



18082 - A Deeper Look at the Type Ia Supernova Remnant Pa 30

Cycle: 33, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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Prof. Paul Duffell (CoI)	Purdue University
Prof. Shrinivas R. Kulkarni (CoI)	California Institute of Technology
Prof. David Charbonneau (CoI)	Harvard University
Prof. Eliot Quataert (CoI)	Princeton University
Prof. Jim Fuller (CoI)	California Institute of Technology

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	(6) PA30-NE	WFC3/UVIS	2	23-Jun-2026 17:00:15.0	yes
02	(6) PA30-NE	WFC3/UVIS	2	23-Jun-2026 17:00:16.0	yes
03	(7) PA30-NW	WFC3/UVIS	2	23-Jun-2026 17:00:16.0	yes
80	(7) PA30-NW	WFC3/UVIS	2	23-Jun-2026 17:00:17.0	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>
04	(7) PA30-NW	WFC3/UVIS	2	23-Jun-2026 17:00:17.0	yes
05	(8) PA30-SE	WFC3/UVIS	2	23-Jun-2026 17:00:18.0	yes
06	(8) PA30-SE	WFC3/UVIS	2	23-Jun-2026 17:00:18.0	yes
07	(9) PA30-SW	WFC3/UVIS	2	23-Jun-2026 17:00:19.0	yes
08	(9) PA30-SW	WFC3/UVIS	2	23-Jun-2026 17:00:19.0	yes

18 Total Orbits Used

ABSTRACT

Pa 30 is an extraordinary supernova remnant harboring a central hot star with fast outflows, and showing a stunning radial filamentary morphology. The stellar remnant and the lack of hydrogen or helium suggests that the supernova was caused by a partially failed thermonuclear explosion in a white dwarf, classifying it as a type Iax supernova. This remnant offers a rare opportunity to study this new class of supernova in our own Galaxy. We here propose to complement a recently-approved Cycle 4 JWST MIRI imaging program with a deep narrowband image in [S II] of the entire nebula with HST WFC3. The proposed image will allow us to 1) study the sub-arcsecond structure of the line-emitting filaments, 2) measure with high precision the edge of the nebula in [S II], providing the first benchmark to measure the expansion of the ejecta, and 3) map with high precision, in conjunction with the JWST/MIRI image, the location and spatial extension of the filaments with respect to the dust.

OBSERVING DESCRIPTION

Pa 30 is an extraordinary supernova remnant harboring a central hot star with fast outflows, and showing a stunning radial filamentary morphology. The stellar remnant and the lack of hydrogen or helium suggests that the supernova was caused by a partially failed thermonuclear explosion in a white dwarf, classifying it as a type Iax supernova. This remnant offers a rare opportunity to study this new class of supernova in our own Galaxy. We here propose to complement a recently-approved Cycle 4 JWST MIRI imaging program with a deep narrowband image in [S II] of the entire nebula with HST WFC3. The proposed image will allow us to 1) study the sub-arcsecond structure of the line-emitting filaments, 2) measure with high precision the edge of the nebula in [S II], providing the first benchmark to measure the expansion of the ejecta, and 3) map with high precision, in conjunction with the JWST/MIRI image, the location and spatial extension of the filaments with respect to the dust.

We intend to image the full nebula over 16 orbits with WFC3 in the [S II] filter. The observations will consist of 4 unique positions, which have significant overlap, meaning that a large fraction of the nebula will be imaged in all 16 orbits. We wish to include a large number of unique rotational

angles, in order to median-out diffraction spikes which will be caused by at least two bright contaminating stars within the sky footprint of the nebula.

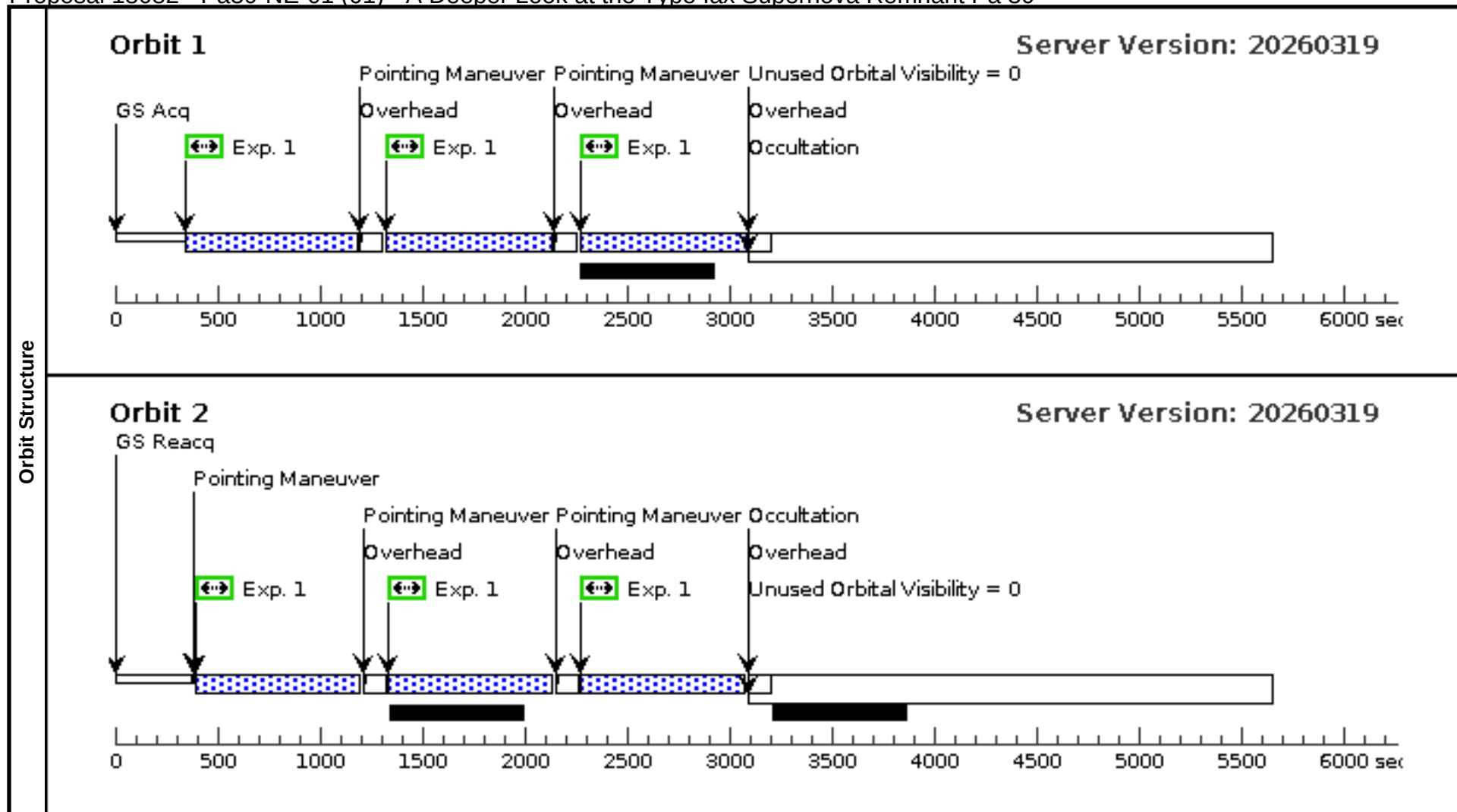
We propose to observe the entire nebula with the WFC3, using the UVIS F637N filter. Due to the 162" x 162" field of view of WFC3 UVIS, we can cover the entire nebula in just four pointings. We considered different configurations of the pointings in order to maximize signal-to-noise and coverage. The proposed pointings will allow to capture the full nebula and comfortably detect the outer edge of the filaments, while the overlap between the different pointings will allow us to maximize the signal to noise ratio, with at least 2 overlapping pointings in most of the nebula. Each pointing will consist of 4 orbits of observations, for a total of 16 orbits. Ideally, for each of the 4 pointings, the 4 orbits will have different position angles, such that we are able to remove diffraction spikes from a bright central contaminant. It would be ideal if among the 16 orbits, the angles cover a wide variety. We also have designed the pointings to avoid placing bright stars in the D quadrant of WFC3.

To calculate the required exposure time, we analyzed the public IFU data from Keck/KCWI presented in Cunningham et al. (2024, ApJL), which cover a section of the nebula. Four orbits will allow us to detect even the faintest diffuse regions with a signal-to-noise higher than 5 with a sub-arcsecond resolution in each pointing. For the brightest, densest regions, we can achieve a higher resolution of $<0.5''$ with a S/N of >15 . The choice of filter will allow us to detect all of the red-shifted doublets and most of the blue-shifted ones.

Although ACS/WFC has a larger field of view, we propose to use WFC3/UVIS following the guidance in the HST Cycle 33 Call for Proposals that recommends the use of WFC3/UVIS over ACS/WFC since the latter is now only offered under shared risk. This choice is also advantageous, as WFC3/UVIS provides the narrowband F673N filter, which is perfectly suited for detecting the [S II] emission in this system.

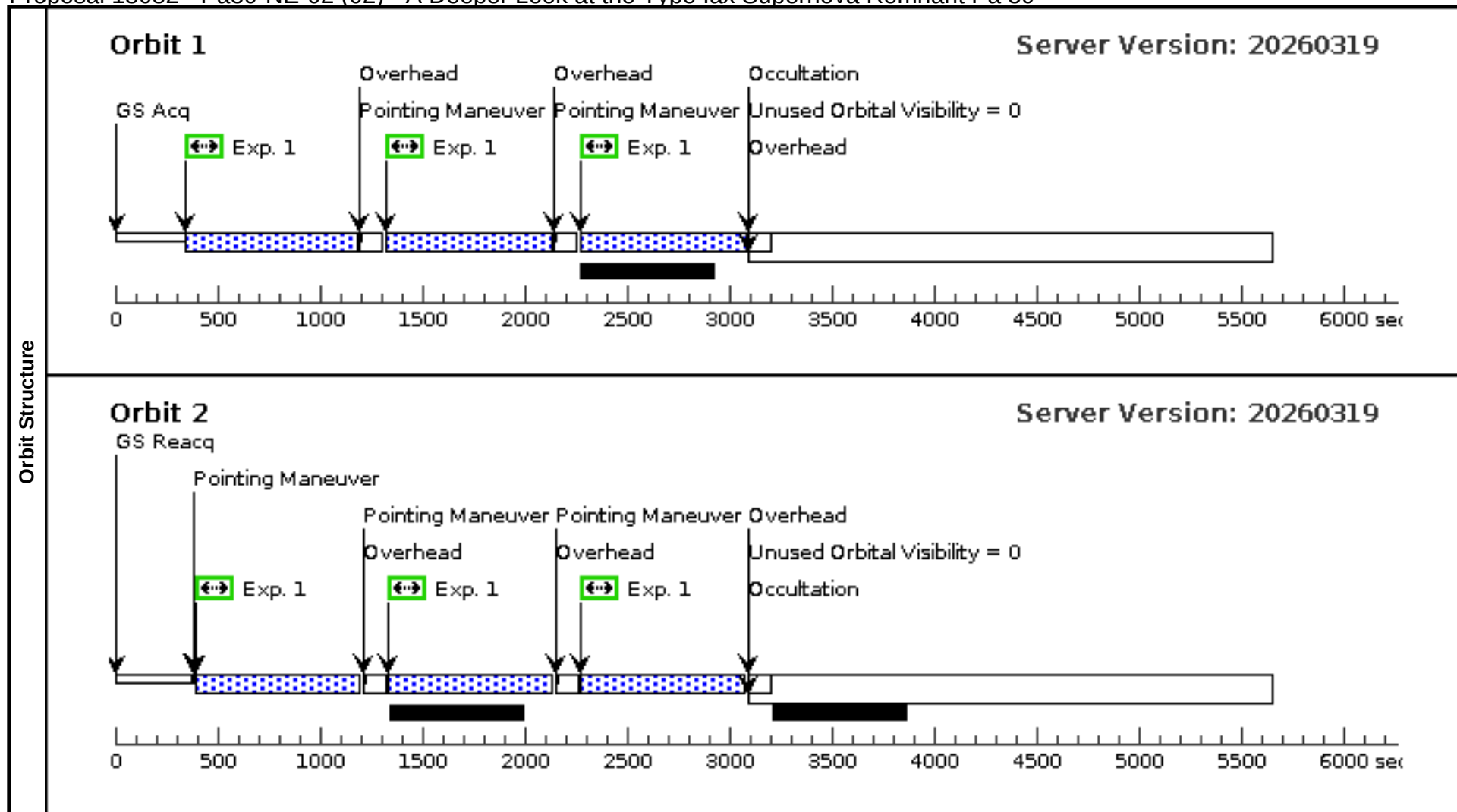
Proposal 18082 - Pa30-NE-01 (01) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-NE-01 (01), completed										Tue Jun 23 21:00:19 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 265D TO 272 D; ORIENT 292D TO 314 D; ORIENT 324D TO 27 D; ORIENT 37D TO 95 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true		Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=DITHER Number Of Points=2 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=33.606 Angle Between Sides= Center Pattern=false		(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(6)	PA30-NE Alt Name1: IRAS-00500+6713-NE Comments: North-East (NE) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713). Category=ISM Description=[EMISSION LINE NEBULA, SNR] Extended=YES	RA: 00 53 17.6612 (13.3235883d) Dec: +67 30 38.71 (67.51075d) Equinox: J2000		Epoch of Position: 2025.9		V=15.7		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(6) PA30-NE	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-NE-01 (01) (1)	1160 Secs (4839 Secs)			
									[==>810 Secs (Pattern 1,1)]		[1]	
									[==>810 Secs (Pattern 1,2)]			
									[==>810 Secs (Pattern 2,1)]			
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									[==>803 Secs (Pattern 3,1)]			
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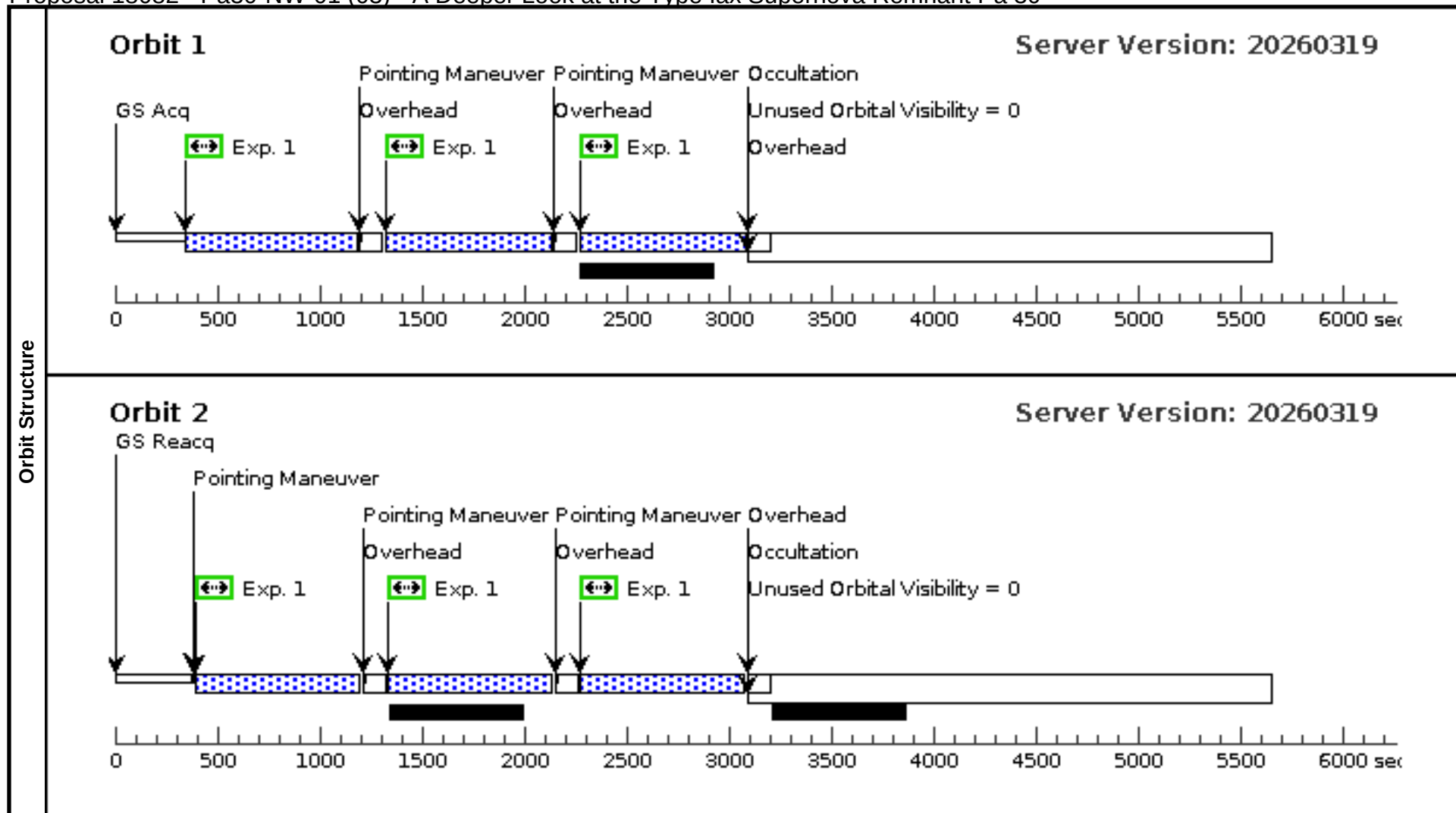
Proposal 18082 - Pa30-NE-02 (02) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-NE-02 (02), completed										Tue Jun 23 21:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 265D TO 272 D; ORIENT 292D TO 314 D; ORIENT 324D TO 27 D; ORIENT 37D TO 95 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true		Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=DITHER Number Of Points=2 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=33.606 Angle Between Sides= Center Pattern=false		(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(6)	PA30-NE Alt Name1: IRAS-00500+6713-NE	RA: 00 53 17.6612 (13.3235883d) Dec: +67 30 38.71 (67.51075d) Equinox: J2000		Epoch of Position: 2025.9		V=15.7		Reference Frame: ICRS			
	Comments: North-East (NE) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713).											
	Category=ISM Description=[EMISSION LINE NEBULA, SNR] Extended=YES											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(6) PA30-NE	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-NE-02 (02) (1)	1160 Secs (4839 Secs)			
									[==>810 Secs (Pattern 1,1)]		[1]	
									[==>810 Secs (Pattern 1,2)]			
									[==>810 Secs (Pattern 2,1)]			
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								[==>803 Secs (Pattern 3,1)]				
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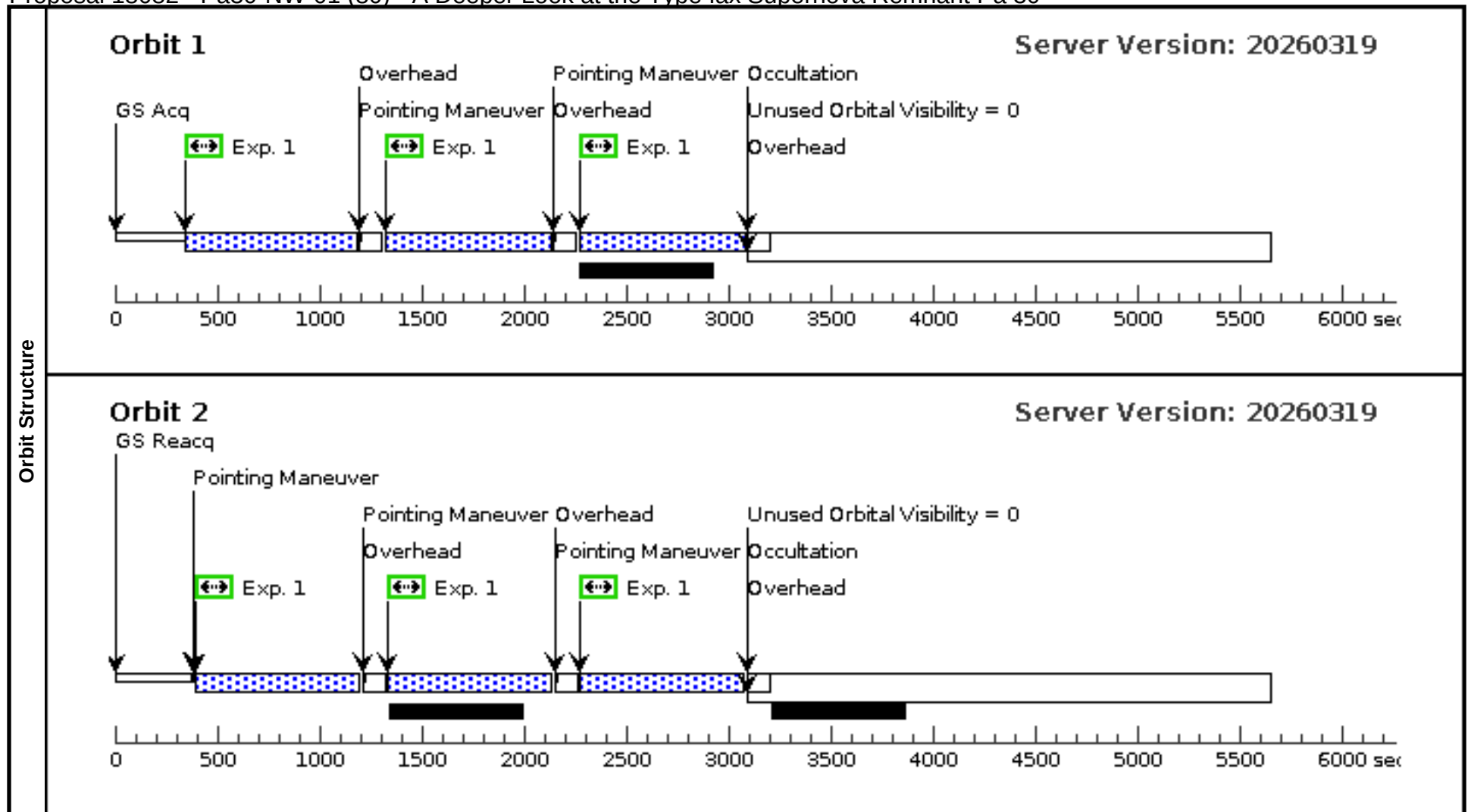
Proposal 18082 - Pa30-NW-01 (03) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-NW-01 (03), failed										Tue Jun 23 21:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 120D TO 290 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=1.37 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=DITHER Number Of Points=2 Point Spacing=1.37 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=33.606 Angle Between Sides= Center Pattern=false	(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous						
	(7)	PA30-NW Alt Name1: IRAS-00500+6713-NW	RA: 00 53 4.8520 (13.2702167d) Dec: +67 30 38.69 (67.51075d) Equinox: J2000	Epoch of Position: 2025.9	V=15.7	Reference Frame: ICRS						
	Comments: North-West (NW) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713).											
	Category=ISM Description=[EMISSION LINE NEBULA, SNR] Extended=YES											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit		
	1		(7) PA30-NW	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-NW-01 (03) (1)	1160 Secs (4839 Secs)			
									[==>810 Secs (Pattern 1,1)]	[1]		
									[==>810 Secs (Pattern 1,2)]			
									[==>810 Secs (Pattern 2,1)]			
									[==>803 Secs (Pattern 2,2)]	[2]		
									[==>803 Secs (Pattern 3,1)]			
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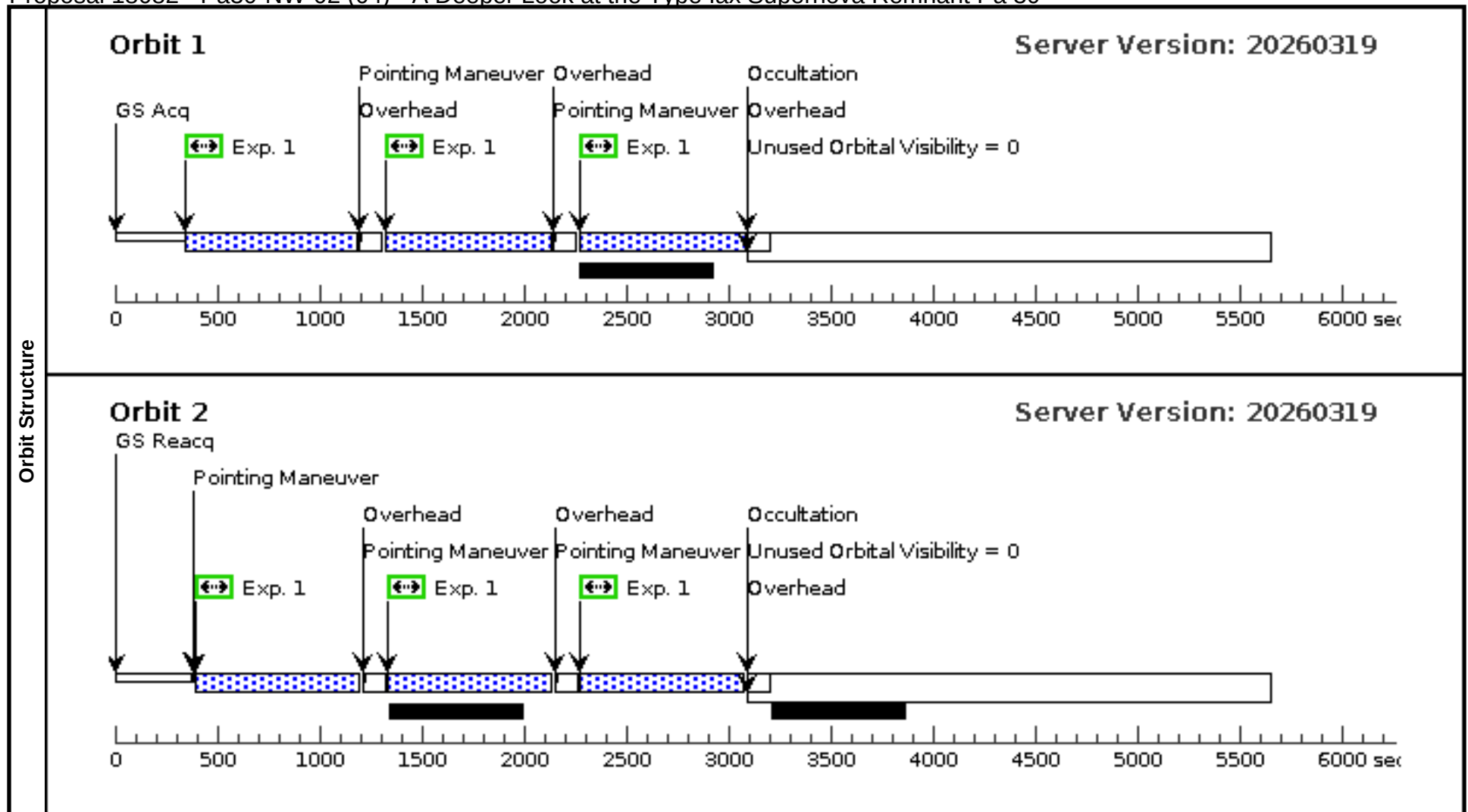
Proposal 18082 - Pa30-NW-01 (80) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-NW-01 (80)										Tue Jun 23 21:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 120D TO 290 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE		Coordinate Frame=POS-TARG		Pattern Type=WFC3-UVIS-MOS-DITH-LINE		Coordinate Frame=POS-TARG		(1)		
		Purpose=MOSAIC		Pattern Orientation=85.754		Purpose=DITHER		Pattern Orientation=33.606				
		Number Of Points=3		Angle Between Sides=		Number Of Points=2		Angle Between Sides=				
		Point Spacing=1.37		Center Pattern=true		Point Spacing=1.37		Center Pattern=false				
		Line Spacing=				Line Spacing=						
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(7)	PA30-NW	RA: 00 53 4.8520 (13.2702167d)		Epoch of Position: 2025.9		V=15.7		Reference Frame: ICRS			
		Alt Name1: IRAS-00500+6713-NW	Dec: +67 30 38.69 (67.51075d)									
			Equinox: J2000									
	Comments: North-West (NW) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713).											
	Category=ISM											
	Description=[EMISSION LINE NEBULA, SNR]											
	Extended=YES											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(7) PA30-NW	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-NW-01 (80) (1)	1160 Secs (4839 Secs)			
									[==>810 Secs (Pattern 1,1)]			
									[==>810 Secs (Pattern 1,2)]		[1]	
									[==>810 Secs (Pattern 2,1)]			
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									[==>803 Secs (Pattern 3,1)]		[2]	
									[==>803 Secs (Pattern 3,2)]			



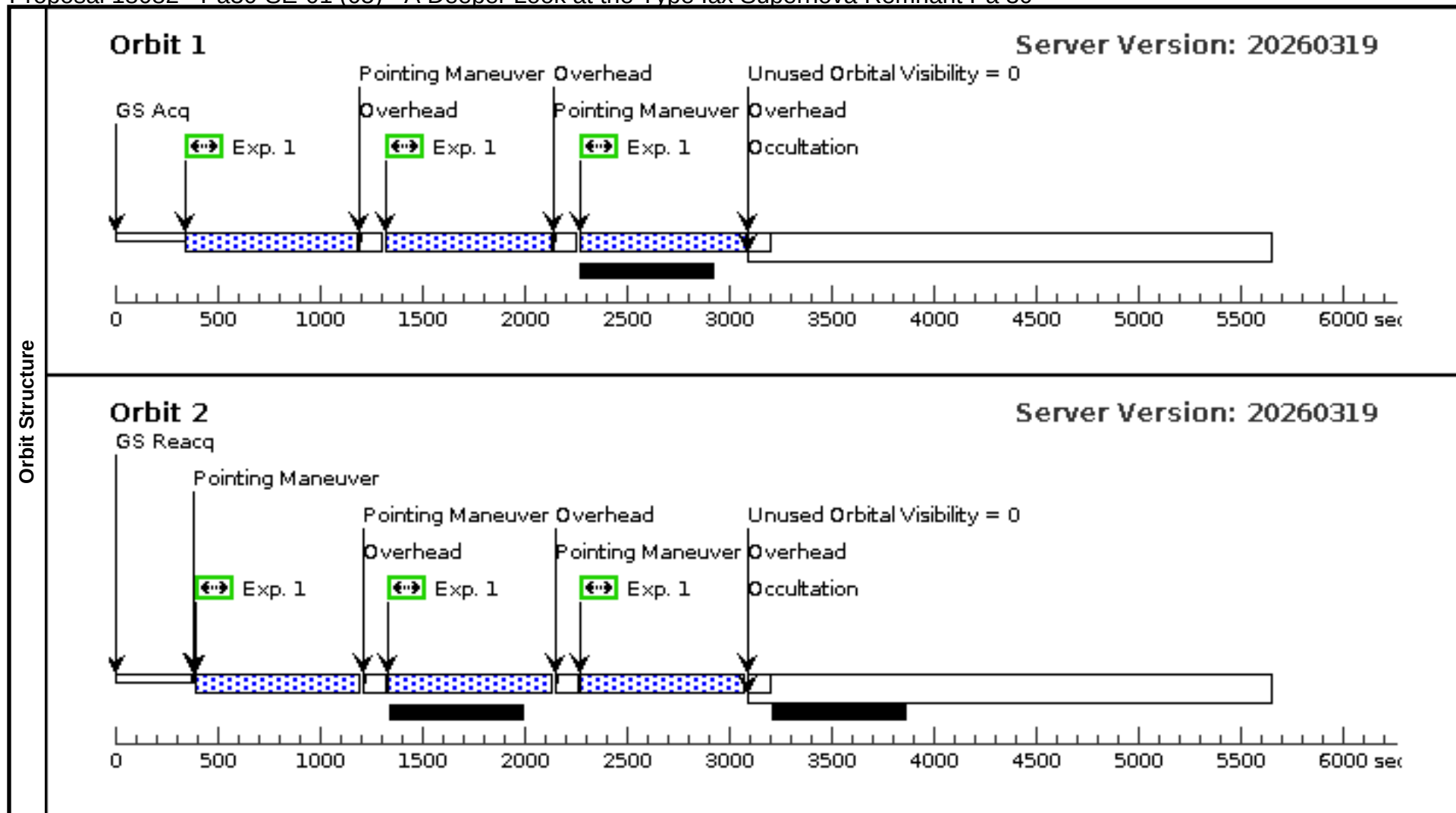
Proposal 18082 - Pa30-NW-02 (04) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-NW-02 (04), completed										Tue Jun 23 21:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 120D TO 290 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=1.37 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=DITHER Number Of Points=2 Point Spacing=1.37 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=33.606 Angle Between Sides= Center Pattern=false	(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous						
	(7)	PA30-NW Alt Name1: IRAS-00500+6713-NW	RA: 00 53 4.8520 (13.2702167d) Dec: +67 30 38.69 (67.51075d) Equinox: J2000	Epoch of Position: 2025.9	V=15.7	Reference Frame: ICRS						
	Comments: North-West (NW) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713).											
	Category=ISM Description=[EMISSION LINE NEBULA, SNR] Extended=YES											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit		
	1		(7) PA30-NW	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-NW-02 (04) (1)	1160 Secs (4839 Secs)			
									[==>810 Secs (Pattern 1,1)]	[1]		
									[==>810 Secs (Pattern 1,2)]			
									[==>810 Secs (Pattern 2,1)]			
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									[==>803 Secs (Pattern 3,1)]			
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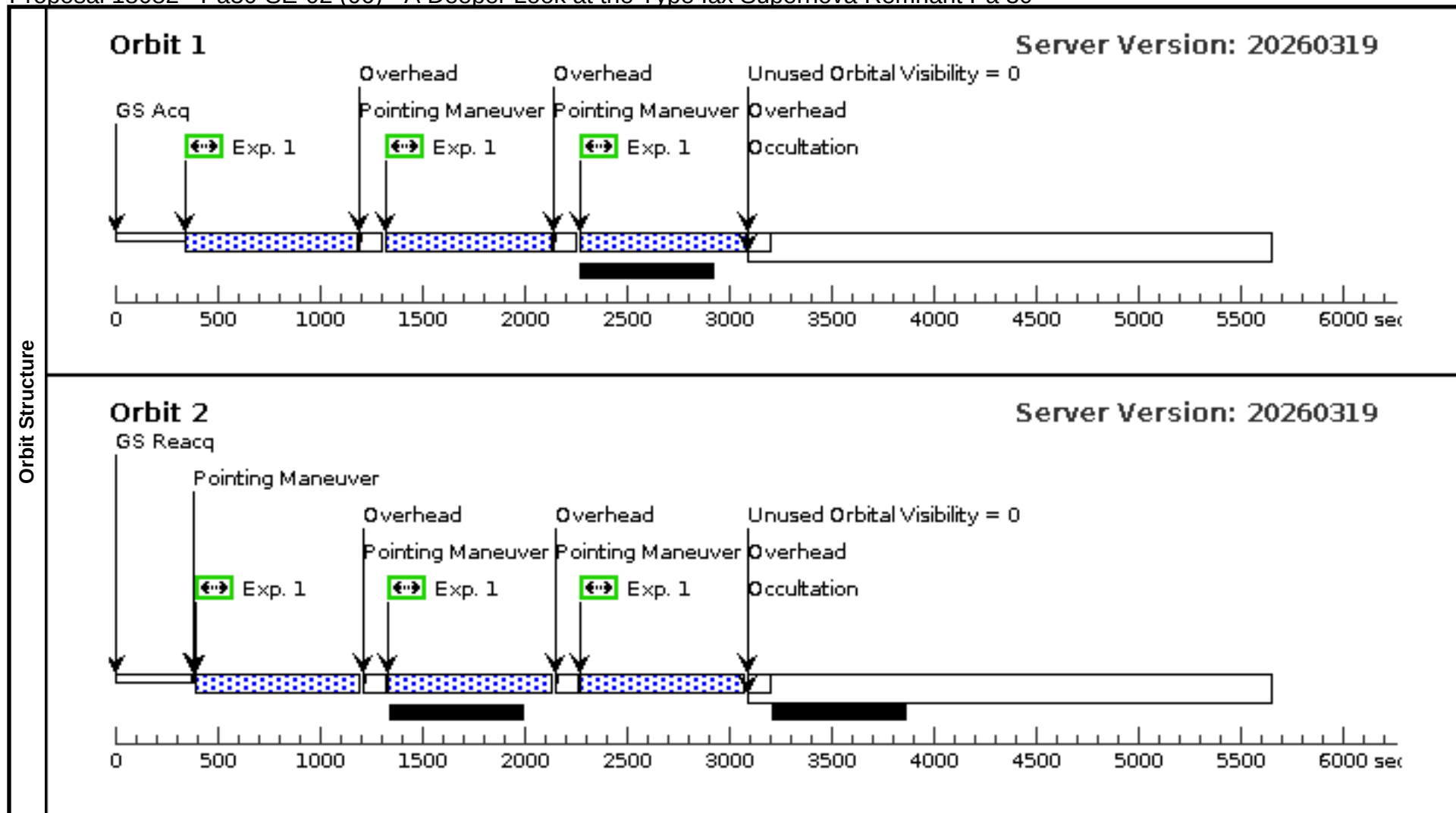
Proposal 18082 - Pa30-SE-01 (05) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-SE-01 (05), scheduling										Tue Jun 23 21:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 320D TO 9 D; ORIENT 66D TO 77 D; ORIENT 138D TO 155 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true		Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=DITHER Number Of Points=2 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=33.606 Angle Between Sides= Center Pattern=false		(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(8)	PA30-SE	RA: 00 53 17.6550 (13.3235625d)		Epoch of Position: 2025.9		V=15.7		Reference Frame: ICRS			
		Alt Name1: IRAS-00500+6713-SE	Dec: +67 29 25.21 (67.49034d)									
			Equinox: J2000									
	Comments: South-East (SE) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713).											
	Category=ISM											
	Description=[EMISSION LINE NEBULA, SNR]											
	Extended=YES											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(8) PA30-SE	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-SE-01 (05) (1)	1160 Secs (4839 Secs)			
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									[==>810 Secs (Pattern 1,2)]		[1]	
									[==>810 Secs (Pattern 2,1)]			
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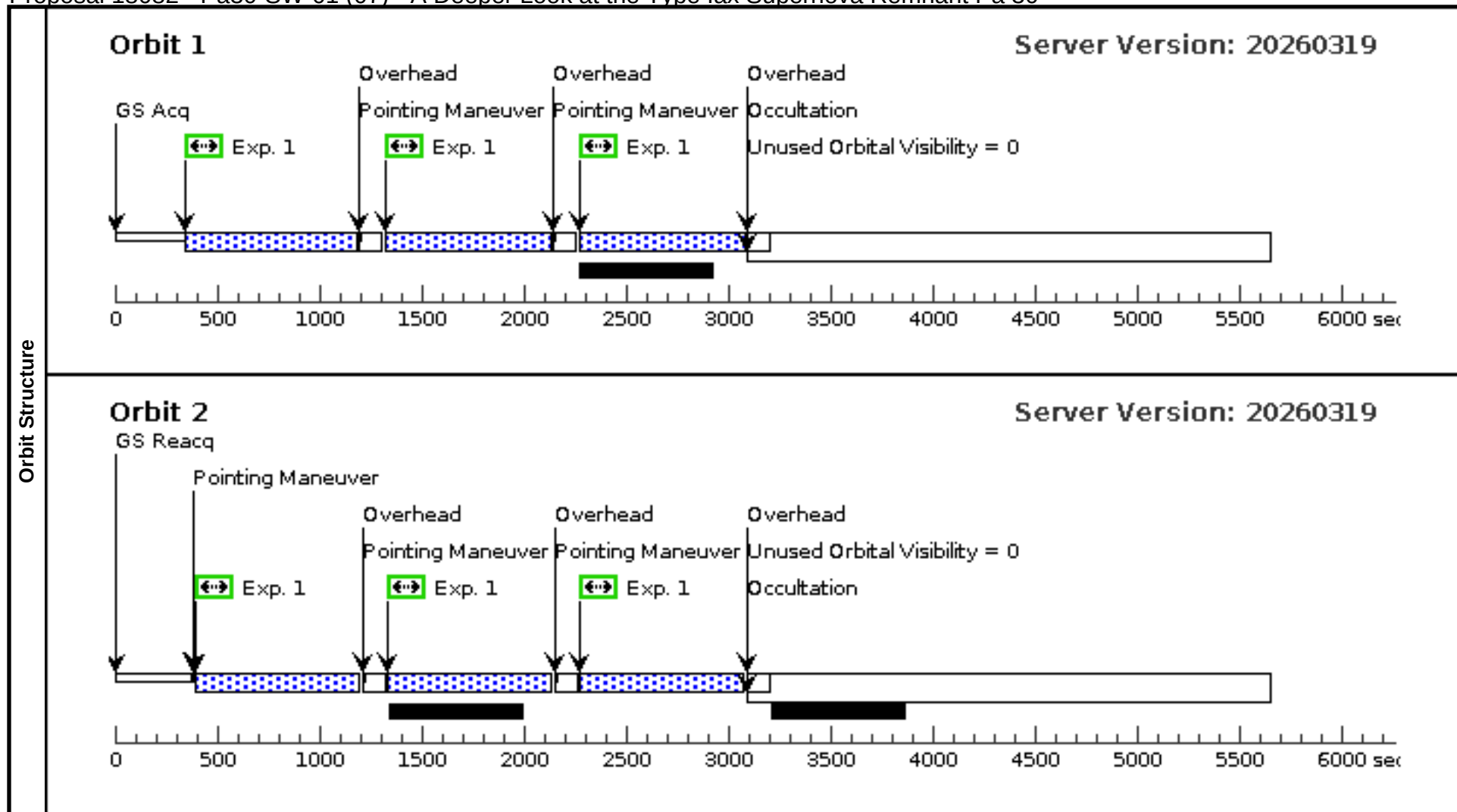
Proposal 18082 - Pa30-SE-02 (06) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-SE-02 (06), scheduling										Tue Jun 23 21:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 320D TO 9 D; ORIENT 66D TO 77 D; ORIENT 138D TO 155 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true		Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=DITHER Number Of Points=2 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=33.606 Angle Between Sides= Center Pattern=false		(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(8)	PA30-SE Alt Name1: IRAS-00500+6713-SE	RA: 00 53 17.6550 (13.3235625d) Dec: +67 29 25.21 (67.49034d) Equinox: J2000		Epoch of Position: 2025.9		V=15.7		Reference Frame: ICRS			
	Comments: South-East (SE) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713).											
	Category=ISM Description=[EMISSION LINE NEBULA, SNR] Extended=YES											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(8) PA30-SE	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-SE-02 (06) (1)	1160 Secs (4839 Secs)			
									[==>810 Secs (Pattern 1,1)]			
									[==>810 Secs (Pattern 1,2)]		[1]	
									[==>810 Secs (Pattern 2,1)]			
									[==>803 Secs (Pattern 2,2)]			
								[==>803 Secs (Pattern 3,1)]		[2]		
								[==>803 Secs (Pattern 3,2)]				



Proposal 18082 - Pa30-SW-01 (07) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-SW-01 (07), scheduling										Tue Jun 23 21:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 350D TO 240 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=1.37 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true			Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=DITHER Number Of Points=2 Point Spacing=1.37 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=33.606 Angle Between Sides= Center Pattern=false			(1)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(9)	PA30-SW Alt Name1: IRAS-00500+6713-SW	RA: 00 53 4.8577 (13.2702404d) Dec: +67 29 25.20 (67.49033d) Equinox: J2000	Epoch of Position: 2025.9		V=15.7		Reference Frame: ICRS				
	Comments: South-West (SW) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713).											
	Category=ISM Description=[EMISSION LINE NEBULA, SNR] Extended=YES											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(9) PA30-SW	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-SW-01 (07) (1)	1160 Secs (4839 Secs)			
									[==>810 Secs (Pattern 1,1)]		[1]	
									[==>810 Secs (Pattern 1,2)]			
									[==>810 Secs (Pattern 2,1)]			
								[==>803 Secs (Pattern 2,2)]		[2]		
								[==>803 Secs (Pattern 3,1)]				
								[==>803 Secs (Pattern 3,2)]				



Proposal 18082 - Pa30-SW-02 (08) - A Deeper Look at the Type Iax Supernova Remnant Pa 30

Visit	Proposal 18082, Pa30-SW-02 (08), scheduling										Tue Jun 23 21:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 350D TO 240 D											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true		Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=DITHER Number Of Points=2 Point Spacing=1.37 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=33.606 Angle Between Sides= Center Pattern=false		(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(9)	PA30-SW Alt Name1: IRAS-00500+6713-SW	RA: 00 53 4.8577 (13.2702404d) Dec: +67 29 25.20 (67.49033d) Equinox: J2000		Epoch of Position: 2025.9		V=15.7		Reference Frame: ICRS			
	Comments: South-West (SW) quadrant of nebula (52 arcsec from central star; IRAS 00500+6713).											
	Category=ISM Description=[EMISSION LINE NEBULA, SNR] Extended=YES											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(9) PA30-SW	WFC3/UVIS, ACCUM, UVIS	F673N	FLASH=16.0		Pattern 1, Exps 1-1 in Pa30-SW-02 (08) (1)	1160 Secs (4839 Secs)			
									[==>810 Secs (Pattern 1,1)]			
									[==>810 Secs (Pattern 1,2)]		[1]	
									[==>810 Secs (Pattern 2,1)]			
									[==>803 Secs (Pattern 2,2)]			
									[==>803 Secs (Pattern 3,1)]		[2]	
									[==>803 Secs (Pattern 3,2)]			

