Secs (1058.819 Secs)				
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		
	2		(3) 1RXS-J170849.0-400910	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in 1RXS-J170849.0-400910 (03) (1)	352.939501 Secs (1058.819 Secs)				
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		



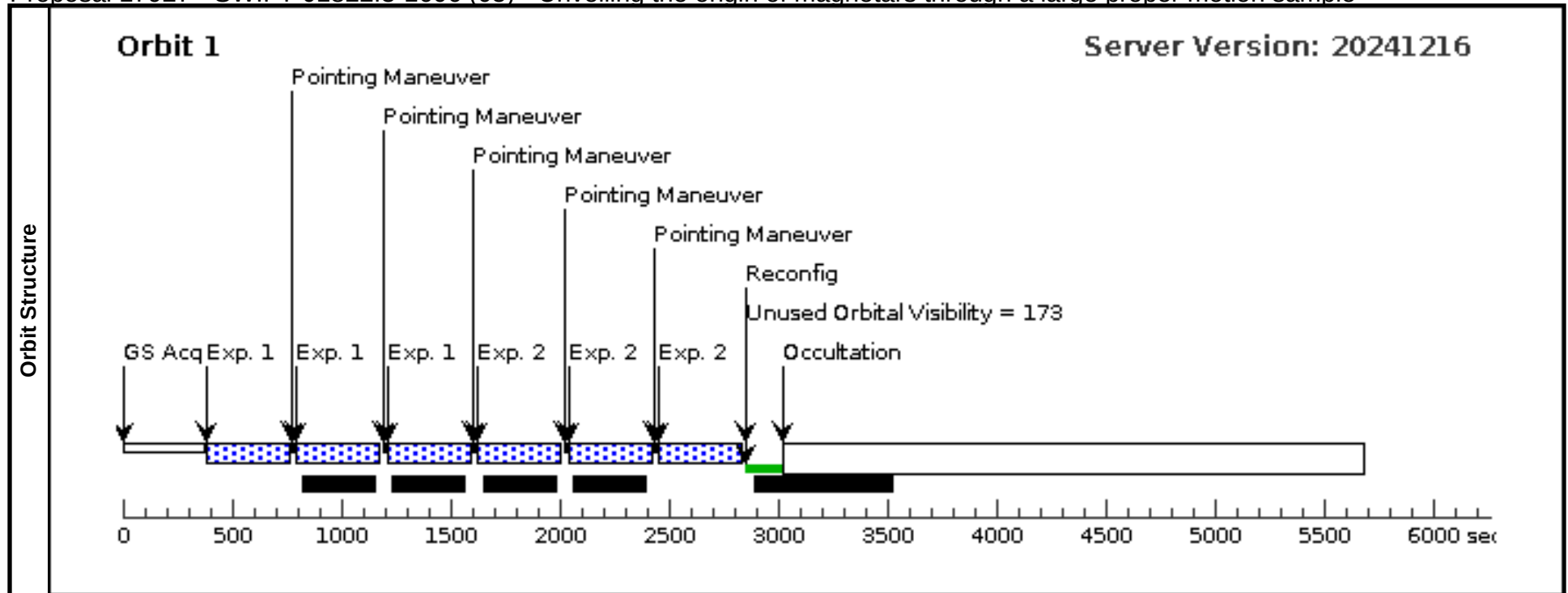
Proposal 17927 - CXOUJ171405.7-381031 (04) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, CXOUJ171405.7-381031 (04), completed										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(4)	CXOUJ171405.7-381031	RA: 17 14 5.7400 (258.5239167d) Dec: -38 10 30.90 (-38.17525d) Equinox: J2000				V=(?) F160W (AB) = 18.72		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(4) CXOUJ171405.7-381031	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in CXOUJ171405.7-381031 (04) (1)	352.939501 Secs (1058.819 Secs)				
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		
	2		(4) CXOUJ171405.7-381031	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in CXOUJ171405.7-381031 (04) (1)	352.939501 Secs (1058.819 Secs)				
								[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]			



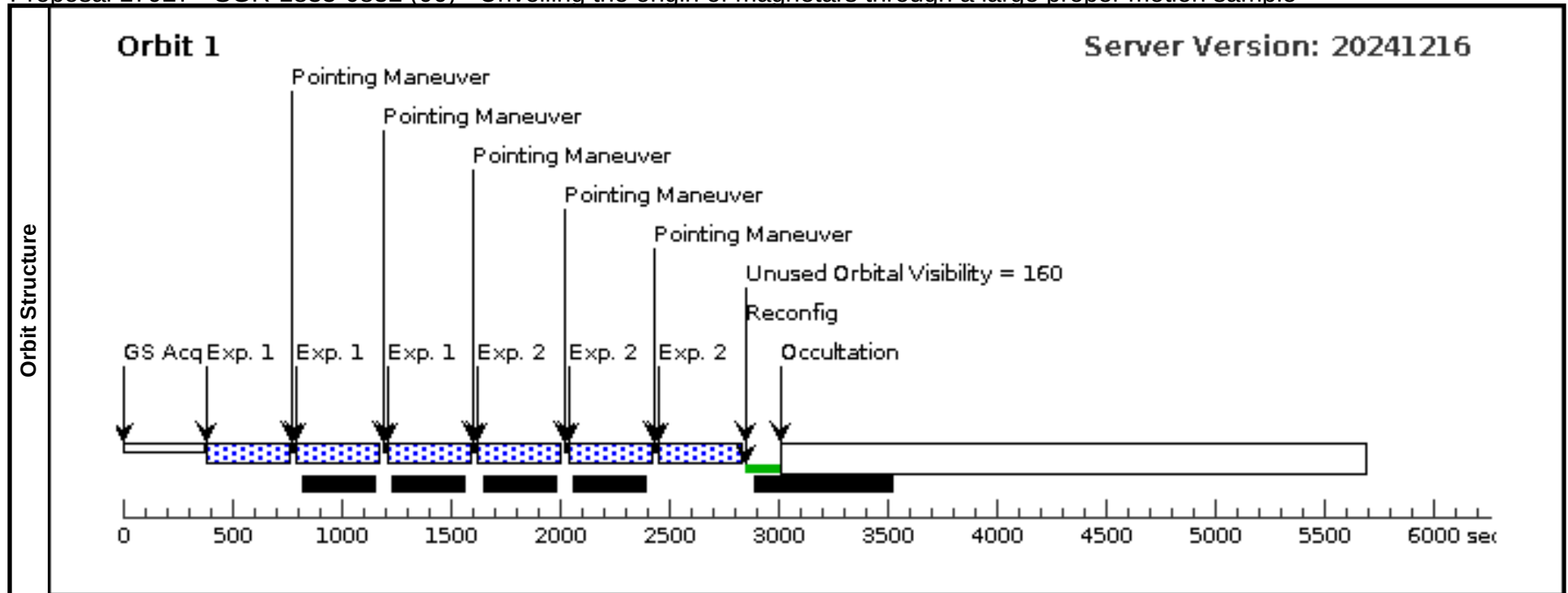
Proposal 17927 - SWIFT-J1822.3-1606 (05) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SWIFT-J1822.3-1606 (05), completed										Tue May 13 19:00:38 GMT 2025	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false						(1), (2)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(5)	SWIFT-J1822.3-1606	RA: 18 22 18.0000 (275.5750000d) Dec: -16 04 26.80 (-16.07411d) Equinox: J2000				V=(?) F160W (AB) = 21.03		Reference Frame: ICRS			
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(5) SWIFT-J1822.3-1606	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in SWIFT-J1822.3-1606 (05) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(5) SWIFT-J1822.3-1606	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in SWIFT-J1822.3-1606 (05) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



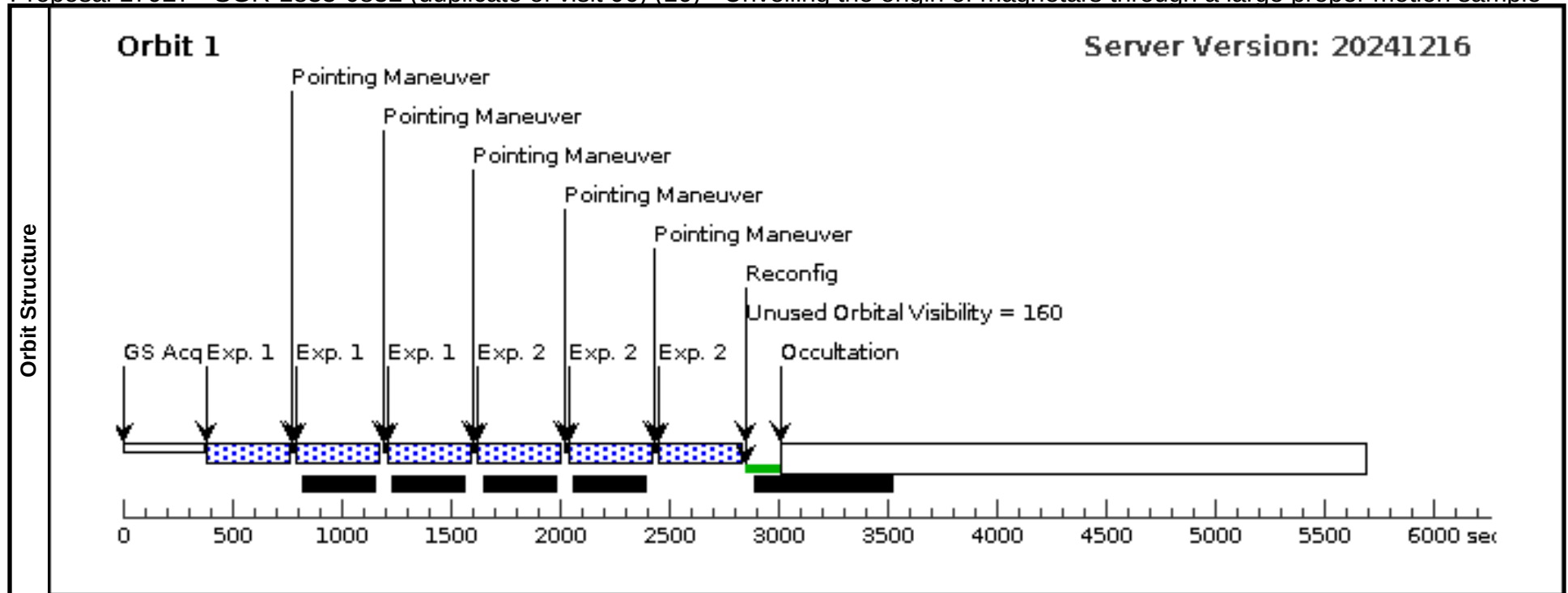
Proposal 17927 - SGR-1833-0832 (06) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SGR-1833-0832 (06), failed										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(6)	SGR-1833-0832	RA: 18 33 44.3700 (278.4348750d) Dec: -08 31 7.50 (-8.51875d) Equinox: J2000				V=(?) F160W (AB) = 22.83		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(6) SGR-1833-0832	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in SGR-1833-0832 (06) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		
	2		(6) SGR-1833-0832	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in SGR-1833-0832 (06) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		



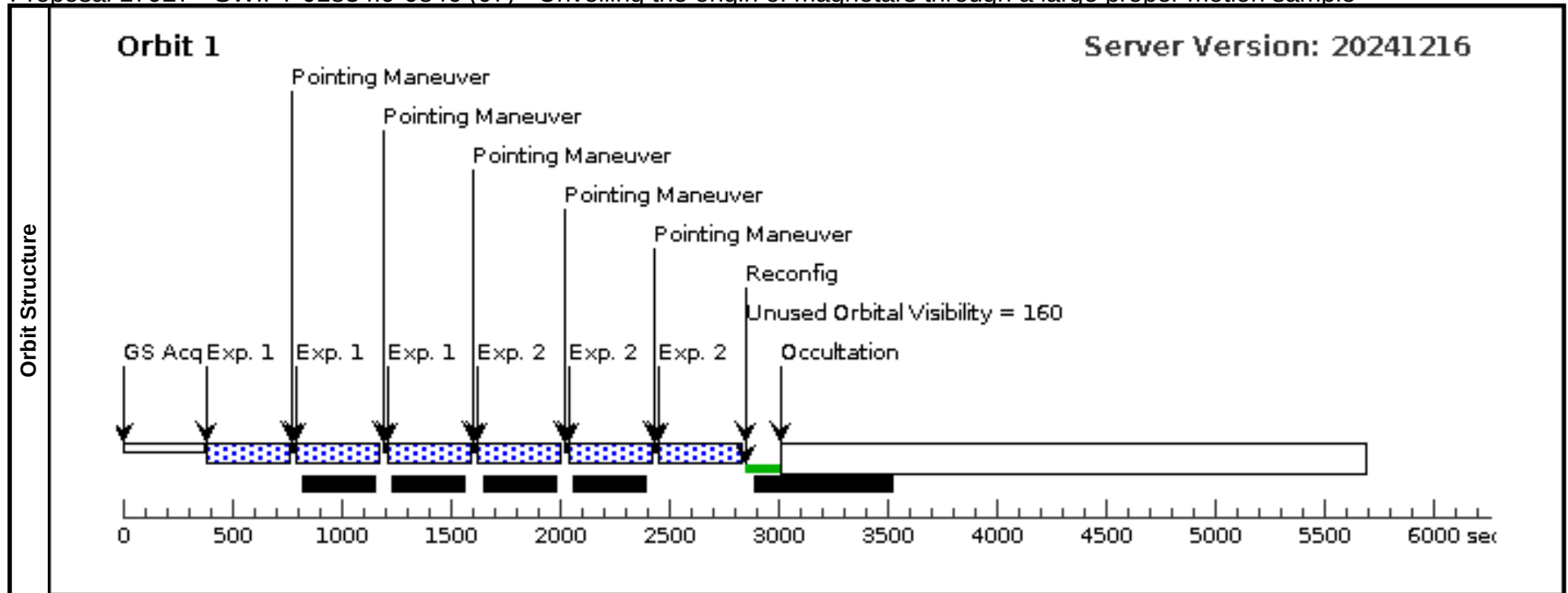
Proposal 17927 - SGR-1833-0832 (duplicate of visit 06) (16) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SGR-1833-0832 (duplicate of visit 06) (16), scheduling										Tue May 13 19:00:38 GMT 2025	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
	Comments: Visit 06 failed, so duplicate provided here.											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false						(1), (2)		
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(6)	SGR-1833-0832		RA: 18 33 44.3700 (278.4348750d) Dec: -08 31 7.50 (-8.51875d) Equinox: J2000				V=(?) F160W (AB) = 22.83		Reference Frame: ICRS		
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(6) SGR-1833-0832	WFC3/IR, MULTIACCUM, IR		F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 i n SGR-1833-0832 (d uplicate of visit 06) (16) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]
	2		(6) SGR-1833-0832	WFC3/IR, MULTIACCUM, IR		F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 i n SGR-1833-0832 (d uplicate of visit 06) (16) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]



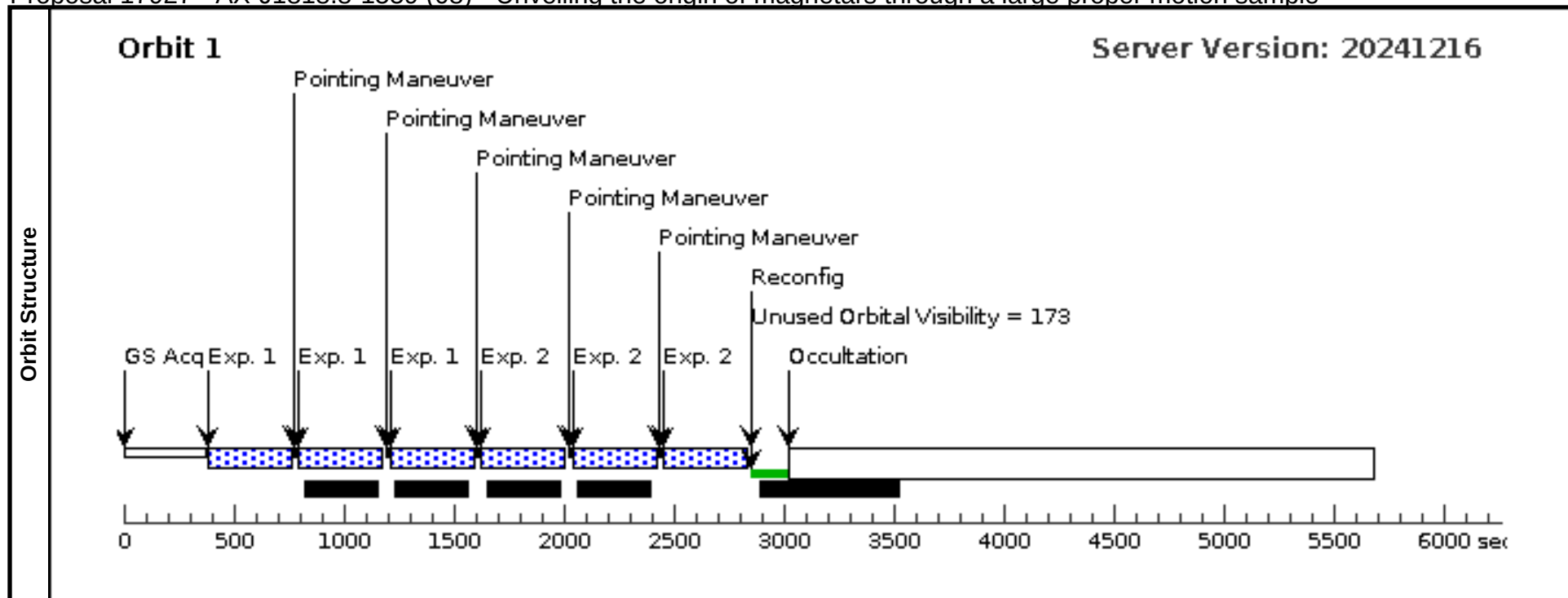
Proposal 17927 - SWIFT-J1834.9-0846 (07) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SWIFT-J1834.9-0846 (07), completed										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(7)	SWIFT-J1834.9-0846	RA: 18 34 52.1200 (278.7171667d) Dec: -08 45 56.02 (-8.76556d) Equinox: J2000				V=(?) F160W (AB) = 23.01		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(7) SWIFT-J1834.9-0846	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in SWIFT-J1834.9-0846 (07) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		
	2		(7) SWIFT-J1834.9-0846	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in SWIFT-J1834.9-0846 (07) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		



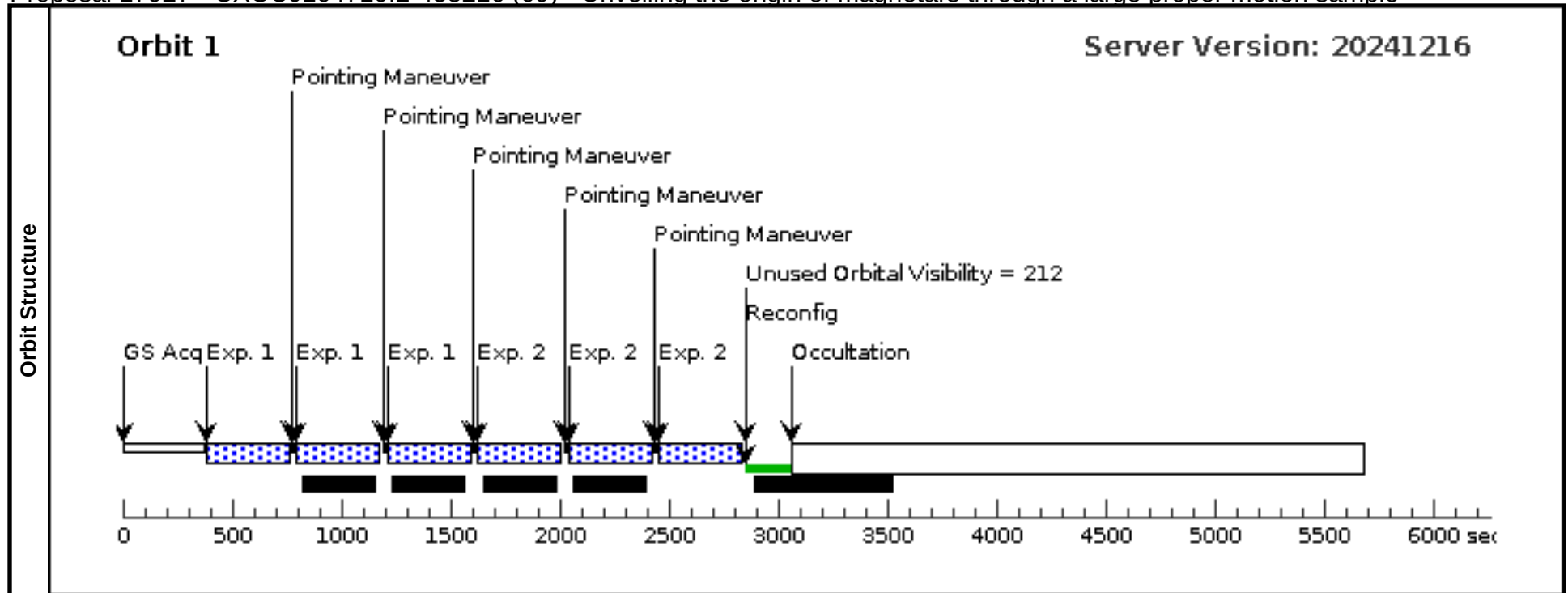
Proposal 17927 - AX-J1818.8-1559 (08) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, AX-J1818.8-1559 (08), scheduling										Tue May 13 19:00:38 GMT 2025	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false						(1), (2)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(8)	AX-J1818.8-1559	RA: 18 18 51.3800 (274.7140833d) Dec: -15 59 22.62 (-15.98962d) Equinox: J2000				V=(?) F160W (AB) = 21.65		Reference Frame: ICRS			
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(8) AX-J1818.8-1559	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in AX-J1818.8-1559 (08) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(8) AX-J1818.8-1559	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in AX-J1818.8-1559 (08) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



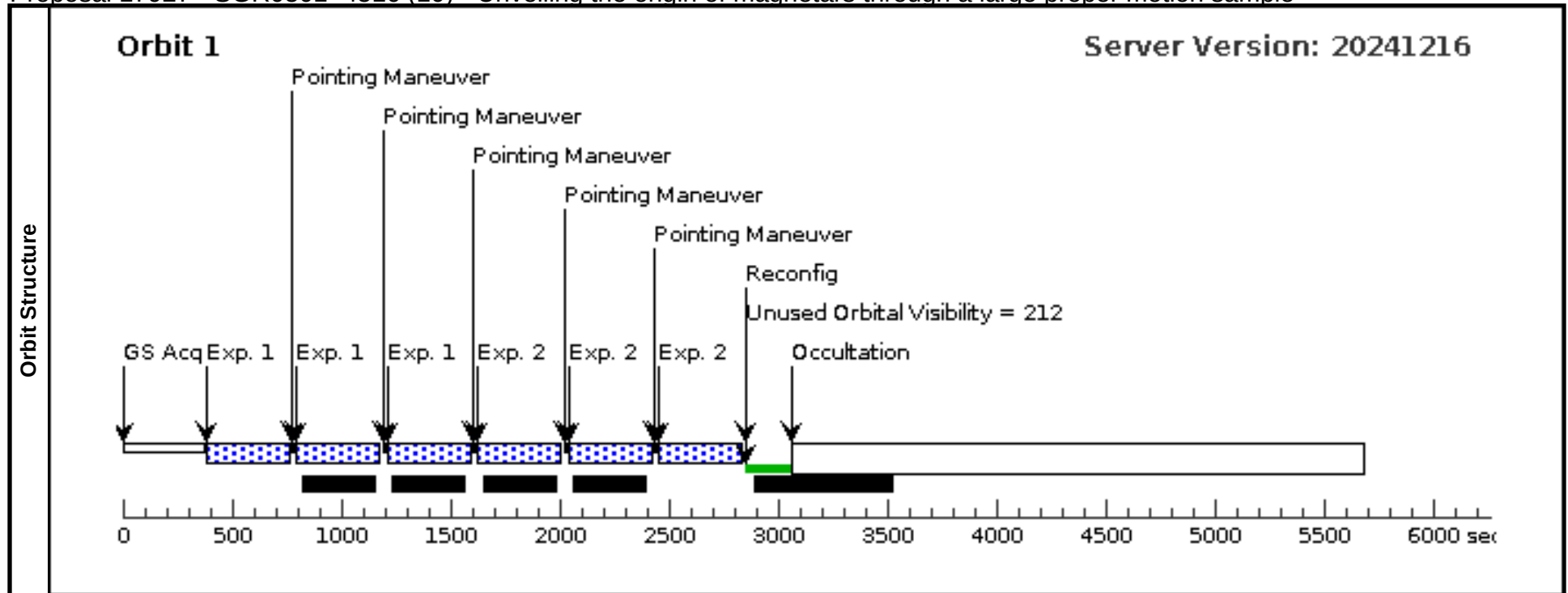
Proposal 17927 - CXOUJ164710.2-455216 (09) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, CXOUJ164710.2-455216 (09), failed										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(9)	CXOUJ164710.2-455216	RA: 16 47 10.1550 (251.7923125d) Dec: -45 52 16.43 (-45.87123d) Equinox: J2000				V=(?) F160W (AB) = 22.47		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(9) CXOUJ164710.2-455216	WFC3/IR, MULTIACCUM, IR		F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in CXOUJ164710.2-455216 (09) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]			
												[1]	
	2		(9) CXOUJ164710.2-455216	WFC3/IR, MULTIACCUM, IR		F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in CXOUJ164710.2-455216 (09) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]			
												[1]	



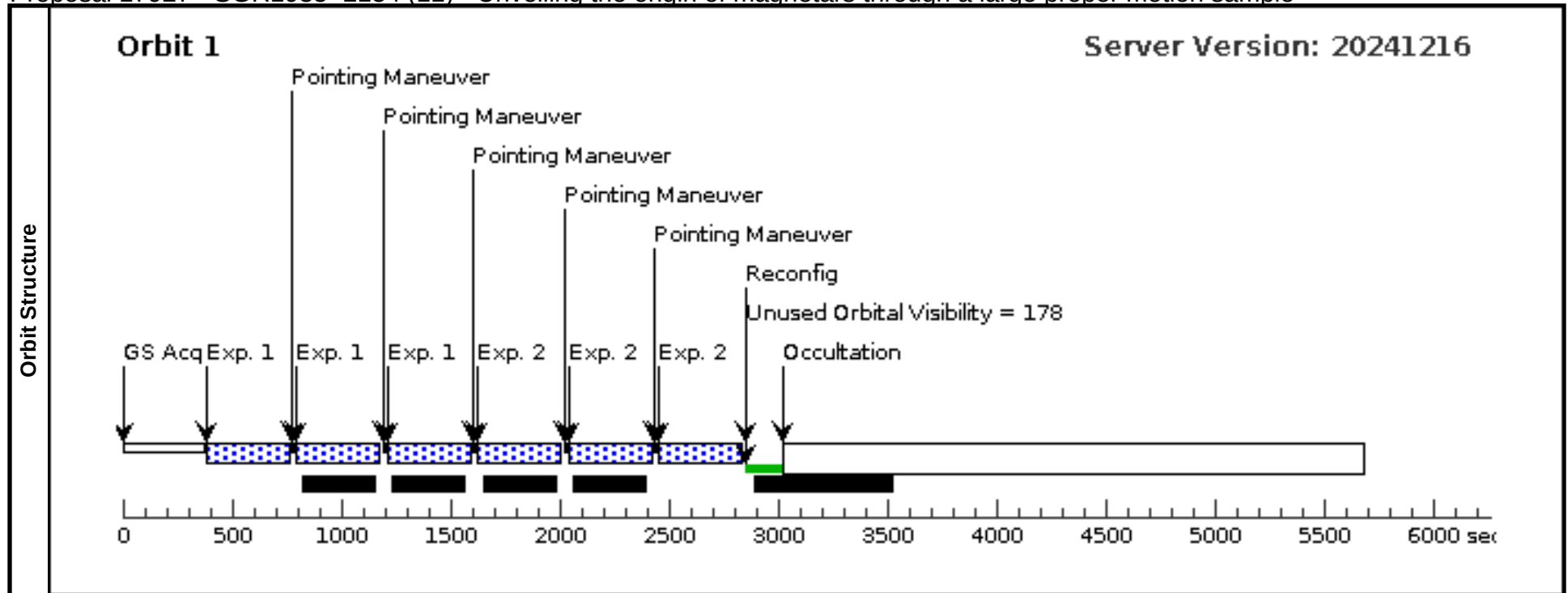
Proposal 17927 - SGR0501+4516 (10) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SGR0501+4516 (10), scheduling										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(10)	SGR0501+4516	RA: 05 01 8.0000 (75.2833333d) Dec: +45 16 31.00 (45.27528d) Equinox: J2000				V=(?) F160W (AB) = 23.83		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(10) SGR0501+4516	WFC3/IR, MULTIACCUM, IR		F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in SGR0501+4516 (10) (1)	352.939501 Secs (1058.819 Secs)			
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(10) SGR0501+4516	WFC3/IR, MULTIACCUM, IR		F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in SGR0501+4516 (10) (1)	352.939501 Secs (1058.819 Secs)			
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



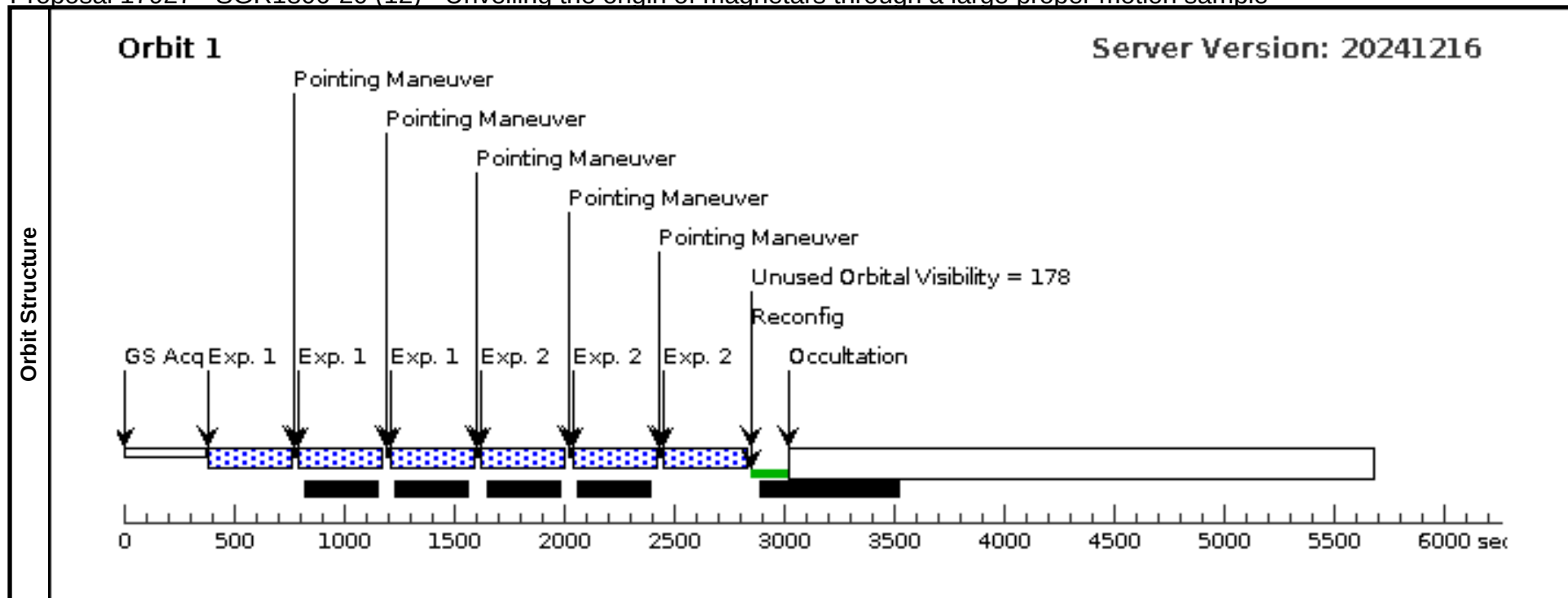
Proposal 17927 - SGR1935+2154 (11) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SGR1935+2154 (11), scheduling										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(11)	SGR1935+2154	RA: 19 34 55.6800 (293.7320000d) Dec: +21 53 48.20 (21.89672d) Equinox: J2000				V=(?) F160W (AB) = 24.50		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(11) SGR1935+2154	WFC3/IR, MULTIACCUM, IR		F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in SGR1935+2154 (11) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(11) SGR1935+2154	WFC3/IR, MULTIACCUM, IR		F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in SGR1935+2154 (11) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



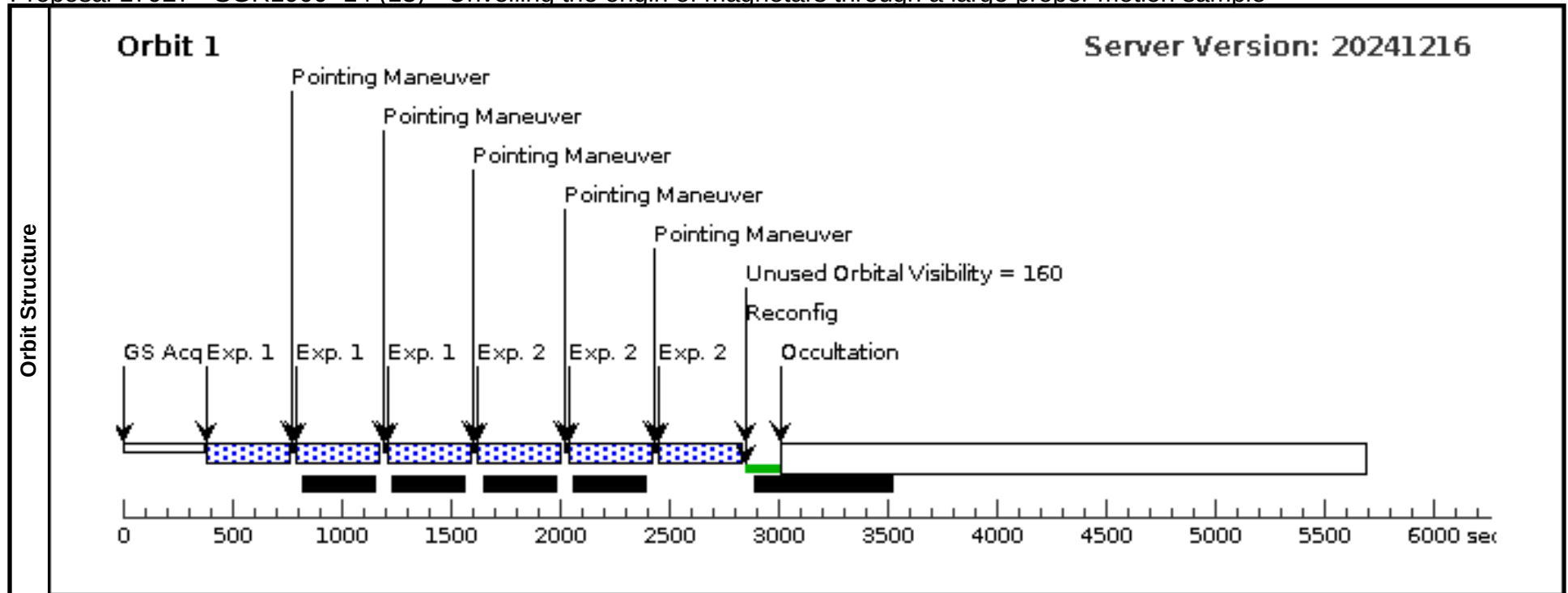
Proposal 17927 - SGR1806-20 (12) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SGR1806-20 (12), failed										Tue May 13 19:00:38 GMT 2025	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false						(1), (2)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(12)	SGR1806-20	RA: 18 08 39.3370 (272.1639042d) Dec: -20 24 39.85 (-20.41107d) Equinox: J2000				V=(?) F160W (AB) = 23.02		Reference Frame: ICRS			
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(12) SGR1806-20	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in SGR1806-20 (12) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(12) SGR1806-20	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in SGR1806-20 (12) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



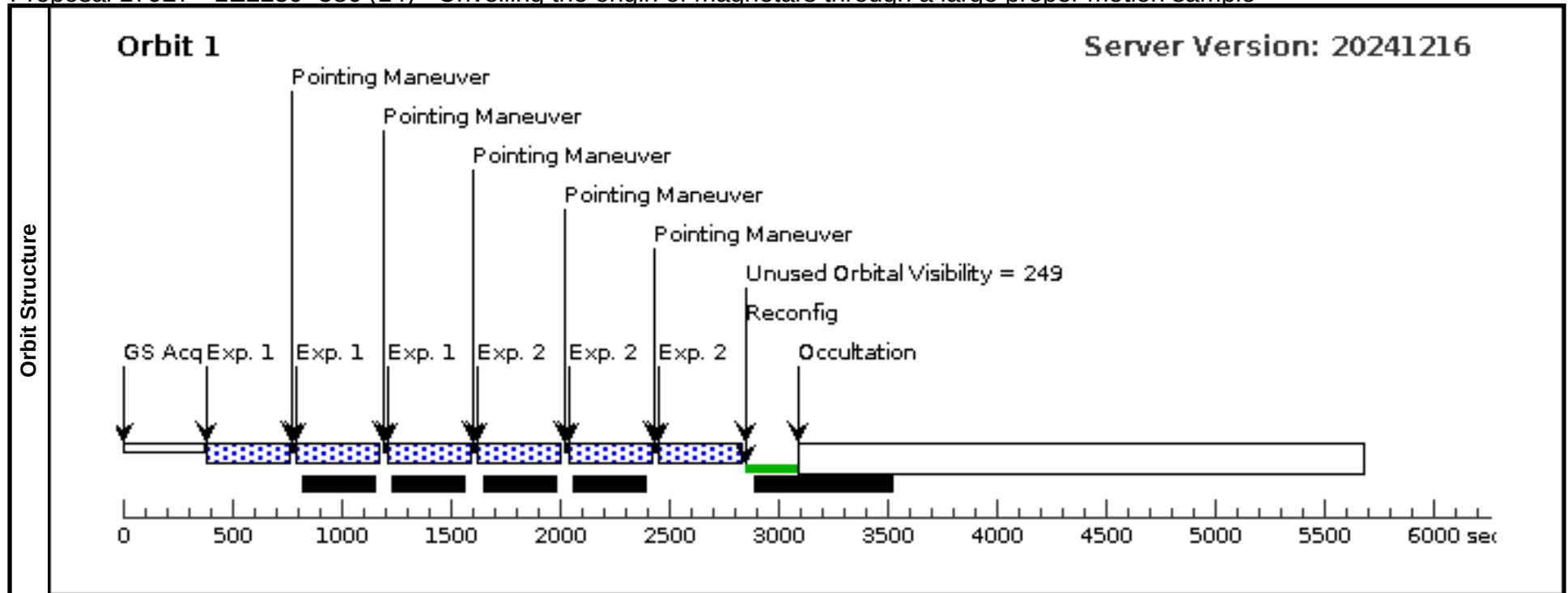
Proposal 17927 - SGR1900+14 (13) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, SGR1900+14 (13), scheduling										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(13)	SGR1900+14	RA: 19 07 14.3300 (286.8097083d) Dec: +09 19 20.10 (9.32225d) Equinox: J2000				V=(?) F160W (AB) = 22.44		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(13) SGR1900+14	WFC3/IR, MULTIACCUM, IR		F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in SGR1900+14 (13) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(13) SGR1900+14	WFC3/IR, MULTIACCUM, IR		F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in SGR1900+14 (13) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



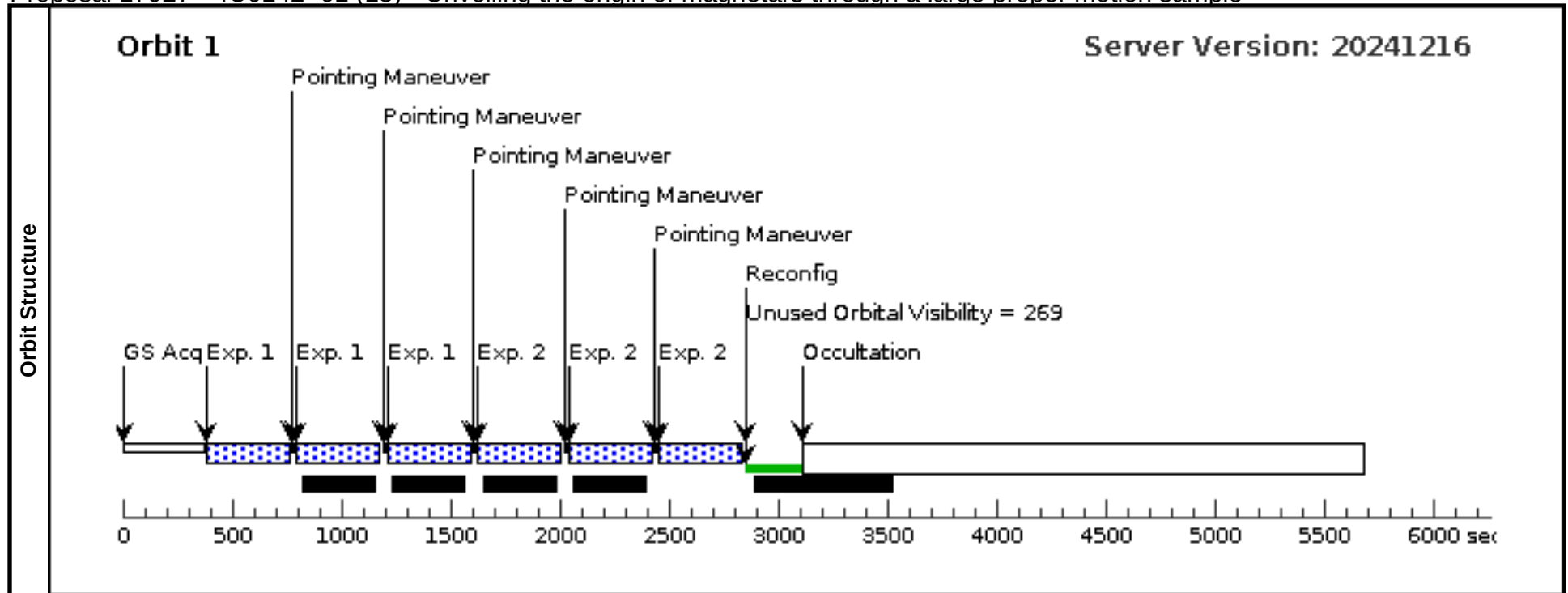
Proposal 17927 - 1E2259+586 (14) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, 1E2259+586 (14), scheduling										Tue May 13 19:00:38 GMT 2025	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false						(1), (2)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(14)	1E2259+586	RA: 23 01 8.1400 (345.2839167d) Dec: +58 52 44.50 (58.87903d) Equinox: J2000				V=(?) F160W (AB) = 23.79		Reference Frame: ICRS			
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(14) 1E2259+586	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in 1E2259+586 (14) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(14) 1E2259+586	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in 1E2259+586 (14) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



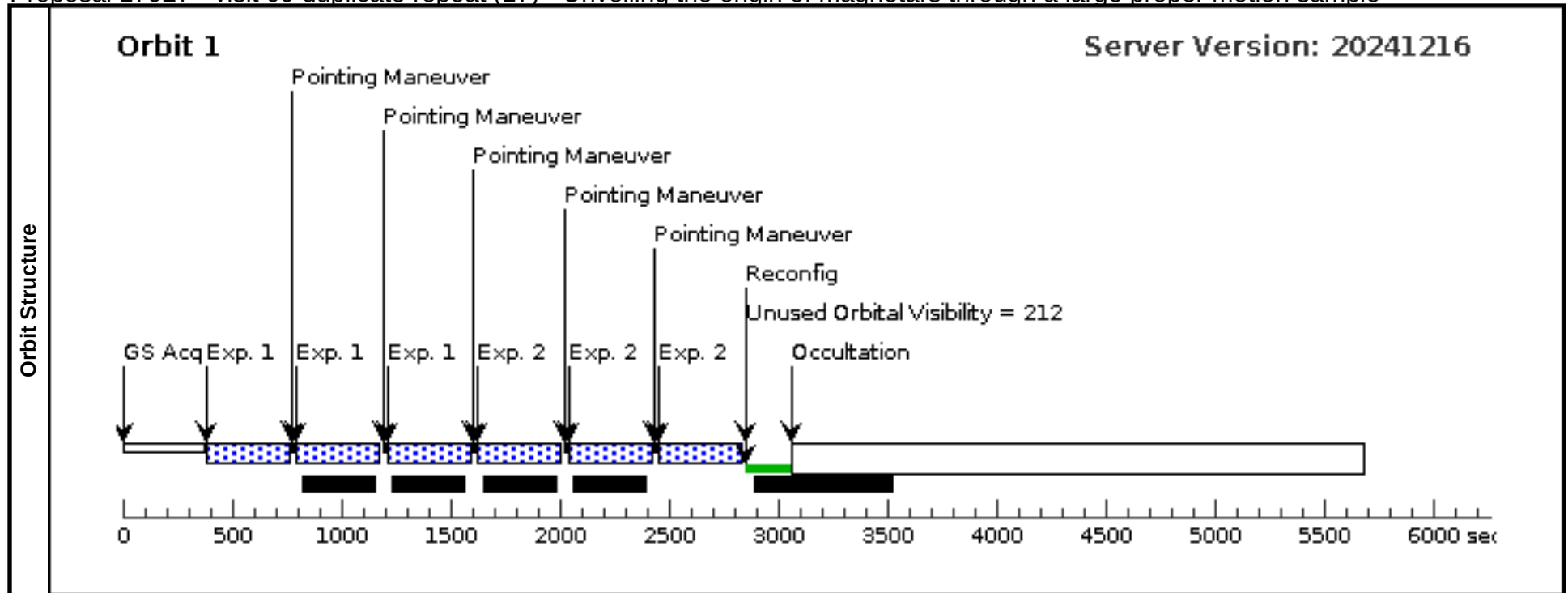
Proposal 17927 - 4U0142+61 (15) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, 4U0142+61 (15), scheduling										Tue May 13 19:00:38 GMT 2025	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false						(1), (2)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(15)	4U0142+61	RA: 01 46 22.4070 (26.5933625d) Dec: +61 45 3.19 (61.75089d) Equinox: J2000				V=(?) F160W (AB) = 22.07		Reference Frame: ICRS			
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(15) 4U0142+61	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in 4U0142+61 (15) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	
	2		(15) 4U0142+61	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in 4U0142+61 (15) (1)	352.939501 Secs (1058.819 Secs)			
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]	



Proposal 17927 - visit 09 duplicate repeat (17) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, visit 09 duplicate repeat (17)										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(9)	CXOUJ164710.2-455216	RA: 16 47 10.1550 (251.7923125d) Dec: -45 52 16.43 (-45.87123d) Equinox: J2000				V=(?) F160W (AB) = 22.47		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(9) CXOUJ164710.2-455216	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 in visit 09 duplicate repeat (17) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		
	2		(9) CXOUJ164710.2-455216	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 in visit 09 duplicate repeat (17) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		



Proposal 17927 - Visit 12 duplicate repeat (18) - Unveiling the origin of magnetars through a large proper motion sample

Visit	Proposal 17927, Visit 12 duplicate repeat (18)										Tue May 13 19:00:38 GMT 2025		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(12)	SGR1806-20	RA: 18 08 39.3370 (272.1639042d) Dec: -20 24 39.85 (-20.41107d) Equinox: J2000				V=(?) F160W (AB) = 23.02		Reference Frame: ICRS				
	Comments: Category=STAR Description=[NEUTRON STAR] Extended=NO												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(12) SGR1806-20	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 1-1 i n Visit 12 duplicate r epeat (18) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		
	2		(12) SGR1806-20	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25		Pattern 1, Exps 2-2 i n Visit 12 duplicate r epeat (18) (1)	352.939501 Secs (1058.819 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]		

